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January 28, 1977

House Special Committee and
Senate Special Committee to
Consider the Sale of Royalty Gas
The Legislature of the State of Alaska
State Capitol
Juneau, Alaska 99811

Gentlemen:

You have requested my review and analysis of the contracts by and between the Commissioner of Natural Resources of the State of Alaska acting pursuant to AS 38.05-.183(d), seller, and Tenneco Alaskan, Inc., El Paso Natural Gas Company and Southern Natural Gas Company, buyers. The contracts in question are each in two parts, one part denominated "General Terms and Conditions," and the other denominated "Royalty Gas Sales Agreement."

I express no opinion on matters relating to title, taxes, or compliance with State contracting requirements. My opinions here offered are limited, as requested, to a legal analysis of the contracts, and an assessment of the merits, and demerits, of the various provisions thereof.

To submit my opinions in these areas, I have reviewed the contracts in question, and a summary of Commissioner Martin's negotiations as furnished to me by the Office of the Attorney General of the State of Alaska. I believe these materials to be sufficient to render the requested analysis, but my comments are necessarily limited to the materials which were available to me for review.

I wish to make clear also that I do not arrogate to myself the formulation or expression of an opinion as to whether the contracts in question should, or should not, be approved by the Legislature. The vote of each member must necessarily be cast in terms of his own appraisal of the contracts, giving due and

appropriate regard to the constituency which he represents, their wishes and best interests, and his perception of where the interests of the State lie. It would be most presumptuous for me to offer an opinion on a matter so peculiarly within the responsibility of elected representatives, particularly when my exposure to the people, the economy and the planning of the State of Alaska is as limited as it is.

Finally, it must be clearly recognized that an analysis of contracts already negotiated, and an appraisal of whether those contracts are, on balance, "good" or "bad," if undertaken as an abstract proposition, can be most misleading and unfair to the negotiators. A contract takes shape through a process of bargaining, and many provisions may not be precisely as one of the contracting parties would wish. The provisions are forged through negotiation and compromise, and if one gauges the contract only by reading the final contract after the negotiation process has run its course, it might appear that certain agreements have been embodied in the contract which are less than desirable and which should be modified or eliminated. Were one familiar with the negotiation process, however, he might realize that the apparently undesirable provisions were in fact necessary if an agreement was to be reached. I would caution, therefore, against an interpretation of my comments and opinions as critical of the officials who negotiated on behalf of the State.

Having offered these preliminary explanatory comments, let me turn to the contracts themselves.

I append, as Attachment A, a detailed summary of the contracts, section by section. Rather than reiterate this summary, I would prefer to offer my generalized perception of the relative merits and demerits of the contracts in terms of probable benefits and areas of concern. The Committee may wish to explore the concerns which I set forth with the Commissioner of the Department of Natural Resources, for indeed his experience in the negotiation process may well substantiate the view that the contracts as presented to the Legislature, even though containing certain problem areas, do in fact represent the best bargain that could have been struck under all of the attendant circumstances.

* * * * * * * * * *

I would speak first on a positive note, addressing the obvious benefits which accrue to the State under the contracts as submitted to the Legislature for approval. I suggest that the benefits are material and substantial and, specifically, there are the following factors to be considered:

1.

The State has secured an agreement for full reimbursement of all costs related to the State's taking of its gas in kind. (Article II, Sections 2.2 and 2.3.) I consider this to be a significant concession in behalf of the State. When the State takes its gas in kind, it is quite possible that the taking will occur at the point of production, so that all costs incurred downstream from that point, such as for transportation to a processing plant, processing, and redelivery to a pipeline transporter, must be borne by the State in ratio to its percentage of the production taken. I do not believe that anyone can guarantee that the State would not be exposed to claims for substantial costs resulting from the in-kind taking. The royalty sales agreement clearly insulates the State from cost exposure with respect to the initial arrangements necessary to an in-kind taking, whether or not the costs reimbursed to the State by the buyers of the royalty gas are collectable by the buyers in their jurisdictional resale rate structure.

2.

The State has sold only a portion of its Prudhoe Bay royalty gas, and has secured the contractual right to withdraw volumes sold under the contract for Alaska in-state needs. (Article III, Sections 3.1 through 3.6.) If an alternate market for the State's royalty gas develops between the present time and the time when the buyers under the contract are in a position to take delivery, the State may take and dispose of its royalty gas in any manner that it chooses, so long as such taking and/or disposition does not interfere with the State's ability to deliver to the buyers when they are in a position to take. (Section 3.8.) The State is not committed by contract to a warranted volume of gas to be sold and delivered under the contracts, and has no stated minimum delivery obligation. (Section 3.2.)

I consider these provisions to be extremely favorable to the State. It is prudent to retain a portion of the State's royalty gas even when a decision has been made to sell part of that royalty gas, since holding a portion free of commitment permits negotiation at a later time when operating conditions have been established, and when circumstances may indicate that significantly different contractual arrangements are in order. Thus, sale of 2.6 Tcf under the contracts in question, rather than a sale of all of the State's Prudhoe Bay royalty gas is, in my judgment, proper.

It has, of course, been essential from the outset that the future needs of the State for natural gas for in-state uses must be in some manner accommodated throughout a royalty gas sales arrangement. It would obviously be unacceptable for the State to sell its royalty gas for transportation out of the State without some provision for meeting future natural gas needs within the State. The arrangement worked out in the contracts to accomplish this objective is favorable to the State. The State may withdraw, over time and upon suitable notice, up to 100 percent of the gas contracted for sale under the instant agreements; the rights of withdrawal must, of course, be exercised for the sole purpose of the State meeting the intrastate domestic and industrial needs of the State of Alaska, and the withdrawal is scaled from 25 percent through 100 percent over 20 years; nonetheless, the withdrawal provisions are more favorable than I would have anticipated and they represent a major element of strength in these contracts.

3.

The State has excepted and reserved from the sale, all liquids removed from the State's royalty gas prior to its delivery to the pipeline (Article IV, Section 4.4), and the State has retained processing rights for the recovery of liquefiable hydrocarbons other than methane, whether exercised before or after delivery to the buyer. (Article IX.) If the liquids are not removed from the gas stream so that the liquid content of the gas stream delivered for sale produces a higher than 1,000 Btu per cubic foot average, the State will be compensated for the greater heating content through adjustment of the sales price. (Article VI, Section 6.6.)

These arrangements for the State to retain the benefits of the liquid content of the gas stream should prove beneficial to the State over the life of gas production from Prudhoe Bay. Liquids and liquid products can provide a significant source of additional revenue to the State if they are sold on the open market and, conversely, if there is need for liquid products in the State (such as a need for propane for its multiple uses, or a need for butane and natural gasoline as feedstocks for petrochemical or other operations), the State is free to direct the liquids and the liquid products to their highest and best use. The inclusion of these provisions in the contract is a distinct plus.

4.

The contract permits State withdrawal from the contract, without penalty, in the event of the occurrence of several different circumstances: If the State is prevented from taking its gas in kind by federal action, the sales agreements shall be void (Article II, Section 2.1); the contracts can be terminated if a decline in production results in nonprofitability to the State (Article VIII); the sales agreements may be terminated by the State if the State so elects following Federal Power Commission certification of an Alaskan gas transportation proposal, except that this right of termination would not exist if the Commission's grant of a certificate is to the El Paso project (Article XI, Section 11.5); and the State may terminate the royalty sales contracts if, by January 1, 1979, all regulatory approvals which the State deems necessary to enable the State to perform its obligations under or receive the benefits of the contract have not been received (Article XI, Section 11.2).

The cumulative effect of these termination options is sufficient, in my opinion, to safeguard the State against reasonably foreseeable adverse developments which might occur. Their inclusion in the contracts is of significant value to the State.

* * * * * * * * *

I must now turn to certain aspects of the contracts which are of concern to me. These relate to the pricing of the State's royalty gas when sold to the buyers under these contracts.

1. Section 6.1 imposes an upper limit on the price which the state will receive for its royalty gas, and this limitation will be operative unless and until appropriate Federal legislation deregulating Alaska gas is passed. The Section 6.1 limitation, in full, is as follows:

> "In consideration thereof, the price which buyer shall pay seller for gas purchased hereunder shall be determined in accordance with Section 6.2 or Section 6.3 or Section 6.4 or Section 6.5 and shall be subject to the adjustment as provided in Section 6.6; however, the price paid seller for gas which buyer reflects in its rates to jurisdictional customers shall never be higher than the price buyer is permitted to retain in its jurisdictional resale rates so long as such rates are subject to regulation by the Federal Power Commission (or any successor governmental authority having jurisdiction in the premises)."

The underscored proviso is thus given controlling affect, irrespective of the price indicated under Section 6.2 (price fixed at the highest price permitted by the Federal Power Commission to any working interest seller from the Exhibit A reservoirs); irrespective of the price indicated under Section 6.3 (in the event of deregulation at the time of first deliveries, the price is fixed at the level of the highest price being paid by any interstate gas purchaser for gas produced from the Exhibit A leases); irrespective of the price indicated under Section 6.4 (in the event of the cessation of federal regulation after such has once commenced, the price is to be fixed by redetermination and/or arbitration); and irrespective of the price which would result from redetermination in accordance with Section 6.5

The limitation holds as a ceiling on the State's sale price "so long as such rates (buyer's jurisdictional resale rates) are subject to regulation by the Federal Power Commission ...."

It is inescapable that the buyers under these contracts will become transporters of natural gas in interstate commerce, and that they are purchasing gas for resale in interstate commerce. The rates at which the buyers sell for resale will be within the jurisdiction of the Federal Power Commission under the Natural Gas Act, and I know of no foreseeable set of circumstances that would produce legislation, or a Commission decision, changing this result.

Section 6.1 may not be unduly burdensome if legislation is passed which denies the Federal Power Commission the power to refuse recovery of purchased gas costs in an interstate transporter's jurisdictional resale rates, for then it could be argued that the buyers under this contract must necessarily be "permitted to retain" in their jurisdictional resale rates the amounts paid to the State and, therefore, the ceiling limitation in the Section 6.1 proviso would not interfere with operation of the other pricing alternates in the contracts. Such legislative language was employed in the bill which passed the United States

Senate in October 1975, S. 2310, and the same type of language now finds expression in the most recent deregulation legislation offered in the current Congress by Senators Pearson and Bentsen, S. 256.

I do not think the language of the contracts to be altogether clear, however, that Section 6.1 becomes inoperative in the event of Congressional deregulation. If it is the intent of the contracting parties that "flow through" language in a deregulation bill would effectively eliminate the Section 6.1 proviso, then I would suggest that an appropriate letter be obtained and made a part of the contracts before they become effective.

2. Even if Section 6.1 is clarified as suggested, you must understand that Section 6.1 will still subject the State's royalty sales to FPC rate regulation, and such will continue unless and until the Congress enacts appropriate deregulation legislation.

While the State has uniformly and steadfastly maintained that its sales of royalty gas are not subject to direct regulation by the Federal Power Commission because the State is not a person within the meaning of the Natural Gas Act (and I agree with this position), the State does by these contracts consent to indirect rate regulation by the Commission by conceding that the State's sale price is limited to that amount which the Commission will permit the buyers to retain in their jurisdictional rates.

3. At this time, the State cannot determine its sale price, or anticipated revenues at time of first delivery. Section 6.2 does not yield a present price, for there are no FPC-set rates for Alaska gas at this time. Neither Section 6.3 nor 6.4 yields a present price, for their conditions precedent (deregulation) have not occurred. I am at a loss, therefore, to advise the Committee on the sale price which will be applicable at the time of first delivery. If the status quo prevails through the time for first delivery, I assume -- although the contract is silent on the point -- that the buyers and the State would agree to an interim price which would be paid to the State, subject to refund.

4. You should note that the pricing mechanism agreed to in Article VI results, in every reasonably probable circumstance, in the State's sale price being determined by parties other than the State. If federal regulation continues, or if deregulation legislation is not appropriately drafted, the FPC sets the rate for the State. If deregulation occurs, before or after first delivery, the sales price negotiated by private firms making comparable sales will determine the State's sales price.

5. I cannot guess what rate the FPC will set for private sales of natural gas from Prudhoe Bay, but the prospects for a relatively low rate -- because the gas is associated and many costs can be allocated to oil, and because the size of this discovery and these reserves may operate to distort initial well-head rates downward -- are not to be ignored. It will, in my judgment, be easier for the FPC to find reasons why a private seller's rate should be low than it would be for the Commission to deny to the State public funds for public needs. Thus, the contract tying arrangement to private firms' prices -- not yet negotiated -- may deprive the State of a strong argument for adequate prices: namely, that State revenues will be public monies devoted to public needs and public uses, and that, therefore, the State's sales rate should not be judged by traditional FPC concerns of windfall profits to private firms.

6. In Article VI, redetermination rights under Section 6.5 are not clearly granted if deregulation occurs prior to first deliveries. Such rights should exist to protect the State adequately over the twenty-year term of these agreements, and should be provided in Section 6.3, or through re-wording of Section 6.5. Incidentally, re-determination downward at the buyer's request, as permitted in Section 6.5, is not frequently seen. If Section 6.5 is modified, revision to eliminate the possibility of price reductions in the future should be explored.

7. Under the pricing scheme in the contracts, the probable mechanism for Federal Power Commission review of the State's royalty sales rate will be either (a) in the various pipeline rate cases where the cost of purchasing gas from the State is submitted to the Commission as a recoverable item by the pipeline in its resale rate structure; or (b) in a producer sales proceeding where one of the Prudhoe Bay working interest owners requests FPC sales authority; or (c) a rule-making procedure to determine as Alaska ceiling rate for producer sales. The State will be forced to seek intervention, and participate forcefully if allowed to intervene, in one or more of these proceedings in order to have an opportunity of making a direct presentation to the FPC on the appropriate rate level for sales by the State.

Are these problems sufficient to condemn the contracts as inprovident? To some -- those whose sole concern is specificity of price and certainty of revenue -- the answer will be "Yes". But that answer may apply too narrow a standard if -- as may well be true -- there are no reasonable pricing alternatives available to the State.

If all prospective pipeline buyers, present and future, would insist on a pricing structure similar to the one in these contracts, then the alternative to rejection of these contracts

is the alternative of having no contract for the sale of the State's royalty gas. Viewed in this light, the pricing structure before you may be unpalatable, but it may be necessary. If you say "no" to this pricing structure, you may really be saying that the State should not contract at all; that the State should play a less affirmative role in the routing decision; and that the State can strike a better bargain for its gas after the Federal decisional process has run its course.

This choice is yours to make. It requires a broader understanding of the State's goals and needs than I possess, and accordingly, I would be foolish to attempt to recommend a course of action to you. The best I can do is make you aware of the problems, so that your decision will be an informed one.

I would add two footnotes. If these contracts are approved, appropriate deregulation legislation by the Congress becomes terribly important to you. If Alaska gas is deregulated, most of your pricing problems disappear. On the other hand, if deregulation does not occur, the FPC becomes terribly important to you. That agency's pricing regulations will directly impact on your revenues. In the absence of deregulation, the State will be required to become an active, and effective, advocate at the FPC.

* * * * * * * * *

As a final area of general discussion, I would like to call the Committee's attention to several of the provisions in the contract which I think are significant. I do not classify these provisions as being either "good" or "bad" since, in most instances, one's perception of the provisions will depend upon considerations other than legal analysis.

In Article XI, Section 11.4, it is provided that the Governor of Alaska may give notice to the buyers of his decision to support a project other than the trans-Alaska pipeline, and if the Governor does so, with appropriate notice to the buyers, then the newly selected project will be considered the "pipeline" for the purposes of the contract. The buyers need not concur in this change in the State's official position, and if they do not agree, then they are given the right to terminate the contracts.

Second, the selection by the State of Tenneco and Southern as buyers of a portion of the State's royalty gas brings a promise of support by those two organizations of the trans-Alaska gas pipeline system. The involvement, and support, of these two concerns adds a new element to decisional process in Washington with respect to the selection of the routing of a North Slope gas transmission system.

Third, it should be noted that the contracts grant certain options on State royalty gas which are triggered if the State effects a withdrawal of all or any portion of the gas committed under these contracts in order to satisfy in-State needs. The options are not exercisable unless the gas covered thereby is surplus to the needs of the State, and unless the surplus gas is to be transported to market through the trans-Alaska pipeline system. I do not find the option provisions objectionable, but I felt that they were significant enough to require separate mention.

Finally, the contract does not speak to one element of revenue loss that the State will probably sustain by reason of an in-kind taking. The severance tax payable on the State's royalty gas if the State did not take in kind will probably be lost if the State does take in kind. No treatment of this problem appears in the contract.

I will stand ready to respond to such questions as the Committee might have during its hearing on February 2, 1977, and if there are any matters contained in this letter or in its attachment which are not clear, I trust that I will have an opportunity to speak to any such problem at that time.

Respectfully submitted,

Rush Moody, Jr.

RM:bw
Attch.

ATTACHMENT "A"

SUMMARY OF MAJOR CONTRACTUAL PROVISIONS

A. "General Terms and Conditions"

Section 1 defines the terms essential to an understanding of the contract. The definitions are standard, and require no comment except to note the definition of the term "domestic and industrial needs of the State of Alaska" as set forth in Section 1.11. This term is defined to mean "those present and projected residential, commercial and industrial uses for gas within Alaska as determined by the Alaska Royalty Oil & Gas Development Advisory Board in accordance with AS 38.05-.183(d)."

This definition is critical to the structure of the royalty gas sale inasmuch as it forms the basis for the State's rights of withdrawal of royalty gas from the contract as set forth in Article III of the various royalty gas sales agreements.

Section 2 delineates the respective responsibilities of buyer and seller for damage or injury occurring in connection with the movement of royalty gas. The State is responsible prior to delivery to the buyers, and the buyers are responsible after receipt of the gas, except that while the gas is being processed by or on behalf of the State, the buyers are not responsible.

The contract does not fix responsibility, as between buyer and seller, for the processing stage.

Section 3 governs metering of gas sold under the contract; the provisions which essentially require the buyers to install necessary meters to measure accurately the gas purchased under the agreement, but which permit the State to install check meters and otherwise periodically review the accuracy of the purchaser's metering activities, are standard and reasonable. In one respect these provisions are more favorable to the State than might be expected; the contract calls for correction of inaccuracies, when they occur, for a period extending back one-half of the time elapsed since the date of last calibration of the metering equipment. Frequently, gas sales contracts limit the period of time of recalculation, with it being fairly standard that such period is limited to a correction period of two weeks, or at most one month.

Section 4 contains standard provisions relating to the definition of the unit of volume sold.

Section 5 sets forth technical standards for gas measurement, and is standard in the industry.

Section 6, dealing with billing and payment, provides for the rendition of monthly statements, by the 15th day of each

month, setting forth the amount of gas delivered by the State and purchased by the buyers during the preceding calendar month, and for payment to be made by the 25th day of the calendar month in which the run statement is rendered. These provisions are standard.

Section 7, entitled "Receipt of Available Gas," imposes upon the buyer the obligation to proceed diligently to seek such authorization as required to receive gas then available for delivery by the State. As will be discussed later, the intent of Section 7 with respect to Tenneco Alaskan, Inc. and Southern Natural Gas Company is not altogether clear since neither of these buyers appears to be so situated that an authorization "to receive gas" would be required. Neither of these two buyers is in the present posture of seeking certificates permitting the transportation of royalty gas, or permitting construction of facilities to transport gas in interstate commerce and, accordingly, Section 7 is probably inappropriate in their contracts.

Section 8 contains a standard warranty of title by the State.

Section 9, force majeure, permits either party to the contract to suspend its performance if reasons force majeure supervene. The force majeure provisions are standard, but it is

interesting to note that, in a case such as this where the State is a contracting party, the State can effectively relieve itself of any obligations under the contract by the imposition of "future rules, regulations, orders, laws or proclamations." The State can thus create a force majeure situation through its own action, and if the effect of force majeure is to require suspension of the State's performance under the contract, the State incurs no liability by reason of nonperformance to the buyers. Conversely, if the State, by future rule, regulation, order, law or proclamation makes it impossible for the buyers to perform, the buyers have no liability for nonperformance to the State.

Section 10 makes the contract subject to all present and future valid laws and valid regulations of the United States, the State of Alaska or any duly constituted agency thereof. This is a standard provision.

Section 11 permits assignment of rights under the contract; it is expressly provided that either buyer or seller may assign its rights under the agreement to a security holder without such security holder incurring personal obligation under the contract, and without such security holder being required to qualify to do business in the State of Alaska.

Section 12 is not a standard contractual provision normally encountered in gas contracts. Section 12 provides, in essence, that if a producer of gas, of which the State's in-kind royalty gas is a part, enters into a contract of sale which contains provisions more favorable to the seller than the terms and conditions set forth in Sections 3, 5 and 6 of the "General Terms and Conditions," then the State has the option to include such more favorable terms and conditions within this contract "within 90 days after approval by the Federal Power Commission of said working interest owner's contract for the sale of its gas." The limitation of the State's right to move to more favorable terms is, as noted, limited to changes in the sections of the State's contract dealing with metering, measurement, and billing, and since these provisions are fairly well standard, it is doubtful that Section 12 will be of consequence. It should also be noted that if deregulation of new gas occurs, and if Prudhoe Bay gas is included within the definition of new gas so that the producer sales of that gas never become subject to FPC review, then Section 12 becomes meaningless inasmuch as the State would never have a matured right to demand favorable changes in Sections 3, 5 and 6.

Section 13 contains miscellaneous provisons to aid in the interpretation and application of the contract. The provisions of Section 13 are not remarkable.

B. "Royalty Gas Sales Agreement"

Three separate "Royalty Gas Sales Agreements" have been negotiated, but all are identical in terms, with the exception that Tenneco Alaskan, Inc. is the buyer of 50 percent of the State's royalty gas covered by the total sales transaction, Southern Natural Gas Company is the buyer of 25 percent, and El Paso Natural Gas Company is the buyer of 25 percent. Since all contracts are identical, the following summary of the provisions of the El Paso contract will apply to the others also.

Article I sets forth the mutual promises of buyer and seller each to support actively and seek before appropriate authorities the ultimate selection and implementation of a trans-Alaska gas pipeline system. For purposes of this article, "pipeline" means a large diameter gas pipeline commencing at Prudhoe Bay, crossing Alaska in approximately the same route as the present trans-Alaska pipeline system oil pipeline, and terminating in the Prince William Sound area.

Article II, denominated "seller's royalty gas," covers several matters: Section 2.1 sets forth the State's warranty of

its right to take royalty gas in kind, and its royalty share as being 12-1/2 percent. The leases identified in Exhibit A to the agreement set forth the specific acreage and royalty shares covered by the contract. If the State is prevented by federal action from taking its gas in kind, the gas sales agreement shall be void. [It should be here noted that Exhibit A was not furnished to me for review; I have assumed it to be no more than a listing and description of those State leases from which royalty gas will be sold under this contract.]

Section 2.2 provides that in addition to the sales price provided for elsewhere in the contract, the State will be reimbursed for the State's pro rata share of costs attributable to "the preparation and transportation of gas to be delivered hereunder." These costs are identified as being those costs which the State may incur as a result of its election to take its gas in kind, and which costs would not have been incurred if the State had not elected to take the royalty gas in kind.

Section 2.3 provides, however, that if the buyer is not able to include within its jurisdictional cost of service as determined by the Federal Power Commission, the cost reimbursement provided for in Section 2.2, then the buyer may terminate the gas sales agreement six months after giving notice of termination. If the

right of termination is exercised, the buyer must nonetheless reimburse the State for those costs identified in Section 2.2 which become due and payable by the State prior to termination.

Article III governs the quantity of gas to be sold under the sales agreement. The structure of this article is as follows:

Section 3.1 establishes the State's agreement to sell 25 percent of seller's royalty gas available at the prescribed delivery points. (The Southern contract also calls for 25 percent of seller's royalty gas, while the Tenneco contract calls for 50 percent of the State's royalty gas.)

Section 3.2 establishes the base volume of gas to be sold by the State and purchased by the buyers during the term of the gas sales agreement. For El Paso, the base volume may be less than, but under no condition shall it be in excess of, 650 Bcf. The same base volume applies in the Southern contract, while the Tenneco contract specifies a maximum base volume of 1,300 Bcf.

Sections 3.3 and 3.4 relate to the right of the State to withdraw from the contract certain volumes to meet the present and future needs of the State. The schedule of reductions is as follows:

From date of first delivery through the fifth anniversary thereof, the State has the right to reduce the

quantity of royalty gas otherwise available for sale under Section 3.1 by up to and including 25 percent.

Commencing on the fifth anniversary date of first delivery and continuing through the tenth anniversary date thereof, the State has the right to reduce the quantity of royalty gas available for sale under Section 3.1 by up to and including 50 percent.

Commencing on the tenth anniversary date of first delivery and continuing through the 15th anniversary date thereof, the State has the right to reduce the quantity of royalty gas available for sale under Section 3.1 by up to and including 75 percent.

Commencing on the 15th anniversary date of first delivery and continuing until termination of the agreement, the seller has the right to reduce the quantity of royalty gas available for sale under Section 3.1 by up to and including 100 percent.

Reductions by the State of the quantity of royalty gas available for sale and delivery shall not become effective until after 12 months have elapsed from the date that the State gives written notice to the buyers of its desire to reduce deliveries.

It is further provided that the State may change the percentages set forth above at any time during the term of the gas sales agreement, but such changes cannot become effective prior to the expiration of 24 months following the State's written notice to the buyer of its modification of the percentages.

Section 3.5 limits the State's rights of withdrawal of royalty gas volumes by stating that the rights of the State "shall be for the sole purpose of the State meeting the intrastate domestic and industrial needs of the State of Alaska ...." It will be recalled that the phrase "domestic and industrial needs of the State of Alaska" is specifically defined in the "General Terms and Conditions." The right of the State to withdraw gas from the contract for certain uses is further explained by the following provision in Section 3.5:

> "This provision shall not limit the right to export from the State any products manufactured from said gas."

Section 3.6 requires the State to reduce, pro rata, deliveries to all three purchasing companies in the event that a State decision to withdraw gas from any of the contracts is made.

Section 3.7 has the effect of granting to the buyers an option on State royalty gas other than that produced under the leases identified on Exhibit A to the gas sales agreement. Under

the provisions of 3.7, if the State in fact withdraws royalty gas to meet State needs and if, during the term of this agreement and five years thereafter, the State has additional royalty gas which is surplus to State needs, and which will be transported by a trans-Alaska pipeline, then the State agrees to offer to sell to the buyers under the provisions of this agreement (except as to price and term) such additional and excess royalty gas. The option is granted to the three purchasers ratably. As to such "option gas," the price to be paid is the highest price available to the State for such gas from any other interstate bona fide purchaser; if there are no other such purchasers, the price for such "option gas" will be the price then being paid under the instant gas sales agreement.

Under Section 3.7(b), an additional right of first refusal is granted to the buyers. If royalty gas becomes available to the state which, in the State's sole discretion, is determined to be surplus to the intrastate domestic and industrial needs of the State of Alaska, the buyers under the instant agreement are given a right of first refusal to purchase additional royalty gas from the State to the extent of one-half times the volume that the State's exercise of its rights of withdrawal under Sections 3.3

and 3.4 in fact diminishes the amount of gas the buyer would otherwise have purchased and received under the instant agreement.

Section 3.8 permits the State to take and dispose of its royalty gas produced under the leases identified in Exhibit A at any time after the effective date of the instant agreement and prior to the time of first deliveries hereunder; the State may utilize, market or otherwise dispose of its royalty gas in any manner it choses, at its own expense, so long as such taking or disposition does not prevent the State from making available for sale to the buyers on the date of first deliveries the quantity of gas committed under the contract.

Section 3.9 commits the State to the burden of advising the buyer at the beginning of each calendar year its best estimate of volumes which will be available under the agreement during each calendar year of the next succeeding five calendar years.

Section 3.10 expresses the agreement of buyer and seller to cooperate in minimizing "any charges levied on gas liquefied and transported from Alaska to the contiguous 48 states."

Section 3.11 provides that if the State exercises its rights of withdrawal of gas from the agreement, then the State will reimburse the buyer for a percentage of any then undepreciated investment made by the buyer in any facilities upstream of the

pipeline. The percentage of reimbursement is the percentage that the State's reserved gas is of the total gas which otherwise would have been sold to the buyer under the agreement.

Article IV of the royalty gas sales agreement deals with delivery points and delivery pressures. Section 4.1 provides that the State's royalty gas shall be delivered at the point where the working interest owners of the leases make delivery of gas to their purchaser, or at any other point mutually agreed upon by the buyer and seller under this agreement.

Section 4.2 provides that if the State is required to take delivery of its royalty gas at a point upstream from the delivery point determined under Section 4.1, then the buyer under this agreement is required to accept delivery at the point where the State receives its royalty gas.

In Section 4.3, it is provided that gas sold and delivered by the State under this agreement shall be received by the buyers at the same pressure as the pressure the working interest owners deliver their gas to their purchasers, or at the pressure the State receives its gas from the working interest owners if delivery is made upstream of the specified delivery point.

Section 4.4 reserves to the State the right to receive all liquids removed from the gas prior to its delivery to the

pipeline, whether the liquids are removed before or after delivery of the gas to buyer.

Article V of the royalty gas sales agreement specifies that the gas delivered by the State shall conform to the quality specifications applicable to the gas sold by the working interest owners at the same delivery point.

Article VI of the royalty gas sales agreement is concerned with price. Three alternate methods of determining the sales price are set forth in Sections 6.2, 6.3 and 6.4. Price redetermination rights are set forth in Section 6.5. Irrespective of which section governs the manner of establishing price, the sales price is subject to two important limitations:

Section 6.6 requires that the sales price reflect 1,000 Btu's per cubic foot, and if the heating value of the gas actually delivered is either greater than or less than 1,000 Btu's per cubic foot, then the price will be adjusted upward or downward.

Secondly, and more importantly, Section 6.1 sets forth an absolute upper limit on the price paid to the State. It is there provided that the price paid the State shall never be higher than the price which the buyer is permitted to retain in its jurisdictional

resale rates "so long as such rates are subject to regulation by the Federal Power Commission ...."

The four alternative methods of pricing are as follows:

Section 6.2 provides that if at the time of first delivery of gas, the price of gas purchased under the contract is subject to FPC regulation because of the Commission's authority to regulate resale rates, then the initial price to be paid shall be the highest rate allowed by the Commission to be paid by any interstate gas purchaser to any working interest owner in the leases identified in Exhibit A under contracts where at least 50 Bcf of gas are sold. Thereafter, the price to be paid would change in accordance with the applicable and governing portions of the rules and regulations of the Federal Power Commission. In the event any producer sells gas from the leases identified in Exhibit A at a price higher than the generally applicable FPC ceiling rates, through utilization of FPC special pricing procedures, then the State sales price would escalate to that higher price. In no instance will the State receive less than the price paid producers for their gas from the same reservoir for same or similar sales in interstate commerce.

Section 6.3 provides that if at the time of first deliveries of gas under the agreement the price of gas sold from the leases

identified in Exhibit A is not regulated by the FPC, then the initial price for gas delivered under the agreement shall be the highest price being paid by any interstate gas purchaser for gas under contracts of at least 50 Bcf and produced from the leases identified in Exhibit A.

Section 6.4 deals with the eventuality of deregulation at the federal level; if the FPC ceases to exercise jurisdiction over interstate sales for resale after having once commenced jurisdiction, and if deregulation is in such form that it prevents the FPC from excluding the price the buyer pays under this agreement from its cost of service, then the State may elect, by the giving of written notice, to call for redetermination of the sales price as permitted in Section 6.5.

Section 6.5 sets forth redetermination rights of both buyer and seller. Each party has the option to cause the price being paid for gas sold under the agreement to be redetermined every 12 months, such redetermination to be effective on the anniversary of such redetermination. If either party requests redetermination, the parties shall attempt to agree on a new price, and in doing so shall observe the following: The redetermined price shall be the higher of (1) the highest price being paid for gas sold in interstate commerce from Prudhoe Bay of Alaska under a

contract selling at least 50 Bcf of gas executed in the previous 12 months, or (2) the highest price being paid under a renegotiation or redetermination clause of any contract for gas sold in interstate commerce from the North Slope covering the sale of at least 50 Bcf of gas. If there are no comparable contracts executed in this one year period, or no contracts under which the price has been renegotiated or redetermined, then the parties are to attempt to agree to a new price, but failing this, the matter will be submitted to arbitration as provided in Article VII of the royalty gas sales agreement. In no event shall the redetermined price be less than the price being paid to the State immediately preceding the initial redetermination.

Article VII of the royalty gas sales agreement covers arbitration procedures. Any dispute arising under the agreement can be settled by arbitration if either party requests arbitration. Normal arbitration procedures are set forth, whereby each party names one arbitrator and the two so named select a third. The action of a majority of the board of arbitrators and their decision on matters submitted to them for adjudication shall be final and binding on the parties.

Article VIII of the agreement specifies that the agreement shall become effective upon execution and approval, and shall

continue for twenty years from the date of first deliveries or until the base volumes of gas set forth in Section 3.2 have been delivered, whichever is earlier. Earlier termination can occur if, for any reason, a decline in production is sustained to the extent that further production of gas would no longer be profitable for the State, or further operation of the transportation facilities would no longer be profitable to the buyer.

Article IX reserves certain rights to the State. The State retains the right to process the gas or have the gas processed before and/or after delivery to buyer for the recovery of liquefiable hydrocarbons other than methane; the State agrees that such processing shall not reduce the heating content of the residue gas below 1,000 Btu's per cubic foot, and the State agrees to reimburse the buyer for all transportation charges, liquefaction charges and regasification charges attributable to volumes removed by processing, including fuel and shrinkage.

Article X of the royalty gas sales agreement specifies the form of notices to be used in those instances where formal notification is required by the agreement.

Article XI specifies certain "conditions precedent." First, the buyer has no obligation to perform any of its undertakings in the agreement, other than its agreement to support the government's

selection of a trans-Alaska pipeline, unless and until all necessary government approvals for building, construction and operation of the pipeline are granted. The only exception here is that any costs incurred by the State by reason of the State's election to take its royalty in kind shall be reimbursed by the buyer as provided in Section 2.2.

Second, if all necessary regulatory approvals have not been issued and accepted by December 31, 1978, either party to the agreement may thereafter terminate the agreement by giving 10 days written notice.

Third, after approval of the agreement by concurrent resolution of a majority of each house of the Alaska State Legislature, the buyer is to proceed with diligence in the filing and prosecution of such pleadings and applications with the FPC as may be required to obtain all necessary rate, tariff and certificate authorizations related to the buyers' obligations under the agreement.

Fourth, it is provided in Section 11.4 that prior to the time that a Federal Power Commission order granting a certificate of public convenience and necessity to the pipeline becomes final and nonappealable, the Governor of the State may give written notice to the buyer of his decision to support a project other than the trans-Alaska pipeline as defined and identified in the

agreement. Such notice is not a default by the State under the agreement, but if the buyer decides not to concur in the Governor's change of position, then the buyer may terminate the agreement in its entirety. If the buyer agrees to support the project designated in the Governor's notice, the new project shall be considered the "pipeline," and the agreement remains in force.

Fifth, the royalty gas sales agreement may be terminated by directive of the Governor and service of notice on the buyer if the Federal Power Commission denies the El Paso-Alaska application in Docket No. CP75-96, or if the Commission grants a certificate of public convenience and necessity to a project or system other than the "pipeline" as defined in the agreement.

Finally, it is stipulated that the agreement shall not take effect until approved by concurrent resolution of a majority of each House of the Alaskan Legislature.

Article XII incorporates the general terms and conditions and Exhibit A into the agreement and makes them a part of the agreement for all purposes.

PLEASE NOTE: THE PRECEDING PAGES WERE TREATED AS A UNIT IN THE ORIGINAL DOCUMENT.

PLEASE NOTE: THE FOLLOWING PAGES WERE TREATED AS A UNIT IN THE ORIGINAL DOCUMENT.

Senate Copy
ARLON R. TUSSING
5352 29TH STREET, NORTHWEST
WASHINGTON, D. C. 20015

May 26, 1976

The Honorable Chancy Croft
President, Alaska State Senate
Juneau, Alaska 99801

Dear Chancy:

The following is a personal account, in response to your request, of my own views on the merits of competing proposals for a transportation system to carry natural gas from Alaska's North Slope to markets in the Lower 48 states.

Over the last year I have devoted considerable attention to proposals for the transportation of natural gas from the North American Arctic to the population and industrial centers of the United States and Canada. During that time I arrived at evaluations of several major issues which were in some respects contradictory to the assumptions on which the major private interests and governmental authorities (U.S., Canadian and Alaskan) were proceeding.

I have of course taken for granted your acquaintance with:

(1) The two principal transportation systems proposed to the Federal Power Commission before May 1975: El Paso-Alaska's "trans-Alaska" pipeline and LNG tanker system, and Arctic Gas' overland pipeline system across Canada which would also carry natural gas from the Mackenzie Delta to Canadian markets;

(2) Foothills Pipeline's proposal for an all-Canadian, "Maple Leaf" pipeline to carry Mackenzie Delta gas;

(3) The principal advantages and disadvantages argued for both proposals;

(4) The rationale for the State of Alaska's endorsement of the El Paso system; and

(5) My own concern with the issue of transportation systems as a consultant to the State of Alaska and to the U.S. Senate Committee on Interior and Insular Affairs, and as a public member of Alaska's Royalty Oil and Gas Development Advisory Board.

I have, as you probably know, no financial stake in any of the proposals, nor have I had any business relationship with any of the systems' sponsors or participants.

From the time they were initially proposed, I have had serious questions about the viability of the transportation systems proposed by both Arctic Gas and El Paso for taking Alaska North Slope natural gas to Lower 48 markets. An investigation I conducted on the economics of the two proposals for a State of Alaska task force in early 1975 raised the possibility that the cost of delivering the gas might actually exceed its value to consumers. [Excerpts from my report are appended to this letter.] Subsequently I have become quite convinced that both projects as proposed by their sponsors are so risky that they could not be privately financed, even if their political and regulatory problems could be overcome -- itself a questionable issue.

Risk Factors

Both projects face the following risks:

(1) Gas supplies: production from the Alaska North Slope (and in the case of the Arctic Gas proposal) from the Mackenzie Delta may be substantially less than the design capactiy of either transportation system, meaning that each unit actually carried would have to bear a larger portion of the system's fixed costs than projected by its sponsors.

(2) Delays and Capital cost overruns: Actual construction costs may exceed estimated costs by substantially more than the effect of general inflation. The Arctic Gas project would use a chilled gas pipeline concept untested in North America, while its route traverses hundreds of miles of difficult Arctic terrain where there has been no previous construction of either pipelines or roads. El Paso proposes a system of unprecedented pipeline pressures and a huge scale-up

of existing LNG technology. New technology, unfamiliar environments and a large scale relative to previous projects are exactly the ingredients for the most spectacular cost overruns. For these reasons I would not be surprised to see the total cost of either project exceed $20 billion, including interest on funds used during construction. [See Appendix 2.]

(3) Market: Both El Paso and Arctic Gas insist that the natural gas shortage in the United States is an absolute one, and that Lower 48 markets will accept North Slope natural gas at any price. Not everyone agrees; the Federal Energy Administration, for example, estimates that no market for Prudhoe Bay gas would exist in 1985 at a "city gate" price exceeding $2.40 per million BTU (in 1975 dollars). The Interior Department's study reaches a similar conclusion. This price could easily be exceeded even without implausibly large cost overruns or shortfalls in gas supplies to the system.

(4) Political, regulatory and other institutional issues: Each project would face serious political and legal obstacles, even after it received a certificate from the Federal Power Commission. Lack of coordination in U.S. and Canadian approvals, for example, could block or delay construction of the Arctic gas system, while there is some chance that resistance in California to port and terminal facilities would jeopardize completion of the El Paso system. The Arctic Gas system is, significantly, opposed by the governments and the preponderance of public opinion in both Alaska and Alberta, and the El Paso system is opposed by the state of California. The major environmentalist organizations are hostile to both projects. Neither they nor various local interest groups are likely to abandon every attempt to obstruct or delay construction simply because one system had been sanctioned by the Federal Power Commission.

Financing Problems

The financial consequences of the risks I have listed are magnified by the fact that neither project can be built in smaller self-sustaining stages. Either would be a large integrated system which could not carry any gas or produce any cash flow until it was completed. All the capital invested ($10 to $20 billion or more) would therefore be exposed to these risk factors for at least the entire planning and construction period.

Private lenders simply will not accept risks of this sort, and neither projects' sponsors are financially large enough to carry them, even if they were willing to do so. They do not in fact seem to be willing, as they both propose tariff conditions which would protect their own profits as well as their debt service obligations against "all events." Only the federal government and/or (perhaps) potential gas consumers are in a position to carry financial risks of the size associated with either of the systems.

Accordingly, El Paso proposes to use federal loan guarantees (under an existing program) for its LNG tankers, and spokesmen for Arctic Gas have suggested that government indemnify the sponsors against cost overruns exceeding 40 percent (nearly certain, in my judgment). But, more importantly, each applicant proposes to rely on "full cost of service all-events tariffs" to cover their debt service obligations and to assure a return on their equity . These tariffs provide, in brief, that consumers be required to pay the debt service and operating costs of the transportation system (plus a profit to the owners) no matter how great these costs are and whether or not the customers receive any gas. Arctic Gas' tariff would begin to run as soon as gas was first delivered; El Paso's would begin 60 months after approval of its project, even if it were never completed.

The proposition that consumers should bear or share in the risks associated with a project which benefits them is not in itself unreasonable, provided that the economic expectations of the project are clearly favorable and the risks of a reasonable magnitude. But with these projects there are good reasons for doubt on both scores. Moreover, even if the Federal Power Commission were to approve all events tariffs, local gas distributors would not sign contracts containing such tariffs unless they were assured in advance by their state regulatory commissions (as well as by their own market analyses) that they would be able to pass these charges through to their own customers. Responses by the state commissions to Federal Power Commission inquiries suggest that there is almost no chance that they would give such advance approval.

These considerations lead inexorably to the conclusion that neither system can be built without either substantial federal financial backing, Federal Power Commission authority to preempt the jurisdiction of state utility commissions over the tariffs of local distributors, or both. No plausible proposals

of either sort have yet been made, either by the applicants or by any of the responsible federal agencies. Moreover, either project would be of questionable economic viability -- even if the question of who will bear the risk were resolved. In addition, there is still a significant possibility that either project could effectively be blocked or delayed indefinitely by legal or political obstructionism by its opponents.

In summary, there seem to be two problems that work together to make questionable the completion of either project as proposed: each of them requires too large an initial capital, and that capital would be exposed to too many large risks. Once these are recognized as the critical problems to be overcome, it is obviously worthwhile to investigate whether there might not be some alternative system (or modification of one of the applicants' systems) which could begin with a smaller investment and perhaps be expanded in stages after gas and income begin to flow, a system with a smaller potential for cost overruns, and one which would have fewer opponents on environmental, developmental or economic nationalist grounds.

Transportation of North Slope Gas as Methanol

As of the beginning of 1976, two proposals, neither of them in the form of applications to the Federal Power Commission, seemed to have some such potential. Firstly, a group of firms headed by the Westinghouse Oceanic Division have been advocating converting North Slope natural gas within Alaska into fuel grade methanol, which could be blended with motor gasoline, burned in combustion turbines, or used as chemical feedstock. Westinghouse's main interest in this system was in developing submarine tankers to haul the product, and its promotions seemed directed mainly at getting Maritime Administration funds for construction of a prototype tanker. Methanol could, however, also be transported in batches through the Trans-Alaska oil pipeline with conventional technology, and carried to ports elsewhere in the United States by conventional products tankers.

A methanol system would need no fixed transportation system of its own (other than additional storage tanks at both ends of the pipeline) until the oil pipeline reached full capacity, a date that seems to be steadily receding because of construction problems and the lack of transport facilities to move Alaska crude oil beyond the West Coast . Unlike the El Paso

and Arctic gas sytems, which would require all the gas from the main Prudhoe Bay reservoir (at least 2 billion cubic feet per day, and perhaps more) to be even arguably feasible, the least-cost methanol conversion facility would require only 25-150 million cubic feet per day. One to three pilot conversion trains could be installed at an initial risk of perhaps a few hundred million dollars; there would thereafter be plenty of time to be sure of the amount of gas available, conversion and transport technologies, markets and the economics of the system before investment gradually (if ever) reached the many billions of dollars proposed for either of the gas pipeline systems.

Wentworth Brothers has proposed a complex variation on the methanol conversion concept that would use natural gas (including the natural gas liquids and carbon dioxide produced together with the methane, but which would otherwise have to be removed from the gas stream) together with coal to produce fuel grade methanol, which would then serve as the vehicle for a coal slurry. Significantly, however, Wentworth (like Westinghouse) has advanced its concept as a rationale for getting government research and development money, not as an immediately commercial practicality. The methanol concept need not be pursued further here, because if it indeed makes sense, there seems no reason why private enterprise cannot take the initiative and establish a pilot facility, without a guarantee of all the Prudhoe Bay gas, without a Federal Power Commission certificate of public necessity and convenience, and without federal or state financial assistance. [See my testimony for the Alaska Senate State Affairs Committee, which is appended to this letter.]

The Alaska Highway Route

The second system which seemed to have a possibility of meeting some of the criteria mentioned above would be an overland natural gas pipeline along the general route of the Trans-Alaska oil pipeline to Fairbanks, and along the general route of the Alaska Highway into Northern British Columbia or Alberta. Such a route has been suggested as an alternative for the Arctic Gas system by various parties, including the FPC environmental staff. Simply as a variant to the Arctic Gas proposal, adoption of the Alaska highway route would result in higher costs, because it would require an additional separate pipeline leg to serve the Mackenzie Delta gas reserves, its length depending upon whether it came

(1) Southwesterly into the Yukon along the Dempster Highway, (2) South into Alberta as proposed by the Foothills group, or (3) Westward across the Arctic Slope to Prudhoe Bay.

Use of the Alaska highway routing would at first seem to have only two advantages over the system proposed by Arctic Gas: (1) a reduction of the likelihood of major cost overruns because the new system would follow existing transportation corridors, where construction conditions are less extreme and better known, and (2) less intense environmentalist oppostion because the alternate route has far fewer river crossings and would not invade the Arctic Wildlife Range.

Coupled with two other changes relative to the Arctic Gas proposal, however, an Alaska highway system would appear to be considerably cheaper in initial capital outlay, and still competitive or even superior in terms of expected transportation tariffs for Prudhoe Bay gas. The first of these two variations is to use, as much as is practical, conventional technology and existing transportation facilities in the United States and Canada. The second is to postpone construction of a transportation system to serve the Mackenzie reserves.

Maximum Use of Existing Facilities

Arctic Gas originally proposed to build an entirely new trunkline system extending from Prudhoe Bay through the Mackenzie Delta into California on the West and Pennsylvania on the East. The Interior Department, among others, criticized this proposal for unnecessarily duplicating hundreds of miles of existing pipelines. As a result, the applicants have made some reductions in the scope of their proposal in the Lower 48, but there still appear to be significant opportunities for reducing first costs by using existing facilities, both in the United States and Canada.

The system with the lowest initial capital costs seems to be one which would tie into (1) the Westcoast Transmission system in Northern British Columbia and thence the Northwest Pipeline system for transportation of part of the gas to Western United States markets, and (2) the Alberta Gas Trunkline (AGTL) system and the Trans-Canada pipeline to the Great Lakes pipeline and other connections in the mid-western and eastern United States. These facilities would of course require some expansion and elimination of bottle-necks.

The Mackenzie Connection

The second departure from the general strategy of Arctic Gas concerns postponing a pipeline connection to the Mackenzie Delta and Canadian Beaufort Sea areas. If the reserves in this region were large enough to support half the total design capacity of the Arctic Gas pipeline, and if there were a Canadian or authorized export market for this much additional gas, the least expensive way of moving the Canadian gas would probably be to route the pipeline from Prudhoe Bay through the Mackenzie Delta and to provide sufficient capacity at the outset to carry the gas from both sources, in other words to adopt Arctic Gas' strategy.

But presently proved Mackenzie reserves fall far short of the Arctic Gas system's Canadian design capacity (2.24 billion cubic feet per day); the Interior Department estimates that proved and probable reserves in that area will support production of at most .9 to 1.1 billion cubic feet per day. At the same time, anticipated Canadian demand, plus existing contractual commitments to United States consumers, can be met for at least the next ten years from existing and anticipated reserves in the Western Provinces. On the other hand, even if there were enough Mackenzie gas to fill the pipeline, it would likely not be enough to induce the Canadian authorities to increase exports to the United States beyond those existing contractual commitments. All these propositions are conjectures, but the fact is that there is a good likelihood that a Mackenzie gas pipeline -- or at least a substantial part of its design capacity -- would be economically superfluous for many years after Prudhoe Bay gas began to flow. If this is the case, as seems probable, the Arctic Gas strategy is actually less economical than building a pipeline to carry exclusively Prudhoe Bay gas, by the least problematical route, and then to build a separate link later to connect the Mackenzie, when and if reserves and markets clearly indicate that it is justified.

At the beginning of this year these notions were only abstract possibilities because of the lack of any serious corporate interest in them. As one of the original participants in the Arctic Gas study groups, however, AGTL had advocated using existing pipeline facilities, including its own, to carry Alaska gas. The decision of Arctic gas to build a separate, competing trunk line was one of the reasons AGTL left the study group and (with Westcoast)

established the Foothills Pipeline Company to promote an all-Canadian "Maple Leaf" project for the Mackenzie Valley.

An inquiry in connection with the U.S. Senate hearings to Robert Blair, President of AGTL, about the probable costs of using existing Canadian transportation facilities was apparently one factor encouraging the Foothills group to appear at those hearings and at hearings of a committee of the Alaska legislature, where they set out their own rationale for a pipeline along the Alaska Highway route, which would maximize the use of existing Canadian pipeline facilities.

About the same time, some of the major environmental organizations began to explore the potentials of the Alaska Highway route, which they (along with the Federal Power Commission's environmental staff) regarded as far superior to either Arctic Gas' or El Paso's proposals, and a representative of one of the Midwestern governors started making similar inquiries. Similar but isolated interest began to appear on the part of business groups in Fairbanks and Yukon Territory, Provincial officials in Eastern Canada and gas utilities on both coasts. This alternative seemed to have a great deal of latent support. It lacked corporate sponsorship, however, and as late as March of this year it was not clear (1) that there was any way a third alternative could be seriously considered by the Federal Power Commission and Canada's National Energy Board, or (2) that Canadian authorities would consider approving any system principally designed to serve United States needs which did not result in an early connection of the Mackenzie reserves to Canadian Markets.

Procedural Feasibility of the Alaska Highway Alternative

Each of these doubts can be resolved, at least in part. The Foothills group (AGTL and Westcoast) is prepared to undertake construction and operation of the Canadian portion of the system. Northwest Pipeline, brought into the project by the Canadian companies, has announced its intention to apply to the Federal Power Commission by

July 9 for a certificate to build and operate the Alaska portion of the system, and is negotiating with other pipeline companies who might participate.*

It appears that both the Federal Power Commission and the National Energy Board can (and there are grounds for believing they must), consider a new application competitively. It is not clear whether addition of a third applicant in either case would necessarily mean a great delay in arriving at a decision. FPC Chairman Dunham estimates only a one to two month delay if Northwest files an application and all parties "cooperate."

Since a gas pipeline along the Alaska Highway route would traverse an established utility corridor and would not carry natural gas of Canadian origin, application to build such a pipeline apparently would not invoke Canada'a elaborate Guidelines for Northern Pipelines, but could be treated as an expansion of Westcoast's existing system. The route has, moreover, already been thoroughly considered by the Berger Commission, which is investigating the implications of northern pipelines for the environment, Native welfare, and development of the Territories.

In the United States, procedural legislation will probably be approved which would much reduce the likelihood of administrative, regulatory or judicial delays arising from either two or three competing applications. Even if

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*Perhaps it is not too heretical to suggest that Northwest's natural partners in this venture seem to be El Paso and Tenneco. Northwest's application significantly weakens both the rationale and the potential base for El Paso's own LNG proposal, yet the Northwest system is the logical route for delivering gas overland into El Paso's market area. Much of El Paso's engineering effort North of Fairbanks, moreover, could be transferred to the system proposed by Northwest.

Tennessee Gas Pipeline Company is not a sponsor of either the El Paso or the Arctic Gas application, but has been negotiating for Alaska's royalty gas on the basis of support for the El Paso proposal. Tennessee, however, now exports natural gas into the Trans-Canada system, and this connection may be a logical basis for serving its own market area with North Slope gas by displacement. Tenneco, moreover, is a participant in the Polar Pipeline project to deliver gas from the Canadian Arctic islands, a project which might benefit substantially from a delay in development of Mackenzie Delta reserves.

Northwest Pipeline had not decided to file an application, the legislation would be likely to require the Federal Power Commission and the President to consider all reasonable alternatives, which would clearly include the Alaska Highway route and maximum utilization of existing facilities.

What's in it for Canada?

The probable reception by Canadian authorities has been in my opinion the most difficult issue to judge. A major appeal of the Arctic Gas proposal is purportedly its early (if not necessarily more economical) attachment of the Mackenzie reserves. Without this feature, it may be asked, what is the advantage to Canada of accommodating the United States in moving Alaska gas?

The attachment of the Mackenzie reserves is, on the other hand, also a disadvantage of the Arctic Gas system, from one Canadian standpoint. There is no particular reason why Canada should not accommodate the United States with a transit line across Canadian territory; after all, a substantial portion of Canada's oil and gas supplies transits the United States. There would seem to be little objection in Canada on nationalistic grounds to American gas moving in either an American or a Canadian-owned pipeline across Canada. The Mackenzie project, however, raises the issue of an American-dominated consortium developing an important frontier area of Canada. The fact that an early Mackenzie connection is being justified in the United States by the (doubtful) proposition that it would lead to greater Canadian exports to the United States aggravates its potential difficulties in Canada. Both the timetable and logistics would be dictated by the convenience of the American interests. The Native claims and environmental complications of this route are also well known.

More importantly, however, a decision today in favor of immediate development of the Mackenzie Delta -- Beaufort Sea region can be seen to prejudice whether that region or the Arctic Islands (where recent exploration seems to have been more successful) shall be developed first. Canada does not have an urgent internal need for gas production from either area, and development of either one could strain the capacity of domestic capital markets. Simultaneous

construction of the two pipelines under Canadian majority ownership is almost out of the question. It is not obvious which of these considerations is likely to be dominant in the eventual decision by the National Energy Board and the Cabinet, and it is possible to get contradictory opinions from key people in the decision process in Canada. The issue is clearly a blind-men-and-elephant situation; there is no person who can make an authoritative statement at this time.

On balance, however, my best informants in Canada indicate that there is a high-level commitment to a cooperative project with the United States concerning Alaska gas; absent a credible third application, this means that the Arctic Gas proposal will be approved. The Maple Leaf project is not a serious contender at this time.

A decision in favor of Arctic Gas would, however, be a reluctant one and would be opposed from many quarters within the Canadian federal government, by several provinces and by a large body of Canadian opinion. These objections rest on a broad range of environmental, economic, nationalistic and Native claims considerations, and most decisively perhaps on the fact that approval of Arctic Gas would effectively preclude or postpone for many years the Polar alternative. For these reasons, my own tentative judgment is that the Canadian government will -- once it has had an opportunity to consider the alternative -- welcome the opportunity to avoid an early decision one way or another regarding the Mackenzie.

The State of Alaska and the El Paso Proposal

Some of the concerns that led the Alaska state government and the bulk of the state's business and political communities to support the El Paso proposal were set out in detail in my 1975 report to the State Task Force, which provided part of the rationale for the Governor's endorsement of El Paso's application before the Federal Power Commission. The main theme of that report was that the cost of moving North Slope gas to the Lower 48 by either proposed system would be so great that the wellhead value of the gas would be very low -- if it was indeed high enough to justify investment in developing the field. As a result, the State's royalty and severance tax revenues from sale

of the gas in interstate commerce would be negligible compared with the contributions a Trans-Alaska pipeline might make to the Sate's economy through, for example, (1) the payrolls, profits and tax collections from pipeline and terminal construction, (2) property and income taxes on the pipeline and terminal when it was operating (3) the availability of natural gas in the Fairbanks area for household and commercial use and at tidewater in Southcentral Alaska, where it might be used as an industrial fuel or feedstock.

The system proposed by Arctic Gas would probably have meant lower average transportation costs to the Lower 48, and therefore, a higher "netback" value at the wellhead. But the effect of this difference on state revenues and economic activity would have been negligible compared to the economic disadvantage of removing the gas from Alaska at its most remote corner, with a minimum of construction activity and resulting capital plant within the state, and the virtual inability of the populated areas of the state to obtain any Prudhoe Bay gas for domestic or industrial use.

The El Paso proposal was remarkable in that -- at least temporarily -- it won the support of both the pro-development interests in Alaska and the environmentalists. For at least two years it has seemed that there was almost complete unanimity in Alaska in support of El Paso's application.

Despite my own role in helping to create this consensus (through the rationale for a Trans-Alaska pipeline, developed in my report to the Task Force), I have not been able to endorse the uncritical and increasingly irrational commitment of State spokesmen to the El Paso application. Firstly, the State has almost certainly been betting on a dead horse. The technical, economic and logistical inferiority of the LNG system from a national standpoint is so overwhelming that Alaska's views or political influence are not likely to carry much weight in the ultimate outcome. Not only is there unanimity in the Midwest and East in favor of a system that would deliver the gas directly into those regions of the United States which face the greatest shortages, but California, the state that would directly receive the LNG, pefers an overland pipeline alternative for economic reasons which seem to me wholly persuasive (and increasingly, it appears, for safety and environmental reasons also).

In view of the growing consternation about the West Coast crude oil "surplus," resulting from the choice of a Trans-Alaska route for the oil pipeline, it seems quite improbable that Congress would compound the imbalance by agreeing to a Trans-Alaska pipeline and LNG tanker system for North Slope natural gas so long as an all-pipeline route is a serious possibility. The imbalance in domestic energy sufficiency between the West Coast and the rest of the United States would of course be further aggravated by any major new oil or gas discoveries in Lower Cook Inlet or the Gulf of Alaska.

To offset the weakness of their economic and logistical arguments from a national standpoint, and their almost non-existent national political base, the supporters of El Paso in Alaska built their case largely on exaggerated and often unreasonable claims about Canadian interests, institutions and intentions. In some cases it seemed as if this rhetoric was deliberately designed to worsen relations between the United Sates and Canada. These claims were advanced, ironically, in support of a company which now imports LNG from Algeria and is presently promoting a project to bring LNG from the Soviet Union.

The case, even from an Alaskan standpoint, for the Trans Alaskan gas pipeline was systematically and increasingly exaggerated, not only by the Anchorage Times and OMAR but by state government spokesmen. Little consideration was given to the possibility that the natural gas available from new discoveries in Southcentral Alaska would exceed any anticipated domestic and industrial demand there, and that El Paso's terminal at Gravina Point was in any case hundreds of miles from the principal gas markets of the state and the logical sites for industrial development in the Cook Inlet-railbelt area. Little attention was given to the fact that the State could make its North Slope royalty gas effectively available in South Central Alaska, by exchange for Cook Inlet gas, even if the Arctic Gas system were built.

Little weight, evidently, was given in the State's strategy to the negative environmental impacts of the additional population growth and the prolonged overheating of Alaska's economy which would result from a second pipeline boom. It was particularly ironic -- and to me disappointing -- that a state Administration which came to office because of public reaction against the excesses of

the oil pipeline boom, and the boomer psychology, should so completely adopt on this issue the outlook of people who vehemently opposed Governor Hammond's election, and who would not support him whatever he did.

By its unconditional support of El Paso, the state gave that company no incentive to accommodate Alaska's interest by, for example, choosing a terminal in Cook Inlet rather than Prince William Sound, or by maximum use of the oil pipeline pad in order to minimize environmental disturbance from the second line. At the same time the State effectively told Arctic Gas -- which was much more likely to prevail ultimately -- that there was no accommodation it could make to the State's interest (like choice of an Alaska Highway route) that would soften the State's position of support for El Paso.

Alaska and the Northwest Pipeline Proposal

Northwest Pipeline, together with Westcoast Transmission and AGTL have this month formally proposed to build a system from Prudhoe Bay along the oil pipeline route to Fairbanks, then following the Alaska Highway to Fort Nelson, British Columbia and Zama Lake, Alberta where the gas would enter existing transmission facilities. These facilities would be expanded where necessary to accommodate the increased volumes. [A description by Northwest is appended to this letter.]

The pipeline concept proposed by Northwest would have several technical and financial advantages over the other two systems. By using a 42 inch pipeline, conventional technology, and a corridor where there has already been highway and/or pipeline construction, for the route segments which require entirely new construction, and by maximum employment of existing facilities, the initial capital cost outlay before any gas or cash could begin to flow might be held to little more than half that anticipated for the Arctic Gas system. The likelihood of large cost overruns, as well, would be much reduced by these features. The system could begin to operate with a flow of as little as a billion cubic feet per day (though I don't see how even this project would be economically viable unless its throughput ultimately reached at least 2 billion). And, in my judgment, the political and regulatory barriers to an Alaska Highway system would be far less formidable than for either of the other two systems.

There is good reason to believe that the announcement by Northwest makes the Alaskan commitment to El Paso obsolete, and that support within the State for that company's proposal may deteriorate rapidly. The Northwest project would avoid most of the environmental objections to the Arctic Gas system; it also makes gas available in the Fairbanks area and involves almost as much pipeline construction within Alaska as would the El Paso system. Because it does not involve an LNG terminal, however, the peak impact of the boom resulting from building an Alaska Highway system would be substantially smaller. This outcome can be seen as either better or worse for Alaska.

According to preliminary estimates from the University of Alaska's Man in the Arctic program, construction of the Arctic Gas system would add $19 million to the State's gross product and three thousand persons to the State's population in the peak year of construction. The El Paso system would increase gross product by $235 million and population by 24 thousand while the Alaska Highway system would increase Alaska gross product by $111 million and population by 15 thousand. These calculations do not take account of the fact that Haines and Skagway would undoubtedly be major ports of entry for materials and equipment destined for construction activities in Yukon Territory.

For these reasons, the Northwest proposal seems at the very worst to be a workable compromise that would be acceptable to almost every important Alaskan interest group. The newly proposed system may, however, be more attractive to Alaskans than as just a fallback position or a workable compromise. Northwest Pipeline's approach to the State contrasts sharply with the "take it or leave it" stance of both of the original applicants. Northwest has at least informally suggested that the State take an equity share in the pipeline system and take part in the planning and in its operation from the inside. The company also has approached or plans to approach Alaska-based corporations including the Arctic Slope Regional Corporation and Doyon, Ltd. for participation, and has suggested that a block of shares in the enterprise be offered to the general public in Alaska. The effect of these innovations would be to assure that the system within Alaska would be closely identified with local interests and be responsive to them.

Another initiative proposed by Northwest (to the Royalty Board) includes acquisition of gas reserves in the Cook Inlet area, which could be provided to the State for intrastate use in exchange for state royalty gas exported by Northewst to the Lower 48. Northwest spokesmen have also talked about advance planning for a possible "Phase II" pipeline spur from Fairbanks to the Cook Inlet area. This addition would be built to serve domestic and industrial customers there when and if existing newly discovered reserves in Southcentral Alaska proved inadequate to the area's requirements. None of these concepts is yet a firm commitment, much less a reality, but if the sponsors of the new system actually proceed along these lines they will quickly rally very significant support in the State.

Regional Interests Outside of Alaska

The Alaska Highway pipeline proposal offers significant advantages over the two other proposed systems to a wide variety of regional and sectoral interests outside of Alaska.

(1) For British Columbia, introduction of Prudhoe Bay gas will more fully utilize the existing facilities of Westcoast Transmission, and thereby reduce the cost of British Columbia gas delivered to consumers in the Province. Construction of a pipeline through the Yukon would provide a stimulus to the development of that Territory, and strengthen its links with market and financial centers in British Columbia. The proposal is now being discussed in the Province as a possible justification for extending the British Columbia Railway to Whitehorse and eventually to Fairbanks. For these reasons, the Provincial Government is considering joining in the pipeline project, perhaps as an equity participant.

(2) The system proposed by Northwest Pipeline is by far the most economical method of moving North Slope gas into the Pacific Northwest, and it is for that reason supported by all the gas distributors of the region. In contrast to the Arctic Gas proposal (which is a second-best gas supply alternative for the Northwestern states), construction of an Alaska Highway system would rely mainly on Seattle-Tacoma and other ports in the region as supply and transportation bases. The Alaska Highway route would

probably not make as large a contribution to Port of Seattle activity and revenues as would El Paso's LNG project. The latter is not in my judgment likely to prevail, however, and the Alaska Highway system offers maritime interests in the Northwest the greatest volume of business they are actually likely to obtain from any Alaska gas transportation system.

(3) For California the Alaska Highway system offers a comparatively economic and (because it utilizes conventional technology) reliable source of incremental gas supply. Unlike the El Paso project it would not raise novel safety issues nor would it displace California's present low price gas from the Permian Basin in favor of high price LNG imports from Alaska.

(4) For the United States Midwest and East the Alaska Highway project (like the Arctic Gas project) would provide an assured supply of natural gas directly into the market areas where the shortages are most acute. Because of its smaller risk of construction delays and cost overruns, however, the Alaska Highway system should on balance be preferable. By preserving Canada's option to develop the Arctic Islands and the Polar Pipeline earlier than the Mackenzie Delta and Beaufort Sea, the Alaska Highway proposal may offer a better possibilty of increasing producible and transportable Canadian reserves to such a quantity that the Canadian Government would be willing to consider new export commitments.

(5) The project would be supported by the crucially important Province of Alberta (which now opposes the Arctic Gas application) because it would contribute to the optimum use of Alberta's own gas transmission system, rather than establishing a competing trunkline through the Province. Unlike Arctic Gas, moreover, the new system would not in the immediate future compete with, and require the shutting in of, Alberta gas now dedicated to markets in Eastern Canada.

(6) For Canada as a whole the Alaska Highway proposal would postpone the necessity of deciding when, how and by whom the Mackenzie Delta-Beaufort Sea region was to be developed, and whether that region or the Arctic Islands should take first priority for development among Canadian frontier regions. By reducing the total amount of new

construction and shifting a substantial part of the construction out of Canada and into Alaska, the Alaska Highway system would reduce the stress on Canadian capital and labor markets and on the nation's foreign exchange position.

There cannot help but be some losers. First, of course, are those gas transmission companies whose projects would be turned down and the construction and service firms who hoped to build a bigger system or a different system from the one which is finally approved. There are Exxon, whose affiliate Imperial Oil is part of the Arctic Gas group, and other producers with interests in the Mackenzie, who would be deprived of an early hookup to their Arctic reserves, however superfluous that hookup may be at the present time from the standpoint of Canada's energy economy. Finally there are those who would expect to build and operate the LNG tankers if the El Paso project prevailed, together with those (in the Port of Seattle, for example) who hope for a larger demand for their transportation and other services than an Alaska highway project can generate.

On balance, however, if we take into account the lower front-end cost, the smaller vulnerability to cost overruns and the widely agreed-upon environmental advantages of the Alaska Highway Route, the system proposed by Northwest seems to be the best practical alternative for almost every region in both Canada and the United States. Together with its broad acceptability to Alaskan's these considerations make the Northwest proposal a possible winner. On its merits it now seems to be distinctly superior to both of the other proposals from a national viewpoint, and at least as good as El Paso's proposal from an Alaskan perspective.

For this reason it was a relief that the Administration was not able to complete arrangement during this session of the legislature to sell Alaska's North Slope royalty gas to pipeline companies who promise in return to give

political support for the El Paso project. It is fortunate that the Royalty Board did not have to vote on any such sale and that the legislature did not have to face the issue in its last days. The choices for Alaska have changed radically -- and so have their political implications. I believe that the State's position will have to move soon to reflect these changes.

Very truly yours,

Arlon R. Tussing

cc: Governor Jay Hammond
Speaker Mike Bradner

PLEASE NOTE: THE PRECEDING PAGES WERE TREATED AS A UNIT IN THE ORIGINAL DOCUMENT.

Corp / Delegation

TELEGRAM

RCA ALASKA COMMUNICATIONS, INC.
PHONE: 586-6440
JUNEAU, ALASKA 99801

#

1977 JAN 28 PM 7 25

02036 NL ANCHORAGE ALASKA 51 01-28 0345P AST

EXHIBIT# 11

PMS SEN JOHN RADER

JUN 1296

I URGE PROMPT CONSIDERATION AND APPROVAL OF THE ROYALTY GAS CONTRACTS FACING THE LEGISLATURE

EXPEDITIOUS ACTION ON THE LEGISLATURES PART WOULD ACCURATELY REFLECT THE VAST MAJORITY OF PUBLIC OPINION ON THIS ISSUE IN THE STATE. IT WOULD ADDITIONALLY HELP IN WASHINGTON THE CHANCES FOR APPROVAL OF AN ALL ALASKA GAS PIPELINE.

MIKE GRAVEL USS

AGO 560307

PHONE: 586-6440
JUNEAU, ALASKA 99801

AAX

EXHIBIT # 2

IPMAFUB AHG

1-035734A028 01/28/77

ICS IPMNAWB WSH

SUSPECTED DUPLICATE

09027 GOVT NFWASHINGTON DC 460 01-28 710P EST

PMS HONORABLE JOHN RADER

PRESIDENT 1297

ALASKA STATE SENATE

POUCH V

JUNEAU AK 99811

I APPRECIATE YOUR REQUEST FOR MY VIEWS ON THE PROPOSED CONTRACTS FOR THE SALE OF THE PRUDHOE ROYALTY GAS TO EL PASO, SOUTHERN AND TENNECO.

AS YOU KNOW, LAST YEAR I URGED GOVERNOR HAMMOND TO NEGOTIATE A SALE OF THE ROYALTY GAS FOR SEVERAL REASONS. I FELT THAT A SALE WOULD CLEARLY ASSERT THE STATES RIGHT TO CONTROL THE GAS AND WOULD, THEREFORE, PREVENT DEDICATION OF THE GAS TO INTERSTATE COMMERCE. THAT ARGUMENT IS STILL VALID IN SPITE OF THE AMENDMENT TO PUBLIC LAW 94-586, GIVING ALASKAS GAS SPECIAL

PROTECTIONS. I ALSO ASKED THE GOVERNOR TO SELL THE GAS FOR THE ADDITIONAL HELP SUCH A SALE WOULD BRING TO THE APPROVAL PROCESS IN WASHINGTON. THE ASSISTANCE SOUTHERN AND TENNECO CAN GIVE HAS ALREADY BEEN DEMONSTRATED IN WASHINGTON. THEY HAVE INTERVENED BEFORE THE FEDERAL POWER COMMISSION AND HAVE INITIATED CONTACTS WITH OTHER MEMBERS OF THE HOUSE AND SENATE. ALSO THE SALE REPRESENTS THE FIRST CONCRETE COMMITMENT OF GAS TO EITHER PROJECT AND, THEREFORE, AFFECTS THE ECONOMICS OF THE PROPOSALS.

SOME OF THE SPECIFIC CONTRACT PROVISIONS CAUSE ME SOME CONCERN BUT I FEEL THE CONTRACTS SHOULD BE APPROVED

AGO 560308

TO REJECT THE CONTRACTS NOW WOULD BE A SERIOUS BLOW TO THE ALL-ALASKA LINE. THOSE WHO FAVOR OTHER ROUTES WOULD SEIZE ON FAILURE TO APPROVE AND MAKE MUCH OF IT. THE COMPETITION BETWEEN THE PROPOSALS IS INTENSE AND WILL GROW MORE SO. I THINK THERE IS A GENERAL CONSENSUS IN THE STATE THAT THE ALL-ALASKA LINE IS PREFERABLE. IT WOULD PROVIDE BENEFITS TO MOST AREAS THAT WOULD BENEFIT FROM ANY OTHER LINE AND WOULD BENEFIT OTHER AREAS, AS WELL. THE ECONOMIC IMPACT ON THE STATE AND THE IMPACT ON STATE REVENUES IS GREATER FOR THE ALL-ALASKA LINE. REJECTION OF THESE CONTRACTS COULD STALL EFFORTS TO HAVE THAT LINE APPROVED.

ALSO, THERE IS SIMPLY NOT ENOUGH TIME TO RENEGOTIATE THE CONTRACTS. LAST YEAR THE CONGRESS ADOPTED LEGISLATION SETTING FORTH A TIMETABLE FOR APPROVAL. UNDER THAT LEGISLATION, THE INITIAL DECISION OF THE FPC ADMINISTRATIVE LAW JUDGE WILL BE ANNOUNCED BY FEBRUARY 1ST. THE FINAL COMMISSION DECISION WILL BE REACHED BY MAY. THE PRESIDENT MUST REACH A DECISION BY SEPTEMBER 1ST, ABSENT UNUSUAL CIRCUMSTANCES. THE CONGRESS WOULD THEN HAVE 60 DAYS TO ACT ON THE PRESIDENTS PROPOSAL.

IN VIEW OF THE LENGTH OF TIME THAT WAS REQUIRED TO NEGOTIATE THESE CONTRACTS, I DO NOT FEEL THAT WE CAN AFFORD TO DELAY FINAL APPROVAL OF THE SALE. FURTHER NEGOTIATIONS WOULD RESULT IN NO AGREEMENT UNTIL IT WAS TOO LATE TO BE OF ANY ASSISTANCE.

IN SUM, ALTHOUGH I HAVE CONCERNS ABOUT SOME PROVISIONS, I FAVOR APPROVAL OF THE CONTRACTS. THEY ARE IN THE INTEREST OF THE STATE AND ITS PEOPLE, IN MY OPINION.

PLEASE LET ME KNOW IF I CAN BE OF ANY ASSISTANCE.

TED STEVENS

UNITED STATES SENATOR

AGO 560309

Exhibit #4

DON YOUNG
CONGRESSMAN FOR ALL ALASKA

COMMITTEES:
INTERIOR AND INSULAR AFFAIRS
MERCHANT MARINE AND FISHERIES

Congress of the United States
House of Representatives
Washington, D.C. 20515

WASHINGTON OFFICE
1210 LONGWORTH BUILDING
TELEPHONE 202/225-5765

DISTRICT OFFICES
115 U.S. FEDERAL BUILDING
ANCHORAGE, ALASKA 99501
TELEPHONE 907/279-1537

202 U.S. FEDERAL BUILDING
FAIRBANKS, ALASKA 99701
TELEPHONE 907/456-6949

January 28, 1977

The Honorable John Rader
President, State Senate
Juneau, Alaska

Dear President Rader,

Thank you for your letter of January 13 requesting my views on the approval of the contracts for the sale of the State's royalty gas to Tenneco Alaska, Southern Natural Gas and El Paso Natural Gas. I welcome the opportunity to respond to these agreements and hope they will receive speedy approval by the legislature.

The sale of the State's royalty gas is a unique and highly significant element in the final decision for a route for the transportation of the North Slope natural gas to the lower fortyeight states. The difficult task of gaining first Congressional approval for Section 13(b) of the Alaska Natural Gas Transportation Act and later presidential approval for the Act will only be brought to fruition upon the successful sale of the State's royalty gas. I have reviewed the contracts at some length and would like to comment on several points contained in them.

I am impressed with the straightforward approach of the contracts. An acknowledgement of the State's derires and expectations to the purchasers of the gas will insure a well understood relationship between the parties. The people of Alaska can only benefit from this relationship.

Next, and this should be carefully considered by the Legislature, the price of the State's gas has not been established and will be subject to change by the Federal Power Commissions actions on the price of natural gas in the rest of the nation.

Overall, the protection of the State's interest is impressive throughout the contracts and is the basis for my support for the mechanics of the contracts.

The current natural gas shortages in the lower forty-eight states is firm evidence of the possible reconsideration of the comprehensive deregulation of natural gas by the Federal Power Commission and the Congress. The greater awareness of the Nation's reliance on natural gas as a result of the shortages will only heighten the controversy surrounding the selection of a route for the delivery of North Slope natural gas. Since the announcement of the sale of the State's royalty gas to Tenneco, Southern and El Paso, it has been my view that the deliberations might have been forced off center in favor of the an All-Alaska route with the entry into the lobbying effort of two more established natural gas distribution firms. With the addition of Tenneco and Southern, both of which distribute natural gas to the Southern United States, key members of the House and Senate can be convinced of the favorable aspects of the All-Alaska route and the direct benefits to their constituents. Greater National interest in the North Slope gas question can only improve the chances for the selection of an All-Alaska route.

It is imperative that this effort not be jeopardized by lengthy discussions of the Legislature over the approval of these contracts. This is not to suggest that the Legislature should fail to carefully consider the proposed contracts. I would hope that upon examination of the contracts the Senate Special Royalty Gas Review Committee will conclude as I have that the sale should be approved and the Legislature will follow suit. If the joint efforts of the Congressional Delegation, the State and the people of Alaska are to meet with success, the existing momentum generated from the sale of the royalty gas should be allowed to continue.

One last point is of some importance to your consideration of the royalty gas sale. As you know, last Friday a gas treaty was signed between Canada and the United States. It is my hope that the U.S. will continue its good relations with Canada in this regard but one shouldn't reach false conclusions from the type of diplomatic exchange which is a part of our ongoing relationship with Canada. For example, the recent treaty which was signed by low-ranking officials of the State Department does not resolve critical questions which must be addressed should an overland pipeline be built through Canada. The questions of expanding the capacity of the line; the protection of U.S. equity in the line; the rate base; the Canadian native land claims; etc. have not been answered.

The two issues which we touched on in the treaty, the non-intervening of through-put and the non-discrimination of taxation are questions which in the long run will have to be answered by the Provinces and not by the U.S. All in all, the greatest obstacle to a Canadian pipeline is Canada and it is my hope that the Legislature will approve the contracts so that we can get on with it down here in Washington, and let the Canadians haggle among themselves.

Thank you for the opportunity to express my views on this important issue. I look forward to continuing my efforts to gain approval of an All-Alaska route for the natural gas line.

Sincerely,

Don Young

DON YOUNG
Congressman For All Alaska

ex. 125

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DONALD V. MOOREHEAD, CHIEF MINORITY COUNSEL

United States Senate

COMMITTEE ON FINANCE
WASHINGTON, D.C. 20510

Honorable John Rader
Alaska State Senate
Pouch V
Juneau, Alaska 99811

Dear John:

Thank you for writing me on January 13 to solicit my views on (1) the proposed contracts for sale of Alaska State's royalty natural gas from the Prudhoe Bay field to Tenneco Alaska, Inc., El Paso Natural Gas Company and Southern Natural Gas Company, and (2) Senate Concurrent Resolutions Nos. 3-5, to approve these sales.

I find the contracts attractive in that they require the buyers to support a trans-Alaska route for a natural gas line from Prudhoe Bay, thereby building into the contract a strong incentive to work hard for such a line. In the event, however, than any other route is chosen and certified for gas from Prudhoe Bay, the Governor may terminate the contracts.

Furthermore, the provision whereby the State has the right to take back whatever gas it needs for in-State use is of obvious merit. This provision, I understand, includes the exchange of Prudhoe Bay gas for gas located elsewhere in Alaska if the exchanged gas is used in Alaska.

Commissioner Martin assures me that although the price provision in the contract is complex, the basic principle behind the term is simple: under all "reasonably foreseeable circumstances" the State will receive the highest price being paid for gas from the same reservoir and never less than would have been received had the State taken its royalty-in-value.

It also is possible under the contracts for the State, should the situation ever arise where it is advisable, to switch its position on the gas line route. If this occurred, the buyer may either terminate the contract or shift its support to the new route supported by the State.

The contracts clearly recognize the Legislature's authority to approve or disapprove, as provided for in AS 38.06. The review and approval by the Legislature are both necessary and desirable actions.

Lastly, these contracts would see Alaskan gas potentially reaching consumers in 42 of the lower 48 states, since the three purchasers combined have markets in 42 states. This major concern, that Alaska's gas abundance reach as much of the rest of the United States as possible, cannot be overstated with my colleagues in the Congress.

I concur wholeheartedly in these contracts and in the Senate Concurrent Resolutions Nos. 3-5 and add my support to them all.

Thank you for the opportunity to express my views to you as Chairman of the Alaska Senate Special Royalty Gas Review Committee.

Sincerely,

Mike Gravel

cc: Honorable Clark Gruening
Chairman, House Special Committee
on Sale of Royalty Gas
Pouch V
Juneau, Alaska 99811

Exhibit #36

February 7, 1977

Senator John Rader
Representative Clark Gruening
Joint Gas Pipeline Committee
State Capitol, Pouch V
Juneau, Alaska 99801

Gentlemen:

I think serious consideration should be given to a "fallback" position by the state prior to ratification of the state's royalty gas sale contracts. The contracts are well-bargained, and at one point last year, might have significantly furthered Alaska's chances for an all-Alaska line. That time has passed.

The only reason for the sale is political support. It is too late to mount any significant campaign to effect the eventual gas-line decision in my estimation. The train has already left the station.

After this winter, the gas-hungry Mid-West would never allow this major project to end up anywhere than their own backyards. No amount of convincing could prove that North Slope gas can be delivered to the Mid-West any more economically than a direct pipeline. El Paso can deliver gas to California competitively - but not the Mid-West.

So the options remaining are Gas Arctic or Northwest - barring a Canadian veto. I suggest attention be paid to: 1) trading Alaskan royalty gas for gas liquids; 2) passing legislation barring the gas liquids from leaving Alaska unprocessed; 3) attempting to gain industry support for either running a small diameter liquids line to Fairbanks, or processing the liquids on the North Slope.

Reasoning: 1) Gas could go to Mid-West where it is desperately needed, with Alaska's full support;
2) Alaska would profit from liquids: a) they could be most efficiently distributed to Alaska's sparse and scattered population as a heating/energy source; b) they are the building-block of several petrochemical applications that could support Alaska's industrial and employment needs.

I think it is time to reassess the state's position to a more realistic one, and seek maximum benefit from that.

Thank you for hearing me.

Sincerely,

Eric Eckholm
1028 East 11th Avenue
Anchorage, Alaska 99501

cc: Gregg Erickson
Guy Martin
Bob LeResche
John Greely

EE/kb

113077

Exhibit #3

EFFECT OF ALASKA'S ROYALTY GAS ON NATURAL GAS SUPPLY:

TENNECO MARKET AREA (25 states)

Prudhoe Bay natural gas production rate is assumed to be
2.0 Bcf/day

Yearly Prudhoe Bay natural gas production 730 Bcf.

Royalty Share of Prudhoe Bay production = 1/8 of 730 Bcf = 91.25 Bcf/Year.

Tenneco Share of Royalty Gas = 50 % of 91.25 Bcf = 45.625 Bcf/year.

Tenneco Summary of Operating Data (from "Tenneco Statistics 1975")

Volume of Gas sold and transported: 1,634 Bcf
Volume of Gas purchased: 1,459 Bcf

Tenneco's share of 25-state gas market:
1,284 Bcf
9.9 %

Tenneco's share of royalty gas as a per cent of Tenneco's share of 25-state gas market:

(45.625 Bcf/year / 1,284 Bcf/year) = 3.55 %

Tenneco's share of royalty gas as a per cent of total 25-state gas consumption:

(45.625 Bcf/year / 12,879 Bcf/year) = 0.35 %

Total U.S. Consumption of Natural Gas in 1975 (rounded): 19,000 Bcf

Yearly Royalty Gas Production as a percent of total U.S. Consumption:

(91.25 Bcf/year / 19,000 Bcf/year) = 0.48 %

Yearly Prudhoe Bay gas production as a percent of total U.S. Consumption:

(730 Bcf/year / 19,000 Bcf/year) =3.84 %

Note: Above calculations do not take into account shrinkage of natural gas through transportation (e.g. 6% loss in liquefication and deliquification).

TABLE I

EFFECT OF ALASKA'S ROYALTY GAS ON NATURAL GAS SUPPLY:
TENNECO MARKET AREA

STATE	1975 Consumption (Bcf)	Tenneco % Share of Market	Tenneco Share of Market (Bcf)**	Tenneco Royalty Gas Share of Market (%)**
*Alabama	260	10	26	.36
Arkansas	270	<1	<2	<.03
Connecticut	64	46	29	1.63
Illinois	1130	16	181	.57
Indiana	488	<1	<4	<.03
Kentucky	208	13	27	.46
Louisiana	1376	<1	<13	<.03
Maine	2	91	2	3.23
Maryland	147	20	29	.71
Massachusetts	153	53	81	1.88
Michigan	902	6	54	.21
Minnesota	318	2	6	.07
*Mississippi	208	4	9	.14
N. Hampshire	8	72	6	2.55
New Jersey	279	6	17	.21
New York	571	27	154	.96
No. Dakota	26	21	5	.75
Ohio	951	21	200	.75
Pennsylvania	698	27	188	.96
Rhode Island	22	23	5	.82
*Tennessee	255	39	99	1.39
*Texas	3911	<1	<39	<.03
Virginia	123	20	25	.71
W. Virginia	172	19	33	.68
Wisconsin	367	14	51	.50
TOTAL 25 STATES	12,879	9.9	1284	.35

AGO 560318

Notes to Table I:

* indicates state will receive additional royalty gas supplies from Southern Natural Gas:

Alabama receives 66% of supply from Southern
Mississippi receives 13% of supply from Southern
Tennessee receives 8 % of supply from Southern

** Tenneco share of market expressed in Bcf was calculated by multiplying each state's 1975 consumption by Tenneco's percentage share of market (Source of these figures was Table II from "Why Tenneco", published by Tenneco). Minor inaccuracies may have occurred due to rounding.

*** Figures for Tenneco Royalty Gas share of market assume equal distribution among states by relative share of consumption.

Tenneco was chosen as an example of the impact of royalty gas commitment because original data was readily accessible. Figures for 1976 consumption among the states served by Southern Natural Gas indicate similar results. El Paso service area figures were not available.

The calculations indicate that the addition of Alaska's royalty gas to U.S. supply will increase total U.S. supply by less than 1/2 of one percent.

Prepared for House Special Committee on the Sale of Royalty Gas

TENNECO'S INTERSTATE NATURAL GAS PIPELINES

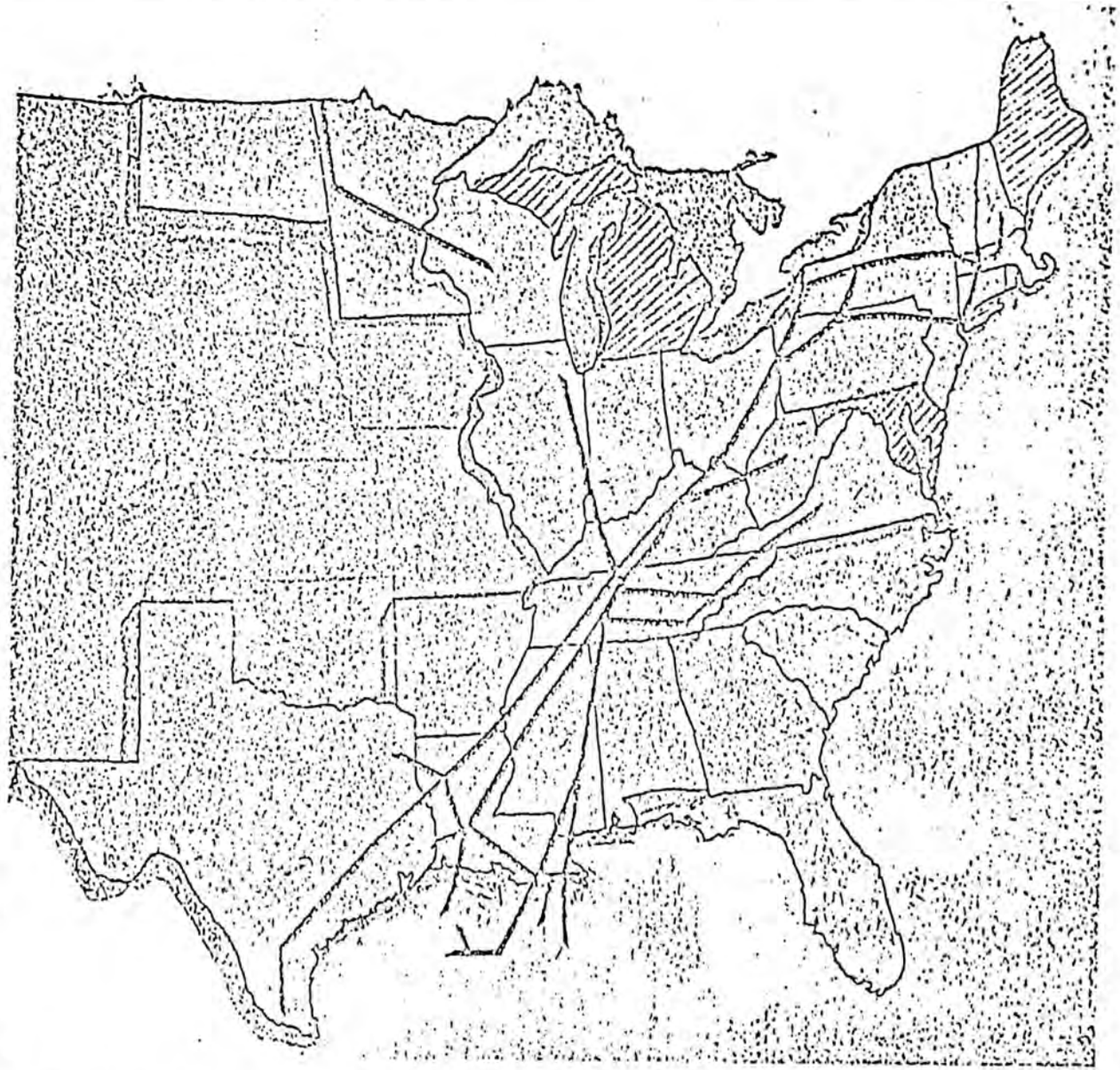
MARKET AREA

AGD 560320

Market Impact

State	1975[1] Natural Gas Consumption (Bcf)	Tenneco's Share of Total State Gas Market	Population[1]
Alabama	260	10%	3,577,000
Arkansas	270	<1	2,062,000
Connecticut	64	46	3,038,000
Illinois	1,130	16	11,131,000
Indiana	468	<1	5,330,000
Kentucky	208	13	3,357,000
Louisiana[3]	1,376	<1	3,764,000
Maine[2]	2	91	1,047,000
Maryland[2]	147	20	4,094,000
Massachusetts	153	53	5,800,000
Michigan[2]	902	6	9,098,000
Minnesota	318	2	3,917,000
Mississippi	208	4	2,324,000
New Hampshire	8	72	805,000
New Jersey	279	6	7,330,000
New York	571	27	18,111,000
North Dakota	26	21	637,000
Ohio	951	21	10,737,000
Pennsylvania	698	27	11,835,000
Rhode Island	22	23	937,000
Tennessee	225	39	4,129,000
Texas[3]	3,911	<1	12,050,000
Virginia	123	20	4,908,000
West Virginia	172	19	1,791,000
Wisconsin	367	14	4,566,000
TOTAL	12,879		136,428,000
% of United States	66%		65%

[1] Gas consumption based on Gas Requirements Committee, September, 1976 Report. Population data based on 1975 Statistical Abstract of the United States.
[2] Served indirectly through another wholesaler.
[3] Louisiana provides 75% of Tenneco's gas. Texas provides 16%.



Source: "Why Tenneco" published by Tenneco
1976

29

FEDERAL POWER COMMISSION

NEWS RELEASE WASHINGTON, D.C. 20426

IMMEDIATE RELEASE
February 1, 1977
El Paso Alaska Company, et al.
Docket No. CP75-96, et al.

No. 22869
(accompanies FPC
Release No. 22868)

ALASKAN NATURAL GAS FACT SHEET

This Federal Power Commission prodeeding involves three competing projects proposing significantly different approaches to delivering natural gas from the Prudhoe Bay Area of Alaska's North Slope to markets in the lower 48 states. The 200-square mile Prudhoe Bay Field is estimated to contain 22.5 trillion cubic feet in proven reserves of natural gas.

The FPC is to make a recommendation to the President on the selection of a transporation route for the gas by May 1, 1977, under the Alaska Natural Gas Transportation Act of 1976 (Public Law No. 94-586), passed by Congress October 1, 1976, and signed into law by the President October 22.

The three projects pending before the Commission are:

© Alaskan Arctic Gas Pipeline Company (CP74-239, et al.) -- This project involves the construction of about 3,300 miles of new pipeline and 875 miles of looped (connected and parallel to existing lines) pipeline. The pipeline, ranging in diameter from 30 to 48 inches, would pick up United States reserves in Prudhoe Bay, Alaska, and Canadian reserves in the Mackenzie Delta, Northwest Territories, and proceed to Caroline Junction, Alberta, where the system would divide, with one leg extending into the Pacific Northwest down to California, and the other crossing the U.S. border into Montana and southeast into Illinois. Gas would move to eastern markets by displacement. This project includes transmission facilities proposed by several other Canadian and American companies -- Canadian Arctic Gas Pipeline Limited, Alberta Natural Gas Company Limited, Pacific Gas Transmission Company, Pacific Gas and Electric Company, and Northern Border Pipeline Company.

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The project facilities are designed to initially transport 2.25 billion cubic feet of gas daily to U. S. markets and will cost an estimated $5.9 billion (based on filed July 1975 estimates of gas allocated to U.S. markets).

© El Paso Alaska Company (CP75-96) -- This company would build an 809-mile 42-inch pipeline from Prudhoe Bay along the Alyeska oil pipeline corridor to a liquefaction facility at Point Gravina on the south coast of Alaska. The liquefied natural gas would be transported across water by a fleet of 11 cryogenic tankers 1,900 nautical miles to Point Conception, California, where it would be regasified. Gas would flow to midwest and east markets by displacement. The project is estimated to cost $6.54 billion (based on July 1975 estimates) and would be capable of delivering an estimated 2.4 billion cubic feet of gas per day.

© Alcan Pipeline Company (CP76-433) and Northwest Pipeline Corporation, along with several Canadian companies (Foothills Pipe Lines Ltd., Westcoast Transmission Company Limited, Alberta Gas Trunk Line Limited), propose construction of about 3,000 miles of new pipeline and 1,600 miles of looped pipeline (paralleling the other line). The pipeline, ranging in diameter from 30 to 48 inches, would pick up Prudhoe Bay reserves and follow the Alyeska oil pipeline route as far as Delta Junction, Alaska, and from there would parallel the Alcan Highway to a connection with Canadian pipelines in British Columbia and Alberta, where the system would split the gas between western U.S. and midwest U.S. shippers. Gas would also flow to the east by displacement. This system would have a capacity of approximately 2.4 billion cubic feet per day and would deliver gas both into the Pacific Northwest and across a route similar to the Arctic Gas project extending from northeastern Montana into Illinois. The proposed project will cost an estimated $6.28 billion (as filed).

An associated, although independent project, Maple Leaf, will be built to deliver Canadian reserves from the Mackenzie Delta to Southern Canadian markets.

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Chronology

March 21, 1974 - Alaskan Arctic Gas Pipeline Company application filed.

September 24, 1974 - El Paso Alaska Company application filed.

January 23, 1975 - FPC order consolidating both applications (in Docket No. CP75-96, et al.).

April 7, 1975 - Hearings began before FPC Administrative Law Judge Nahum Litt.

November 21, 1975 - FPC staff Draft Environmental Impact Statement issued.

April 7, 1976 - Final Environmental Impact Statement issued.

July 9, 1976 - Alcan Pipeline Company and Northwest Pipeline Corporation application filed.

September 1976 - Supplemental Final Environmental Impact Statement issued.

November 12, 1976 - Hearings concluded. (There were a total of 253 days of hearings resulting in 44,458 pages of transcript together with numerous exhibits.)

December 7, 1976 - Final Position Brief of the Commission Staff issued.

December 14, 1976 - FPC issued Order No. 558 prescribing procedures pursuant to the Alaska Natural Gas Transportation Act of 1976.

February 1, 1977 - Initial decision issued by Judge Litt.

March 1, 1977 - Briefs on exceptions to the Judge's decision to be filed by FPC staff and all parties in the proceeding. (Replies to the exceptions will not be permitted.)

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May 1, 1977 - The Federal Power Commission to make its recommendation to the President.

September 1, 1977 - The President to make his recommendation to Congress. He may postpone his decision until up to December 1, at his discretion.

Sixty days after the President's recommendation, Congress may enact a joint resolution. The Alaskan Natural Gas Transportation Act of 1976 (in section 8) provides dates for further executive and legislative review, if necessary.

Maps of the three proposed Alaskan natural gas transportation systems accompany this fact sheet.

- FPC -

For further information
call 275-4006 (Area Code 202) DC-E

ARCTIC GAS PROJECT

AGO 560325

EL PASO ALASKA PROJECT

AGO 560326

ALCAN - MAPLE LEAF PROJECTS

AGO 560327

FEDERAL POWER COMMISSION

28

NEWS RELEASE WASHINGTON, D.C. 20426

IMMEDIATE RELEASE
FEBRUARY 1, 1977 No. 22868
Docket Nos. CP75-96, et al.
Alaskan Arctic Pipeline Company, et al.

FPC JUDGE RECOMMENDS APPROVAL OF ARCTIC GAS' $8.5 BILLION ALASKAN GAS PROJECT

Federal Power Commission Administrative Law Judge Nahum Litt today recommended approval of an $8.5 billion trans-Canada pipeline system proposed by an Arctic Gas Study Group to bring large volumes of Alaskan natural gas to lower 48 U.S. markets.

Judge Litt in his 430-page decision found the proposal superior in almost every respect to two competing applications, by El Paso Alaska Company and Alcan Pipeline Company (see fact sheet, FPC release No. 22869, for details of all three proposals).

Arctic's project, the largest private undertaking in the country's history, will make more gas available sooner, result in less impact on the environment, at less cost to the consumer than either of the competing proposals, Judge Litt concluded. It would be built during the winter seasons, employing 2,400 at its peak, and initially carrying from 2 to 2.5 billion cubic feet of gas daily beginning in 1982 or 1983.

This initial decision is the first step in FPC consideration of the matter. The full Commission will now review the action of the Administrative Law Judge under the special procedures established under the Alaska Natural Gas Transportation Act of 1976. An FPC recommendation regarding the transportation system will be submitted to the President by May 1, 1977.

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In a separate order issued concurrently with Judge Litt's decision, the Commission noticed suspension of the Natural Gas Act proceedings, established further procedures for Commission review and responded to earlier procedural petitions by Arctic Gas and El Paso. The Commission said that the procedures adopted will give parties adequate opportunity to rebut factual matters while enabling it to discharge expeditiously its duties under that Act.

Hearings on the proposals began May 5, 1975, and continued almost uninterrupted until November 1976. An official inspection was made in August 1976 of the sites of the proposed major facilities and pipeline routes of all three applicants. The record consists of 253 volumes of transcripts and about 1,000 exhibits. The second-stage proceeding is not likely to begin before early 1978, and construction would not begin before late 1978 or '79. The second-stage proceeding would address producer sales contracts and again review rates, marketability, financeability and other matters.

The transportation cost per million btu's for the Alaskan Arctic gas in the fifth year of operation, based upon unescalated 1975 data, will be about $1.60, compared to $2.15 for El Paso's proposal and $1.91 for Alcan.

Judge Litt recommended rolled-in pricing, where all the pipelines' customers help pay for the project gas, but cited one witness' conclusion that gas marketed through the Alaskan Arctic project will be competitive whether priced incrementally or rolled in.

Making a number of assumptions, the average rolled-in price at the city gate would be $1.50 per thousand cubic feet, based on a field price of $1 per thousand cubic feet. On an incremental basis, meaning only those consumers who actually receive the gas pay for it, the average price will be $2.41. These prices are substantially lower than the price of fuel oil and electricity for all metropolitan areas except California and New York, where there is parity with fuel oil, Judge Litt said.

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Even with a 20 percent construction cost overrun, which is not improbable, Judge Litt said, the Arctic Gas deliveries are still economically competitive, while the El Paso project gas would be only marginally so.

Alaska's North Slope encompasses an 80,000-square-mile area extending about 600 miles from the Canadian border up to the Arctic Ocean. Exploration there has only begun, but Judge Litt said all parties agree that proved saleable reserves are around 22 trillion cubic feet.

Most of the proved reserves on the North Slope are in the Prudhoe Bay field, discovered in 1968. Those reserves are the largest yet discovered on the North American continent, representing about 10 percent of proven 1975 U.S. natural gas reserves and more than a year's supply for all U.S. consumers.

The applications were filed prematurely from any rational regulatory point of view, Judge Litt said, and the Commission's determination to try the cases without an essential ingredient represents a regulatory boldness normally not seen. The important missing ingredient was sales contracts by any of the 13 producers who hold interest in Prudhoe Bay reserves. Their failure to sign sales contracts was a chief impediment throughout the hearings, Judge Litt said, since many things depend on the amount of gas available, such as the size of the pipeline, financing, and marketability.

The Commission, with some misgivings, set the applications for hearing without the sales agreements because the national interest demanded expedited consideration, Judge Litt said. The only conclusion possible, he stated, is that for the producers the national interest "lies somewhere below their own economic interest. The producers, like G.B. Shaw's dinner-time companion, have a price at which they would sell their 'service,' and all their protestations to the contrary cannot hide that they are mainly dickering over price," Judge Litt said.

However, he continued, the lack of sales contracts was not fatal to the case since there is little dispute over the

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recoverable reserves at Prudhoe Bay. There is no such agreement on the size of the Mackenzie Delta reserves though, which are critical since the Arctic Gas proposal is directly dependent on delivery of at least 1 billion cubic feet a day the first year of operation. The Mackenzie Delta, located in Canada's Northwest Territories, is 15,000 square miles in size. There are benefits of building one project to transport both Canadian and U.S. gas rather than two separate transportation systems, he said, not the least of which is fewer environmental effects.

Judge Litt rejected Alaska's claim that the FPC does not have jurisdiction over the Alaska gas because the State is performing those activities within the state which Congress wanted regulated. The Commission clearly has full jurisdiction over producer wellhead sales in interstate commerce, transport of the gas within Alaska, and transport and sale within the lower 48 states, Judge Litt said.

The Arctic Gas proposal calls for over 4,000 miles of pipeline extending from Prudhoe Bay through Alaska and Canada to termination points in the lower 48. The 48-inch line to be built between Prudhoe Bay and Caroline Junction in Alberta will be the largest ever used to transport gas, and the operating pressure used to force the gas through the pipeline will exceed the thrust of any line now in existence in North America. The projects would all be built using known technology, with adaptation or "scale-up" as necessary to improve that which is known, such as construction of chilled gas pipelines in permafrost (ground that is frozen year-round), or fabricating a ditching or snow-making machine larger than any built before.

Arctic Gas' heavy reliance on winter construction, it was argued, subjects it to billion-dollar risks if construction is delayed. Arctic has made clear its willingness to incur additional costs to avoid delay, Judge Litt pointed out, but maintains it will not be necessary. All in all, he continued, there is little reason to believe Arctic Gas will not be able to meet its logistic build-up schedule prefatory to each winter construction season. It plans to barge most of its equipment and supplies to stockpile sites before the construction begins, with air support as needed. Although Arctic contemplates six years between certification and

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commencement of flow, actual construction would not begin until the winter of the fourth year.

Judge Litt said that, as to the environmental effect of the proposed projects, seldom has a decision-making body been favored with so substantial a body of salient information on which to draw in reaching a decision. The staffs of the FPC and the Department of Interior each wrote detailed environmental impact statements assessing the "worst case" risks of all three proposals and numerous alternatives. In addition, reports were filed by the parties and voluminous evidence submitted by numerous expert witnesses.

The most significant environmental concern as expressed through testimony was Arctic's crossing of the 14,000-square-mile Alaskan Wildlife Range. The line would cross the entire Range in an east-west direction, with about 2,650 acres permanently dedicated to it. Most of that acreage is right-of-way, however, which would be revegetated.

The Range is part of a large ecosystem, Judge Litt said some of which has not been substantially despoiled by man. Its protection from significant degradation is therefore important and has been so considered by all parties, he said. He accepted, however, Arctic's belief that the impact will be small, of limited duration and not disruptive of even a small area. Judge Litt pointed out that the Range, while remote, is not unimpacted by man, who will continue to use the area regardless of whether a pipeline is approved or not. In addition, he noted, the Range is not legally designated as a "wilderness area" and there is therefore no legal impediment to authorizing a pipeline across it.

It is clearly in the public interest to exploit hydrocarbon reserves in the Range, Judge Litt said, and unless prohibited by Congress, incursion into the Range for this purpose must be considered a virtual certainty. The Arctic Gas project then becomes a benefit because it lessens the environmental cost of attaching the reserves, he said.

A primary environmental concern of the cross-Mackenzie Delta route in Canada was effect on migratory snow geese. Mitigative construction measures can greatly reduce the impact, Judge Litt said. Aircraft overflights, the most

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serious hazard, will be kept well below the least acceptable rate of one every two hours. Judge Litt said, however, that while the FPC can consider the impacts of the pipeline on the MacKenzie Delta, two Canadian tribunals must also rule on the issue, with ultimate authority to deny, license or condition as they see fit.

Judge Litt rejected the argument that Arctic's knowledge of the environmental effects along its proposed route is woefully deficient. The research effort Arctic has made is impressive, he said, and its specific knowledge of the fauna and flora exceeds that held by its competitors.

Another key environmental criticism of Arctic's proposal is its alleged inability to build snow roads when needed in an environmentally acceptable manner or to build a pipeline from them in winter conditions of extreme cold and long periods of darkness. Judge Litt found that the snow road plan is both feasible and effective and can be accomplished with a minimum of environmental harm.

The 915 miles of snow road and work pad will be built in sensitive permafrost using snow collected by snow fencing, harvesting from frozen lakes, or manufactured snow using standard ski-slope technology. Timing is the critical element, he noted. Snow fences would be erected in October, and construction would begin in late October or early November as soon as five to ten miles of snow road is completed.

The State of Alaska's position on environmental matters clearly has been influenced by economic considerations, Judge Litt stated. The simple fact is, he continued, that the State wants to encourage industrial development in central Alaska and supported the El Paso proposal on economic grounds, bargaining with pipeline purchasers of its royalty gas to release portions of that interstate supply for future intrastate industrial use.

The State embarked early on upon a course designed to maximize the economic benefits it would derive, Judge Litt stated. "This laudable goal for Alaskans, unfortunately, is not always consistent with the public interest of all the people of the U.S.," he said. Besides the fact that the state's

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use of Alaskan gas is speculative at best, Judge Litt stated, there is also a serious question of whether industrial gas use would be compatible with federal natural gas end use policy or environmental sensitivities.

Judge Litt acknowledged that Alaska's views are entitled to substantial weight even where the evidentiary showing may be ambiguous. However, he said, the great bulk, if not all, the Prudhoe Bay gas will be marketed in the contiguous U.S., and those consumers will be paying the costs. The economic ills of a particular state are not a valid consideration in determining pipeline rates or route selection, he said, and this policy has been upheld by the Commission and the courts.

Arctic Gas' pipeline, because it is large-diameter and uses extra-high compression, will use less fuel than the other two proposals--6.87 percent for Arctic gas compared to 11.96 for El Paso. Since gas consumers must pay for the gas consumed as fuel, their unit costs will be lower, Judge Litt said. The annual fuel saving by using the Arctic system exceeds residential consumption in each of a large number of states, he noted.

The Arctic Gas system also has more flexibility and expansibility should volumes exceed those expected. It can handle up to 4.5 billion cubic feet daily with additional compression, and if even more capacity is necessary, looping (new lines paralleling existing ones), would "be a work of joy," Judge Litt said.

The FPC staff contended the west leg of the Arctic Gas system is not the most economic way of moving the gas to those market areas. That leg, as proposed by Arctic Gas, would deliver 655 million cubic feet daily, or roughly 30 percent of total initial flow, to a point on the Idaho-British Columbia border, for delivery to west coast markets. The FPC staff proposed that delivery could be accomplished by using idle western pipeline capacity it expected to result from future declining Canadian gas imports, or by displacement of gas westward using existing pipeline systems.

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Judge Litt said the staff's alternative must be rejected because he does not believe its pessimistic outlook for Canadian gas imports will be fulfilled. Without this occurring, he said, there would be no true saving to consumers. Recent reports issued by the Canadian government contain a considerably more favorable appraisal of its ability to continue exports at present levels. Any curtailments which might occur in the late 1970's or early 1980's should prove temporary, he said, in light of frontier gas which may become available then.

The existence of a nationwide gas shortage is uncontested, Judge Litt said, with the nine interstate pipelines comprising the Arctic Gas group projecting their total supplies will fall short of requirements by 26 percent in 1985. These companies, which marketed about a third of total gas production in the lower 48 in 1975, sell in a substantial majority of the lower 48 states but principally California, Ohio, Michigan, Illinois, Minnesota, New York and Pennsylvania. Without both Alaskan gas and other gas supplies, their 1985 requirements in priorities 1 and 2 cannot be met, Judge Litt said.

While Canada's National Energy Board is considering the proposals, Judge Litt said there is much dispute on political issues such as whether the NEB will act impartially in a timely fashion for U.S interests, and whether it will allow U.S. and Canadian Mackenzie Delta gas to be transported through the same system.

These political considerations are principally the prerogative of the President, Judge Litt emphasized; the FPC does not make foreign policy for the U.S. However, he said he must assume that the decision to be made by the Canadian government will be made by rational men viewing the pros and cons of the proposals on a wide range of criteria, just as it is assumed rational men here will make the decision.

Given the present state of world energy resources, he stated, it can be assumed that more rapid development of known and substantial resources is as important to Canada

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as to the U.S., and that a time frame for delivering known supplies late into the 1980's is not likely to be a winning position.

Judge Litt agreed with Arctic Gas' contention that a joint project through Canada is not dependent on a U.S.-Canadian treaty. The normal and long-standing relationship of almost 200 years between the two countries is more than a sufficient basis for assuming stability and rational treatment of a mutually beneficial business enterprise. "Even if it is assumed that a Canadian government would come to power predisposed to act unreasonably, such imprudence could be countered with equally unsavory activities on the part of the U.S.," Judge Litt said.

The overwhelming benefit to Alaska will be royalty gas payments and severance taxes. Any of the proposals would net the state a minimum $135.5 million a year, totalling several billion dollars over the next several decades. The bottom line for the state's development is how it spends those billions, Judge Litt said. Those policies will determine the ultimate socio-economic effect of the project.

There was consensus by the Commission staff, the most populous consuming states which took an active interest, and an array of pipelines and distributors serving huge sections of the country that Arctic Gas' proposal would serve their best interests. However, El Paso's proposal is viable and, if Arctic Gas is unable to accept a certificate, El Paso's proposal, with modifications, would also meet the public convenience and necessity, Judge Litt said. The chief problem with the El Paso project is its lack of flexibility and credibility as presented, he continued. It would need at least 9 cryogenic ships, rather than 8, to provide reliable transportation; five rather than four liquefied natural gas storage tanks, and seven, not six, liquefaction trains at Gravina Point in Alaska. While El Paso proposed locating its California terminal at Point Conception, Judge Litt said all the evidence points to Oxnard as the preferred location.

El Paso, primarily through its lawyers, "has made a silk purse out of a sow's ear," Judge Litt said. It has done

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little intermediate design work and its design, while impressive on paper, has no particular backup by core samples or even general site-specific work anywhere along its actual route.

As to Alcan, Judge Litt said the record does not support even the possibility that a certificate could be granted it. Its design is clearly neither efficient nor economic since the pipeline is undersized. Its 3-year phased-in construction schedule is not credible, he said, and judging from the FPC staff's evaluation, the proposed summer construction cannot be accomplished without unacceptable environmental impact, primarily degradation of ice-rich permafrost.

All the major participants in this mammoth undertaking, "in the vernacular, 'have their hand out,'" Judge Litt said. They all want top dollar, creating serious questions of marketability and in turn, financeability. Alaska may again seek to increase its severance tax on hydrocarbons from 4 to 10 percent; the pipelines want consumer guarantees to repay their equity investment but still seek a rate of return of from 15 to 17 percent; the producers' failure to sign sales contracts indicates where their concern lies.

Only a limitation on the field price of the gas to reflect its intrinsic market value and a reduction on investment returns to reflect limitations on risk can bring these projects "in from the cold," Judge Litt concluded. A field price of $1.00 per thousand cubic feet is about the upper limit, he said; a field price established by contract or otherwise at a level much higher will sink the project, because the delivered cost of the gas would be so high the high-priority consumers which constitute the market would turn to other energy supplies.

The financial plan prepared by Arctic Gas does not outstrip the capacity of any of these markets and is generally feasible, Judge Litt found. He concluded, however, that the magnitude of the capital investment is such that the gas transmission company sponsors cannot provide the institutional lenders with the security necessary to warrant financing. There must be reliance upon both the consumer and the taxpayer to guarantee that the project will be

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completed and that debt service will be secure during any sustained outages.

Legislation to perfect tracking of rates to the consumer level and to approve U.S. Treasury participation is necessary if the project is to be built, Judge Litt concluded. He made the following recommendations: consumer participation in guarantees on capital costs, but only for the debt service; the equity holder should accept the usual risk of equity investment; and the federal government should entertain an insurance or completion guarantee arrangement to facilitate raising project debt capital at a more reasonable cost.

-FPC-

For further information
call 275-4006 (Area Code 202) DC-E

Sunday, January 30, 1977.)

STATE OF CALIFORNIA—THE RESOURCES AGENCY

EDMUND G. BROWN JR., Governor

ENERGY RESOURCES CONSERVATION
AND DEVELOPMENT COMMISSION
1111 HOWE AVENUE
SACRAMENTO, CALIFORNIA 95825
(916) 322-3690

exibit # 21 (f)

January 31, 1977

The Honorable John Rader
Senate President
Alaska State Legislature
Pouch V
Juneau, Alaska 99811

Dear Senator Rader:

Your letter to Tony Kline, the Governor's Legal Secretary, has been forwarded to me for comment. I urge the Alaskan State Legislature not to approve the gas royalty sales agreements between the State of Alaska and three firms. California cannot afford to rely on liquefied natural gas (LNG) and the El Paso project for over 90% of the State's gas supply. LNG delivery technology is proven for small scale deliveries but not for the large scale (greater than 3.2 bcf/day) deliveries proposed for California.

If the one LNG terminal California is likely to approve were to be temporarily closed down due to an equipment malfunction, trestle damage, or earthquake, the State of California could face major disruptions in its gas supply delivery system. The potential disruptions are described in the Resource Planning Associates study being sent under separate cover.

For this and other reasons, California supports an overland gas pipeline delivery system for North Slope Natural gas with a direct delivery system to the West Coast. A copy of the Energy Commission policy resolution and PUC brief will also be sent under separate cover.

There is also strong evidence to suggest that an overland pipeline system would yield much lower transportation costs to the consumers, and hence, much higher natural gas royalties for the State of Alaska and higher wellhead values for North Slope producers.

We, therefore, urge you to consider the value of the higher wellhead price to the state against the value of a liquefaction terminal.

California officials are sensitive to Alaska's wish to provide its citizens with jobs and economic development opportunities. Arrangements of the overland pipeline proposals could be established that would not deprive Southern Alaska from supplies of natural gas. The Alcan Highway proposal

will deliver gas to Southern parts of Alaska and could provide the same volume of gas and development opportunities as El Paso's proposal. Arctic Gas's proposal could also be permitted in a manner to insure deliveries of gas to South Alaska in quantities sufficient for economic development. This could be accomplished by requiring that North Slope gas producers purchase or exchange South Alaskan natural gas which would remain in South Alaska in exchange for North Slope royalty gas. The resultant transportation costs savings would benefit all parties.

There is one other important factor the Alaskan Legislature should consider before approving the proposed royalty sales agreements. The California Legislature may consider the establishment of a California State gas purchasing authority which would enable California to purchase Alaska's royalty gas directly without Federal Power Commission (FPC) approval or price regulation. The possibilities of Alaska benefitting from this arrangement (through higher royalties), and of California establishing such an authority significantly diminish as the State of Alaska and other North Slope producers sign these "open ended/unknown price" contracts.

The energy futures of the State of California and Alaska are intimately tied to one another, with regard to oil as well as gas. We are grateful for the opportunity to respond to your inquiry and look forward to a spirit of continuing cooperation.

Please enter the Mailgram and materials being sent under separate cover into the official records of your proceedings.

Sincerely yours,

RICHARD L. MAULLIN
Chairman

cc: Governor Jay Hammond
Mr. Guy Martin
Mr. Tony Kline
Mr. Robert Batinovich
Mr. Arlon Tussing

RESOLUTION NO.: 76-1117-13

STATE OF CALIFORNIA

State Energy Resources
Conservation and Development Commission

RESOLUTION

WHEREAS the California Public Utilities Commission has been directed by recent state legislation (SB 2008) to "represent the united interests" of (state agencies) in federal regulatory energy proceedings and to consult with state agencies, specifically the ERCDC (Section 5401 of the Public Utilities Code); and

WHEREAS the ERCDC staff has prepared or in preparation comprehensive reports designed to identify emerging trends related to energy supply, demand, and conservation and public health and safety factors pursuant to Section 25309 (the Warren-Alquist Act) "to provide the basis for state policy and actions in relation thereto"; and

WHEREAS ERCDC staff has acquired and analyzed information in order to ascertain future energy problems and uncertainties including:

(a) The production of Alaskan North Slope oil and its projected use in the State;

(b) Impacts of petroleum price increases and projected conservation measures on the demand for energy and indirect effects on the need for offshore oil development and Alaskan oil delivery into the State;

(c) Potential shipments of Alaskan oil through the State;

(d) The impact on the State of national energy policies. including Project Independence and its successors;

(e) Implications of natural gas decision making for California

in accordance with Section 25005.5 of the Public Resources Code (SB 1479); and

WHEREAS the CPUC, in consultation with the Governor's Office of Planning and Research and ERCDC staff, has established procedures for consultation with other state agencies in federal energy proceedings; and

WHEREAS the CPUC will file a final brief in the El Paso Alaska case by November 30, 1976, which will set forth a statement of policy, based upon the record before the FPC, of other state agencies (CPUC telegram, October 28, 1976);

THEREFORE BE IT RESOLVED that the General Counsel's Office, in coordination with the Executive Director and Commission staff, shall recommend to the Commission appropriate responses to CPUC's request for assistance and to have evidence, expert witness(es), and statements of policy prepared when appropriate for the following federal regulatory energy proceedings (described in depth in attachments) pursuant to the ERCDC's consultation responsibilities according to the provisions of SB 2008:

1. El Paso Alaska Company, FPC Docket No. CP75-96, et al.;
2. Pacific Indonesia LNG Company, FPC Docket No. CP75-160, et al.;
3. El Paso Natural Gas Company, FPC Docket No. CP75-362;
4. Proposed Rulemaking for Approved States' Coastal Zone Management Program, FPC Docket No. RM76-38;
5. Request for Rulemaking on LNG Site Selection Criteria, FPC Docket No. RM76-13;
6. Pacific Alaska LNG Company, FPC Docket No. CP75-140;

BE IT FURTHER RESOLVED that all statements of policy representing the position of the Energy Resources Conservation and Development Commission in any of the above federal energy regulatory proceedings be submitted on the Energy Commission's consent calendar and approved before they shall be officially represented as a Commission position;

BE IT FURTHER RESOLVED that the Energy Commission makes the following Alaskan North Slope natural gas policy findings, and respectfully requests the California Public Utilities Commission to include these findings and the attached policy statement in its final brief in the El Paso/Alaska case and consider them in the development and approval of CPUC's own final arguments:

1) That California will require at least one liquefied natural gas (LNG) regasification marine terminal in the early 1980;s;

2) "Until the risks inherent in liquefied natural gas terminal operations can be sufficiently identified and overcome and such terminals are found to be consistent with the health and safety of nearby human populations, terminals shall be built only at sites remote from human population concentrations. Other unrelated development in the vicinity of a liquefied natural gas terminal site which is remote from human population concentrations shall be prohibited. At such time as liquefied natural gas marine terminal operations are found consistent with public safety, terminal ties only in developed or industrialized port areas may be approved." (California Public Resources Code, Section 30261(b).)

3) That given the current state of knowledge concerning LNG safety, the proposed Oxnard and Los Angeles LNG terminal sites should not, at the present time, be considered "remote from human populations concentrations";

4) That the State of California has a law and a process (the California Coastal Act, SB 1277) for resolving LNG-related land use, environmental, and safety questions and for issuing coastal permits for LNG terminals;

5) That it would be inappropriate for California to advocate a specific remote site (on or offshore) until such time as the state has completed its environmental impact, supply contingency, and seismic and LNG safety studies;

6) That certification of an overland natural gas pipeline system is in California's and the national interest, in part because diversification of supply sources minimizes risks and enhances the reliability of energy delivery systems; and

7) That, however, if the Federal Power Commission should approve the El Paso Alaska proposal and must, therefore, select one of the three proposed California sites in the El Paso/Alaska proceeding, it should tentatively approve a site subject to:

   a. Permit approval by the State Coastal Commission and review by the State Seismic Safety Commission;

b. Strict permit conditions which prohibit unrelated secondary (or induced) industrial and residential development adjacent to the site or within a "fire hazard" radius of the site; and

c. Completion and evaluation, including public hearings of the expanded alternate site analysis for the Point Conception EIR.

THEREFORE BE IT RESOLVED that the Energy Resources Conservation and Development Commission finds that an overland pipeline delivery system for natural gas from Alaska's North Slope including a western leg for direct delivery to California should be selected by the Federal Power Commission which most closely incorporates the following characteristics:

1) Earliest possible completion date; ?
2) Lowest cost of service; Arctic ?
3) Least environmental impact particularly including impact Alcan on sensitive wildlife areas;
4) Provides access to the largest deliverable natural gas Arctic supplies;
5) Relies on proven pipeline construction techniques; Alcan
6) Maximizes the use of existing rights-of-way; Alcan
7) Provides an acceptable financing plan requiring the least possible governmental subsidies; arctic
8) Provides the most direct delivery system for California;
9) Enjoys the committed support of both the United States and Canadian governments; ?
10) Provides the greatest incentives for maintaining continued access to Canadian gas already contracted with California consumers.

WHEREAS the final decision on the choice of systems for delivering Alaskan North Slope (and Canadian) natural gas to the lower 48 states will be made by the President with Congressional concurrence in the second half of 1977;

BE IT RESOLVED that the SERCDC directs the staff to prepare issue papers in support of hearings to be held by the CERCDC during the 1st quarter of calendar year 1977. The purpose of the hearings shall be to enable the Commission to take a definitive position in favor of one or the other of the overland gas transportation routes for North Slope gas and to communicate such findings to the President and the Congress.

Dated: November 17, 1976

STATE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT COMMISSION

Richard L. Maullin
Chairman

ENERGY COMMISSION POLICY STATEMENT
EL PASO/ALASKA CASE:

The Energy Commission contends that the CPUC acted prematurely in choosing Oxnard as the preferable site for the El Paso/Alaska project for the following reasons:

1. The public safety factor regarding the proposed facilities at Point Conception, Oxnard and Los Angeles Harbor is still undetermined. The risk assessment studies prepared by Science Applications, Inc. (SAI) for all three facilities and submitted for the record by Western Terminal as Exhibits WL-51, WL-52, and WL-53 were based on preliminary data and anticipated design (Tr. 25178). The SAI studies were published in December 1975, and do not fully reflect certain critical engineering details and design progress. For example, seismic analysis for the Oxnard marine facility was completed in July 1976, and the related gimbal joint study was completed in September 1976.

2. Disagreement exists between the FPC staff and SAI regarding the behavior of LNG vapor clouds and other key risk determinants, such as marine vessel traffic. Attention is directed to a letter from the FPC staff to Western Terminal, dated October 26, 1976, in Western LNG Terminal Company, Docket No. CP75-83-2, requesting additional information as to 21 technical points relating to the SAI risk assessment studies and models and assumptions upon which those studies were based. The information requested in this letter indicates that several important areas relating to public safety remain unanswered.

3. Witnesses for Western Terminal stated that they were convinced "internally" that the proposed facilities "presented no undue hazard to the public" and that SAI's risk assessment studies were performed primarily for "defense in permit proceedings", and for the purpose of "convincing the public" (Tr. 24959). Witnesses for SAI stated that no changes in design or operations were suggested because "the risks were extremely low and therefore there was no reason to suggest any changes in the design". Western Terminal did not produce "internal" studies or documents which led them to the conviction that the facilities were acceptably safe, prior to completion of the SAI risk assessment studies. Therefore, the SAI work must be treated as an advocacy document until such time as technical review by qualified, independent peers has established its scientific validity. This review process has only just begun. SAI's conclusions and methods have not been shown to enjoy general acceptance in the scientific community, and they have not been accepted or relied upon by any identifiable authority other than Western Terminal.

4. Contingency planning appears woefully inadequate to assure public safety in the event of a major safety incident, however unlikely.

5. Pre-permitting safety review must be regarded as preliminary and inconclusive. For example, the review conducted for the FPC by the National Bureau of Standards was only a preliminary step; many critical issues were not and could not be addressed because of the preliminary status of engineering work. Other problem areas were identified but, based on information and belief, responses were left open-ended. It has not been adequately established that safety monitoring in the post-permitting phase, from final design through construction and operation, will be adequately provided for. The recently enacted California Coastal Act (California Public Resources Code, Section 30000, et seq.) will require positive findings that any LNG facility proposed for siting in a populated area is consistent with public safety. The California Coastal Commission intends to exercise this responsibility.

6. Additional studies are being conducted within California, regarding all three of the proposed sites for LNG regasification facilities. A preference for any site would be premature, until these studies are completed. For example, the City of Oxnard recently issued a Draft Environmental Impact Report (EIR) regarding Western Terminal's proposed facility at Oxnard. The first public hearing regarding the Draft EIR was held on November 4, 1976. A Final EIR for the project is required by the California Environmental Quality Act (California Public Resources Code, Section 21000, et seq.) prior to the issuance of any local or state permits. Also, from a public policy point of view, completion of the State EIR process appears indispensable to a decision as to the acceptability of Oxnard as a site for a LNG regasification facility.

   At this point, it should be noted that in preparing its Draft EIR, the City of Oxnard had an independent safety study performed. It refused to rely on the SAI risk assessment study to establish the safety of the proposed facility at Oxnard. Based on information and belief, a Final EIR for the Oxnard facility will be certified in March or April, 1977. The Final EIR for the Oxnard facilities will be submitted to the FPC as soon as it has been certified.

   The preparation of an EIR for the proposed Point Conception site has recently begun. The reason for the delay has been Western Terminal's failure to file the necessary applications with the County of Santa Barbara until just recently. As stated above, with respect to the Oxnard EIR, completion of the State EIR process is indispensable to a decision regarding the acceptability of Point Conception as a site for a LNG regasification facility.

By Order dated May 19, 1976, the Federal Power Commission denied petitions by the CPUC and the County of Santa Barbara for local hearings regarding the proposed LNG facilities at Los Angeles Harbor, Oxnard and Point Conception. At the same time, it has granted requests for local hearings at other sites in the lower 48 states, e.g., Everett, Massachusetts. After the Commission has denied the requests of state and local agencies for local hearings in California, it would be premature for California to endorse any site until the various State EIR processes have been completed. After the Oxnard and Point Conception EIRs have been subject to local public hearings and local exposure, there will be a better indication as to which site, if any is more acceptable for a LNG facility. Also, until the Oxnard and Point Conception EIRs have had such local exposure, it seems premature to argue, as the CPUC did, that the possibility of injunctive action is more likely at Point Conception than at the other for proposed locations.

The issue of seismic safety is presently under detailed technical review by the California Seismic Safety Commission (Seismic Safety Commission). The Seismic Safety Commission expects to issue an official report regarding each of three proposed sites by the end of 1976.1/ Design data presented to this Commission in the El Paso/Alaska, Pacific Indonesia and Pacific Alaska proceedings has been preliminary in many respects. For example, important studies relating to the design of the trestle at Oxnard were only completed in September 1976. These studies have not been submitted for the record in either the El Paso/Alaska or Pacific Indonesia proceedings. Until the Seismic Safety Commission has completed its study as to the proposed sites at Point Conception, Oxnard and Los Angeles Harbor, judgment as to the seismic issues should be reserved.

The Energy Commission is preparing a study relating to the issues of reliability of the proposed LNG regasification facilities. The study will be completed by the end of 1976 and will be available for presentation in the Pacific Indonesia and/or Pacific Alaska proceedings.

1/ It should also be noted that the U.S. Navy, acting through its Naval Facilities Engineering Command, has actively participated in technical discussions relating to seismic issues with respect to both the Los Angeles Harbor and Oxnard sites. Based on information and belief, the Navy has intervened in the Pacific Indonesia and Pacific Alaska proceedings because of the proximity of major naval facilities to both Oxnard and Los Angeles Harbor. In its recent comments on the Draft EIS for the Pacific Alaska project, the Navy agreed with the Commission Staff's conclusion that "the LNG terminal facilities should not be constructed at the proposed Los Angeles site in view of the seismic problem, the shipping congestion in Los Angeles Harbor and the resulting threat to a highly populated area.

4. Contingency planning appears woefully inadequate to assure public safety in the event of a major safety incident, however unlikely.

5. Pre-permitting safety review must be regarded as preliminary and inconclusive. For example, the review conducted for the FPC by the National Bureau of Standards was only a preliminary step; many critical issues were not and could not be addressed because of the preliminary status of engineering work. Other problem areas were identified but, based on information and belief, responses were left open-ended. It has not been adequately established that safety monitoring in the post-permitting phase, from final design through construction and operation, will be adequately provided for. The recently enacted California Coastal Act (California Public Resources Code, Section 30000, et seq.) will require positive findings that any LNG facility proposed for siting in a populated area is consistent with public safety. The California Coastal Commission intends to exercise this responsibility.

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#32

State of Mississippi

Evelyn Gandy
Lieutenant Governor

Jackson
February 3, 1977

The Honorable Lowell Thomas, Jr.
Lieutenant Governor
State of Alaska
Pouch "AA"
Juneau, Alaska 99811

Dear Governor Thomas:

Our growing concern about the severe shortage of natural gas has been greatly increased as a result of the unprecedented cold weather we have experienced this winter. We believe that positive action must be taken if this situation is to be improved and serious consideration must be given to ways by which adequate gas supplies will be available to our people.

The above situation brings to our attention the proposal by your State to sell a portion of its royalty natural gas to Southern Natural Gas Company which delivers a substantial amount of natural gas for use by the consumers in Mississippi. This additional supply for use in our area would mean much in helping Mississippi avoid a more serious and acute shortage of natural gas in future years.

The accelerated development and transportation of the natural gas from the Prudhoe Bay Field of Alaska to the lower forty-eight states appears to be absolutely necessary, and I hope Alaska's proposal to sell a portion of its royalty natural gas to Southern Natural Gas Company will be given serious and favorable consideration.

With kindest regards and best wishes, I am

Sincerely yours,

Evelyn Gandy

Evelyn Gandy
Lieutenant Governor

EG/nl

RECEIVED
FEB 1977
Lieutenant Governor

AGO 560352

STATE OF ALABAMA

JERE BEASLEY
LIEUTENANT GOVERNOR
MONTGOMERY
36130

January 14, 1977

TELEPHONE
AREA CODE 205
832-3492
832-3493

RECEIVED
JAN 19 1977

Honorable Lowell Thomas, Jr.
Lieutenant Governor
State of Alaska
Pouch "AA" State Capitol Building
Juneau, Alaska 99811

Dear Lowell:

Since the recent announcement by the State of Alaska to sell its surplus royalty natural gas for distribution to the lower 48 states, I have met with officials of Southern Natural Gas Company to discuss this matter. I was pleased to learn of this large new supply source of natural gas that will be available for delivery within the next several years to our part of the nation. This additional gas will be most important to our residential, commercial, and industrial sectors.

As we now find ourselves in the midst of an ominous and deepening natural gas shortage in the lower 48, I am firmly convinced that we must recognize the seriousness of its impact upon the nation's economy as well as to the health and comfort of millions of our citizens. It is incumbent upon all of us in government that we recognize this and act affirmatively to insure that our consumers will have the reassurance of adequate natural gas supplies.

Our nation should not have to depend on imported oil. It stands to reason that the greater the proportion of our total energy supply that domestic natural gas makes up, the lesser the proportion imported oil will make and, therefore, the lesser OPEC leverage on our foreign policy.

AGO 560353

Expeditious development of the domestic natural gas reserves of Alaska for transportation to the lower 48 states appears to be our best hope if we are to attain a timely degree of self-sufficiency in our energy needs. Accordingly, I endorse your state's proposal to sell a portion of Alaska's surplus royalty natural gas to Southern Natural Gas Company, the major supplier of natural gas to Alabama.

Our state will support efforts to obtain these new gas supplies for our area of the nation. If we in Alabama can be of assistance as this matter receives further consideration, please let me know.

With best personal regards, I am

Most sincerely,

JEFF BEASLEY

JB:cw

AGO 560354

Karen:- Copies To Senate Pres. and House Speaker - L.T.G.
sent 2/7/77 Kgw

To File

STATE OF ALABAMA
HOUSE OF REPRESENTATIVES
MONTGOMERY
36104

JOHN W. PEMBERTON
CLERK

February 1, 1977

Honorable Lieutenant Governor
Honorable Speaker of the House
The Legislature of the State of Alaska
Juneau, Alaska 99801

Gentlemen:

On February 1, 1977, H. J. R. 5, which was introduced in the House of Representatives by the Speaker Pro Tem, the Honorable Bobby Tom Crowe, was passed without any controversy. The resolution was passed by the Senate with no descension and subsequently signed by the Governor of the State of Alabama. When the Governor signed the resolution, the office of the Secretary of State had closed for the day and as a result there was no act number given to the H. J. R. The office of the Secretary of State will be open at 8:00 a.m. on Wednesday, February 2, 1977 at which time H. J. R. 5 will be given an act of number 1 of the 1977 legislature.

The legislature is very much concerned about the events occurring in the State of Alabama and are very hopeful that the resolution passed by them will be of some assistance whereby the Legislature of the great State of Alaska will help us in the problem that confronts us with regards to a shortage of natural gas.

Very truly yours,

John W. Pemberton

JWP/csf

RECEIVED
FEB 7 1977
Governor's Office

AGO 560355

State of Alabama

House of Representatives

MONTGOMERY, ALABAMA

Resolution

H.J.R. 5

By Mr. Crowe

WHEREAS, the lower 48 United States are experiencing a dire need for natural gas, the impact of which is causing serious economic and citizen hardships; and

WHEREAS, the vast discovery of natural gas in the Prudhoe Bay Field on the North Slope of Alaska will offer a new supply source that could improve the requirements of our residential, commercial and industrial sectors; and

WHEREAS, Southern Natural Gas Company, the major supplier of natural gas to the State of Alabama, has negotiated a contract with the State of Alaska for the purchase of a significant quantity of the royalty natural gas from Alaska; and

WHEREAS, under the terms of the contract between Southern Natural Gas Company and the State of Alaska, approximately 650 billion cubic feet of natural gas would be delivered to our area of the country over a period of twenty years; and

WHEREAS, this contract must be approved by the Legislature of the State of Alaska; now therefore

BE IT RESOLVED BY THE LEGISLATURE OF ALABAMA, BOTH HOUSES THEREOF CONCURRING, That the State of Alabama urges the Legislature of our sister state, the State of Alaska, to lend its approval to this contract and to take the necessary steps to the end that the contract will be ratified and the natural gas can be expeditiously transported for use by our citizens and industries.

BE IT FURTHER RESOLVED, That copies of this resolution be forwarded by the Clerk of the House to the Governor and Lieutenant Governor of the State of Alaska, to the Congressional Delegation from the State of Alaska and to the Congressional Delegation from the State of Alabama.

I hereby certify that the above resolution was adopted by the Legislature of Alabama on this the 1st day of February, 1977.

John W. Pemberton

John W. Pemberton, Clerk

AGO 560356

Anch.

Exhibit #37

TELEGRAM

RCA ALASKA COMMUNICATIONS, INC.
PHONE: 586-6440
JUNEAU, ALASKA 99801

#

02 01S ANCHORAGE ALASKA 45 02-09 1107A AST

PMS SENATOR JOHN RADER

JUN 534

PLEASE MAKE THE FOLLOWING PART OF THE RECORD.

ANCHORAGE ASSEMBLY BY UNANIMOUS VOTE URGES FAVORABLE CONSIDERATION OF HCR 11, 12, 13 (SCR 3, 4, 5) APPROVING SALE OF ALASKA SURPLUS ROYALTY GAS TO TENECO ALASKA, INC. SOUTHERN NATURAL GAS CO. AND EL PASO NATURAL GAS CO.

DAVE ROSE CHAIRMAN

1977 FEB 9 PM 1 53

AGO 560357

exhibit 37

JAN 77 2 59

TELEGRAM
RCA Alaska Communications, Inc.

#

02048 TDA VALDEZ ALASKA 20 01-24 150P AST

PMS OMAR 278-9615

~~BOX 516~~ 2119 630 W. 4th Ste 200

ANCH 995~~100~~1

(THE CITY OF VALDEZ) URGES PROMPT APPROVAL OF THE ROYALTY GAS CONTRACT TO ASSURE SUCCESS OF THE TRANSALASKA GAS PIPELINE.

(LYNN CHRYSTAL MAYOR OF VALDEZ)

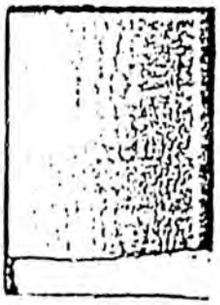

Exhibit # 41

Phone: (907) 424-3237
or 424-3238

CITY OF CORDOVA

Box 1210

CORDOVA, ALASKA 99574

"The Friendly City"

Reply to:

February 10, 1977

Senator John Rader
Pouch V
Juneau, Alaska

Dear Senator Rader:

With the F.P.C. deadline for its recommendation on the Gas Pipeline set for May 1977, it is important for Alaska to speak with a unified voice for an all-American route.

Your timely approval of the proposed gas royalty contracts, after due consideration, will enhance this effort by allying us with influential parties Outside.

We urge your approval.

Sincerely,

Axel Bud Janson

Axel (Bud) Janson
Vice-Mayor

scomm

#15:2a

House Committee Minutes 1/27/77

AGO 799451

HOUSE SPECIAL COMMITTEE

ON THE

SALE OF ROYALTY GAS

Committee Meeting - 1/27/77

AGO 799452

HOUSE SPECIAL COMMITTEE

ON THE SALE OF ROYALTY GAS

REPRESENTATIVE CLARK GRUENING:

We will come to order. This is going to be rather informal. This is the first meeting of the House Special Committee to Consider the Sale of Royalty Gas. We have with us tonight Commissioner Guy Martin, who, I think, has been following us longer than anybody, in this room anyway. He is eminently involved in negotiations and what it is to sell this natural resource. With him is Easy Gilbreth who is now head of a new division called the Division of Minerals and Energy Management. And he still has his fingers in the Division of Oil and Gas and knows a lot about the technical aspects of extracting gas and moving it. We also have Fred Boness who is with the Attorney General's office and, as I understand it, is the resident legal expert on the sale of royalty gas and oil.

I think the committee will have some questions, particularly of you first, but we have just received... First let me preface this, that we have lost one of our experts in the House, Willard Bowman, who initially started the interest of the Legislature in this area with his proposal bill which became law. That created the joint gas pipeline committee. With the exception of myself, I don't think any of these committee members have served on that committee although I think they have followed the issue, so tonight I want to cover some of the basics so that we're, maybe, better prepared for the hearings that start on the 31st.

The resolutions just arrived from the Governor and he mentions in them that he wants prompt action on them and that they were introduced on the House side later to expedite the action. Can you tell us, Commissioner Martin, what in particular would require us to speed it up? Is there anything we should know in terms of time limitations and such? It may be our first consideration.

MARTIN: Well, first, Mr. Chairman, I'd say, first of all, I think we've tried to make it clear, when asking for prompt action, that we don't want that in any way to suggest that you ought to act any more quickly than you think you ought to responsibly, pursuant to your responsibilities under the Statute. So we put the matter before the legislature very early in the session. I think either the first or second day, all the materials were delivered and, hopefully, a lot of it was in your hands by various means before the session started. I don't think we mean to at all, pressure the legislature to act more quickly than they think they have to to look at these things closely.

In terms of the need to act on them as quickly as reasonably possible in that constraint. I think it is a series of factors. Let me just put it very bluntly -- the train is leaving the station on the decision on the gasline in Washington. And the timing of the Federal decision is underway now. Now whether that decision is made for practical purposes, in June or July, or September, or at the end of this year, is something that, quite frankly, I don't know. But there is going to be a critical time when the Federal decision comes together and it's going to be a combination of factors that has to do with the ability of the Canadians to really show us whether they have any capability at all, or any willingness to agree to a pipeline through their country. And it is going to have to do with the agency reports, the FPC report followed by the Federal agency reports, and then by the emerging position of the Carter Administration. I don't think we really know when that will be. But we know, now, with some certainty, it will be during 1977. My own view -- I think I can say that I have some acquaintance with what is going on in Washington -- is that it will be earlier, rather than later in 1977 that most of the key decisions are at least forming in a way that will limit Alaska's alternatives.

My major concern is this: That these contracts -- and we can argue endlessly whether they come in response to legislative initiatives last year, public initiatives, or whether they are an immaculate conception of the Administration, which the legislature has just discovered for the first time. But the point is that these things are here, really I think, as a function of the cumulative desire to see this alternative developed. And that's what we've done. So long as it's proposed, and before the legislature, but undecided upon one way or the other, Alaska is in a kind of a limbo with regard to the Federal decision. Our position is clear. We have a strong position of advocacy in favor of the Trans-Alaska route in Washington at the FPC. And the Administration is going to advocate that route so long as our analysis holds up and there is no contrary assertion by the legislature or the Alaska public.

But these contracts are looked upon as something as a watershed, I think, for the pipeline decision. If they are pending for a long period of time, to some extent, I thing that immobilizence, the perception of Alaska's position back East, they are waiting to see how we are going to decide. So I think our preference is the Administration -- is to get a decision on it. Is this alternative something we want to do -- get going on it. Assert ourselves in the fight. Essentially bring on

AGO 799454

board a full measure of the support of these buyers and their constituencies in the United States. Is it something we don't want to do because the contracts are a bad idea. Because the terms of the contracts are offensive or there is something in the policy that we don't want to do, or don't really want to do them because we now have changed our minds and want to support another route. Any of those decisions, in my view, would be preferable to a lengthy period of indecision while the proposal was before us. And so that, I guess, is the summary of our position.

GRUENING: Okay. Maybe I will be more specific. If there is a need to get into more information, to hold further hearings, do you see any -- In other words, the session could go 90 days and at the end of 90 days, is there anything that is crucial, of crucial importance that we, say within 90 days from now as opposed to something that is going to happen after that 90 day period, later this summer. When you say, "they", these contracts are going to have some affect on "they". I'm trying to determine who "they" might be, and are those persons more likely to be affected later in the year or is it something that requires prompt action?

MARTIN: Clark, that judgement, like a great deal have to do with these contracts, I think has to be made by what I call accumulative subjective judgement. My own view is that every day is important. I was, as you know, the State's representative in Washington during the oil line debate, and you simply can't afford to lose very many days if your position is clear during the decision making process. I honestly can't tell you what days will be the critical days. But I can tell you that if our position is to support the Trans-Alaska pipeline, the gasline route, and our decision is that these contracts are a good idea, the best possible situation would be to have decision right now and start immediately. If there is legitimate doubt, and that is borne out by legislative investigation, we should take whatever time it takes to get there. I know what you are looking for. You are looking for guidelines. Is there something that happens in April or March or June that's very important that you're going to be up against. And the answer is -- I don't think you can go by those guidelines. I think you should ask a lot of people that question and get their view. I think you should start with the delegation in Washington. But I will give you my own views -- that I think the decision ought to be made as soon as possible, one way or the other.

GRUENING: Representative Cotten?

AGO 799455

COTTEN: Okay. I have a quick question. It came to my mind that we've got kind of an odd situation here. But if it is the legislature's final decision, as it will be, is it going to bind the Administration's decision? Are you going to do whatever we decide is best, as far as legislation?

MARTIN: Sure. The royalty statute really gives the legislature really two options at this point. That is to approve or disapprove the lease contracts. The way the procedure works: they are put together by the administration; they are approved or disapproved by the Royalty Board; and they must be then approved by the legislature before they are valid.

COTTEN: It is a statutory requirement?

MARTIN: Statutory requirement. If they're disapproved, what I would hope is that the legislature speaks with a very clear voice and a unified voice. Not a series of individuals all indicating what their problems are, but a clear, unified voice as to what the problem is. And then the Administration will undoubtedly seek to be responsive to that. If it is approval, of course we will be guided by that. If it is disapproval, and spoken with a clear voice, we'll have to do whatever is possible to accommodate that. If the disapproval is clearly stated and it has to do with an individual term in the contract, we would then have to go back, renegotiate that term, resubmit it to the Royalty Board, and bring it back to the legislature again. And that's simply a statutory imperative in this case. And that's a -- I suppose it could be done expeditiously but it's probably a one month process, depending on what term it is and what the negotiations are. There are some terms that have been suggested for renegotiation that, in my view, simply could not be renegotiated. Others could be but would take time. Others would probably be reasonable.

GRUENING: Representative Chatterton?

CHATTERTON: Thank you, Mr. Chairman. Commissioner, I have just, hurridly, scanned Public Law 94.586. In trying to help you answer a target date when something must be finalized, and knowing, I guess, by law we cannot lobby the Federal Power Commission -- it's against our statutes -- they've got up until May 1, 1977 before they put it before the President, is that right? And that would be the earliest date that we could start lobbying actions?

MARTIN: Well, that would be a very late date as a matter of fact. Because one of the things that would be most important to influence in that decision would be the Federal agencies

which are preparing the recommendations that go to the President. There is a number of targets that Alaska's going to have to look toward. And Congress is the last of them. The most important early target will be the various agencies that will be making recommendations, the Department of Interior, FEA, Transportation, etc. And quite frankly, because many believe, and I subscribe to this view, that ultimately I doubt if the President will send a recommendation to Congress on this issue, that he doesn't know the answer to. I don't think the President would be in the position of sending a recommendation up there wondering what will happen. So I think that our influence is going to be best utilized at the time that they are making the administrative legislative accommodations.

GRUENING: Commissioner, will there be any holding back by these agencies until the FPC makes a decision?

MARTIN: No. So far as I know we are still very early, just in the first week or so of the new Administration, but my information and my belief is that the agencies are going to go all out to try to deal with this issue. The FPC decision is going to be influential, but let me say that my expectation with regard to that decision is that it will be extremely lengthy, it will be a decision which is filled with a number of conditions and a number of conditional statements, and a number of maybe's, in the sense that it will give a number of conditions that must be met for one not to be satisfactory or another. And the agencies will have guides from the FPC but a lot of clear field for themselves to investigate.

GRUENING: Representative Chatterton?

CHATTERTON: Thank you, Mr. Chairman. Commissioner, Guy, help me here. The reason why I ask this question. Now I am looking for when (quote unquote) your lobbying effort wants to start. Actually, these other agencies of the government can only give testimony to the Federal Power Commission, isn't that correct? They can't...

MARTIN: The Federal Power Commission procedure is effectively over with one exception. The decision on it is going to be rendered probably on the first of next month. And following that there will be a brief period during which briefs will be filed and that will terminate at least the hearing at the Administrative Law Judge's part of the proceeding. How the commission acts, the full commission acts pursuant to that is still an open question. And there are a number of theorys as to what they will do. Whether or not they will engage a whole commission proceeding. Whether or not they will defer to the Judge's decision. Whether or not they simply won't render a

AGO 799457

decision at all and will wait the direction pursuant to that. They are all open possibilities. So I just don't think you can emphasize enough -- and you don't have to have a position on the route to say this -- that Alaska ought to be in the game, pretty fully armed on one side or the other at the earliest possible time. And if what you are looking for from me is some way to tell you how much latitude you have in terms of time, the answer is it would be better if it were done today. I'm saying that the legislature ought to take the full amount of time it needs to responsibly deal with the issue. But you can't carve out a period time and say, "this is a safe time to deal with it." We ought to be going now.

GRUENING: Any questions on timing? Just one on the FPC role. Commissioner, do you think the State is losing any flexibility by not waiting to see what the decision from the FPC is. Or is that decision so insignificant in the total process that it really doesn't make any difference?

MARTIN: No. The Attorney General, in his transmittal letter of our gasline task force to the Governor, made it very clear and with my concurrence, that there were a series of extremely important facts, or actions, or mileposts, that had to be acknowledged. One of them is going to be the decision of the Administrative Law Judge. Now, that is an important decision. Before the passage of the procedure bill in Congress last session, it would have been a crucial decision. But with the passage of that bill, it has significantly diminished in importance compared to the findings of the agencies and the Presidential finding and the Congressional action.

GRUENING: Could I ask you how the procedural act -- you're referring to the Alaska Natural Gas Transportation Act? How does that lessen the importance?

MARTIN: Basically, under the standard procedure that they use in a situation like this -- the Hearing Judge's opinion would simply refer directly to the Federal Power Commission, the five member commission, and they would then make a decision on it and that would be it. The proceeding would basically be over at that point. Under this circumstance they have done what they did, really, in the oil line situation, and expanded it to make it a full blown national decision involving both the President and Congress, which would not be required by ordinary law. So I would say that the FPC decision and the Hearing Judge's opinion becomes one of many factors, nevertheless an important one, but one of many factors that will influence this, whereas before, it would have been probably the major background factor.

GRUENING: Any questions on that? Will the FPC actually, if this contract is concluded, finally approved before their decision, will they make any certification or approval, or take any note of it? Will they officially take any action to certify or approve or otherwise pass judgement on this contract?

MARTIN: Let me make sure that... Clark, what will happen is that they have two roles under the new bill. First will be, produced the Administrative Law Judge's opinion, next week. Then the FPC will take some action on that, which will be one of many inputs into the national decision process that the President and Congress will make. It will be one of many. Then at the end of the entire process, when the decision has been made by Congress ratifying the President's recommendation, the FPC will come back again at the end and effectively "rubber stamp" the decision by issuing a formal certification. But that will be an administerial act.

GRUENING: Will that administerial act have -- this should maybe be addressed to Fred -- have any legal affect in terms of, say, strengthening our ability to take back gas later, or is that covered in some other aspect?

MARTIN: Yes. I'm not sure we're going to that question, Clark, but our ability to take back would have to be approved beyond any appealable state at the federal level for these contracts to ever be valid. Let me give you a case in point: We could conceivably enter into these contracts and gain the support of the buyers, proceed into the fight, and win the fight, and upon winning the fight for the route that we wanted, achieve the route that we wanted, and if the contracts were not ultimately approved, the take off provision, the ability for the State to take back, if they were not approved and we could not have that take back, the contracts would still be void. So that we could conceivably get it both ways in that situation, although you can tell whether or not that is going to happen. But these contracts will not bind us unless the take back provision is ultimately validated by the Federal approvals.

GRUENING: Commissioner, if the Section 13(b) of the Transportation Act is repealed, as we've heard rumored, would that void the contract?

MARTIN: Not necessarily. Let me talk about that for a second. The best way to look at it, Mr. Chairman, is to go back to the situation that existed before 13(b) was in effect. Under that situation, we would have had to have either gone to the FPC for approval of the take back provision

directly. And this was one of the main reasons, quite frankly, that I was very luke warm about these contracts for a long period of time because I felt that the chances of the FPC approving that take back provision, without a Congressional action, was just extraordinarily slim. So I thought there was something illusory and unrealistic about these contracts. Nevertheless, let's say we had a slim chance of getting them approved by the FPC but they would have had to have been approved there in order for the provision to be valid. Once Section 13(b) was passed, which was something we pursued fairly diligently. It gave a Congressional mandate that such provisions be approved by the FPC. Now, if 13(b) survives we should be in good shape. If 13(b) doesn't survive, we are back where we were before. We still have a slim chance of them being approved but still no risk of loss of the gas if they are not approved because the contracts would fail of their own terms if they are not.

GRUENING: So, if I understand what you are saying then. They are not void, per se, if this is repealed, even before, let's say, approval of a route.

MARTIN: Because we would still be able to pursue the approval of that term that we would have pursued before, and that is direct approval of the FPC, without the Congressional mandate.

GRUENING: But your reading of the contract is that if this should occur then anything less than a clear declaration by the FPC that we had full rights of take back, under the contract, would void the contract.

MARTIN: Yes. That is my reading. And I think you probably ought to follow up that line of inquiry with the buyers as well.

GRUENING: We will. Are there any questions, now that we are just touching on this special provision? I would just like to read into the record the Section 13(b) that we are referring to. It seems remarkable for legislation because it is so clear. It says, "The State of Alaska is authorized to ship its royalty gas on the approved transportation system for use within Alaska and to the extent its contracts for sale of royalty gas so provide, to withdraw such gas from interstate market for use within Alaska. The Federal Power Commission shall issue all authorizations necessary to effectuate such shipment and withdrawal subject to review by the Commission only of the justness and reasonableness of the rates charged for transportation." It seems to me an unusual provision. Is there any other state in the Union that has anything equivalent to it?

MARTIN: It is unprecedented. Mr. Chairman? May I make just a short comment on that. There is a lot of speculation about whether or not an attempt will be made to overturn that. Let me put myself on the record on that by saying that it is just very unclear whether that will be the case. I don't doubt that an attempt will be made. There is just no doubt in my mind that individual Congressmen have made it clear that they are going to do that. John Dingell of Michigan said, "I'm going to try to get rid of that." I don't want to sell the committee or the legislature on the idea that they should act in fear of that repeal. I do think, however, that when people talk about what we get with this contract in addition to what we think is a good price provision for the gas and whatever support people believe will come as a result of it, we also get probably our best attempt to deal, or to take advange of that at this time. And I will tell you just very briefly why.

What we are really doing -- and I think this has been misconstrued a great deal -- is we're telling people, by this contract, in the lower 48, how it is, the terms by which our royalty gas might be made available to them. And we are telling them which system for that to be in, and we are telling them what kind of notice they would get if we were going to take it back. We are being reasonably honest with the people, given the fact that we do want to retain the right to take it back. Really, when you are sitting in Cleveland, Ohio, tonight and you don't have any gas or your thermometer is at 62°, or the gas company can't supply you gas, and you hear the State of Alaska wants the right to take all its gas back to make plastic, it is a difficult case to make. But the only way that you can make it reasonably, is to say, "Alaska has aspirations like any other state and we would like to try to fulfill those aspirations with our share of our natural resources." So what we have done is laid out for them the terms on which we want to do that, without simply being arbitrary and saying, "We want it all and we're going to take it all." We've said, "We will sell it and commit it to these companies in these states, but under these terms -- to take it back at a later time on fair notice." And I think that is the essence of that provision that can be attractive to Congress. And I think can serve as a positive argument that Stevens and Gravel and Young can make, that we've made an attempt to tell them how we've taken advantage of this thing.

GRUENING: Representive Parr?

PARR: You are expressing an argument. This is the fact that the contracts are a positive thing _____. I think that most of us have heard that these contracts are likely to expedite the deal. Those sections are in there -- are supposedly because we need this gas here. _____ _____. I guess _____ _____ in giving it to some other people is that we say that we need the gas in Alaska. We've got an Arctic climate, we have real heating problems and all sorts of things. So we need to have _____(indiscernible)

MARTIN: I think that... I don't accept your characterization of the motive for why it passed. The thing passed, I think somewhat along the motives that you indicate, but it is really along the motive that Alaska asked for this, that the distance problem is quite extraordinary. In other words, don't make resources leave Alaska because of the tremendous amount they have to travel and the amount to return them if we need them. The people who voted for it trust that Alaska will treat that provision reasonably. But I would think that if I were a Congressman from Ohio and I were looking at that, I would rather have the terms of that withdrawal that Alaska might make, including the one and two years notice provisions that we have. And being out front with that, I would rather have those, preferably to having that provision, 13(b), exist, kind of in a vaccuum, not really knowing when it was or how it was that Alaska would exercise that. Under the terms of this contract we at least set some boundaries as to how we would exercise it and we can talk about it to individuals down there. Whereas if we didn't exercise it, it would simply exist and they would _____ some uncertainty as to how we would ultimately do it, and if we would have a full right to do it anyway.

GRUENING: I kind of share some of Representative Parr's questions in the sense that, aren't we telling them that what we are going to do is take 100% of the gas back if we want to? And there is no other criteria for that event? And the reason we are doing that is because you passed this amendment which allows us to do that. Doesn't that kind of challenge them, directly throw it in their faces?

MARTIN: No. I think the only answer I could make is I'm not sure what they would think if we didn't do this. If we didn't do it we would still have clear right to take the 100% back under the terms of the amendment, and to do it without any notice, one year or two years or anything else. We simply have the right to do it. So what we've done is give definition to a right that we have. And in the other case there is no definition, it simply exists without any definition.

GRUENING: Well, my point is that some Congressmen may feel that that right only exists by virtue of the amendment.

MARTIN: Certainly. I think they are correct if they say that it exists substantially because of that amendment. There is no question about it. I think they would know that one way or the other.

GRUENING: You mentioned that certain Congressmen had announced a desire to seek repeal. On what grounds?

MARTIN: They opposed it to begin with. Most of the ones who now say they will try to repeal it, were Congressmen who opposed it in the...

GRUENING: I mean, what were their grounds for opposing it?

MARTIN: Their grounds for opposing were basically that Alaska had no right to deprive the rest of the nation of this gas, whether or not it was royalty gas or not.

GRUENING: Representative Hayes?

HAYES: Just to follow up on that. If one or more Congressmen pursue that idea of rescinding that particular part of the agreement that we can withdraw our royalty gas, what is the timetable on that? How long would it take. Do you have any idea of that?

MARTIN: To repeal the amendment?

HAYES: Yes.

MARTIN: Well, it could go as quickly as it could go through Congress. There is no timetable established.

HAYES: About?

MARTIN: Oh, I'd say that it would be difficult to do something like that in any less than a month. But it could be done at a more reasonable timetable -- a couple, three months. It would depend on whether or not it was taken on as an individual issue, which is somewhat unlikely, or whether or not it would take it on as a part of the gas debate itself, and only happened at the end of the debate. My guess would be the latter would be most likely.

GRUENING: The Governor has mentioned, I think it was in his speech and correct me if I am wrong, his speech announcing the conclusion in the contracts, that one of the considerations for prompt action was that this repeal might occur. The inference being that if we approve these contracts before

repeal we would somehow be in a better position. Maybe this goes to Fred Boness as an attorney, but I'm questioning -- as a legal matter, is that true? Is there any doctrine or any precedent for being in a better position if they repeal it? After we have concluded these contracts?

MARTIN: Fred should answer that detailed part, but just let me say that just as a policy matter, that the Governor did not mean to infer that we got absolute protection by acting early. He was really speaking of the answer that I just gave you. And that is that we think that we take the best advantage of the existence of that amendment by acting on it _____. Really, with the thought that if it is challenged successfully, it's lost and we have missed the opportunity to do that. So that shows the thrust of that remark. Let me ask Fred to answer the legal aspect of it.

BONESS: No. I do not believe that it is a legal matter. The contracts passed while the statute existed -- we'd have some sort of grandfather rights if the statute were repealed.

GRUENING: Are there any question on that? Representative Cotten?

COTTEN: Can I have you clarify something? It was a question asked earlier, and now it comes back to mind. You said that some people were of the opinion that... You mentioned the word _____ in regard to the contract and the repeal and our ability to take back even if it is repealed. You said there was still a possibility. If 13(b) is repealed, you seemed to indicate that there was still a chance that we could take the gas back.

MARTIN: If 13(b) is in place, we stand an excellent chance of getting the contracts approved for the take back provisions. If 13(b) is repealed, I think it reduces the substantial chance that it will be approved to a slim chance that it will be approved at the FPC.

COTTEN: I don't mean the contracts, I mean the take back provision.

MARTIN: That's what I mean. I mean the take back provision in the contracts.

COTTEN: The FPC would still have the ability to...

MARTIN: If the legislature approved the contracts, and 13(b) were subsequently repealed, we would then attempt to get the same take back provision okayed, but we'd do it through the FPC. And we would do it without the benefit of 13(b).

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COTTEN: So the FPC can do it without the statute?

MARTIN: They still could do it. And we think we have, if our argument is reasonable for keeping some of this resource in Alaska, we think it might be the case. If I could, let me elaborate on that a little bit. Let me tell you what might happen in that situation. If we go to the FPC and we say, "We want a total take back pursuant to the terms of this contract," I've always thought the chance that they would approve that are low. So this term may not survive. But putting this contract aside for a second, what is it that we might be able to slide by the FPC? What the most reasonable grounds would probably be is a provision where we maintain some kind of a right to keep resources in Alaska, gas resources in Alaska, for certain priority uses. For instance, we might be able to protect ourselves for the future for things like municipal gas supplies, domestic uses, and so on. But they would draw the line at the point that you're making maybe petrochemicals or something that would be secondary use in the lower 48.

COTTEN: In other words, they might let us keep some of it.

MARTIN: That's right. That would be our...

COTTEN: Where would that take place? At the end of the Congressional decision?

MARTIN: Well, it depends on what happens to 13(b). But it would take place at the end of the Congressional decision.

COTTEN: What happens if the FPC got in there before and had...

MARTIN: It would take place at the end.

COTTEN: So then they would be conducting more than an administerial function, is that _____?

MARTIN: Yes. But if 13(b) were in place, it would probably be administerial, if it weren't, that's right, it would be a very very difficult procedure.

GRUENING: Representative Chatterton?

CHATTERTON: Are we still on the contracts or are we ready to proceed to another question?

GRUENING: I think we will shortly, but I had one question. Representative Meekins?

MEEKINS: Commissioner, in following up what Sam talked about, I don't know the inner workings of these things but it

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seems to me the FPC would be a little reluctant to grant us what the Congress, just a month before, repealed. I know they don't take direct orders from them, but it would be a pretty strong move on their part.

GRUENING: I understand that the State has intervened in a case called the Pacific Alaska LNG, and another case that involves the Public Service Commission of North Carolina and Texas, is that right? And is it one of the purposes of the intervention to establish take back rights involved in those contracts?

BONESS: Not in this contract.

GRUENING: No, I understand that. But those contracts involved.

BONESS: That's correct. Pacific Alaska LNG proceeding would involve certifications of the contracts entered into between the producers and purchasers in Southern California. One of the things we wanted to make sure of was that the producers, their purchasers, the FPC and the public in general, is put on notice that the provisions in our lease which allow us take royalty either in kind or in value. As it stands now, the producers are selling (indiscernible).

We wanted to make certain that they were aware of our recent provision in that the FPC and everybody had notice of it and that we might switch back. That no decision, particularly we are concerned by the decision that would be made on the assumption that all of the gas that is committed and then if the State took its royalty in kind, that somehow or other that would seriously affect, say the economics or viability _____. In which case you might then run into serious federal preemption type questions. We felt that if we give them notice at an early date, the chances of preemption issues being raised would be substantially minimal.

GRUENING: Representative Parr?

PARR: Yes, I guess I got lost there. Would you mind going over that in layman's terms. _____ was going to sell 8/8s of the gas they were getting out of the Prudhoe Bay area to somebody else. And we felt it necessary to go (indiscernible)

BONESS: Yes. At the time we intervened, there was a case that had been decided by the FPC and was on appeal to the Circuit Court of Appeals. In that case the FPC had held that reversionary interests, the person who leased the land to the oil companies, the land came back to the oil companies. The lease was back in the 20's. The land

ca[illegible]e back to the owner of the land. The FPC said that even though he had not been involved in any of the sales by the oil companies, gas to purchasers in other states, even though he hadn't been involved in any of those sales, when the lease came back to him, his gas was committed to the interstate market. And he said, "Now, wait a minute. I wasn't involved in that. I want my gas. The lease is over, it is my land, and I want it." The FPC said no. He was committed. We were concerned that the same thing might happen to us if we didn't make known that our lease allowed us to take back our 8/8s and the producers, that is, our leasees, the oil companies that we issued the leases to, who are producing the gas, sold all of the gas, because at this time we were taking in value. The FPC at some later date, would say, "Now, we certified all of that gas to move in the interstate market and we are not going to let the producer comply with this lease. We are not going to let him comply with your notice."

PARR: Isn't it against the law to sell something that doesn't belong to you?

MARTIN: The confusion here is -- that may be right -- but under oil and gas leases the producers, the people who you sell your leases to, under ordinary circumstances, take the royalty 1/8 in addition to their 7/8, and sell it all and simply give you the money back. So what we are dealing with here is a circumstance where, if they do that (cough) under whatever circumstances, and then we decide that we don't want them to sell our 1/8 anymore, but we take it back and use it some other way, that we were afraid that these cases colored our right to do that. So what we are doing is intervening in every case where what we think our rights might be are colored and attempting to make our point.

GRUENING: The situation then would really describe the problem that the State would have without a Congressional take back authorization without FPC approval. In other words, we could have 8/8s of our gas if we hadn't used it in the beginning when the lease was used, chances are we would lose that 1/8. Isn't that the purpose of your intervention? Is to prevent that situation from happening?

MARTIN: Our purpose is to prevent other cases from coloring that decision. There doesn't appear to be a decision that's exactly on point, but we are intervening in all the cases that would appear to create prejudice against what we might want to do.

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BONESS: Right. Our purpose for intervening in Pacific Alaska was to protect the gas that was there, involved, that was Cook Inlet gas, leases that are issued for Cook Inlet. Our purpose for intervening in the Public Service Commission of North Carolina was because that was a case which was not identical but quite similar to the situation which could exist either in Cook Inlet or which does exist on the North Slope. There, Texas is attempting to, under one of its leases, to take some gas, in kind, which in the past it had been receiving royalty payments for, and sell that to the Public Service Commission of North Carolina and transport it by contract over the pipeline that connects Texas with North Carolina. Texas is arguing that it is a state and not subject to the natural gas act. We intervened in that case because that argument will be relevent to the State of Alaska in arguing that our sale of gas is not subject to the Federal Power Commission's jurisdiction. The problem with the take back provision, and the reason why we need Section 13(b) does not come about as a result of the FPC potential power to regulate the sale of the State. Rather, it comes about by virtue of its power to regulate the pipeline, the transportation service in which the pipeline engages in. The Federal Power Commission could and has in other cases, said, "We are not going to allow you to transport that gas because we don't like what the person who wants to transport it is going to do with it." That is the reason for Section 13(b) and the take back provisions in the contracts.

GRUENING: Well, is there any practical difference -- unless you can take it out any other way than the pipeline?

BONESS: There is no practical difference. The importance of the difference is in sort of the chances of winning the case. One, I think, with respect to beating the FPC at their ability to regulate the pipeline, the chances are much weaker.

GRUENING: What I think I was aiming for, Mr. Boness, was if you get a favorable decision in the Pacific Alaska Case, will that give us some precedent in terms of Prudhoe Bay contracts. In other words, do you recall Russ Moody's advice -- earlier advice to the legislature -- prior to any amendment being passed by Congress, his suggestion, if I understand it correctly, if you have knowledge of that, is that we should sell in interstate commerce in order to get an approval of the sale by the FPC in order to establish a take back right. In other words, sell some portion of it. Is this more or less what you hope to arrive at in a favorable decision in the Pacific LNG case?

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BONESS: Clark, let me say, harkening back to last year's discussion with Russ Moody. You are right. I think the answer to your question is yes. That that is what you would hope to accomplish. At that time I think we expressed the same reservations we are expressing now. And that is, he made it clear that that does not buy you protection. He made it clear, on the other hand, that that was probably the best course that he thought you could take to attempt to do that. So that what we think we've done with the royalty contracts is to combine that idea with the idea of gaining whatever additional support for the route we want, plus gaining utilization of 13(b) at an appropriate time. So we are really proceeding sort of on all three theorys. But to be perfectly honest with you, we've always had reservations about the ability of the theory that Mr. Moody advanced to help us a great deal. In other words, it is the weakest link in the things that we get. But sort of about fourth down the list. Yes. We're taking advantage of that and think that it is something worth pursuing.

GRUENING: Could we accomplish that Moody theory or the Moody -- or let's say the approval theory -- just as well with the cases that you're intervening in, by doing it in a direct sale as proposed before, in terms of the Prudhoe Bay sale. And take out of that the amendment. Do you understand the question?

BONESS: Would we benefit by simply having one of those cases win and not need to do anything ourselves?

GRUENING: Yes. I mean, do you see any added benefit, assuming there were no 13(b), of trying to make a sale?

BONESS: I understand what you are asking, Clark. I think, first of all, none of those cases are related to 13(b). None of those cases, even though they are influential, are on point with our situation. I guess our statement would be -- we really don't think we can afford to lose any of those, very many of them. But we don't think that we are the direct beneficiary of any of them winning. We would not gain certainty from victory in any of those cases. But we would gain certainly from getting our contract approved.

GRUENING: Even without 13(b)? The question is...

BONESS: If our contract were approved all the way through the FPC...

GRUENING: I guess what I'm saying is, would you recommend a gas sale of this magnitude... (end of tape)

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...matter of just establishing our right to take it back.

BONESS: I wouldn't recommend it only for that purpose. I would recommend it if you could make a sale of that type that had other advantages for the state. But I didn't recommend it last year and I wouldn't recommend it now, necessarily, only for that purpose.

MARTIN: Fred makes a point that I think sort of brings out what I just said would be one of the problems. Again you go back to the fact that what the FPC regulates is the transportation. So that if you made a big sale like this based on the Moody theory which we didn't agree with, particularly, last year, every transportation arrangement that grows out of that contract would have to be approved. It may not be that everyone of them would be decided uniformly, so that you'd just have to, I guess, face the fact that you are swimming in fairly uncertain waters on a great deal of this. But I would not necessarily recommend, in fact I wouldn't recommend, a sale of this magnitude only for that purpose.

GRUENING: Representative Chatterton?

CHATTERTON: Mr. Chairman, I will make a statement, and somebody around here tell me if I am halfway right. By virtue of the State of Alaska entering into these contracts here, we have them, and they are all signed and everything is happy, we are a year from today, these contracts are in force -- we have then taken our 1/8 gas in kind -- we have opted to do that instead of taking it in value, therefore, I see no similarity between our situation a year from today, these having been signed, and the North Carolina case. Is that a factual statement?

MARTIN: The North Carolina case deals with a question of whether Texas as a state, the owner of royalty gas, must get approval of the FPC to make the sale. The Federal Power Commission -- everytime the owner of gas wishes to sell that gas in interstate commerce resale -- in other words, if he is selling to interstate pipelines, he is going to sell it to somebody else at the other end who in turn is going to sell it to somebody else, and that is the way the whole business operates. The _____ pipeline sells to a distribution company that sells to people who consume it. So everytime you make a sale like that you have to go to the Federal Power Commission to get approval of that sale. The way the definitions are set up in the natural gas act, it appears states do not have to do that. They can sell gas without getting Federal Power Commission approval. That is what the issue is in the Texas case. If Texas wins, there will be no question but that this contract for sale, this contract does not have

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to be approved insofar as the State making the sale of the gas concerned. If we lose that, this contract must be approved. If Texas loses that and we are unable to distinguish ourselves from Texas, and there are some grounds for doing so, if Texas loses and we end up in the same bag, then this contract will have to be submitted to the Federal Power Commission for approval.

PARR: Mr. Chairman. I'm just a poor old dumb country boy and I have to take this a little slow. Alright, we are contracting to -- if I hear what you just told me -- we are in the process to sign a contract to sell 1/8 of the natural gas existing in the Prudhoe Bay oil pool. There is no contract that I know of for the sale of the remaining 7/8s. Your concern is, if I am hearing you right, that if we lose this North Carlina case, why it's going to be a matter of -- the 1/8 tail does not wag the 7/8s of the dog. Is that it, as far as the FPC is concerned?

MARTIN: Okay. When you jumped from the 7/8 to the 1/8, I think you may be confusing the Pacific Alaska case...

PARR: I don't even know about it so I can't confuse it.

MARTIN: Okay. Let me come at it this way. What happened in Texas was, Texas leased the land and they discovered gas. The oil company sold all the gas...

PARR: Yes, the landowner chose -- if I can help along here, so I am understanding and we get it across -- the landowner there chose to take his royalty share of gas in value. He already exercised his election with his lease, to take it in value. Now, I can readily see where he gave up his option there, at that point in time. I can readily see that we have elected our option to take in kind before the first cubic inch of gas is moved, is that right?

MARTIN: Okay. But the problem from the point of view of the FPC is that every sale -- it doesn't matter whether you make it on the first day that gas is produced or you wait two or three years and then take your royalty in kind. Every sale in interstate commerce for resale must be approved by the FPC. There is one exception to that which we believe exists. And that is states do not have to have their sales approved. That is what is being argued in Texas, and that is what we are arguing here.

GRUENING: I want to mention one thing that if we have any questions of Commissioner Martin -- I didn't want to keep him here too late, he has another commitment. He was gracious enough to come, even with the conflict. We will get him back again. Charley?

PARR: My question -- I thought I heard Mr. Martin or Mr. Boness say, a while ago, something that may make this whole thing about Texas academic. I believe he said that even if the case _____ that they don't require FPC approval, that state doesn't, that the FPC still controls all the transportation mechanisms. So unless they were keeping it within Texas it wouldn't make much difference anyway. Is that correct? So if it is transferrable to our case, if we are not distinguishable, then even if we got the right that, okay, they don't control our sale but we still couldn't ship it anywhere without FPC approval. We would have to use it all instate. So it's kind of an academic thing in a way.

MARTIN: That's right. That's the follow up statement to Representative Chatterton's statement.

PARR: Could I ask one more question? The FPC controls all the shipments in interstate commerce. That's where they would have a stranglehold on us even if they couldn't control the sales. And they also control all the shipments that go outside the country without going through another state. Suppose we were to decide to put the stuff in liquefied form and sell it to Japan. Do they have that stranglehold too?

MARTIN: Yes, they do. And there are two reasons for that. One is, that you cannot export gas from the United States without approval of the FPC. And the second is, even though the pipeline would be located all within Alaska, they still control that transportation. So even if we didn't have to get an export certificate, they could prevent you from moving it from Prudhoe Bay to...

PARR: They control intrastate pipeline and they would also _____ export license. Is that what you are saying?

MARTIN: I am concerned by your use of the word "intrastate" pipeline.

PARR: The pipeline began in Alaska, it ends in Alaska, it is intrastate.

MARTIN: But that isn't the way the statute reads. The statute says somebody transporting gas in interstate commerce. So even though the pipeline is all located in Alaska, because the gas ends up in the lower 48, that pipeline was transporting gas.

PARR: I said it went to Japan. So you would cover that by the export license.

MARTIN: If anybody's gas goes to the lower 48, then they get control of the pipeline.

PARR: The point is, unless we used all that gas in the State of Alaska, then the Texas case, even if it is won, doesn't really mean too much to us. We could have the authority if the Texas case is won, we could sell it to anybody we wanted to...

MARTIN: Let me just say this. I don't think you can say that it doesn't mean anything to us. But it doesn't solve all our problems. It would be bad to lose it. It would be better to win it. But it certainly doesn't solve all our problems. 'There are other hurdles to be cleared even if we won it.

GRUENING: Representative Hayes?

HAYES: Recognizing that Commissioner Martin has to leave, I just want to make the comment that there are some questions that I wanted to ask that are not related to what we are talking about now, so I will defer to a later opportunity.

GRUENING: Well, I intend to go on unless there are more questions in this area, on the FPC.

HAYES: I just wanted to ask one question regarding what we have been discussing so far. Just a little bit of background -- since you were in the last legislature -- apparently there was legislation passed prior to now that essentially directed the Governor to enter into or to pursue selling our royalty gas. Was the thinking behind that legislation essentially what we are talking about right now? To try to preserve the right? What was the motive in asking the Governor to pursue this? To confirm our ability to sell it or were there other motives? I'm getting the feeling so far -- up to this point you get the feeling that the only reason we have a contract before us is because we are trying to preserve the integrity of our right to sell our royalty gas. Is that a true statement? Is that what this was all about before? Is that what we're...

GRUENING: I can't speak for the other 59 members. There was an appropriation of $50,000 made to the Department of Natural Resources to negotiate a contract. But, no, in my opinion, that appropriation was not made for the sole purpose of entering a contract so we could secure before the FPC a right to take back, no. But I think there were a lot of motives for people voting for it and maybe it is appropriate now if we have questions for Commissioner Martin, to ask him. What was your understanding of what you were supposed to do with that $50,000?

MARTIN: It's one of those provisions and it's really one of the reasons I reacted very strongly to statements where each individual legislator or administration official attempts to say what the motive was. It was a mix of motives. There is no question in my mind that many of the legislators believed that we should undertake these contracts specifically to support the Trans-Alaska pipeline. Others believed that the Moody theory was a theory worth pursuing. Others I think, believed that we should move forward and simply take our gas in kind and see we what we could do with it. It think it was a mix. And what everyone has now is the freedom to deny whatever motive they may have felt or expressed at the time. But I personally think that it is undenyable that there was a very strong direction established to, (1) negotiate, (2) seek support for the gasline, and (3) see what we could do to carry out the Moody theory. The fact that Section 13(b) came along is basically an added plus which we were able to take advantage of possibly by these contracts. I think that misses the point of this whole debate though, actually, and it's one that we tried to avoid very early in the Governor's statement and my own, and simply get on with the business of trying to figure out whether these contracts make any sense to us.

GRUENING: I agree with you there. Representative Meekins?

MEEKINS: Mr. Chairman. I have one question. The language in 13(b), doesn't that -- assuming that everything works right and we prevail, our interests are prevalent in the Texas case -- that's not sufficient because we still have to get authorization for the shipment of gas in interstate commerce. But doesn't this language mandate that they allow us to do that? If we are over that hurdle of the sale and 13(b) is not repealed, then it is sort of sufficient...

MARTIN: That's right. If you assume 13(b) is there forever, then this contract may take advantage of it.

MEEKINS: And the FPC can't say anything about the sale because of Texas or other reasons.

MARTIN: That's right. 13(b) -- we agree with the Chairman. It's about as clear as you can write a provision.

GRUENING: Any other questions? Representative McKinnon?

McKINNON: When we are talking about the repeal of 13(b) -- I just ran across it in my notes -- I am wondering what percentage, assuming the contracts are approved, what portion of these companies reserves will our royalty gas represent? I realize it will be 1/8 of the gas coming out of Prudhoe. But what portion of the reserves of these companies, nation wide, will our gas represent?

AGO 799474

MARTIN: I can't give you those figures off the top of my head. We can supply them to the committee.

McKINNON: The point I was thinking about was considering if they do represent a substantial portion of their reserves, how reasonable one and two year notice provisions are going to be seen by Chicago...

MARTIN: I do understand your question. Clearly, you could make the attempt to essentially take advantage of the terms of 13(b) as more reasonable and more reasonable. For instance, the most reasonable way to make it would be to lengthen out the notice provision to a great length, five or six years, and then allow the State take back provisions only for certain specified priority uses omitting heavy industrialization and so on in Alaska. There is no question in my mind that it would make it more attractive.

GRUENING: By reserves, I think you were referring to, Joe, the amount of gas they had committed under sales or commitment to sell.

_____: Mr. Chairman, for clarification. Joe, are you thinking of the companies who owned the 7/8s of the gas?

McKINNON: No.

MARTIN: You are asking, for instance, if Southern Natural Gas buys a quarter of our gas, how does that compare with what they had. Is that half of their gas or more? The answer in broad terms is -- in a company like Southern Natural Gas, it represents a very substantial amount of their reserves, not half by any means but in the case of both Tenneco and El Paso, it represents a much smaller percentage.

Incidentally, I might just say that I don't know if anyone here is familiar with the advance gas contract and procedures but, it was a way that people bought gas during the past few years until it was finally outlawed at the federal level. What it did was, it took to the ultimate extreme, the sort of ripping off of gas companies by the gas owners, by making them pay huge cash sums in advance of the time they got any gas. And in some extreme cases they paid in advance for gas that wasn't even produced yet and they didn't get their money back if they didn't hit gas. That's how bad it got before they struck the contracts down. So compared to some of the arrangements that have been in effect in the United States over the past years, ours is not exactly the level of reasonableness, but it is very reasonable in comparison to some of them.

AGO 799475

GRUENING: Is that FPC decision -- I think it was an FPC decision that said no advance payments...

MARTIN: It was a federal court decision which then mandated the FPC to not allow any more advance payments.

GRUENING: Does that have any relation on the State's ability to get, say, bonus payments for gas sales in the future?

MARTIN: It precludes it at the present time.

GRUENING: Absolutely? There's no way...

MARTIN: Not absolutely. But it precludes advance contracts which would be the most likely way to get a...

BONESS: What it actually precludes is a company putting it in the rate base.

GRUENING: I understand that. But does that, as a practical matter, preclude cash bonuses. Generally, you would think if you sell something now, commit it now as opposed to the future, even though you are getting what the price is in the future, that usually, in other commodities, is worth something. But you are saying in the gas business now, that it...

MARTIN: It would be worth something, but it would be unlikely that in the event that they can't pass it through that it would be very substantial. And largely, as a practical matter, it does preclude _____.

GRUENING: Representative Parr?

PARR: Were you talking about the same thing that I've heard discussed in _____.

QUESTION: (Indiscernible)

BONESS: The Court of Appeals sent its act to the FPC to reconsider that. Said that the FPC hadn't looked at certain factors. And then they reconsidered it and decided that it was no longer allowed.

GRUENING: Representative Meekins?

MEEKINS: Commissioner, I don't know if Joe meant this, but from what I got out of what Joe asked you and what you said before -- right now, because of the cold weather and the gas shortages, there's is a lot of talk of -- and I don't think they have done it yet -- but there is a lot of talk of even violating the contracts that are already legally made. And some people have paid premium prices for gas

AGO 799476

and their users are being supplied. In other areas the distributers have not paid those prices and therefore do not have gas available. But in order for sort of an equity where everybody has gas, there's sort of a movement to take it away from where it is already contracted to and distribute it to where it is needed. So that is just this situation now, and if we can expect, I think, in years to come, still to be those kinds of problems, I think if you extend that logic out, if they do that, set that precedent -- and then, as you indicated, it is a very tenuous and insecure situation to say, "Well, you are using our gas and we are going to take it back." And regardless of contractual provisions or anything we may think we have legally, I think those might be over-ridden. If we try to take our gas back at some future date when it is already sort of committed or at least needed in a certain area, I think it would be, just as a practical matter, it might not...

MARTIN: I can't resist a really obnoxious pun -- that the climate for what the State wants to do is very bad.

GRUENING: Representative Cotten?

COTTEN: Well, just on that point, I heard on the radio that they are asking the President to declare a national disaster area. So under that, if he does declare it, then they can _____ it I suppose something like that would have to happen before they could ever do it.

MARTIN: I don't think that is the necessary prerequisite but that is the kind of situation we'd have to be in.

GRUENING: Is it possible, Commissioner, that these companies that have these contracts -- the three contracts in question -- as soon as we approve this contract, turn around and sell that gas to another company? There is no prohibition in the contract is there, any of them, to prohibit that, is there?

MARTIN: They are under curtailment which would act as an effective prohibition against that.

GRUENING: I don't understand.

BONESS: Curtailment is where the pipeline company doesn't have enough gas to meet all the contractual obligations that have already occurred. When you hear that gas is being cut off at factories and people are getting laid off, that is the result of curtailment. There is a priority category set up in the FPC which involves a section of four categories.

AGO 799477

GRUENING: Well what... Maybe you are getting to that, but my question really is, can't... I mean, the FPC would say they couldn't sell their gas?

BONESS: If your're a pipeline under curtailment then you can't sell gas to a new customer until you've supplied all your old customers. Which means, effectively, that this gas, the amount we are selling, isn't going to allow anybody to come out of curtailment.

GRUENING: You are assuming that these companies all have pipelines under curtailment?

BONESS: They do.

GRUENING: Then there's no way that the FPC would approve -- first of all, it wouldn't have to approve any sale if they want to make one tomorrow, for example?

RESPONSE: (Indiscernible)

GRUENING: Mr. Hayes?

HAYES: Are we going to -- are we just asking him questions from random? I don't see any particular line. Before he leaves I want to ask him a question.

GRUENING: Please, if you have any questions of Commissioner Martin, ask them now. I wanted to get into some of the technical aspects later. I don't want to go too late tonight, but as long as you're... Why don't you ask your questions?

CHATTERTON: I want to stay a little bit on the subject that we're just about to take off on, with a question if I may. That is referring back to (quote-unquote) the front end money and exploration costs, interests cost and _____ _____ going to the rate base, and that having, FPC having seen the _____ before they change their mind. Now there is a case in point on the Arctic Slope. What is the situation... I will put it this way, I'll give you the lead anyway, and you tell me where I have been told wrong. I have been told that there is one -- because it was indirect -- one front end payment, if you like, or a loan I guess is a better term, made by Columbia Gas that still is valid. Is that correct?

RESPONSE: Yes.

CHATTERTON: That means that Columbia Gas now has the right to 52% of 7/8 of that gas, is that right?

BONESS: I can't verify that. That sounds much larger than it is.

AGO 799478

CHATTERTON: That is my recollection... (indiscernible)

BONESS: I'd have to check that but that sounds...

CHATTERTON: _____ is still legal, whatever amount it is. It survived all this. I'm through with the question on those points. I've got three more on different subjects.

GRUENING: Okay. We will be shifting here... Senator Hayes?

HAYES: Inasmuch as I think maybe one of the three is going to be what I'm going to ask, I will defer to Chatterton to ask his three questions.

CHATTERTON: I bet it will not be one of the questions. First of all, I have read the contracts, Commissioner Guy, and I think considerable other people have read it, and I am getting a little bit of difference of opinion on this one particular subject, and I would like clarification for it. Let's say that we have gotten all through this mish-mash procedure, the all-Alaska pipeline is approved and these gas sales contracts are approved, and everything else. So let's say it is January 1, 1978 and everything has been taken care of back in Washington -- Do we have any right under this contract to terminate or back out of it? Is there any clause in the contract which permits us from then on til the end of 20 years to back out of it? Let's say we don't want to do business with them. Is there anyway we can do that?

ANSWER: (Indiscernible)

CHATTERTON: The next question that I have, real quickly, is that as I remember, and I couldn't spot it as I ran through here, but there is a little bit of dialogue on whether or not the FPC will include in the rate base the cost of cleaning the gas for transmission. Could you refresh my memory on that. What exposure do we have under that situation, and if there is cost that cannot be passed on because the FPC will not include it in the rate base?

BONESS: If it is a cost which we would not have borne had we taken in value, then our purchasers are obligated to bear that cost, even if the FPC will not allow them to put it in their rate base.

CHATTERTON: Thank you.

MARTIN: Let me just say that this term is one of probably five or six in the contract that were absolutely most hotly negotiated.

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CHATTERTON: I'm sure of it. The last question, and I here again apologize, but it sticks in my mind that some while back where Statute 30.05 used to read anyway, that the State to, by law, to sell any hydrocarbons...(indiscernible) Is that still factual?

MARTIN: No sir. The royalty statute specifically provides a procedure by selling by negotiation, and quite frankly, when the legislature appropriated $50,000 last year to negotiate, we were pretty sure they meant negotiate.

CHATTERTON: Okay. Alright. So we don't have to ever worry about it?

BONESS: Our interpretation of the word "negotiate" was to negotiate.

CHATTERTON: That's all the questions I have.

GRUENING: Do you have any questions? Representative Hayes?

HAYES: We're talking about -- the subject before us is the contract to sell 1/8 of our royalty gas. And going along with that we are talking about what is tied in with that is selection of a gas line route. And the public is generally projecting that such and such a pipeline route is _____. We could be under construction by 1978-80-85, whatever, but sometime in the near future. And the thing that I would like to get clear in my own mind before I can really get into it -- you know, I have to clear that up before I can get to the merits of the contract -- is, has the State determined beyond a reasonable doubt that it is in the State's best interests to sell our royalty gas or allow the other 7/8 to flow south, in consideration of the other resources?

MARTIN: Do you mean as opposed to preventing the flowing somehow?

HAYES: Yes.

MARTIN: I think the answer to that might -- I think later this evening Mr. Gilbreth probably will touch on that -- basically the answer is a combination of things. But our powers to prevent it from flowing are not complete. In fact, maybe saying it the other way, they're limited. The conservation statute, which will certainly be a controlling factor in this situation, it will control possibly and probably over our desire to do other things. It is a fairly definitive statute and it will be a controlling statute. That would certainly enable us to do that, if it is consistent with the purposes of the conservation statute and the way that those statutes have been interpreted by legal cases. Other than that, we effectively, have sold the gas pursuant to the leases

AGO 799480

that we held, and the owners of that gas have certain rights with respect to it, including the right to attempt to build a pipeline to move it. And our rights to negate that contract, or say that we don't want it moved now, are limited by that prior commitment that we made. So to some extent, the State's determination is limited and within those constraints, yes, we think that this is the best approach.

HAYES: Well, I have been under the impression, perhaps erroneously, that the State had absolute power to determine when gas would flow, so that if we needed it _____, reinjection in that field or adjacent fields...

MARTIN: There is really a difference, Representative Hayes, between absolute power to determine it and the second statement you made about reinjecting it in the field, which really alludes to the conservation statute. The statutes have been upheld, in juristictions, have been upheld for the purpose of achieving the maximum efficient production of a very important resource, oil and gas. And the courts have allowed states to have very important powers over the production of oil and gas where it can be shown that your public objective is to ensure that you don't waste oil and gas. That you produce it in a way that maximizes the amount you produce. But where it simply -- an arbitrary judgement by the State for some other purpose, then the State's powers start being limited fairly drastically and you run into what is called interstate commerce problems. So absolute powers are pretty much intrastate.

HAYES: Well, yes. We probably would not be in a position to determine, absolutely, for a number of years. Is that right?

MARTIN: Well, this is one of the things that Mr. Gilbreth is going to talk about but let me say that the determinations under the conservation statute, which is our greatest extension of power _____, are based now on modeling, computer modeling, and we believe we will make additional decisions based on that, will be based subsequently on the early production history of the field, which will give us a better idea. And it will be adjusted from time to time during the life of the field as appropriate, based on what is happening with the reservoir.

GRUENING: Representative Meekins?

MEEKINS: On the other side of that, perhaps this is better asked of Mr. Gilbreth, but at the same time that in order to maximize the recovery of the reserve by reinjection... _____ want to reinject the gas in order to

maximize efficiency in production, and at the same time, there is some sort of a constraint, some sort of limit as to how long you can reinject, also, is there not?

MARTIN: In some cases there is. I'll let Mr. Gilbreth give more details to this but I think it is a safe conclusion now that in the case of this field we have determined that there is no practical limit to how long you could reinject, so at least the problem is not that there is some time at which you are doing damage to the reservoir by reinjecting.

MEEKINS: In other words, if there is a delay of some sort, is what I am getting at, in the building of a gas pipeline, we're not...

MARTIN: We are not doing that type of damage, at least...

GRUENING: Before Commissioner Martin leaves, I wanted to ask -- on terms of the comparative analysis and the merits of the three routes, would we be safe to assume that the administration is relying on all the information contained in the comparative analysis of November 76, that was prepared -- it was kind of a summary of November 1976 by the Pipeline Task Force.

MARTIN: I think that is right.

GRUENING: So all the information in that document is... In other words, that contains all the information that you relied upon, that there is no outside input...

MARTIN: I'm not sure that -- that is a garden path statement, Clark. I think that's true. Fred?

BONESS: I think that's a summary of all the information. We've relied upon all the evidence that the FPC... The various kinds of assessments, environmental considerations. We ran into 26 boxes of material stored over at the Historical Library.

MARTIN: The decision ultimately made by the Governor and the recommendation of the Task Force was a balance of a lot of factors and I'm not sure how you indicate how each individual made his recommendation or so on. You can regard the summary as the total -- it is certainly not the total background that the Governor had, but it is intended to be a summary of that information and I think it can be relied on for that purpose.

GRUENING: Well, in terms of the finding that the highest net economic benefit to the State was El Paso, is that all the information that you need consider on that issue, that you know of, is contained in that document?

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MARTIN: I'm going to defer on the question for this reason, Mr. Chairman. Both Bob LeResche, Director of the Division of Policy and Planning and Av Gross, who is Chairman of the Pipeline Task Force, and Sterling Gallagher are going to be at the hearings on Monday to talk about just that subject. And I'm not certain the answer to that is absolutely yes. Generally speaking, it is yes. That represents the summary of the information we used.

GRUENING: These gentlemen might supplement that?

MARTIN: I'm sure they will be able to tell you if there is something that they would want to add or that they thought was particularly persuasive.

GRUENING: But you don't know of anything beyond that?

MARTIN: No. And there have been assertions of items like, for instance, the tanker subsidy idea, or something. But in the case of that one, for instance, the decision and the analysis was made absent that. In other words, that wasn't figured in the decision and then left out of the summary. It would have been an additional backup and included. It was sort of a hypothetical additional case, that wasn't put in the summary. We thought that -- in other words, we concluded that the summary justified the result even without that thing included.

CHATTERTON: Mr. Chairman, I'd like to help the Commissioner out, for his information. There was an addendum to the November 1976 report. I have it here at hand. I believe it came out quite some time after the decision was made to have the... (indiscernible)

MARTIN: It wasn't taken into consideration at the time, but when I speak of the document, I include that being in it. The Governor made it clear that our work on the thing is ongoing. For instance, we take the letter of transmittal from Attorney General Gross and both the Governor's speech and my statements have made it clear that the way our royalty statute works, you have to make certain decisions are locked in time. One would wonder what would be the political climate in the state if these contracts had not been put before the legislature on the first day and we were taking the line that you're essentially taking -- that we are just not sure, and we just want to keep looking at it for a little while. I suspect that we...

GRUENING: I don't think anyone has taken a position. We have a duty to look at the contracts. The appropriation of $50,000 did not require us to approve the contracts. It only required negotiations and now that they are here we

AGO 799483

look at the results of the negotiations. I don't think anyone on this committee has taken a position.

MARTIN: I'm not saying that. I don't mean to. What I am saying is that the way that the royalty statute works, it requires that at a certain point in time decisions be made and that then they be advanced through the process so that they can arrive on the legislative doorstep for approval. And it would be obviously desireable for us to be able to continue to remain flexible but we felt we had to offer the alternative. So it is a way of really addressing that question. But if additional information comes along, or for instance, additional actions like the Administrative Audit Judge's decision, we are going to consider those things and try to judge our actions pursuant to them.

GRUENING: Representative Parr?

PARR: A very simple question. Is it correct that the 7/8 of the non-royalty gas has not yet been committed? Or has it been committed _____?

MARTIN: There were attempts to commit it through advance sales contracts which were then negated by the decision that we discussed earlier in the evening.

PARR: I thought you said that you couldn't make them pay for it in advance. But you didn't say you couldn't commit it advance?

MARTIN: That was one of the terms of those advance contracts, so the contracts failed by virtue of that term being included.

PARR: It is true that there _____ against crude oil which is transferred (indiscernible)?

MARTIN: (Indiscernible)

PARR: _____ as of now the 7/8, which belongs to the producers, is not committed to any distribution companies like _____ Chemical, Southern and so forth? That is not committed to anybody at this point?

MARTIN: With the exception of the Columbia contract that he...

PARR: _____... that is 50... (indiscernible) (several people speaking at once)

MARTIN: Columbia, El Paso, and Tenneco are always among the top five of the gas companies.

AGO 799484

GRUENING: Despite the fact that the contracts were negotiated, it still is a statutory requirement, isn't it, or did we find that there is a surplus before the sale is made? Is that correct?

MARTIN: Yes. We attempted to deal with the surplus question. I think we have dealt with it, in the terms of the contract. There are two ways to approach it. It would take a long time to talk about the surplus issue. I won't do that here. One way to do it is to attempt to predict what the surplus would be and then try to match what you sell against what you predict and then see if everyone agrees with your prediction. What we've done is simply provided flat out that we have a right to take back whatever we need. So we have, essentially, a legal surplus. We have a surplus which is protected by the terms of the contract rather than trying to identify it by some quantity.

GRUENING: There are no studies to your knowledge? There are studies?

MARTIN: Yes. We are going to be prepared to advance and have advanced at prior hearings before legislative committees, our work on surplus gas and what it consists of basically is projections of various low, medium and high growth scenarios that indicate what might happen. Because ultimately all surplus is, is whatever you believe will happen in the State, minus whatever we'll produce. And if you believe we will build a petrochemical plant then the surplus is one thing, if you don't, it is another.

GRUENING: Is that a completed study or one to be done?

MARTIN: It is complete. It is completed and it will be ready to be advanced. But it is one that changes constantly, Mr. Chairman, because you learn more about what the reliability of your predictions are. But it is completed and we will be prepared to advance it.

GRUENING: Is it in a form that we could look at?

MARTIN: We will submit it to the committee.

GRUENING: Okay. I think we would all like to look at that. Representative Chatterton?

CHATTERTON: Mr. Chairman, Mr. Commissioner, on the subject of surplus I have this question. First let me read from the transcript of the Royalty Oil and Gas Advisory Board Hearing. It says, "at that time you define surplus" the word surplus, or the Board did, "as the volume of gas available in excess of residential and commercial needs of the state." Now, my question is -- when we speak of surplus in the context of our contract here, is it still by that definition?

MARTIN: I would have to look at the context of the remarks, but I don't I need to to answer your question. In the terms of the contract, if this provision is approved, we have a right to take gas back for any purpose whatever. So the surplus is defined in the broadest conceivable terms. There is only one thing that is not included. And I think I can say this very thoroughly. The only thing that is not an instate use is liquefaction for export. That is the only thing that is not an instate use. So liquefaction even for transporting around the Alaska coast to another community is instate use. Anything else is instate use. So a surplus would only be that which is left over after we call it back.

Let me give you the example I gave Representative Meekins the other day in terms of what you can do with this contract. If everything is locked up, and the trans-Alaska pipelines are approved and every term in this contract is executed and we're in great shape. And that happens in the middle of 1978, and we are expecting that the first gas will flow on the first day of 1982. Using our two year notice provision, we can discover that we have a use -- now we have to have a use, we can't make one up -- but if we have a use that would be available for every cubic foot of our royalty gas on the first day that the pipeline would flow, we simply have to give two years of notice to the buyers and they would never take a cubic foot under this contract. So that the contract enables us to take every single cubic foot back with that notice and they would never take a cubic foot. On the other hand, if we never do develop the instate uses, then they would be buying pretty substantial amounts of gas simply because we don't really need what we sometimes projected.

CHATTERTON: So coming full around why our election to terminate...(end of tape)

MARTIN: ...In this case, what is surplus under this contract is determined purely by the will of the State.

CHATTERTON: And also instate use, is only determined by the will of the State?

MARTIN: By the will of the State. Let me say one quick thing about the one and two year notice provisions. The two year notice provision is the one to focus on because it is the one that gives us the total right to take back everything. We simply rewrite the contract and take it back. The one year notice provision was written because we felt that there might be some circumstances were we'd want to act on a shorter time frame. Most people conclude that one year or two years is adequate lead time for any

AGO 799486

large scale project that would come forward. We will try to demonstrate this in the hearings but one year notice periods built on this schedule, this 25%, 50%, 75%, that curve that is drawn by that 25%, 50%, 75% thing each five years, roughly corresponds in a kind of a stair step fashion to what we would call the moderate growth expectation. It makes certain assumptions in regard to what might happen, so what we have done there is just provided a secondary take back term that roughly follows it. But it is the two year term that is really important.

CHATTERTON: Okay. This is vitally important to me Guy, and I'm serious gentlemen, if I could just hold you up for a minute. You can almost make or break me as to how I feel about this contract. So it is important to me, personally. Do I hear you right, that in effect, we only are giving a two year contract that I can give some type of a notice and two years after the giving of that notice, I can stop the flow of gas through that pipeline and convert it to an existing instate use. And you are telling me that I am sole judge of what the instate use is?

MARTIN: Not you, Representative Chatterton. That's is right. The criteria for that must be that the use exists.

CHATTERTON: If I suddenly decide, then, that I want to use that gas to maximize the recovery of black oil from reservoir X, to geographically remove it from Prudhoe Bay, that is an instate use by the definition that you are saying, and I can just quit selling gas?

MARTIN: That's right.

GRUENING: Any more questions of Commissioner Martin? Representative Meekins?

MEEKINS: Commissioner, just on the exact line of questioning, have you not pointed out that even though that's what's in the contract, there are two considerations, one being the possibility of some sort of emergency gas problem, veto of that provision if there was something going on that if we were trying to take back a large portion of our gas...

MARTIN: Yes, I doubt if it is possible. Assuming that this provision is approved and we begin to operate pursuant to it. I doubt if we can get anything that's more reliable.

MEEKINS: I understand that, but I don't understand...

MARTIN: There are imponderable problems. And you can't foreclose the possibility of a simple national emergency.

AGO 799487

GRUENING: Representative Parr?

PARR: The term used in the contracts, meeting the intrastate industrial needs of the State of Alaska (indiscernible)

GRUENING: Are there any more questions of Commissioner Martin? I want to thank you for showing up tonight and I think we are going to have a lot more questions of you. This is just touching the surface really.

MARTIN: I appreciate it. Let me say that I think that this kind of format is exactly the way to do it. Looking at two offers, I'm perfectly willing to come in any amount of time it takes to have meetings like this, largely informal, and just do it because these are very serious and important questions. The second thing is that I have determined in talking to a number of legislators that there are a lot of misconceptions, people have firm and vivid beliefs that the contract does something that - we just want to try to show you that it doesn't or that it's different. I've had some very successful conversations with some of the people at this table and others and I'm perfectly willing to spend any amount of personal time just, policy aside, explaining what we think the thing does. Don't hesitate to call me or have other collegues call me or just come over and talk for a while. Because it has really been useful to do it and we don't want anyone to vote based on an assumption or a...

GRUENING: Representative Parr?

PARR: Mr. Chairman, I appreciate Mr. Martin's willingness to do this, but I want to say one thing that I said to somebody who came in and told me _____. And that is a lot of these questions should be raised and answered on record at a public hearing.

GRUENING: I agree fully.

MARTIN: I would not hesitate to answer the same questions at a public hearing.

GRUENING: Thank you and I'd like to call a short recess and we will carry on with the remaining later.

(BREAK)

GRUENING: We will come to order here. Mr. Gilbreth has offered to give us a real short course in some of the technical aspects of oil and gas, particularly natural gas and maybe that will help us direct questions.

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GILBRETH: Mr. Chairman, I'm sure most of these people here are not too familiar with what happens in an oil and gas field and oil and gas reservoirs. I will take just a few minutes and start in on some of the basics and work up on it.

Of course a lot of you have heard that we have a big field of crude oil. It is a large field... (end of tape)

We have other pays at Prudhoe also. The main pay that you all hear about, the big pay, is the one that contains 9+ billion barrels. That occurs around 8,000 or 9,000 feet. Then we have a shallower series of sand stones, Nika Park River Pay. They are characterized by high productive wells. They flow real easily to start with but expected to drop off very rapidly. Those go to the west of the main portion of the Prudhoe Bay field and could extend as far as 20 or 30 miles out to the west.

Lying underneath the main pay vents to the east side, we have the Lisbourn Pool. And the Lisbourn had been tested in many, many wells, but not found to be commercially productive in very many. It covers a large area and if it should ultimately be economic and give up enough oil in commercial form, it could be a sizeable field, but at this stage it doesn't look like it is a sizeable field. So what we are generally talking about is the main Prudhoe reservoir, the big reservoir. And the operators are trying to unitize the reservoir now so that, in effect, the entire reservoir will be operated by two operators on behalf of everybody else. They would operate the whole field so that you would get advantage of the economies of operation, you don't have competitive forces operating and _____. Now the operators have submitted preliminary draft agreements to us and we have gone over them and they have proposed a unit outline of what area this unit is to cover. The outline has not been or the boundary around the unit has not been decided yet. There are some wells that still fall within the confidential status under our two year confidential statute and the operators themselves are not even trading information on these. So we find ourselves in a sort of a touchy position where we can talk to one operator and we can't talk to another operator across the table because they don't want to exchange information.

So we don't know at this stage just exactly what the unit area is going to be around this unit. It will be decided sometime in the next couple, three months probably. But the gas contract had been written so that it will correspond to that area, whatever it finally turns out to be. So we're talking about gas that will fall under the ultimate unit area for the main reservoir only. I wanted to point

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that out because in later testimony we will tell you that there are other reserves that are not committed to this contract and these are the reserves in some of the sands up above, reserves in other pays that are out away from the main reservoir.

In the Prudhoe Bay field, of course, we have oil and we have gas on top, and then water on the bottom. Within the oil zone, very near the bottom of the oil zone, there is a big, very heavy, oil accumulation. We loosely refer to it as a tar matt sometimes. And this can be 60 to 80 to 100 feet thick. It is fairly impervious. Now to produce oil out of the well, you have to have energy or pressure to force it into the well bore and up to the surface. And in Prudhoe Bay, because it is buried under several thousand feet of sediments, they have a weight or pressure forcing down on the oil. The reservoirs originally under a certain pressure. And the free gas then, or the gas cap which is free gas, is also under that pressure and this is around 4500 pounds, depending upon where you are in the reservoir. The oil itself, also has gas in solution within. Just like you popped the cap off a Cocoa Cola and it bubbles. The carbon dioxide comes out of solution. And we have gas in solution at Prudhoe the same way. We have free gas, solution gas, and then we have oil. And under that we have a salt water area and this underlies nearly all oil fields. I don't know of one anywhere in the world that doesn't have salt water at the base of it. The water reservoir or aquavoir if you please, as a lot of people call it, extends out over many, many miles and we have mapped it as far away as 65 miles from Prudhoe Bay.

Now to get the energy to force the oil up to the surface we have the pressure from the gas cap, the original pressure in the oil zone, and the water zone is originally under the same pressure. So something has to push fluids to the well bore, and the ease with which the fluid goes through the formation is a technical term we call permeability. And the higher the permeability, the easier it will go over to the producing well. The lower it is or the tighter it is, the greater resistance it is, the less likely you are to get good float. You'll have a horizontal characteristic in your permeability and a vertical characteristic. Obviously, from gravity forces, fluids and pressures can act down, they can also act horizontal. And our characteristics at Prudhoe are such that we have very good vertical permeability characteristics and particularly so on the gas. So that the reservoir simulation work that we have done leads us to believe that the gravity drainage system or the effectiveness to (cough) will be very effective.

And just some ball park figures -- Mr. Chairman, let me point out that any figures I throw out here tonight about recoveries and rates and so forth, are subject to later correction and refinement by Hoyle Hamilton, the Director of the Division of Oil and Gas. He is in Denver now doing simulation work to try to bring our figures up to date based on the latest plan the operators have told us about. Some of our earlier work, I'm sure, will be changed somewhat but not significantly. But we are trying to get a refined position now to try to determine what the production rates in Prudhoe are likely to be. Up until this time, we in the Department have taken a very firm stand in not committing to any production rate because we have not had enough information to tell what would be a good rate. We have had some ballpark figures based on early data but we didn't know what the operators were going to do. Now, along with the unit, the operator is required to submit a plan of operation, what he plans to do in the way of drilling additional wells, and putting in projects or increased oil recovery pools. So the operators have filed information with us, we have gone back and requested more information on a couple of occasions. We have had several meetings. We have had meetings with our engineers, with their engineers, and I will say this, that the operators have very graciously, if you please, given us proprietary data to help us in our analysis. We now have enough information that we can put into the computer and get some sort of a reasonable prediction on what probably will happen with what the operators plan.

Because of these characteristics that I mentioned, the permeability characteristics, the recovery that we anticipate based on what we see right now, without anything, would be probably in the order of 30% to 32% to 33% of the original oil that's in the reservoir. Now to give you an idea as to how this might compare in the Cook Inlet field, some of those which do not have gas caps, do not have _____ water drive, we are looking at recoveries in the order of 14% to 16% to 18%. So without doing anything at Prudhoe Bay, we will have a fairly efficient recovery mechanism. Now this recovery is achieved by the gas pressing down or working on the oil, if you please, furnishing pressure energy there and also by the water furnishing pressure energy on the bottom side in an upward direction. Now with the good vertical communication we have, the gas cap looks like it will do an excellent job. But with the permeability that we have and the tar matt that we have, or the heavy oil zones that we have, there is quite a bit of question about how effective the existing water drive will be and how much the operators are going to have to supplement this water drive. Therein is where most of the discussions are being held now days.

Just some ballpark figures -- if we take the reservoir and produce it just as it is, we'd have in the order of 30%, 32%, 34% recovery. If the operators during the life of the field, would return all the water that is produced back into the reservoir, we could probably increase that by 2%. If the operators put in an efficient secondary recovery program, they might increase the oil recovery from 5% to 7%. So we could get up somewhere from 37% to 39% to 43% ultimate recovery out of the reservoir depending upon how its ultimately produced.

Now our latest runs, they are still analyzing them, and I talked to Mr. Hamilton by phone to see if I could get any advance information, and up to this point the only thing he can tell me is that it doesn't look like, on first analysis of what he got out, that there would be any advantage to requiring gas to be returned to the reservoir indefinitely. There is no increase recovery as a result of this. But there are other variables from there back. So that is all I can tell you about that one thing and then he will have to tell you how some of these variations work.

The water injection program could be small or it could be very large. We anticipate that it would require the injection of a very large volume of water over the life of the field. And the water, in all probability, would have to be obtained from the Arctic Ocean to furnish a volume of this kind. Tests have been run. It looks like the water is compatible with the oil at Prudhoe Bay.

The type of project that would be required would be, as you can imagine, the largest in the world. And it is not a cheap project. I haven't talked to the operators, I don't know what kind of cost they'd be looking at but I would say it would easily exceed a billion dollars. It is a large project. Something that can't be done overnight. Now the scale and direction such a project would take, would depend on how the reservoir performs under actual production operations. And all we can do right now is look at the computer output and it says, well, weighing one factor against another, this looks like it is probably the best way to go right now. But then as we get actual data from the field and feed into the program and start refining it and try to line the two up, we may get slightly different answers. So it is going to take, probably, two to three years of production operations in the field, actual operations, before you can, with any degree of accuracy, define a water injection program for that field. You can have some ideas and you can make estimates, but when you start spending money of that type, you've got to know pretty well what kind of _____. So to get water in the field, we are looking at something

that is going to take a couple of years to figure out what kind of a program we really need. And then it is going to take two or three years to design it, finance it, install it and put it into operation. So from the standpoint of water injection, we're probably looking at something four, five or six years down the road before an effective water injection program can be installed in the field. We are incorporating timing of this type into the computer program, in terms of ultimate oil recovery, to see what the effects are of delaying water injection. What could we do if we started now. And what could we do with large volumes, small volumes, and intermediate volumes, and so forth.

So about the most I could tell you in terms of rates are that the operators are planning to start out, and in the not too distant future, get up the rates in the order of 1.6 million barrels of oil a day. These, with the gas production in the field -- there would be gas available to sell as much as two billion cubic feet a day. Now we don't have a gas line. We don't have a gas line authorized. And we don't have facilities in the field to process the gas to get it in to _____. So it is going to take quite some time and as Commissioner Martin said a while ago, we are looking at least to 1982, we think, before a line could even be constructed to take the gas. So during this interim then, we have a tremendous volume of gas that is going to be produced on a daily basis that something has to be done with.

So the operators have designed an injection plant or program to return this gas to the reservoir during the interim period, until such time as they are permitted to sell gas from the reservoir. Let me reiterate again a point that Commissioner Martin made. Under AS 31, we have a waste prevention statute which says that you can't waste oil or gas in the state, and the Division of Oil and Gas Conservation has authority, under that statute, to regulate the flow of oil or gas or both for conservation purposes to achieve maximum recovery. Nothing in this contract that we know of, and we have been very particular to see that nothing _____, would interfere with that or in any way relinquish any of the State's authority to make that determination. That determination will be made exclusively under AS 31, and regardless of what this contract says, the field will be operated at the MER or most efficient rate of production. Now this contract is set up to sell any gas that is produced and sold. If the Conservation Committee permits them to produce at such rates that they could sell gas, then whatever that rate is, then we are committed that volume. If they could only sell 100 mcf a day, then that's what we sell under this contract. It is only what can be produced under this section at the MER.

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GRUENING: If the committee members have any questions that they don't want to slip by, please ask them. You mentioned 1982, as the date the gas pipeline would be completed or started or what?

GILBRETH: No. That is about the earliest that we could expect any deliveries from a gas pipeline. If you go into all the approvals that are necessary, the lead times to order, the contracts that the companies have to go through, the right of ways, the clearing, the studies, and so forth, about the earliest that we can see would be 1982, to have one completed to take gas.

GRUENING: Representative Chatterton?

CHATTERTON: Thank you Mr. Chairman. So we all understand, here is the same thing. If you say that by the earliest that you can see we can start selling gas in 1982, that is based upon how long a construction period? I guess what I am asking is, how long prior to 1982 would a private enterprise have to make an economic determination and put cash on the line to start the procedure for the permits and so forth and so on in the ultimate construction of the line? How far do we back down...?

GILBRETH: I don't know just how the overall timing would fit in on that. Some conversations that I have had would indicate that -- and here Mr. Chairman, you will have to talk to maybe El Paso or someone else on that but -- I am led to believe that if the approval finally comes from the federal government late this next fall or early winter, that the companies that they could do anything would be a little bit the following summer. Now, I am assuming that they are going to be able to arrange financing or anything like that until approval is given. And I don't know what time lapse, between that point and the time they actually start construction. You know, from the standpoint of getting financing and so forth. But if you consider a reasonable time in there considering the season effects and logistics and everything else, you will be coming into pretty close to 1982. Any reasonable set of assumptions you make regarding financing and ordering and starting construction and then construction time

GRUENING: Representative Hayes?

HAYES: I understood you correctly, it is going to take a little while to determine what kind of a commitment can be made for the sale of gas?

GILBRETH: Yes, sir.

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HAYES: What I don't understand is -- how can a prospective owner and constructor of a gasline get financing to start construction when he doesn't know until the time he knows what he is going to be able to get? Nobody is going to loan him the money.

GILBRETH: That is true. This is a real problem in the area. What we hope will come out of this, we hope that there will be some clear cut information what will say to us and, of course, we are going to have hearings on this and make a determination but, we are hoping that something can come out that we can say, alright, based on the best information we have -- and I am going to use two billion a day as purely an example, I don't want to write that in concrete -- but let's just say that we hope that our information will show us that if you sell 1.75 to 2.25 billion cubic feet a day, you are not really going much difference in the reservoir, at least within the experimental error or engineering error that we can see in our model, in our data, and our figures. And we will be in a position to say to the operator, if they so request, if they want to produce enough to sell 2 billion a day, say, alright, we will give you a temporary authority to produce for two years, or three years, depending receipt of reservoir data to confirm it. And the first time that we get reservoir data that says that is too high, we are going to have to cut it back. And this is going to make it rough on financing because nobody can guarantee that we are going to let them produce two billion or three billion or four billion cubic feet a day for the 15 or 20 or whatever years that they need to finance the loan.

GRUENING: Representative Parr? And then Mr. Meekins.

PARR: (Indiscernible) ...Well, what I am leading up to Mr. Chairman, is in the contract _____ maximum use would be committed for, one trillion, 300 billion. Was that... (indiscernible)

GILBRETH: No. It is. What we are committing through all three contracts is 2.6 million. And the one you happen to be looking at is one that -- that company gets 50% of our royalty gas, so they get the maximum of 1.3 billion.

PARR: Okay, that's ... So we are actually committing everything we would reasonably expect to be produced according to (indiscernible)

GILBRETH: No, this is from the 1/8. This is not the...

PARR: I understand that. I'm sorry I _____.

GILBRETH: Okay. But the 2 billion a day is 8/8 of the gas. It is not our 1/8.

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PARR: No. It is 250 million of ours.

GILBRETH: Yes. And there is also a time limit on it that's 1.6 trillion over a certain number of years. It is not the whole life of the reservoir.

MEEKINS: I have a question back on the geology. The reason it is important, I understand, is because these questions are yet to be resolved as to what kind of recovery you are going to get and how much gas we are going to need to reinject. As I understand it you have a water drive but you also have gas drive. Say that the horizontal and the vertical permeability is good, so what you are really concerned about is the water drive is really a function then of the _____ of the oil or something like that?

GILBRETH: Yes. The permeability of the reservoir and the _____ of the oil. There are a bunch of factors that go into it, but those are two of them.

MEEKINS: The question is really how much the tar matt going to impede the water drive, right? And if it impedes it a great deal then we have to reinject a lot more water in order...

GILBRETH: Our computer runs lead us to believe that the reservoir is rate sensitive, by that you can very ultimate recovery depending upon the rate that you take it out. But they do not indicate to us that it is very rate sensitive on gas withdrawals. It is more sensitive to the amount of water to be injected, to determine the maximum efficient rate of production. Here again, Mr. Hamilton will have to give you more detail later, but we think that the rate of gas production is not nearly as critical on the ultimate recovery as the rate of water injection. And that the rate of water injection is what is going to really ultimately determine the rate of production _____. I am talking about the rate of oil production.

Now, I didn't talk about the oil and the gas as it comes out. As our oil and gas comes to the surface, of course the gas comes out of solution with the oil when you release the pressure, you get it on the surface and you have vessels there to release the pressure and the gas is taken off the top and the oil goes on the bottom. The gas that is taken off, it has a lot of other hydrocarbons in it, referred to in many cases as liquids. These gases can go through other types of containers which condensates or liquids are settled out and called condensates. These are generally fairly stable and in most cases will be put right back in with the crude stream right there and go on down and be sold as crude oil. The remaining gas that

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comes off after the condensates drop out, still have liquids in them, and they are liquids that you have heard of -- propane, butane, penthane, ethane, hexane -- and the composition will depend on the separation characteristics as you go through each of these steps down the way. Initially, the plans are -- and I didn't tell you that Prudhoe Bay gas has about 10% or 12% carbon dioxide in solution with it, it is there, and it is an impurity, and it can't be burned, it is a pain in the neck. It has to be removed before it gets to your kitchen for fuel. But initially, until a pipeline and other cleaning systems are installed, the plans of the operators are to go through the separation stages, take out the impurities, and anything that is not stable and then just recompress the gases and reinject them right back down into the reservoir. This would include what we call natural gas liquids or ngl. The condensates will be taken off and sold as crude oil during the interim period. And anything that can't be dropped out.

Now, once a pipeline goes in, however, it is a little different story. The condensates will still be taken out, but there will be some additional equipment installed and as of this morning the operators have not designed the equipment and not ordered it and not installed it. It is gas conditioning equipment to take care of the natural gas liquids, or to extract these liquids out of the gas stream. Their intent at this stage is to take out as much as they can that is stable enough to go down the crude line and meet pipeline specs, and then any of the other products that come out during the stabilization and cleaning process, where they take out the carbon dioxide and the water and so forth to make it of pipeline quality. Anything that can't go down the crude stream, at least initially until there is some market for it or some need or some way to use it, will be pumped back into the reservoir. It will go into the reservoir as a liquid and will obviously revaporize. It will go in under high pressure and will be there for ultimate recovery later. But at this stage there is not a plan to take all of those liquids out and try to send them down a third pipeline or try to do something else with them. They are unstable. It is not feasible to put a lot of gas down the oil line and it is not feasible to put too many of these down the gas line. It can be done, and under the right conditions, might well be done. But I just wanted to point this out to you that the plans right now are very indefinite on what to do. Some of the operators propose to have their purchaser extract these products. Some of the others do not.

In the contract before you, provision has been made that the State will reserve the right to take those out wherever _____.

GRUENING: Mr. Parr?

PARR: Mr. Gilbreth, what is a gas cleaning plant? Now is that the first kind of thing you referred to where the condensates drop out or is that where you take out the liquids and the...

GILBRETH: This is where you would take out the liquid that won't fall out under just the ordinary means.

PARR: So you'd take out the liquids, the last one you were talking about?

GILBRETH: Yes.

PARR: I guess they are talking about the plant costing them a billion dollars in 1975 and in four to six years from the time of design and construction. And further than that, they can't even start the design until they know the characteristics of the pipeline. And further that the characteristics of the proposed Arctic, Alcan and El Paso pipelines were different. So that decision has to be made first before they can start designing the gasoline plant which is going to take them four to six years.

GILBRETH: That's right.

PARR: In general, this is a very general question because the circumstances may change it. Are the liquids as valuable as, less valuable than, more valuable than, the gas itself?

GILBRETH: It depends upon what you want?

PARR: You mentioned a lot of names a while ago. Like hexane. I've never even heard hexane. I'm not kidding.

GILBRETH: Your strain of liquids go all the way from aviation gas, automotive gas, butanes and propanes and on down to your oils and asphalts. You have got a whole ray and in some cases you can bury the recovery of them. But, generally, you get your gasolines and your napthas, and your diesels from the oil. You get your propanes and butanes from your gas.

PARR: The propanes and butanes then are a part of this natural gas liquid that you were talking about?

GILBRETH: Right.

PARR: Okay. Presumably these are valuable because the State retained the right to receive them. If they weren't worth a thing, we wouldn't want that right. I have somebody who is supposed to know something about this subject, which I don't, and who felt this contract was very deficient because it didn't refer to residue gas. If I understood him correctly, residue gas was the gas after the liquids were taken out, and that we should have been in the contract only agreeing to sell residue gas, still the one thousand btu. Only residue gas -- it is important is it not -- why...?

GILBRETH: Okay. Let me go back just a second if I may to our original lease and Fred may have to help me here, but our original lease, we sell the right to an operator to explore for, drill for, produce, sell, and market, oil and gas produced on the property. And as a consideration for that, he gives us a 1/8 royalty when it is produced at the surface and so forth. Now our rights are to take that at the wellhead on our lease. Which can mean the hole coming out of the ground. We are talking about gas sales here that are occuring through many millions and billions of dollars worth of equipment. There is a question -- well if we don't sell our royalty gas, it goes through the separation process and the condensates are knocked out, and it goes ultimately through the conditioning plant and then the tail gas, or the output of that plant is what would be going in to the pipeline, after those liquids are knocked out. Now, there is a long step between the wellhead and wherever that point is going to be. And we don't know at this stage, where it is going to be and the operators don't know. We have written the operators to please tell us and they say, we don't even know yet where the delivery point is going to be. Whether they will deliver it to us back at the wellhead or after it goes through one of these separation facilities. We want it where it is free to us. We don't want to have to pay anything. Now if we get it, ultimately, at the wellhead and we sell it to somebody as tail gas out here, we are going to have to pay for the processing going on through all these plants. So what we did here to insure that we didn't get stuck with some of that, was to say that we're going to reserve the liquids, wherever they are taken out. If they are taken out in the field, if they are taken out at Fairbanks, or if they are taken out at Valdez or if they are taken out in California, the State of Alaska wants to reserve those liquids. And the gas purchaser is going to pay the price of taking those liquids out wherever it is. That is something that we would have gotten had we not taken it in kind. If it is something that we would have had to pay for anyhow, then that is a different story. So what I am saying is, in essence, selling the tail gas, we are not calling it tail gas. We are selling the gas and reserving the right to take the liquids out of it. Am I confusing everybody?

AGO 799499

GRUENING: Mr. Chatterton?

CHATTERTON: I am going to try to help him. Very simply, his contract -- we are going _____ energy out of our 1/8. Now I can promise you that. The contract is beautiful from that standpoint. As the liquids drop out, we get 1/8 of all the liquids that drop out, wherever they drop out. We get 1/8 of all the pretty _____ units that pass from the wellhead. And we don't have to pay to get it. The processing is going to be paid for by the summation of these three companies.

GRUENING: Yes. Maybe you can help the question -- get out what you are saying -- but I'm not too sure -- if there is no use that the State has, let's say, at the wellhead for... The likelihood, is it not, that these liquids will go with the gas, wherever the gas happens to go. And if there is some market along the way that the people that are purchasing it will probably try to sell it, which point, if I understand it, we could say we want to claim it in kind at that portion. But don't we have to pay for any costs that are incidental to that?

BONESS: First of all, there are two separate provisions in the contract which I have gotten a lot of questions back that apparently confuse people about what we did reserve. Article 9, Section 9 refers to propanes, butanes, ethanes and things like that.

Gas, as it moves through the pipeline, once it goes through all the cleaning processes and separating processes that Easy has explained, it comes out of that last plant, the cleaning plant and is put into the pipeline, it will still have some propanes, butanes, ethanes, maybe a few higher but not very much beyond that.

GRUENING: Most of it will be left behind?

BONESS: Most of it will have been left behind and will either be reinjected into the reservoir, put into the oil stream...

GILBRETH: But the basic plant we are talking about is going to take out most of this in the field.

GRUENING: The reason this is going to be done is because it is not practical to ship this in the gasline?

GILBRETH: No. There are certain specs in the pipeline -- the requirements of the pipeline itself -- to transport the gas down. You are limited on the type of liquids that you can have in it. Well, you've got dew point measurements to take water and impurities out, to keep it from freezing in the line. And if you don't take these other products out, every low place you go in, in real cold

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weather, why the liquids will drop out in low places. They are called the sludging of the fluid in the line and the gas and so forth. So the gas companies require that you put the gas into the line with a certain quality. And the gas conditioning plant that we are talking about that's going to take four or so years to construct, that plant will take out everything that is required to get it to pipeline quality. Most of these liquids that we are talking about will be taken out in that plant and the ones that are not stable enough to go down the oil line, if there is not a market for them, will be pumped back into the reservoir.

GRUENING: And the cost of this cleaning is borne by the people that are buying this gas, is that right?

BONESS: I would like to interject something here. Our lease says that if we take royalty in value, the lease is silent with respect to cleaning and dehydrating the gas, either oil or gas. But it says if we take royalty in kind, we agree to pay actual value or actual cost of cleaning and dehydrating the gas. There is some question as to first of all, whether that term can be in the lease at all. Whether it exceeds statutory authority of the Commissioner in terms of issuing the lease and even if it does, whether therefore it can bind us. There is also a question of what it means by actual cost. These were debated in the oil pricing case in Cook Inlet and that case was settled. We don't have a legal judgement on those. That question with respect to three of the people in the Cook Inlet case is still open. And we may get some litigation. We may get a court decision on what that means or not.

If we incur that cost solely as a result of taking in kind, and would not have incurred it had we taken in value, then our purchasers would pick up that cost. If it turns out that we must pay that cost, even if we take in value, the lease is silent in that matter, then our purchasers are not obliged to pay that cost. And the reason for it is, we didn't want to be in a position where we would have gotten less revenue by virtue of having taken in kind than we would have gotten had we taken in value.

GRUENING: In other words, the uncertainty in the lease is in the contract as well?

BONESS: That is right. There was no way to contract out uncertainly in the lease.

GRUENING: Why is that? Because they wouldn't buy it?

BONESS: They essentially did buy it. They are going to pay the costs if it would have been put upon us.

AGO 799501

GRUENING: Well, couldn't you have stated in the contracts that they will pick it up regardless? In other words, we announce by contracting, do we not, that we are taking in kind? In other words, the contract assumes that we are taking all this in kind? Okay, can't we say that whatever costs...

BONESS: We tried that.

GRUENING: But they wouldn't buy it?

BONESS: No.

GRUENING: Okay. So we might have to end up picking up this billion dollar cleaning plant, in other words? Is that correct?

GILBRETH: The actual cost of cleaning and dehydration, if we were ultimately liable for it, we would have to pay 1/8 of that.

BONESS: Yes. The answer is if we are going to end up doing it, we are going to end up doing it whether we take it in kind or in value. The contract doesn't affect whether we have to do it. I might add that nobody believes we have to do it. It is our legal judgement and the legal judgement of other people that have looked at it, that we cannot be held liable for that. But if, indeed, we are, we are going to be whether we take in kind or in value.

GRUENING: Mr. Parr?

PARR: I don't want beat this to death... (indiscernible)

What part of the contract is it that says we get the liquids regardless of where and when they take them out and so forth?

BONESS: Both of those terms in fact say it. 4.4 says it with respect to...

PARR: 4.4 says it but 9.1 doesn't unless I read it wrong. It says the right to process the gas and have the gas processed, is not exactly the same as saying you can get it after (indiscernible)

BONESS: It means that you get the liquids. If you process the gas, once it has been delivered to the pipeline, the only thing you get by processing the gas is the liquids, is the propanes and butanes out of the gas. That is what it means to process the gas.

PARR: (Indiscernible)

BONESS: Yes.

PARR: Mr. Gilbreth never really answered my question exactly a while ago, and I guess I didn't state it clearly. I said somebody who is an employee knows something about this and he said that the contract was wrong because it _____ say residue gas. You didn't answer that (indiscernible)

GILBRETH: I'm sorry. I don't feel that it is important because I think we have covered it in essence in the wording by saying that we have the right to take the liquids out of the gas. And that is all that happens between the time that you initially separate it and it goes to the pipeline, you take the liquids out of it. You can call it -- there would be no problem...

PARR: Residue gas, I assume, is a standard term. What does it mean?

GILBRETH: It means the gas that comes out of the gas conditioning plant. In essence. Residue gas generally is a term that is applied when you put gas into some sort of a treating plant. And it doesn't have to be a conditioning plant like we have. It is just the gas -- the residue after the treatment. It is a fairly well understood term. If you come out to any plant, you can have the residue gas.

QUESTION: (Indiscernible)

GILBRETH: In this case, yes. The gas coming out of the gas conditioning plant, the residue out of that, would be what goes into the pipeline. But the residue out of one of the other plants, the injection plant or something like that might not be the gas that goes down the pipeline.

GRUENING: Mr. Meekins?

MEEKINS: I just have a technical question, as I understand it, the names for these different things are related to the number of hydrogens associated with the carbon atoms. Is that correct? Like hexane would be six hydrogen, right? Which ones are which? Does propane mean one and butane mean two?

GILBRETH: Methane, ethane, butane, propane, penthane, exane, and haptane. Methane and ethane are your two very lightest ones. And then as you go down, they get heavier.

MEEKINS: And all those are gas, right? And then octane would be oil, right?

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GILBRETH: No. Not necessarily. I don't know the real character of octane, whether it is oil...

MEEKINS: But as you get heavier then you get into...

GILBRETH: Yes. But your lightest ones are methane and ethane are what you generally run in your stoves in your house...

MEEKINS: So you've taken out the heavier ones like propane (end of tape)

GILBRETH: ...they are taking out everything, taking out about 96% of the butane and propane. I believe it is 98% of the propanes and 96% of the butanes. And then leaving the methane and ethane. And it will depend on the design of the plant up there, whatever they take out.

GRUENING: Mr. Gilbreth. What percentage -- you say that not all the propanes and butanes will be cleaned out if this thing goes as according to plan -- what percentage will go with the gas and what percentage will be in...

GILBRETH: That is the point I just made. I don't know. It will depend on the design of plant that the operator puts in. They may take...

GRUENING: But your earlier point was that they are trying to take as much out as possible?

GILBRETH: I'm sorry. I might have misled you there. What I was saying is that they will take out as many of the heavy hydrocarbons as they can to go down the crude stream, those that are stable. And they will take out the others that will make it of pipeline quality, whatever that turns out to be. And they may have to take out 95% of all the propanes and heavier or 98% or 91%. I don't know at this stage what the design of the plant will be. But they will be taking out most of the liquids, leaving, basically, ethane and methane, and some small fractions of some liquids.

GRUENING: Now, what determines what is of pipeline quality? It depends upon pipeline design, does it not?

GILBRETH: And the quality of the gas.

GRUENING: Okay. Well, that's fixed someplace. But the pipeline...

GILBRETH: Wait a minute. Gas can be of a different quality, from everywhere, from every field...

GRUENING: But within the Prudhoe field, it is likely to be of the same quality, right?

GILBRETH: Yes.

GRUENING: Okay. The question I want to get at...

BONESS: Mr. Chairman, I think I can answer your question. Each pipeline by tariff says what the gas has to be, sets the pipeline specifications. And they will say you can have so much propane, butane, ethane in the gas. And you cannot have a higher percentage than they tell you. They will determine that by engineering characteristics.

GRUENING: Right. What is the relationship - If you examined the three proposed routes. And what can you tell us about the different characteristics in terms of gas quality that they can take. Is there a substantial difference between those three lines? I only say this...

GILBRETH: I have not examined that myself.

BONESS: I have examined it slightly, but not having Easy's background, cannot tell you very much. But I can tell you that because the El Paso and Arctic Gas pipelines are higher pressure, they are able to carry a higher percentage of propane, butane, ethane, than the Alcan, which operates at a lower pressure and therefore is not able to carry as large an amount. I believe I could supply you with the pipeline specifications that were submitted in the tariff if you are interested.

GRUENING: Yes. The question is, why the difference -- as a result of pressure? Is that...?

BONESS: Easy could explain to you, but it has to do with the dew point. If there is greater pressure the heavy hydrocarbons will not come out to form a liquid as easily as if...

_____: I understand that, but why is there pressure differences between Alcan and those...

BONESS: The Alcan proposal makes use of existing pipeline facilities in Canada, whereas the other two build all their own facilities. So, those in Canada are low pressure and they have to be compatible.

GRUENING: Mr. Chatterton?

CHATTERTON: Mr. Chairman, because this may be important in the lives of some people, I'm not too sure what is important, I would like to have Easy and I caucus but I guess we can't do that. But I have a hunch, if my memory serves me, and so I guess it is a question to Easy -- is that generally liquids will vaporize more easily at lower

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pressures than at higher pressures, therefore, a lower pressure line -- and I am asking this as a question, as to whether it is right or wrong -- lower pressure lines will carry more of the heavier hydrocarbons in the gaseous stage than a higher pressure line would.

GILBRETH: As long as you have ample pressure and temperature, but...

CHATTERTON: Constant temperature, yes.

GILBRETH: But under the pressure conditions you can keep more liquids in that phase at the high pressure.

CHATTERTON: In which phase?

GILBRETH: The gaseous phase. As you flash your pressure, the liquids drop out.

GRUENING: In terms of, let's say, the tariff on the pipeline -- is the fact that it has got more liquids in it likely to result in a lower tariff? In other words, having liquids in there, is that an advantage to the pipeline owners?

GILBRETH: No. They want to keep the liquids out.

BONESS: I believe the tariff is set up on a price per mcf, so that wouldn't have any significance.

GRUENING: But don't they charge for taking the liquids through?

BONESS: No. They charge for the space in the line.

GILBRETH: They are interested in transporting mcf of gas. They don't want to transport liquids if they can keep from it.

GRUENING: Unless they own some -- have a chance to sell those liquids at the other end.

GILBRETH: Well, that could be then.

BONESS: Having the liquids in, of course, increases the btu content of the gas. And if the tariff were set up on a btu basis, that might have some effect, but I don't believe the tariffs are set up that way. There is also a minimum btu requirement in the tariff, which I believe is a thousand btu.

GRUENING: Well, in terms of the people who are buying -- or are contracting to buy this gas from us -- wouldn't they prefer to have a situation in which they could have the liquids? At least available for shipment through the line? And they could, in other words, as I understand it

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under the contract, unless we chose to take them out at some point, I mean, they have the right. They pay us for it, but they have the right to sell those liquids. Right?

BONESS: Yes. If nobody takes the liquids out of the gas, the liquids will just be burned as part of the gas stream. You will have a higher btu content gas stream. If somebody choses to take the liquids out, and we don't chose... The one way that this is very likely to occur or at least could occur, is all of the different people who own the gas may get together and decide to build a processing plant and take the liquids out. They will share in the cost and share in the percentage of the liquids that come out. We elected not to do that, but if the purchasers of our gas did elect to do that, yes, then they would own the liquids.

GRUENING: Are you aware of any plans on the part of the purchasers to do that?

BONESS: No. There are no purchasers for the other 7/8, with the one exception of Columbia Gas.

GRUENING: Which constitutes over 50% of the 7/8? Right?

GILBRETH: I heard that 50% figure...

(All talking at once)

GRUENING: 37% of the 7/8. What is the percentage?

_____: May I answer for you because I was the one who made the statement. And I find that I did not know there are two participating areas. One is for crude oil and one is for natural gas. So on the basis we are now told that about 37% of 7/8 is committed. (indiscernible)

GRUENING: Well, was it Commissioner Martin's statement that that was his understanding of the amount of gas committed?

_____: I thought that Commissioner Martin said that he was aware that some had been committed but he didn't know what the percent was.

GRUENING: Any questions?

_____: I have a question, Mr. Chairman. (Indiscernible)

GRUENING: Do you have any more questions right along this line?

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PARR: You were talking a while ago about, when you were going through and explaining to us _____ about the use of gas and water and so forth, furnish the pressure to get the oil out. If I understand you correctly, they use either gas or the water, obviously they prefer to use water in some cases because they can sell the gas. And they are apparently considering, not just produced water that comes out of the well, but also source water and you said the Arctic Ocean, to be specific.

GILBRETH: Yes, sir.

PARR: I assume that the Department of Environmental Conservation or somebody like that is looking at this to see if this is going to be environmentally feasible so that (indiscernible).

GILBRETH: No, it is not possible to use gas for this. It has to be water or ethane water.

PARR: (Indiscernible)

GILBRETH: No, not for the area that we are talking. I made a mistake when I said there is water in ethane. That's not quite true. But it in all likelihood will be more efficient to use some sort of a liquid mechanism.

PARR: Why is DEC looking at this business of taking that whole Arctic Ocean up there -- that ocean is very very shallow for quite a long ways out. And if they take a large volume of water out, there might be environmental considerations. Is the DEC looking at that now?

GILBRETH: I am not aware of it right now. Right now the studies under way are to see if the water could even be used. And, of course, they are obviously going to have to meet all the environmental criteria and everything else to use the kind of volumes that we are talking about here, we obviously would have to lay a source line to deep water somewhere. They couldn't do it within the island area there except in a few limited places, because of the shallow water depth and it freezes in the winter.

PARR: _____ the amount of gas that is going to be used for reinjection or something, anyway,...

GILBRETH: No. At least our tentative runs show us that recovery due to the water are almost independent of the gas part itself. The gas stands fairly well on its own and you have to put the water in to supplement the energy...

GRUENING: Mr. Hayes?

HAYES: I have a question of a non-technical nature. Maybe this should have been directed to Commissioner Martin. Does or would the FPC allow, it is on your royalty gas, or its selling gas to a purchaser, do they allow unusual restraints against getting a premium, selling the rights? If we had found a willing -- if people had been so inclined -- would it have been possible to get everything -- what we have in this contract is they are going to buy this gas at the best rates and there other considerations which support the all Alaska line. Could we have, also or instead of, got a billion dollars _____? Are these the figures? Are these the only figures around here? Is it a consideration?

GILBRETH: Let me take one shot and then let Fred take one. I know some of the discussions that were had on it. The purchasers pointed out that any payment that they made would not be recoverable through their rate structure and it would have to come out of their own back pockets. And they could pay something, but it would be relatively small because it would come out of their pocket. Fred?

BONESS: To my knowledge, there would be nothing unlawful about that.

HAYES: We do sell oil and gas leases. And we get a premium and that comes out of profits. _____ we could sell... You'd finally have something in your hands... we could have done it if we could have found somebody willing to do it?

GILBRETH: Well, you are talking about two different types of companies, now. You are talking about selling oil and gas leases. Those people are in the drilling exploration and they are not controlled, whereas the purchase is our control on their properties.

GRUENING: As I understand it though, nobody was ever asked to bid on the gas on a cash bonus or premium basis. Is that correct? To your knowledge? Either of you.

BONESS: There were some early discussions. The very early offers. These offers were made actually before the price, or advance payment ruling came down. There were offers to put up front end money. I believe all of those were withdrawn after the advance payment ruling. There was no other bidding...

GRUENING: There have been no... any bids invited?

BONESS: That is what I mean. That's right.

GRUENING: Mr. Meekins?

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MEEKINS: I hate to go over this again but that advance payment -- how did that relate to that, I mean... Was there some way that, before that was prohibited that they could take it not out of profits, or something? Is that somehow easier for them to do it?

BONESS: Right. They would have been allowed to pay the money and put it immediately in their rate base.

MEEKINS: Oh, I see. Right.

_____: What kind of profits would they (indiscernible)

BONESS: The rate of return is regulated by the Federal Power Commission. I don't know what...

GRUENING: On the pipeline but not on the other end of it. Well, that isn't true either, but. You do distinguish between the rate of profit that the owners of the pipeline can make and that that these purchasers could make. That is two different ball games, isn't it?

BONESS: Well, perhaps you ought to explore that with them, more than me, but let me... Pipeline companies, gas transmission companies, the companies we sold the gas to, makes no money on the purchase of the gas. That is just given. They buy gas for a dollar an mcf or 20¢ an mcf, but they sell the gas for the same price. Where their profit comes is on the capital investment, the pipeline they own. They are allowed certain rates of return on that capital investment.

GRUENING: But there is no law that requires them to sell it for the same price they buy it from us?

BONESS: Yes, there is. The FPC regulates them so that they don't make any money on that. They make money by moving gas, not by buying and selling gas.

GRUENING: But they could sell to somebody else and make money on that, couldn't they? Or not?

BONESS: Not for resale. Interstate commerce. They could sell the gas to a direct consumer.

GRUENING: Well, that's what they are going to do, aren't they?

BONESS: The principle customers of all of the major transmission companies are distribution companies. Those are all regulated sales.

_____: The people who are buying royalty gas (indiscernible)

BONESS: They are pipeline companies. They make money by having -- the only way they make money. And you ought to explore this with them in greater detail. But the only way they make money is by owning a pipeline and moving gas through the pipeline.

GRUENING: Mr. Meekins?

MEEKINS: And for doing that they receive a certain return on their rate base because the cost of building that pipeline or whatever?

BONESS: That's right. All of the sales in the natural gas industry except direct sales in interstate commerce, are regulated, either by the Federal Power Commission or by State commissions.

_____: (Indiscernible)

GILBRETH: Their ownership in the pipeline, percentage, would be greater than...

BONESS: If you were moving one cubic foot through a pipeline, that means you'd have to distribute all of the fixed capital investment over that one cubic foot. And you wouldn't be able to sell that one cubic foot for the hundred million dollars or whatever it was that it cost to build the pipeline. So you have got to have gas in the pipeline in order to distribute it. A lot of gas in the pipeline, to distribute the cost.

GRUENING: I think what everyone is struggling with is trying to find out what is the probable value of what we are selling here. And along that line, can't these gas companies that we are proposing to sell gas to, they can sell it to someone else, not for resale, can't they, and get whatever price they can, that the market bears at that time? How does that relate to the price we get?

BONESS: I believe if they were not in curtailment they would probably be able to do that. In the curtailment situation that they are in, I don't believe they can do that.

GRUENING: Yes, but, we are talking about seven or eight years from now. With deregulation there may be no curtailments. Is that a safe assumption?

BONESS: That is a possibility. I'm not sure if it is likely.

GRUENING: Mr. McKinnon?

McKINNON: Curtailment _____. What is it based on?

BONESS: Basically it is based on the fact that they don't have enough on the average, I believe, to supply the customers, their firm customers. It is based on firm customers.

HAYES: Well, some way or another they -- there is a value that can be put out on the front end for their right to our royalty gas in addition to what the FPC might allow because under the terms of this contract these companies are going to spend a lot of money just lobbying. A tremendous amount of money is going to be spent so right there - there is some money there, so there is room for additional value for the sale of our royalty gas, whatever that might be. In addition to the terms of this contract which generally have to do with whatever regulations allow.

BONESS: Although the question may hinge on whether -- the value may be related to whether it can be put in the rate base or not. The cost associated with the lobbying that may be associated with this contract may be included in the rate base, and if that is so, then they could put the money out.

GRUENING: Let's just forget about the pipeline for a second and if the State just sold it today -- I don't know if you can do that -- but what value does Administration put on the -- present value -- does it put on the 26 trillion cubic feet? Is there any figure there? How do we even approach this unless we've got some idea of what the value is? If we should ship it out today?

BONESS: Let me try and give you some ideas. I don't think I can really answer your question.

GRUENING: Is there somebody who is in the Administration who has looked at that?

BONESS: Well, one way of looking at -- If resources weren't what you could sell it for, nobody has come in and offered to give us a fixed sum for all of the gas. So I mean to that extent I don't believe anybody can put a number on it saying, today it is worth half a billion, or two billion dollars. No one has offered to buy the gas that way. The FPC regulates the price of gas in the lower 48 that's sold for interstate, in the interstate market for resale. That price was, a year ago, I believe 51¢. The new order, I believe, said a $1.51. That's the wellhead price of the gas. That is on one basis. Something you might explore to see how that relates to... That price, by the way, does not apply to Alaska, it applies only to exploration in the lower 48 states. Another thing you might be interested in is unregulated gas. That is, gas sold in the intrastate market. In Texas and Louisiana

and places like that, it is selling anywhere from $1.75, $2.00, maybe even a little bit more than $2.00 mcf contract. There is something called emergency sales. Which means for a short period of time, or under certain other kinds of conditions, gas can be sold in the interstate market, in an essentially non-regulated fashion. It is not completely unregulated, but it doesn't come between the price that is otherwise applicable. I believe contracts there were going for about $1.50, $1.60, before the new rate took place. I don't know if that really answers your question, but maybe it is some help.

GRUENING: Mr. Gilbreth?

GILBRETH: Also, I believe that the volumes of gas that we're talking about here are significant volumes without a known use for it now in Alaska, necessitates that it go to the south 48. All of the companies who have talked about it, to the best of my knowledge, would be regulated by the Federal Power Commission and they are regulated on what they can pay for it. So you are talking about FPC regulation, whatever that turns out to be.

GRUENING: If we are not a person -- you might want to follow this up - if we are not a person under the natural gas act, and we sell to somebody who isn't going to resell, say an industrial user is going to turn it into something or do something with it right there, what kind of price could we expect to get? Do we get a premium price for that?

BONESS: If there would be no FPC restriction on them paying the premium price, whether we could or not, I can't answer you.

GRUENING: Okay. Has that question been explored in terms of...

BONESS: The Royalty Board made a number of solicitations that you may be aware. I don't believe any responses came in from direct purchasers.

GILBRETH: Commissioner Martin would probably have to answer that.

GRUENING: Mr. Meekins and then Mr. Hayes.

MEEKINS: I just have a short question. What is the total volume of gas included in the sale in the contract?

GILBRETH: 2.6 trillion for the three contracts.

HAYES: I'm just trying to get a handle on this value. What the value _____. The value of having the opportunity to buy the gas. I think there was testimony here to the effect that if Columbia loaned Sohio somewhere around $300 million, in a tight money market, which was interest free, for what periods of time I don't know, for the opportunity of buying 37% of the gas at some price.

GRUENING: That is a good line of inquiry. I'd like to follow that up. Maybe not tonight. Mr. Boness?

BONESS: I think that is a good observation but you do have to realize that that has to be discounted by the fact that it can be put in the rate base. Because they came in before the advance payment decision.

HAYES: The point I am trying to explore is what are we giving up in potential dollars for lobbying effort for a line _____ what we read about?

GRUENING: Does anyone want to answer that? No comment?

GILBRETH: We'll let the Commissioner take a shot at it. There's as many evaluations that can be made there as there are people to look at it.

GRUENING: Yes, but is there a stab at it?

GILBRETH: Not to my knowledge.

GRUENING: I don't want to go too late. I think we are getting a little tired. Maybe we could follow this up. Mr. Meekins?

MEEKINS: Yes. I'm trying to do this calculation right. When you talk about $1.50 per mcf, are you talking about million cubic feet? Is that what that stands for?

GILBRETH: Thousand.

MEEKINS: Good.

GRUENING: Mr. Chatterton?

CHATTERTON: Several people have made various estimates of what the wellhead value might be and there are some figures thrown around. I don't know what the validity of them are, but we're going to need a wellhead value in the order of 55¢ mcf for the operators to obtain an adequate return on their investment. I wonder if there is some information on that around. (Indiscernible)

GRUENING: Somebody outside Administration?

CHATTERTON: I think so.

GRUENING: Does that appear correct to you or...

GILBRETH: _____ says _____, Department of Interior.

GRUENING: Mr. Meekins?

MEEKINS: Mr. Chairman, if you say the new rate if $1.50 -- just assuming that, I think the logical assumption is that the price is going to go up, simply because there is a possibility of deregulation, there is a scarcity, all sorts of combinations like that. But if you don't even take in all the things you should consider and just multiplied volume times the price, you get four billion dollars and that is not considering increases or discounted value of it for the future and all that kind of stuff. But just how much it is worth sitting there, I guess. Right now the current price is four billion at _____.

GRUENING: Mr. Chatterton?

CHATTERTON: Mr. Chairman. I have a series of questions that would be completely within Mr. Gilbreth's discipline. And depending on time, why I can ask them to my satisfaction now or, I don't know what his schedule is...

GRUENING: Let me ask the committee -- What are your wishes? It is quarter after ten, now. There are going to be long hearings next week and we've been told by all these gentlemen that they will be happy to appear. Mr. Gilbreth are you going to be staying through til Monday?

GILBRETH: I have to go back for a meeting tomorrow and one on Saturday. I will be back Sunday.

GRUENING: I think it is kind of late. Are there some immediate questions that are left hanging that you want to cover? If anyone wants to stay and talk to Mr. Gilbreth, and he wants to stay, that is fine. Mr. Gilbreth?

GILBRETH: Mr. Chairman, I'd like to say that in our little discussion between Mr. Chatterton and I about the pressures, I will do some checking. I think we are talking about two different things and we both may be right.

GRUENING: Mr. Parr?

PARR: Let me ask one very quick question. Mr. Boness, something has been said about the possibility that the State of California might want to buy the gas from us _____, they're not regulated by FPC either. (indiscernible)

BONESS: Probably Commissioner Martin is the person you ought to... I don't think I know really any more than any of

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you do. I know that there was some discussion in California introducing legislation to create a gas purchasing authority. The thought was that the purchasing authority could then purchase the Alaskan gas and other gas, resell it to the utilities of California. Beyond that, I'm afraid I really don't have any additional...

PARR: Such a sale, though, even if _____ and California is not subject to the regulations and we are not subject to the regulations, transportation is still a problem?

BONESS: That is right.

GRUENING: Would it be fair to assume from our recent comments -- from a little while ago -- that one of the things we are giving up, perhaps, is the difference between the regulated and unregulated price for selling... Under this contract we're going to receive the regulated price. And a sale to California, as Charlie mentioned, or a sale to some hypothetical industrial user, could bring a higher price?

BONESS: I would agree with that with one _____. And that is if you are talking about a sale outside of Alaska, you still have the problem of the FPC regulating the transportation of that sale and prohibiting that sale. In fact, that would be almost exactly the facts in the Transco case which is the leading for the proposition that the FPC can regulate...

GRUENING: That is the one you have intervened in?

BONESS: No. The Transco case is a 1960 case which really establishes the doctrine that they can get at the wellhead price by virtue of the authority to regulate the transportation. A little bit earlier you said, as long as we are not a person, we can get this sale. Actually you can get that sale even if you are a person. Direct sales in interstate commerce are not regulated. If A sells to B and B is going to use all of the gas himself, that is not a regulated sale, even if they're in different states. The problem is, if you want to move that gas, you've got to go through an interstate pipeline, and the FPC can then regulate the sale and decide yes or no whether they are going to let you go through it. The Transco case was a case where the FPC said, you have exactly those facts, they wanted to move the gas from Texas to, I believe, New Jersey. And the FPC said, no, we don't like what you are going to do with the gas, we don't like the price it is being sold at, and we are not going allow it. You would always have that problem if you are talking about direct sale in the lower 48 states.

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GRUENING: Any questions you want to hit tonight? I want to thank you both Mr. Gilbreth and Mr. Boness, for sticking with us tonight and we thank Commissioner Martin for being here for a short time. Thank you.

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ISER, University of Alaska (2/3/77)

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MR. KILGORE: All right, thank you, Senator. My name is Richard Kilgore. I'm Director of Research for W. J. Levy Consultants Corporation. Our firm has been economic advisor on matters of oil and gas to the Legislature since, I believe, 1969. We are also consultants to a number of oil companies, domestic and foreign, small and large. We also are consultants to a number of chemical companies on feed stock procurement and feed stock availability and so on. We're also consultants to a number of major oil users such as electric utilities, mining companies and the like. In addition to the State of Alaska, we are consultants to a number of other governments, at the present time the Province of Alberta, for example, and Pertamina, the state oil company of Indonesia, among others.

As for myself, I'm an economist by training, a Bachelors Degree in Economics from Rutgers University, and a Masters Degree from Carnegie Mellon University. Senator, you've been calling me Doctor; that is incorrect. I'm one of those who passed Ph.D. exams and never wrote a thesis, so I would like to correct that.

I've been with W. J. Levy since 1963, just about fourteen years now. Prior to that I spent two years with the National Bureau of Economic Research, which is a major non-profit research organization. I was also with the

Econometric Institute for a short while, and also did some work for the Committee for Economic Development.

I would like to make what I hope are relatively brief opening remarks, and they really have to do with how we, as your economic advisors, view what you're trying to achieve through these contracts. At least my opening remarks today are addressed primarily to the underlying reasons for sale of Prudhoe Bay royalty gas.

I'm going to cover such things as what are the interests of the State of Alaska, what issues can Alaska properly decide for itself; set against these, what are the broader national interests; and how do Alaska's interests fit into the national decision making process on this gas pipeline. And we'll try to put these in the context of the contracts before you.

As I said, my initial remarks will have relatively little to say about the contracts themselves. As an opening statement, our view can be characterized this way: if Alaska decides that sale of royalty gas is essential to support of an all Alaska pipeline route, we feel that the contracts, in general, are carefully conceived to protect the State's interests.

The primary objective in entering into agreements for sale of Prudhoe Bay royalty gas at this time is to provide support for an all Alaska route. We would like

to review briefly the reasons for Alaska's interest in that route and the importance of these reasons. As we see it, there are basically two types of benefits to the State in an all Alaska route. First, there appear to be certain fairly clear-cut economic benefits, although probably offset to some extent by some social costs.

And second, there is the question of the potential availability of gas for State use with the El Paso route.

We would like to provide some perspectives on both of these potential advantages. Among the pipeline alternatives there are certain economic advantages to the State that can be reasonably established. These were reviewed by the Governor's Task Force, and then the report, Comparative Evaluation of Prudhoe Bay Natural Gas Pipeline Systems.

An all Alaska route, together with its liquefaction facility, does appear to provide the greatest economic advantages in certain key areas. Employment is an obvious one; resulting income flows to Alaska's labor force, although all these will obviously not be State residents, there will be migrants too. Employment and income should be higher, both in the construction and operating phases of the El Paso facility, as against others. The greater length of the line, and the LNG facility virtually insure this will be the case.

Tax revenues to the State treasury should also be higher, largely through the operation of your property tax. Again, it's the greater length of the line and the LNG facility that make this possible for you.

Now, another major source of State revenue from Prudhoe Bay natural gas will be royalties and severance tax, both of which are based on wellhead values, as you know. The Governor's Task Force concluded that these revenues would not be affected by alternative routings; that is, that higher or lower transport costs to markets would not bear on wellhead values.

Now, we agree that as long as sales of Alaskan gas in interstate markets continue to be regulated by the Federal Power Commission, this is likely to be the case; that is, that wellhead values will probably be established on a basis other than a net-back from markets, that transportation would probably be added on to a regulated wellhead price, and the final price would be rolled into the final cost of gas to distribution companies and to ultimate consumers.

The FPC staff, I believe, has recommended the rolling in of high-cost gas supplies such as foreign LNG and Alaskan Arctic gas, and I understand that Judge Litt has also recommended this approach for high cost sources.

Under deregulation this is not necessarily the case, that the costs of transportation would not bear on prices. Transport costs, in that case, would have an ultimate bearing probably on the value of Prudhoe Bay resources. But we basically feel that deregulation is not a too likely event for some years to come.

We would caution, however, that Alaska cannot always assume that the value of its resources will be unaffected by the routing of its exports. In the long-run this may be the case. I think Prudhoe Bay provides a current example of some of the problems of transportation costs on wellhead value. As you know, there is a problem of potential crude surpluses on the West Coast, the major market to which Prudhoe Bay crude will move. And there is a possibility that some volumes of Alaskan crude may have to move to quite distant markets, that is, beyond the West Coast, around to the Gulf and East Coast of the United States, and this would be at very high tanker transportation costs since the oil must move in U.S. flag vessels and the distances are very substantial.

And if this is the case, if Alaskan crude does move in this direction in any kind of substantial volumes, there will inevitably be a question of the value of Alaskan crude in Alaska; that is, what market is its value established in. We feel that over the long-run it is not

in the national interest, and probably not in Alaska's interests either if its wellhead values are affected, to funnel ever larger and larger volumes of Alaskan energy supplies through California; that is, larger and larger volumes beyond Alyeska crude and beyond the El Paso route, if that is chosen.

If major oil reserves are found in Petroleum Reserve No. 4 on the North Slope, for example, a strong case will be made for a pipeline to move that oil through Canada I think, despite the fact that you have a pipeline corridor southward. Incidentally, if the gas Arctic pipeline is not built and an oil line moves in that direction, it would then be pioneering a corridor rather than following a corridor which might be established had the gas Arctic pipeline been constructed.

But this is somewhat aside. We believe it is reasonable to assume that the value of Prudhoe Bay gas will most likely be unaffected by the cost of alternative pipeline routes, at least for many years ahead. And let me also say that we've looked at the various studies that have been made on the costs of transportation, what the FPC has done, what other people have done, and we are not entirely certain in our own minds which system would, in fact, have the highest cost of transportation. It looks like a very uncertain thing to us. A lot of the

cost estimates are based on probabilities of delays, cost over-runs and so forth, that are very, very difficult to assess, in our view.

Against positive advantages in terms of employment, income and tax revenues, there are other factors to be considered as well by the State; and, as the Governor's Task Force concluded, some of these may be negative to the State in an all Alaska routing if one looks at such things as social impacts, the effect on the cost of living, prices in Alaska, and so on, and also looking at environmental factors which are, obviously, very difficult to assess. The all Alaska route also involves an LNG facility, movement of LNG tankers out of Alaska, and these pose new environmental concerns, and ones we feel are very, very difficult to assess.

However, these are all factors that the State and its citizens must evaluate and weigh with the more clear-cut economic advantages from taxes, employment and so on. Your own Task Force concluded that the positive advantages outweighed the negatives, as you know.

The second reason for supporting an all Alaska route is the potential availability of natural gas for in-state use, and it is very clear -- I've been through all the -- I've sat also through all the hearings -- it is very clear from your questions that many of you

consider that aspect very vital.

It is obvious that the potential availability of gas is quite different among the three pipeline alternatives. El Paso moves to tidewater, and this could be very important for uses of gas in industries which involve export of their products to Lower 48 markets, obviously; being on the water, near water transportation, is important.

Alcan, of course, moves gas to Fairbanks and then moves off in a southeasterly direction, and in directions which run through areas that are, obviously, not very populated.

Gas Arctic route, of course, provides gas essentially just on the North Slope.

It is difficult, however, to assess how much value to be placed on this greater potential availability of gas for in-state use. We should point out first that there may well be other gas availabile in the State over the years ahead. Exploration is beginning now in other areas, the Gulf of Alaska, Lower Cook Inlet, Bristol Bay and so on. Gas may be discovered in one or more of those areas, and it is possible also that gas may be available for in-state uses from these areas at lower costs, lower transport costs and the like.

As an aside, I think we should also mention

something that we have before, that to the extent that the State of Alaska feels that in-state use of gas is very important to it or may be important to it in the future, they might consider in their leasing policy, perhaps changing leases so that what they have available to them, to the State, is not simply a royalty which can be taken either in value in kind. Perhaps the State should consider some sorts of options in leases which provides the State's future ability to buy back gas if the State feels that's necessary. This is not what is under your consideration now, but I think I should say again one should consider this if use of gas, you feel, is important in your State.

In any event, all may not be lost in terms of future availability of gas if the Gas Arctic route is chosen. As for now, however, it is Prudhoe Bay gas that is becoming available, and other potential supplies are obviously very speculative. And El Paso clearly has the potential to make more gas available to more locations in the State of Alaska. But what then really are the advantages in using gas within the State of Alaska?

You have major oil resources in the state, as you all know, and you're obviously not an energy short region. I believe we've pointed this out before, but we would

like to again: there is likely to be an economic advantage to using gas versus oil in an area such as Alaska, which is a major exporter of energy and also an exporter which is remote from its major markets. The reasons for this is that the economics of transportation clearly favor movement of oil over gas.

Gas transport costs per btu are roughly three to four times that for oil when the gas is moving overland by pipeline. Gas transport costs are roughly ten to fifteen times higher when the gas is transported over water as against transportation of crude oil over water. Thus gas, which carries very high transport costs, tends to have a lower value in an area such as Alaska, an exporting area such as Alaska; and oil, a higher value.

In general then, the economics tend to favor use of gas in Alaska and export of oil. To put it another way, gas is a better btu bargain locally, oil a better product to sell nationally. But we want to caution you and point out that gas transportation within Alaska is also, obviously, expensive if distances are very great over which gas must move; it's possible that the general economic advantage of using gas internally could be wiped out. But in general, the distances that you're likely to move gas to markets are likely to be comparatively short, at least as compared with the distances

you would be moving it to export markets in the Lower 48. Thus, in general, we would expect that gas will be a relatively attractive fuel for use in the State, as against oil.

While there can be significant cost advantages to using gas in Alaska, the potential volumes that might actually be consumed, we believe, are very elusive. We've looked at a number of studies that have been done projecting these volumes, and we think it is by no means certain that the volumes would be very large, especially any time in the near future.

It is even difficult to estimate what future residential, commercial and conventional industrial fuel uses might be in Alaska. Realistically, as I said, we believe that the volumes are not likely to be very, very large. We would note that in the Anchorage area where gas has been available for many years, as you know, and which is the area's most populous region, Alaskan consumers are now consuming something like two hundred million cubic feet a day of natural gas. Your royalty share of Prudhoe Bay gas might be on the order of three hundred million cubic feet a day, or about fifty percent more than is currently being consumed in Anchorage, where it has been available for many years, and where a large part of your population lives.

Now, new industries are possible. Copper, iron ore, nickel were pointed out by the Governor's Task Force, but they also were very candid in admitting that, and I quote, "At the present time there have been no large-scale, serious and detailed proposals by the private sector to utilize Prudhoe Bay gas for in-state use."

Non-conventional uses of gas, and we've heard some testimony about these, such things as using gas as a feed stock for petrochemicals or for methanol are even more uncertain, we believe. If these do materialize it seems likely that it would be many years down the road. While the resources are available in Alaska for these types of operations, the economics of scale and of transport of products to other areas tend not to favor Alaska and tend to work against the economics of these industries in Alaska. We don't mean to say nothing of this sort will ever come about, but what we are saying is that one has to look very carefully at the economics of these things, and it is uncertain, quite uncertain as to what volumes would be used in the foreseeable future for these unconventional uses.

So, as we see it, the State's interest in an all Alaska route depends on, first, reasonably clear-cut net economic and social benefits; second, the potential

availability of gas for in-state use which, in principle, could provide economic advantages as against other fuels, notably oil. But the volumes that might be used, and their importance, is very difficult to judge and uncertain.

But it is up to the State and its people to decide how important these factors are to their interests, and how vigorously, and by what means it wishes to pursue these interests. We do not, however, feel that the State of Alaska can really be the judge of what pipeline route is in the best overall national intersts. There are a great many factors that bear on this beyond the interests of the State. Alaskans should be aware that other routes than an all Alaska route might have greater overall advantages to tne Nation.

On the other hand, if Alaska feels strongly about what it sees are important advantages to the State in the all Alaska route, what is important is that these interests are considered and weighed in the national decision making process that is now taking place as to the routing of the pipeline.

We were struck, in reading the FPC staff report, which strongly recommended the Gas Arctic route, that the interests of Alaska and potential benefits to the State were apparently not really considered at all. Judge Litt,

in his decision, and I haven't read it all, I haven't read it in its entirety, acknowledges that -- and again I quote, "Alaska's views are entitled to substantial weight." However, I suspect that he is not as convinced of the validity of Alaska's arguments and gives them less weight than most Alaskans might wish.

If Alaska feels strongly about what it believes are the interests of the State in an all Alaska gas pipeline, it will want to work to insure that its views get a very careful hearing in the nation's decision-making process. The sale of Alaska's state royalty gas is one way of attempting to do this. If this approach is chosen, we believe that the contracts before you are, in general, as I said before, carefully conceived and effective in protecting the State's interests.

We are not legal advisors to the State, I want to caution, and we have no legal expertise, and there are others here who do. But I would like to make the following general comments on the contracts.

Some questions have been raised about the pricing provisions, and you will obviously have to consider these very carefully. You obviously are by the nature of your questions. In the end, it seems to me, you will have to assess the likelihood of these contingencies that are spoken about; that is, the likelihood that the State

might be able to get a higher price if it didn't sign this contract. Various alternatives have been thrown out. Some of them seem to involve sales of emergency gas to industrial users, questions of whether the State would be caught on a vintaging problem if it signed the contract now, and get a lower price, and so on. From your questions it's obvious also that you are taking the approach that we would recommend, trying to assess what the possibilities of these things happening are. I'm sure you're going to ask me more questions on this.

In general, I've looked at these possibilities; I think they're relatively unlikely. And second, if you conclude that these things are possible, that is that it's possible that the State might get a lower price by entering this contract, and even if you assume that that possibility is very small, you might want to consider how could one protect oneself against this possibility. You'll have to ask yourself, could you write contract terms or modify this contract in a way which would protect you from these eventualities. Well, I don't know whether I have the answer to this, but I suspect it's probably doubtful that you could. I think there are probably other witnesses who may be able to give you a better answer to that.

Now, as to the other provisions, the recall

provisions seem to us to be very strong. It is difficult for us to see how they really could be improved upon very significantly.

We are also pleased with the State's ability to get access to liquids under the contract. We have always felt that liquids could be very important to the State, if not as a petrochemical, or a feed stock, or for methanol, or something rather exotic, we think that they could be especially of value as a fuel to local residents, especially to businesses and residents in remote areas. So that we feel that liquids, in the end, could perhaps be of even more benefit to the State for in-state use than gas itself. It's a possibility, and we're very pleased with the provisions of the contract in that respect.

In sum, the Legislature will have to consider carefully what its interests are and how to pursue those interests. In the end, only you can decide whether the contracts before you are an effective mechanism for achieving your objectives. Thank you.

SENATOR RADER: Thank you, Mr. Kilgore. Any questions? Mr. Gruening.

REP. GRUENING: Mr. Kilgore, when you mentioned studies that you looked at for in-state use of royalty gas, which studies were they?

MR. KILGORE: Well, there was one prepared by your Division of Natural Resources.

REP. GRUENING: Could you identify it specifically?

MR. KILGORE: I think I have it with me. "Analysis of Prudhoe Bay Royalty Natural Gas Demand & The Proposed Prudhoe Bay Royalty Natural Gas Sale" dated January 1977. It's a study done by the State of Alaska, Department of Natural Resources, Division of Minerals and Energy Management.

Now, I don't want my remarks to be construed to mean I quarrel with this study. It's very difficult, all I'm saying -- estimating future requirements is an extremely difficult and uncertain thing, and this may be as good a job as can be done, but the results are still highly uncertain.

REP. GRUENING: Did you do an analysis of what projected uses might be?

MR. KILGORE: No, we have not.

REP. GRUENING: In that regard, the testimony yesterday from Mr. Thomas Stahr was that the Anchorage utility saw that in 1985 their needs in Cook Inlet would be exhausted. In your readings or studies have you established that to be true?

MR. KILGORE: No, I really don't know whether that is true. I do not know how much gas is committed to that pipeline.

REP. GRUENING: But the major part of that would be that two hundred million cubic feet per day that you referred to that's used there?

MR. KILGORE: Yes, a significant part of that does go for generating electricity in the Anchorage area.

REP. GRUENING: And the total royalty share at peak capacity is about two hundred-fifty to three hundred million cubic feet per day?

MR. KILGORE: I said very roughly three hundred million cubic feet a day. That's an eighth of 2.4 million cubic feet a day, a very rough number.

REP. GRUENING: Did you run across a date at which at least the present known reserves at Cook Inlet are exhausted?

MR. KILGORE: No, I haven't. The gas reserves data are available. The American Gas Association has estimates of reserves in the area.

REP. GRUENING: Do you recall whether that study of January '77 covers that point?

MR. KILGORE: No, I don't recall. As I recall, it was basically an anlysis of potential gas demands along the route of the pipeline.

REP. GRUENING: But it didn't take in total the gas demand in the State?

MR. KILGORE: I believe not.

REP. GRUENING: Are you familiar with the provision that

allows the companies that are purchasing to take one and a half times new reserves that are discovered to replace gas that we call back?

MR. KILGORE: Yes.

REP. GRUENING: Do you see any economic disadvantage to the State in doing that? It was raised, I think by Mr. Dallas, yesterday . He pointed out that, say, reserves were found in Cook Inlet, new reserves or, say, Copper River Basin, that we would be giving them lower priced gas. In other words, because of the lower transportation costs we would be giving them gas at a lower price than we should.

MR. KILGORE: Well, frankly, I don't know the answer to that. As I originally read the contract I thought it referred to gas which traversed the whole length of the pipeline, that this was gas they would have a call on. I was thinking in terms of North Slope new discoveries or more gas on the North Slope. I really don't know the answer to that question.

SENATOR RADER: Representative Parr.

REP. PARR: Mr. Kilgore, you mentioned a while ago that one of the possibilities was gas from OCS, you mentioned the Gulf of Alaska, etc.

MR. KILGORE: Yes.

REP. PARR: And that this might be cheaper than what we could

get from the North Slope actually. As you know, of course, the Supreme Court has held that all belongs to the Federal Government and we don't have a claim on it. So I suppose we would have to buy it from the producers. Even considering the fact that we would be buying it rather than using our own royalty gas, do you think the economics are still such that we would do better by taking OCS gas, assuming it is produced in reasonable quantities?

MR. KILGORE: I think the answer to that is very uncertain. It's impossible to really know. One doesn't know the pricing of this gas, one doesn't know the physical circumstances under which it would be produced, what sort of costs would be involved in bringing it to shore and so on. I think the answer is, one cannot really determine in advance whether that gas would be cheaper. It could be.

REP. PARR: Is it also possible, Mr. Kilgore, that the Federal Power Commission could decide where the OCS gas would go, it might say it would all go to Pennsylvania rather than staying in Alaska at all?

MR. KILGORE: Yes.

REP. PARR: Thank you, Mr. Kilgore.

MR. KIGORE: Certainly.

REP. PARR: Two different points. You said a while ago it didn't seem really that there was too good a potential

at least at the present for use in the State of the gas. At least it seemed to be highly doubtful as far as you were concerned.

MR. KILGORE: What I said was, it's very uncertain, it's elusive, and we suspect that the volumes would not be too large.

REP. PARR: Does that mean what you're saying is that you don't anticipate, at least in the foreseeable future, a sufficient demand; is that what you're saying; or are you simply saying you can't tell? I'm not sure.

MR. KILGORE: What we're saying, it's very difficult to tell. If you want a judgment, I suspect it's lower volumes rather than higher volumes.

REP. PARR: Has your company ever done any kind of a study as to the lowest economic threshold at which petrochemical plants and so forth will become feasible, of the kind that might be built, let's say, in Alaska using the royalty gas?

MR. KILGORE: No, we have not made formal studies of that. We know some of the problems of the economics involved and so forth but we have not done a formal -- this is from broad knowledge chemicals and so on. It is not from a detailed study of the potentials for petrochemical uses in Alaska.

REP. PARR: Could we assume that the use of natural gas in

other communities in Alaska would be roughly comparable to that being used in Anchorage? I'm not talking absolute terms, of course, but in, say, relationship to the population? Fairbanks, for example, is roughly -- the Fairbanks immediate area is roughly one-third the size of Anchorage. Now, do we anticipate that they would use about one-third as much as Anchorage, or does that vary quite a bit?

MR. KILGORE: I think, if one has to make a guess, you might guess that it might be lower per capita. Don't forget, Anchorage is a populated area, you have a density of population, and this provides advantages, economics of scale of putting in distribution systems and things of this sort. If you were going to put gas into Fairbanks there would be a very, very high expense of putting in a distribution system. If you look at other more remote areas, the economics of just getting it there and the scale of population, or the users in those areas, is quite small and tends to work against the advantage of gas use.

REP. PARR: That was going to be my next question. You did say, I believe, something about the possibility of using, I believe, butane and propane, which are the liquids from the natural gas, especially for remote areas. One thing you really didn't touch on very much was the

liquids. You said you thought it was desirable to the State to have them. Do you have any idea of the economic feasibility of taking liquids out in the State, let's say propane and butane, and shipping those to remote areas of the State to use?

MR. KILGORE: Some liquids, obviously, have to come out, I guess there's been testimony here. On the North Slope there will be some taken out for pipeline reasons. The answer is no, we have not done detailed studies on the economics of the use of propane as a fuel in areas. The statements I made really come from our broad judgment and from our knowledge of the industry, not from detailed studies.

REP. PARR: Thank you, sir.

SENATOR RADER: Representative Hayes.

REP. HAYES: Mr. Kilgore, yesterday Mr. Thompson of the Alcan Pipeline testified that in his opinion one of the advantages of the Alcan route over the El Paso route was an approximately Eight Hundred Million Dollars of additional revenue to the State. From your testimony I conclude that you don't agree with this, and if my conclusion is correct is that because you don't agree with their projected construction costs or you don't agree with his statement that if construction cost is less it will result in a better price to wellhead?

MR. KILGORE: It's the latter. I don't quarrel with his or anybody else's construction costs because I don't have my own estimates. What I'm saying, we really don't know what the circumstances of pricing of Prudhoe Bay gas are going to be. If it's still regulated by the Federal Power Commission we don't know quite how they're going to regulate it. We don't know whether there will be regulation and so on.

We think the most likely thing is that we will have continued wellhead gas regulation by the Federal Power Commission and that it will set prices independently of what the transportation costs are. That's the most likely thing to happen.

If you're looking down the road and we really have deregulation, then the cost of transportation could have an impact on the value of gas at Prudhoe Bay.

REP. HAYES: If I might continue on that, we have had testimony here that we can expect deregulation of some sort down the line. Would you agree with that?

MR. KILGORE: Well, if far down the line is a very long period of time, yes, I think you can't rule it out. We think it unlikely it would come anywhere in the near term.

REP. HAYES: Anytime during the life of the contract?

MR. KILGORE: The life of the contract is?

REP. HAYES: Twenty years.

MR. KILGORE: Twenty years. Well, near the end of the contract I suppose the probabilities get higher.

REP. HAYES: But in any event, in your opinion, you don't anticipate any regulation that would be beneficial to the wellhead price in the next ten years.

MR. KILGORE: I think that's most likely, there will not be.

SENATOR RADER: Senator Sumner.

SENATOR SUMNER: My concerns lie primarily in the area, say, of economic development potential, whichever line is chosen. Which line, in your view, would provide more economic development opportunities for the State of Alaska?

MR. KILGORE: Well, I think the all Alaska; I think that's reasonably clear.

SENATOR SUMNER: Do you think that petrochemical manufacturing is a potentially viable interest for our future?

MR. KILGORE: I think it may be. I don't know at the present. I think it might be and I think obviously this is something you want to look at. You will want to get people, chemical companies who do this kind of thing to look at it very, very carefully for you. I don't want to imply, anything that I've said, that you shouldn't pursue economic development.

SENATOR SUMNER: There seemed to be some doubt in your mind

as to whether it might not be feasible, and yet the primary interest in using the Alcan line, or the all Alaska line, would be for that primary benefit. Yet you seem to have a fair amount of hesitancy as to whether that's ---

MR. KILGORE: I think this is something that you're obviously interested in. I guess, yes -- what I'm really saying is I wouldn't overdo my expectations as to what you will get because you have gas available.

SENATOR SUMNER: If we don't get the all Alaska line what opportunity in the future do you see where there might be a possibility of getting gas to tidewater or an Alaska line bringing the gas down?

MR. KILGORE: Is your question where else one might get gas?

SENATOR SUMNER: What is the opportunity of getting gas to tidewater in the future if we don't get the Alaska line that's proposed?

MR. KILGORE: That depends on what the chances are of finding gas in the area close to tidewater, and there are a number of prospective areas where gas could be found. But there isn't anyone, including myself, I'm not a geologist, but one who really knows geology, who can tell you for sure exactly what the probabilities are of finding gas in these areas because there has been, as you know, virtually no exploratory work in many of these areas. So you just

can't assess in advance how much you might get or what the chances are.

SENATOR SUMNER: Are you aware of any interest at the moment from different chemical companies that might have an interest in Alaska in the petrochemical area?

MR. KILGORE: No specific knowledge. In the past -- as I say, we have some chemical company clients -- we have very broadly suggested they might want to look into this possibility. But I don't know of any detailed proposals of looks at the present time.

SENATOR SUMNER: And if I've drawn the right conclusions, you're saying that the Arctic line provides virtually no economic benefit or development benefit for the State of Alaska except money; the all Alaska line provides the most opportunity of the three lines; is that correct?

MR. KILGORE: In terms of economic advantage and potential availability of gas.

SENATOR SUMNER: Thank you very much.

SENATOR RADER: Senator Butrovich.

SENATOR BUTROVICH: Mr. Kilgore, in your work for the State, have you people projected changes in population down the road?

MR. KILGORE: No, we have not, Senator. We have not been asked to do that.

SENATOR BUTROVICH: Are you aware of what is happening in the

way of population in Alaska?

MR. KILGORE: I know that it's growing rapidly, yes.

SENATOR BUTROVICH: Can you see any difference in shipping a product by water, say, from an Alaska port to the South 48 than from Alaska to Japan or from South America to the United States?

MR. KILGORE: Well, obviously the costs of transportation depend upon the distances involved, but in the case of Alaskan shipments to the Lower 48, they also involve the use of U.S. flag vessels, which are considerably higher on cost than foreign flag vessels. Shipments from Alaska, for example, to Japan would not have to move in U. S. Flag vessels.

SENATOR BUTROVICH: You are aware, however, I assume, or are you aware that when the consumer in Alaska buys something he is generally paying the freight up and the freight back because of the fact that there is no back haul?

MR. KILGORE: Yes, sir.

SENATOR BUTROVICH: Wouldn't you consider the possibility of a petrochemical industry in Alaska greatly reducing that span of cost to the people living up here if, indeed, there was a back haul?

MR. KILGORE: Yes. I think it's obviously something you have to look at. It's an important objective for you to pursue. You see a problem and you obviously should

pursue it. The problem may be that -- I said may be -- certain types of chemical processing, you're talking about a plant on a very large scale, and a very small part of the output of that plant may be consumed locally in Alaska, which means that a very large part of the output may have to go to other markets, and you have to look very carefully at how competitive that big part that goes elsewhere is with supplies from other sources. I don't want to prejudge the answer.

SENATOR BUTROVICH: No, I'm sure you don't. It's awfully hard for me to reconcile, in this day and age, why it is not as practical to ship by water from Alaska as it is to ship by water anywhere else. There's no such thing anymore anywhere that I know of where such a thing as cheap labor exists. That used to be a great argument, but it certainly doesn't exist in the United States today. I, for one, don't think that enough emphasis and enough study has been developed on the petrochemical side of this question.

MR. KILGORE: I would agree with that.

SENATOR RADER: Senator Huber.

SENATOR HUBER: Mr. Chairman, I do have a couple. Dick, do you believe that the contracts that we have before us are attractive enough to disregard the earlier admonitions of Walter Levy and Milt Lipton to be very

cautious about committing our future oil and gas supplies before delivery systems actually exist that are able to transport them? We've heard that many times from Milt and Walter, and can you expound on it?

MR. KILGORE: I think, as a general proposition, I would probably agree with that, but what one has to do is -- here you have a new objective, something else which you are trying to do with these contracts. You obviously have a purpose for doing it; it's to help promote a line which you seem to be quite interested in having, and you just have to assess that against a more general position that perhaps waiting is better. You really have to assess the value of it.

SENATOR HUBER: Leading to my next question, Dick. Do you believe the contracts will decide which route is chosen, and would you please try to give us a percentage of chance for El Paso against Artic Gas, for instance?

MR. KILGORE: Senator, I'm really not able to give you that kind -- it obviously provides some positive support. I really don't know what the odds of it are. I think that's beyond the scope of my competence as an economic advisor.

SENATOR HUBER: My last question fits in with it. Leaving political considerations aside, if you remove the political considerations from the contracts, do you believe

we could get more money if we held off selling our gas until a transportation system is ready instead of using it for political clout? If so, what magnitude would you project?

MR. KILGORE: As I said before, we don't really know what future pricing is going to be like. We don't know whether it's going to be regulated pricing, or deregulation and so on. So there is an uncertain future. It has been suggested there is at least a possibility that the State could get a higher price by not signing this contract and waiting. But when I look at the circumstances under which this possibility might happen, I think it's unlikely.

SENATOR HUBER: You think it's not the most likely scenario?

MR. KILGORE: That's correct.

SENATOR HUBER: Thank you, Mr. Chairman.

SENATOR RADER: Any further questions? Mr. Chatterton? It's about time for a break. I assume we're just about. through with this witness, but go ahead.

REP. CHATTERTON: There are three questions, and I don't know how long he's going to take to answer them.

SENATOR RADER: Why don't you go ahead, let's try it.

REP. CHATTERTON: Sir, Mr. Kilgore, let's take an assumption that here last week there was a natural gas transportation system between Prudhoe Bay and the South 48 and, at least

we will take that premise right now. Now, apparently a crisis occurred in the northeastern sector of the United States that has led the President to take near national emergency situations, at least for transporting liquefied methane between American ports in foreign bottoms and Heaven knows what all we are doing, quite an upset. On the premise that that straw existed, do you believe that the President might even have been able to legally, and I'm sure he would have, demanded Alaska gas from Prudhoe Bay even though it might have made the people of Alaska suffer?

MR. KILGORE: Yes, I think it's a possibility. In an emergency situation you can't rule out that if he doesn't have the power now that the Congress will legislate such powers.

REP. CHATTERTON: Without that straw he can't do much about it, can he?

MR. KILGORE: No, there's no way he can move the gas to the Lower 48.

REP. CHATTERTON: You indicated, when you were giving your reasons for being hired by the Legislature here and so forth and so on, that you did do consulting work for, I think you said, transmission companies, other foreign governments. I don't know whether I singled out of context transmission companies, but would any time,

keeping in mind the powers of the Alaska Oil and Gas Conservation Commission, would you recommend to a client or do you think that a client, even if you recommended that he proceed to look for financing, could possibly get financing for a Six to Nine Billion Dollar pipeline in view of the powers of the Alaska Oil and Gas Conservation Committee?

MR. KILGORE: What your're asking, are these powers likely to be an important stumbling block to ---

REP. CHATTERTON: To the financing.

MR. KILGORE: To the financing? No. I think those powers, in and of themselves, no.

REP. CHATTERTON: Even though they can turn the valve and shut the gas off in two years?

MR. KILGORE: I think if the lenders were reasonably assured from their own looks and so forth at the reserves and so forth, and carefully considered what they felt were reasonable flows of gas without loss of pressure and so on, without loss of oil, I think they would go ahead, yes.

REP. CHATTERTON: You, yourself, or your associates have not so done, have you -- made that determination?

MR. KILGORE: No. We are purely economic consultants.

REP. CHATTERTON: One more question and I'll close. Do you think, by any chance, that the transmission system between

Prudhoe Bay and the South 48 would be financed by public money?

MR. KILGORE: Do I think is there a possibility that in the end public money or some sorts of guarantees, or something?

REP. CHATTERTON: Yes.

MR. KILGORE: I think there is a possibility, yes.

REP. CHATTERTON: Thank you, sir. Thank you, Mr. Chairman.

SENATOR RADER: Representative Hayes.

REP. HAYES: Thank you, Senator Rader. I want to get back on the question that I was asking you about, the timing for deregulation. I didn't quite pose the question correctly. I think you said that you didn't think there would be deregulation in the next ten years, but within somewhere between ten and twenty years from now. The contract actually starts on the date of delivery, isn't that correct?

MR. KILGORE: Yes.

REP. HAYES: So that during the first ten years of the life of the contract we might expect deregulation, going back to your previous answer?

MR. KILGORE: It's possible, yes.

REP. HAYES: Thank you.

SENATOR RADER: Any further questions?

SENATOR HUBER: I have a short one that comes from a question Mr. Chatterton asked.

SENATOR RADER: Go ahead, sir.

SENATOR HUBER: I just wondered, Dick, I thought maybe you might have some idea. Well, here's the question. How much is the reasonable flow of gas without reducing oil recovery? That's in answer to the way you used it in answering Mr. Chatterton.

MR. KILGORE: Would you repeat that, Senator?

SENATOR HUBER: In your opinion, how much is the reasonable flow of gas without reducing oil recovery in the content that you used it in answering Mr. Chatterton's question?

MR. KILGORE: As I said, I'm not an engineer, I don't know technically the answer to that. My answer to the question was, if the lenders and other people in their own analysis were assured of this fact that they probably would be willing to go ahead. I have no opinion of my own as to what the volumes would be.

SENATOR HUBER: I thought it indicated to me you had some knowledge that we didn't have, from your work with other companies.

MR. KILGORE: No, sir.

SENATOR RADER: I think you stated, Mr. Kilgore, when you started, that you've been in attendance constantly during the hearings which started Monday, and that the value judgments you have given us today, you have taken into consideration the testimony that you have heard

at these hearings thus far?

MR. KILGORE: Yes, Senator.

SENATOR RADER: Are there any other questions of Mr. Kilgore? Mr. Kilgore, will you be available the rest of the afternoon?

MR. KILGORE: Yes.

SENATOR RADER: We'd appreciate it very much if you could keep yourself available for the committee if they have any questions.

MR. KILGORE: I intend to. I'll be happy to do so.

SENATOR RADER: We'll take a break and then hear from Mr. Rush Moody. Ten minutes.

(Whereupon the hearing recessed at 3:45 p.m. and reconvened at 4:00 p.m.)

SENATOR RADER: The committee will come back to order. Mr. Jerry McCutcheon has handed me a two-page document dated April 4, which he has asked to be inserted into the record as an extension of his remarks as Exhibit 18 instead of requiring him to verbally testify. Unless there is objection, we will have those remarks placed in the record as Exhibit 18.

REP. CHATTERTON: Objection. Would you change the date to February 4, please, from April 4?

SENATOR RADER: I'm sorry, did I say April 4? It's February 4.

(Whereupon Exhibit 18 was duly marked.)

MOODY

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Our next witness -- before he starts to give us his own statement of qualifications, I just thought I might direct the attention of the people present, as well as for the record, that the February 7, 1977 Newsweek entitled "The Gas Crisis" in the National Affairs section, Mr. Rush Moody, a former Federal Power Commissioner, is extensively quoted. So I want you to know that Mr. Rush Moody has a national audience for sure and perhaps a national constituency. I don't know about that.

MR. MOODY: If nominated, I will not run.

SENATOR RADER: But, at any rate, I want to say one thing about the Alaska Legislature; we go first-class when we hire consultants. That's February 7, 1977 on page twenty.

Mr. Moody, would you please -- as many of you know, Mr. Moody was first retained by the State of Alaska last year by the Joint House-Senate Gas Impact Pipeline Committee, which was a statutory committee chaired by myself and Representative Gruening as Co-Chairman. Mr. Moody gave that committee extensive testimony last year on some of the same matters that we're considering now. The committee went out of existence as of January 1 of this year, the statutory committee. As I say, he was retained by that committee, as was Mr. Swanson,

from funds appropriated to that committee, with the thought that some committee of this Legislature would need his advice and his counsel in this matter.

So, Mr. Moody, with that, would you please read into the record first, sir, your background qualifications, and then I assume you will make a statement and open yourself for questions.

MR. MOODY: Thank you, Mr. Chairman, to both Chairmen, and to the Members of the Committee, I wish to express my appreciation for the opportunity of being here. I have been most impressed over the course of the past five days with the attention and the concern which each of you expressed. I wish that the Congress of the United States would take as seriously some of the problems they have as you obviously take seriously this problem before you.

I am a lawyer by trade. I attended the University of Texas, with a Bachelor of Business Administration, University of Texas Law School, licensed to practice in the State of Texas in '56, in private practice from 1956 until 1971. I was appointed to the Federal Power Commission as a Democratic member by a Republican President. I served on the Federal Power Commission from 1971 until March 15, 1975. I was Vice-Chairman of the Commission for two of those years.

I resigned from the Commission in March of 1975 because of my belief that the structure of Federal regulation was injuring the consuming public of the United States and that very serious regulatory reform was necessary if the country wasn't going to get in a lot worse shape than it was already in.

Following my resignation I represented the

Governor of the State of Texas in Washington, as his special counsel on energy affairs. In January of 1976 I became a managing partner of the Washington office of the law firm of Vinson and Elkins. The firm, of which I am a member, has offices in Houston, Washington, Fort Worth and London.

I hesitate to claim to be an expert in any area, but I am more than fifty miles from home and I do have a briefcase, so I guess I qualify.

Mr. Chairman, I would start out, I suppose, by saying that I attempted to prepare for the committees a summary of the contracts together with some analyses, or attempted analyses, of what I perceive to be the major strengths and major weaknesses.

SENATOR RADER: Let me interrupt you, Mr. Moody, so we be sure we don't miss that. Make certain that the remarks, your analyses and your covering letter of January 28 is entered in full as an exhibit to the hearings, and that would be Exhibit 19; is that not correct, Reporter?

MRS. SANDERS: Yes.

SENATOR RADER: Be assured that your full remarks are in the supplement.

(Whereupon Exhibit 19 was duly marked.)

MR. MOODY: Thank you, Mr. Chairman. I realized after I got here and after I listened to the course of the

hearings over the past several days that, in many instances, the issues that were being explored related to whether or not any contract should be signed, whether it was appropriate use of the State's resources to commit to these contracts, these particular purchasers, under these particular circumstances at this particular time.

I will, if I might, go through the more formal part of my contract analysis first and then turn, if it is the committee's will, to some of the other issues that have been addressed during the course of the hearing, and then finally respond to whatever questions the committee will have.

With respect to the contracts themselves, I should start out by saying that it is very difficult to make a comparison with any other gas sales contract because you have a unique situation, and much of what I can offer to you, other than with reference to the technical side of the contract in terms of measurement, metering, and that sort of thing, I can tell you whether that's standard or whether it's not standard. But there's much that's in the contracts that reflect the unique nature of the transaction, and so when I offer thoughts on that I hope that you gentlemen and ladies will understand I'm having to offer you value judgments of a sort. I didn't perceive it to be my job to say this is the best of all

arrangements that could be made, but rather to take what the Administration had negotiated and brought to you and try to offer some thoughts as to where those contracts seemed beneficial and where there might be questions.

I would speak first on the positive side with reference to the contracts themselves. I find four areas where I think an excellent bargain has been struck, in several instances much better than I would have expected in trying to plat out what course this all might have taken when we first started discussing it a year ago.

I think one of the principal strengths of the contract lies in the provisions that the State will not suffer monetary loss by reason of an in-kind taking, compared to what expenses the State would be out, which would be none, if it just took in value. When the State takes in-kind there has to be a point in the production cycle when title to the gas passes. It cannot be, in my judgment, at a point after all of the processing has occurred and all liquids have been stripped out, and the State just walk in and say, "All right, we want one-eighth of the residue gas and we want one-eighth of the liquids free of any costs."

I don't believe that's the way it's going to work under your leases and under the practicalities of the arrangement. But since the gathering lines haven't been

built and the processing plants have not been designed or constructed, no one knows what those costs will be, and I think it very important that the contract negotiators realized that there was a risk, a substantial financial exposure on the part of the State, and that they undertook to protect the State against those costs. This, in my judgment, they have done in Article II, Sections 2.2 and 2.3 wherein, in effect, the buyers say whatever it is that the State is out in terms of out-of-pocket costs by reason of this in-kind taking, that the State would not have been out if it were value taking, then we, the buyers, agree to reimburse the State in full.

I think that was a significant concession on the part of the buyers to the State, and I think it's an important element of protection in the contracts.

Secondly, I think it is very much in favor of the contracts that the arrangements have been structured so that the State is selling one hundred percent of its present deliverability, but not one hundred percent of its Prudhoe Bay reserves. You will notice as you go through the contracts that of the three buyers, one is to receive twenty-five percent of the gas that flows that belongs to the State, another twenty-five percent, and then the third fifty percent.

Well, obviously, that's the full one hundred

percent of the deliverability as it is produced. But because the volumetric limitations are written into the contract in Article III, what we have is a situation that the State is not selling what it really believes that it has in totality. In this instance I operate on the strength of what I was told last year when I was up here, that the State's royalty share of recoverable reserve was anticipated to be in the order of 3.2 trillion cubic feet, and these contracts obviously sell less than that. So it's less than a complete sale of all of the royalty gas that the State expects to recover from Prudhoe Bay.

Personal judgment, I think that is prudent because it gives you an opportunity to have some operating experience behind you, it lets you see what the market conditions are like at that point in time when the total volumes have been delivered under these contracts, and permits you the flexibility and freedom to make new contractual arrangements if that appears to be in the best interests of the State.

Third, I think the arrangements for withdrawal of gas for in-State needs are very favorable. I think the protection there is quite good. I will express to you the view that these provisions may almost be too good when comes time to try to finance construction

of a pipeline. It's going to be a little bit hard for a financial institution to look at a situation where the State has a right to pull back out one hundred percent of one-eighth of the gas stream, so that that throughput is not available to stand behind the generation of revenues for the line.

From a contractual standpoint, I see no reason in the world not to insist upon this bargain as far as the State is concerned. What I'm suggesting to you is that there may come a moment of truth further down the line when the financial institutions come to the State and say, "If you insist on this we can't finance it." To me, I'm trying to underscore what I believe to be the strength of the withdrawal provisions because I think they are very favorable to the State.

I am impressed with the provisions in the contracts relating to the retention of the State's rights in natural gas liquids. You've heard a number of people say, and certainly I agree with them completely, that the liquid content of this gas may be of greater value to the State than residue gas itself. I do think that the State has retained fully the right to remove the liquids, process them and do with them as they will.

You're not forced to do that. It's an option under Article IX. If you leave any part of the liquids

in the stream the buyer has to take them; you, the State, will be compensated on the basis of the increase in btu content of the gas that comes about by reason of leaving the liquids in the stream. So you, in effect, have an option as to whether to pull the liquids out or to leave them in. If you pull them out, they are yours to sell on the open market or to devote to uses within the State. If you leave them in you will be paid for the btu content. I think those provisions are quite protective of the State's interests.

Finally, I read with interest the different places in the contracts where the State has the right to withdraw or terminate because, since we are dealing in such such a flexible fluid situation, I would think it important to the State to know that they were not forever bound to these contracts, that if certain things happen that you might walk away from them without incurring any obligation or liability.

There are, I believe, four instances where the State can withdraw from the contract without penalty. It may do so if it is prevented by a Federal action from taking its royalty gas in-kind. The contracts may be terminated if a decline in production results in non-profitability to the State. The sales agreements may be terminated by the State if the State so elects after

the FPC makes a routing decision that is adverse to an all Alaskan line, and finally, the State may terminate if by January 1, 1979, all approvals necessary, authorizations, that the State feels necessary to get the benefits under this contract, if all of those approvals have not been received.

I think the latter quite a good provision. I think it lets you look at the decisional process at the Federal level. If it's something that the State could live with, you may do so; if you don't like the way it's structured, you've got the right to terminate the agreements. I think those provisions are all quite sound, quite protective of the State, and I think they are major sources of strength in the contracts.

The principal areas of difficulty that I have with the contract all relate to Article VI, dealing with pricing. There are several problems here. I've tried to be as exhaustive as I could in thinking up the problem areas that you need to be aware of. In the course of talking about them though, I'd like to give you an assessment as to whether I think they're problems of great magnitude or problems of lesser magnitude -- because any lawyer can find anything in a contract, you know, and say, "This might not work out too well." So I'll do the best that I can to give you an assessment of how bad

it is as we touch upon each one of them.

The first one relates almost directly, Representative Gruening, to the line of questions you were asking about the possibilities of a deregulation bill or any action that would result in a vintaging situation that would be hurtful to the State. The structure of Article VI is such that there is a proviso in Section 6.1 which has overriding effect on the pricing structure. I'm sure that each of you have read these contracts carefully, and you will recall that Section 6.2 provides a pricing mechanism if regulation continues.

6.3 provides a pricing mechanism if there is no Federal regulation, and 6.4 provides a pricing mechanism if Federal regulation starts, deliveries commence, and then Federal regulation terminates. So there are three alternatives, really, in terms of pricing, and then you pick up Section 6.5, which is important and which gives redetermination rights.

But Section 6.1, the last clause makes it clear that there is one condition that cuts across all of the pricing alternatives, and it is that so long as the pipeline buyers are subject to the jurisdiction of the Federal Power Commission, so long as their rates are subject to the jurisdiction of the Federal Power Commission, then the price that they will pay to the State

shall be no higher than the price which they are permitted to recover in their jurisdictional rates at the FPC.

I'm not surprised to find that the pipelines wanted that, because certainly you can understand that they don't want to pay you more than they can get back from their customers and, indeed, I would be surprised if all pipeline purchasers didn't bargain most strenously for this type of provision. But I do want you to be aware that the effect of it is to say that so long as deregulation does not occur the Federal Power Commission is going to be setting the price for your gas.

So far the State has taken the position that it is not a person within the meaning of the Natural Gas Act, that it is not subject to direct rate regulation by the FPC. I concur in those positions, but the effect of Article 6.1 is to consent to indirect rate regulation by the FPC because you are saying that the pipelines do not have to pay to you more than the FPC will permit them to flow through in their jurisdictional rate structure.

That problem disappears if appropriate deregulation legislation is passed. But if it does not pass, if we are with substantially the same form of pricing that we now have for some period into the future, then it seems to me that the 6.1 proviso does override the other pricing

alternatives that appear in the contract. Because of that, Representative Gruening, you can postulate a situation where a deregulation bill passes that deregulates the producer but does not deregulate vintage of gas that the State would be selling under this contract. That would occur if a deregulation bill were drawn so as to deregulate gas sold under a contract dated after a certain date.

I offer you the value judgment that that is a most unlikely occurrence. The Commission moved away from contract date vintaging in 1969 in the Southern Louisiana Two decision and has never returned to it. I believe that I have read every piece of gas legislation that's been offered in either House for the last four years, and I can recall no bill offered in either House that went to deregulation on the basis of contract alone. They are mostly cast in terms of new gas being defined as gas sold under a contract or delivered after a certain date, and it's an "or" delivery test. I don't really think it's likely at all that a deregulation bill would be cast so that it would be harmful to you.

As a practical matter, so that you will understand why the Congressional reasoning and the FPC reasoning seems to be moving in this direction, away from contract vintaging, it is simply because if you

permit a deregulated price to a producer on the basis of when he contracts to bring the gas to market, if that producer has been guilty of withholding his gas from market in anticipation of deregulation, then you have rewarded his wrongful conduct.

So, to me, it's not likely that people are going to go back to contract date vintaging as a test for deregulation. So my answer to the line of questions you posed is that there is, yes, a theoretic possibility that the State could be hurt by contract date vintaging in deregulation, but I do not believe that that possibility is substantial.

I do think that the present language of Section 6.1 is unclear in one respect. In my opinion letter, on pages six and seven, I attempted to spell out why I thought there was an ambiguity. I think, from my discussions with Mr. Byrd, that the parties did not intend the ambiguity to exist and it would be probable that the buyers would enter into whatever type of letter modification or letter of explanation that is necessary to straighten this out.

It seems to me that it must be made clear that Section 6.1's limitation goes out the window, becomes totally inoperative, if an appropriate deregulation bill is passed. I just don't think that the language

is altogether as clear as it could be on that point, but I don't think it's a major burden or a major obstacle to the contracts if the purchasers will agree as to what the proper construction of that provision is.

Other witnesses have advised you, and certainly I agree, that you cannot determine a sales price under these contracts as drawn. Section 6.2 will not give you a sales price because the FPC has set no price for Alaska.

Section 6.3 and 6.4 will not give you a price because they're conditioned precedent, deregulation, has not occurred. And so you have before you a contract that is indefinite as to price, and you have a contract where your price will ultimately be determined by someone other than the State. In the event of continued regulation your sales price will be determined by the FPC. In the event of deregulation your sales price will be determined by the prices which producers, working interest owners, obtain in their contracts.

So, I would want you to understand that you are giving up direct State control over the sales price through the pricing mechanism embodied in Article VI.

There have been a number of comments about whether we will or will not have deregulation, and if we have continued regulation, what is likely -- I'm mentioning at this point, because it's structured into my opinion

and I think it is a major concern.

So many things have happened so fast in the Lower 48 States in the natural gas business over the course of the past three or four weeks that I don't think anybody can give you an informed guess as to the likelihood of deregulation or not. We've seen two and a half million people out of work on a given day in the Lower 48 States because there wasn't enough natural gas to go around. We've seen the Congress in three days' time pass an emergency allocation bill that for the first time gives the President of the United States the right to reach into one interstate pipeline supply sources and move the gas to another interstate pipeline.

We've seen as of, I think it was Wednesday night, the President authorized Two Dollars and Twenty-Five Cents as an emergency purchase price that any interstate pipeline could pay for one hundred and eighty day emergency purchases of gas anywhere in the Lower 48 States.

All of this says to me that it is a time of great uncertainty. We will nationally, I suppose, sooner or later arrive at a decision whether we're going to move toward greater regulation and allocation on a national scale, or whether we move to less regulation and honoring of private contracts. I wish I had an answer for you, because I think if you knew what the future held, it would

make your job a lot easier.

But I cannot, in honesty and in good conscience, tell you that I'm confident what the future will bring. If deregulation continues, or if a deregulation bill is passed that is not appropriate to Alaska, and by that I have reference to the possibility that a bill might be structured like FPC and go to commencement date of a well rather than date of first deliveries. So you might have some gas up there that continues to be regulated even though a deregulation bill passes. But if some or all of your gas remains regulated, I hate to say it but I must say it, brace yourselves -- my judgment would be that the Federal Power Commission will determine a rate for Alaska as a separate producing area, that they will not treat you on the same basis with the national rate, as they treat the rest of the country. They have specifically excluded Alaska from applicability of their last set or rate orders, they have specifically excluded Alaska data from the calculation of a national rate, and to me that indicates that when the time comes for the setting of an Alaskan rate, it will be a rate peculiar to Alaska.

I am concerned, and I would want you to understand the reason for my concern, that an FPC separate for the State of Alaska will probably be not as high as Judge Litt

and they came up with a very low rate, relatively speaking, for associated gas. You can understand it. Gas was their responsibility, they could keep the price down and make everybody happy by putting the costs over on the oil side; so that's what they did.

The second factor that you've got going against you is that you do have a major, huge discovery up here, and obviously the more units of gas you have in terms of reserves added, the more units that you have to spread these costs over, then you come up with a lower per unit cost figure. So the arithmetic of FPC methodology is against you if they're going to set the rate for you. I can't really do much more than say that the structure and the methodology is just going to work against you; that's all there is to it.

But that is a condition beyond my control, or yours. It is only one of those things that you need to be aware of. That condition would exist whether or not you sign these contracts. The existence or the absence in the Federal regulation is not, obviously, going to turn on whether these contracts are signed or whether they are not. But in speaking with you today, I at least want to mention to you that it would appear to me that the State of Alaska needs to be very active at the FPC in any rate matters affecting Alaskan gas, because if you

mentioned in his opinion, of a Dollar, probably not be as high as some of the economic projections that have been laid before you over the course of this past week. And the problem essentially arises because of the structure of rate making methodology at the FPC. They try to set a rate for natural gas on the basis of what they perceive the cost of production to be, the cost of finding and production, and a reasonable rate of return to the producer.

They have, since 1968, been costing gas well gas where they could find a data series and they could determine how many feet were drilled in gas well exploration, what gas reserves were found, what the costs of gas production were. So their national rate determinations since 1968 have essentially been for new gas well gas.

You go back to the early Commission efforts at rate regulation when they tried to price associated gas, and they became enormously tangled up with the problem of cost allocation. Here are two joint products, oil and gas, they come out of the same hole in the ground, you spent a certain number of dollars to find it and produce it, so how do you allocate the cost between the two products. The FPC, since they had jurisdiction over gas, allocated a very heavy burden of costs to the oil,

leave it to them to do it for you without some evidence, and some input and some argument from you, you are probably not going to like the results.

I did have a problem with the redetermination provisions under Section 6.5. They were the same concerns that Mr. Swanson raised with Chairman Rader the second day of the hearing; and with the purchasers' representations about their meaning of Section 6.5, I no longer find an objection in that area.

Over all, to get back to the general structure of the thing, since your rate is going to be determined by somebody else, one consequence of entry into these contracts will be the necessity that the State participate in some FPC proceedings. Your rate, under this structure, in the event of continued regulation will be set either in a national or an Alaskan rate proceeding where the FPC determines by rule-making a rate applicable to the whole state, or it will come up in an independent individual producer's certificate case where one of the North Slope producers goes finally into the FPC with a contract and says, "Here is the price I bargained for. Let me charge it." And the FPC can approach the rate issue in that context.

Or, finally, if neither of those two things occur and deliveries commence, the pipelines that buy

from the State will take to the FPC their rate structure and ask for approval of what they paid to the State. There are three possible procedural mechanisms where the pricing problem can be reached by the FPC. Whichever of those three comes to pass, it seems to me absolutely essential that the State be there to participate fully. I don't think you can rely on other people to carry this important issue for you in that fort.

On the whole, if you asked me whether the pricing problems that I've tried to outline for you are sufficient to condemn the contract, I'm going to give you one of those "either/or" answers, I think. I'm not sure that what we're talking about here is a pricing issue, in terms of what the Legislature is going to be asked to do. I think it's a routing issue.

Having already stated that these contracts are unique and that, therefore, there's not much I can compare them with, I offer you the value judgment that I don't think you'll get better terms than this from anybody at this time and under these circumstances. I think that on the whole they're as good a contracts as you are likely to get.

The real question, it seems to me, and here I need to, I guess, go back a little bit -- I did come up here this time thinking that the State had already made a

decision about which route it supported and that the sale of the gas was an appropriate means to try to help influence a favorable decision on the routing. I can well understand it, because a lot of things that have occurred in the last year that many members of the Legislature and many citizens in the State might want to think through again, whether those are both questions that you would still answer in the affirmative. But if you come to the same answers and you say, "We do think that the routing decision is important to the State, we do think that the State should do all that it can to influence a favorable routing decision," then I suspect that the pricing provisions here should not be a bar to your approval. But I can't -- and I'd make it perfectly clear to you, you've got a third applicant in the game since I was here a year ago. I carry no brief for El Paso or for Alcan, I carry no brief for the individual purchasers under these contracts. Pick Tenneco, Southern, anybody else -- I'm just trying to speak to the concepts of what are you doing with the State's resource and is this a good time to do it.

I think there is a risk in not doing anything. I cannot tell you, and I don't think anybody else can tell you, how much it will influence the routing decision if these contracts are approved. I think, as Mr. Ward

said the other day, that most people would recognize that it will have some impact. I don't think, and this kind of disturbed me, about the way things sounded a time or two. I don't think what we're talking about is the State trading its royalty gas for lobbying efforts by two companies.

It seems to me what I was talking about a year ago and, hopefully, what everybody is thinking about, is that the State is holding out to a number of states in the Lower 48, "We will share our gas with you if you will help us get the route that we need." I have a jaundiced and prejudiced view, I suppose, of lobbying as such, if a corporate vice president thinks he's going to influence a Legislator's vote. I don't think that happens very often. I don't think that's the way to get things done anyway.

But I don't perceive these contracts as a means where you buy a corporate lobbying support and expect you're going to get anything. If you look at it that way, I don't think you will get anything. But if these purchasers, in your judgment, are responsible companies that know their business and can reach to their customers, and go to their customers and say, "We have the promise here in writing of some gas from Alaska if we help Alaska on getting the right route," then it seems to me

you've got to have some influence on the routing decision.

I think Judge Litt has spoken the first word, but most assuredly, he has not spoken the last word on the routing problem. An Administrative Law Judge of the FPC, and particularly Judge Litt, is respected by the Commissioners. They will believe him to be an honest man who has worked diligently with the record over many months, and I would anticipate that they would think that he is infinitely more familiar with the record than any of them can hope to become. But they will not abdicate their responsibilities to Judge Litt. I say that institutionally and I say it knowing the individuals. I think they will try their best to reach a decision on what they perceive to be truly in the national interest.

Certainly I think the same will be true when it moves over to the White House for Executive Agency decision. So I don't think the routing decision dies with Judge Litt's decision. I think it's still an open issue. I think it's possible that some persuasiveness can still be brought to bear on the issue.

Really, I don't ask myself so much, "Is it too early to enter into these contracts," as do I ask myself, "Is it too late that we entered into these contracts?" Once again, I'm not talking about individual buyers (I hope you all understand that), I'm talking about

the concept of the use of the State's royalty gas as a means of trying to influence what you believe to be in the State's best interest, and whether you come down on the side of Alcan or El Paso, that's beyond my concern and beyond my knowledge.

Whatever you do, it seems to me, perfectly legitimate that you use the State's resource in a manner that helps you get the best benefit for your State.

I preach a lot, I apologize. I guess I feel strongly about your situation up here because you're one of the few places that still has the opportunity of controlling your own destiny.

There are a couple other things that I guess are worth mentioning. I don't try to characterize them as good or bad since I think that your perception of them depends on things other than legal analysis. But I think the provisions of 11.4 are noteworthy, which grants to the Governor the right, in effect, to make a switch in the State's support. I really can't offer any judgment as to that provision. Certainly you have to be aware of it.

The contracts do contain certain options on State royalty gas that are triggered if the State effects a withdrawal of some of the gas covered by these contracts for in-State use. I think the option provisions, themselves,

are not remarkable and are understandable. I suspect that they reflect the necessary bargaining process of what State negotiators had to give up in order to get some of the stronger elements in the contract that I covered earlier. So I mention it only to make sure that I've tried to make you aware at least of the major provisions in the contract.

The contract is silent on one thing that I think is significant, and I'm probably beyond my depth here and, therefore, going to make a mistake or two. But my recollection of your severance tax structure is that if you take your gas in-kind, the one-eighth taken in-kind will probably not bear a severance tax. That is a substantial revenue loss that occurs by reason of an in-kind taking that would not occur if you took in value, and I don't think the contract deals with that. I don't think that the questions asked to the purchasers the other day, in effect were, "If you pay a severance tax component to a working interest owner will you match that and will you pay it to the State," and they said, "Yes," and that's fine.

In the event of the continuance of regulation they will be permitted to pay a severance tax component only as reimbursement for severance tax pay. So I don't think that the FPC will let them pay you the equivalent

of a severance tax component. So I do suggest, as I think one of the other folks did this morning, that it might be appropriate for the State to give some thought to its severance tax structure in conjunction with these sales arrangements.

One or two general thoughts, if I might, maybe it would save some time, before we get to individual questions.

I think several of you have indicated an interest in knowing whether or not these same or better terms could be obtained if the State waits until a later date to make a sale. I suspect that if the routing decision is adverse, if Arctic Gas is selected, I don't think you'll get these favorable terms because I don't think that your rights of withdrawal will be meaningful to you, and I'm not sure that a purchaser through that system would consent to it.

I'm not sure that you could get the same provisions on the reimbursement of costs incident to your in-kind taking. In essence, the four areas that I thought represented real bargaining pluses in the contracts, it seems to me if you're talking about a buyer through the Gas Arctic system, they have little reason to offer you those favorable terms. So it may be that waiting until a later date, in the event of an adverse routing decision,

you might not see terms as favorable as these again.

Some questions have been asked as to whether or not the State could obtain a higher price if they pursued some other type of sales arrangement. Again I have to offer you a value judgment because I haven't surveyed the market. There's not any real way that I could do that, but I can speak with reference to how sales arrangements are structured under FPC regulation. And I will say that any sale that you make to someone in the Lower 48, or in the State of Alaska, is going to involve FPC transportation jurisdiction and, in a sense, that sale is going to be subject to FPC review.

If you attempt to find a distribution company in the State of Alaska or outside the State of Alaska to sell to, yours will be a sale for resale in interstate commerce, and the transportation of the gas will be in interstate commerce. So I don't really think that you move beyond where you are now by looking for that type of purchaser. There are not many purchasers that are able to take the volumes of gas that you all are talking about delivering, so you've got, in one sense, a limited market.

Electric utilities, I'm sure, would love to have it to burn under boilers, but I am quite positive that the FPC would never grant transportation authority for

that type of use.

The FPC does have a procedure whereby high priority users can purchase gas from a producer. It's called Order 533(a). It is limited to two years. The buyer is supposed to receive only those volumes that offset his curtailment in high priority two and three usage, and I think it's just simply not applicable to the type of sale that the State would be looking to.

So, while I will not absolutely rule out any possibility of a sale at a higher price, I offer you the value judgment that you probably won't find one.

One of the Representatives the other day indicated that perhaps Section 13-B of the Alaska Natural Gas Transportation Act rendered the desirability of these contracts somewhat less than might have been true before the passage of that act. It seems to me that 13-B is helpful to the State only if the right route is selected. If the gas moves out of the State north of the Arctic Circle I don't know how you would ever implement your rights of withdrawal. You're just not going to have a means of getting it down to where your people are and where you hope your industry is. So it will look good on paper. It doesn't vanish if the Gas Arctic route is chosen, but it is hard to see how it is of much practical help to you.

I will confess to a certain academic interest over the last few days in the discussions that you all have heard with reference to the effect of transporation costs on wellhead prices. It's a very confusing area, and I will offer you my perception if you want it.

In a regulated market, transportation costs are not going to have a thing to do with wellhead price. The FPC is going to set a wellhead price based on what they perceive to be the costs of finding and production, and a reasonable rate of return to the producer, and they simply have no mechanism for looking at transportation costs as a function of that rate. I know of no instance that the FPC has ever set a producer rate based upon any consideration of transportation costs.

In the event of a non-regulated market, I think that what I have heard over the last several days with two sides of the argument, I've heard some truth on both sides, but I'm not sure that I've heard the complete truth from either side, and I mean no disrespect, obviously, by saying that. In a deregulated market transportation costs do have an influence, but they are not the only factor that influences wellhead prices.

The nature of the use to which the gas is going to be put determines whether it is appropriate to look at a number two fuel oil equivalency price. For some

uses a user will pay much more than a number two fuel oil price. So you have to look at the market to which the gas is going before you know what is your base point for comparison backwards, and in the absence of a fundamental change in regulation the average cost of purchased gas on a pipeline system is buying from you has an influence on the wellhead price in the sense that, indeed, regulatory agencies now tell a pipeline or distributor, seller, to roll in or average his costs. And if you're dealing with a buyer that has a low average cost to purchase gas, then what he pays you is influenced by the fact that he's working against a lower averaging base.

I guess what I'm saying is that in the event of deregulation, if you tried to determine wellhead price only by looking at transportation costs and only by equivalencies with number two fuel oil, I suggest that's less than all of the factors that will enter into it. I suspect that as of right now, trying to determine what wellhead price will be in the event of deregulation is largely a metaphysical exercise. I'm just not sure that it's productive. You'll get as may guesses as you get economists up here.

Now, we lawyers are more definite, you see. I'm sorry I've taken more of your time than I intended to. I guess, Mr. Chairmen, it would be appropriate

to offer myself sacrificially.

SENATOR RADER: Representative Rudd.

REP. RUDD: Mr. Mocdy, this morning Mr. Swanson mentioned the possibility of storing our gas in place for some time, until we have a need for it. Is that a possibility if we don't approve these contracts? Is that a possibility?

MR. MOODY: Well, I guess there are two sides to the question. Is it possible mechanically, physically?

REP. RUDD: I was going to ask both questions.

MR. MOODY: And is it possible ---

REP. RUDD: By law.

MR. MOODY: Regulatory. I better not make a guess on the first one because I really don't know enough about your reservoir and its mechanics, that I really couldn't give you anything of value other than to guess on it. On the other side of it, once again you've got to make a judgment as to whether we're going to be deregulated or continue to be regulated. Since my personal feeling is that we probably are going to face regulation, I think I'll deal with that one first.

If the producers start selling the gas stream into interstate commerce you would have to be most careful that some type of balancing arrangment or under-lifting arrangement with the producers had been reduced to writing and had been approved by the FPC, because in my judgment,

if eight-eighths of the gas stream starts flowing in interstate commerce without some advance approval for the State to be storing its gas having been had and obtained from the FPC, you would be met with the argument when you later wanted to change the flows that you were trying to work an abandonment and that Section 7-B of the Natural Gas Act would interfere with what you wanted to do.

I think it's something that perhaps could work but I think you need specific agreements and, to be on the safe side, I think you'd want to go for regulatory proof.

REP. RUDD: Could you give us your appraisal as to how likely it is the FPC would agree to such an arrangement?

MR. MOODY: I'd guess they wouldn't. I think they want your gas.

REP. RUDD: Would this hold true under both conditions of the Alaska exemption, whether it's in effect or not in effect? Would that have any bearing, do you think, on their decision?

MR. MOODY: I read Section 13-B to apply to withdrawal from the system after deliveries have once commenced. Maybe that's too narrow a reading. Assuming 13-B stays in the Act and your arrangements for storage were structured as part of a royalty sales contract, I guess you could

bring it within 13-B.

REP. RUDD: Thank you. I have one more question on another subject.

SENATOR RADER: Go right ahead.

REP. RUDD: I think it was Mr. Thompson who mentioned yesterday or the day before, that he felt that a lobbying effort in Washington would not really be a very important thing to do at this time because it is now a decision that is before the FPC and then the President, and Congress only gets into it after those two have made their decisions, and only has a very short time to evaluate the President's decision and, therefore, probably will not go against the President's decision. But you're a former Commissioner on the FPC, and you just mentioned that you thought that lobbying efforts would be valuable. Are you talking about influencing the decision of the FPC and the President and the Congress, or at what point do you think the lobbying would be most effective?

MR. MOODY: I'm going to, if I may, take exception to the word "lobbying".

REP. RUDD: I'm sorry.

MR. MOODY: No, really. Because to me it has a specific connotation; perhaps it doesn't to others. What I suggest will happen is that the Federal Power Commission

has been told to gather all the information they can in order to make the most advised recommendation to the President as they can, and the President and the Executive Branch has been told to gather all the information that they can, talk to as many people as they can.

I think those people are genuinely interested in arriving at the best decision they can. I would not want to believe, and I do not believe, that their minds are made up. I don't think that there is anything wrong with offering the views of concerned people, both at the FPC and to the people in the Executive Branch that are charged with this responsibility. I think that the opportunity still exists for people other than the State of Alaska and people other than El Paso, who have made their record, to go in and say, "We do have an interest and here's what it is, and we'd like for you to take us into consideration," and I think the opportunity exists both at the FPC and in the White House.

REP. RUDD: Thank you.

SENATOR RADER: Any further questions? Representative Hayes.

REP. HAYES: Thank you. Mr. Moody, you mentioned that one of four pluses that these contracts have -- interested me. One in particular that's of interest to many of us here is the right to withdraw our royalty gas for in-State use after it's originally injected into the pipeline

system. Then you mentioned that when we get around to the financing that Alaska may have to face a moment of truth. Does that mean that we may have to subordinate that particular clause in order to make it possible for the pipeline companies to build this line and, if so, what do you think the chances are that we'll have to do that?

MR. MOODY: Well, I hate to borrow trouble, but I can see that a financial institution wouldn't be too wild about lending on an eight-eighths pipeline knowing that one-eighth of the through-put can be withdrawn at any time, because it's the through-put that generates the revenues that pay back the debt.

I guess I'd just be guessing if I said I know they're going to come to you and make you give it back. The best I can do is offer you the view that to me, representing the lender, you know, I'd say, "Gee, we'd better go get this straightened out some way, we'd better get some means of determining that the whole financing of the line is not going to be in jeopardy."

REP. HAYES: So we have three pluses and a possible plus.

MR. MOODY: From a contractual standpoint you've got a very good plus. My point is that it may be too strong a plus. You may have to give some of it back.

SENATOR RADER: That was my understanding of what you were

saying too, that we drove such a hard bargain that these people may not be able to finance the pipeline with what they have left.

MR. MOODY: To me it's quite conceivable it could deveop that way.

SENATOR RADER: Representative Gruening.

REP. GRUENING: Is the project so marginal in your view that what we do with our one-eighth will kill the project? I mean, can I fairly infer that from what you said?

MR. MOODY: No, I have no judgment about the economics of any of the three projects. I've never sat down to study them.

REP. GRUENING: But you're saying as it relates to private financing that our one-eighth is crucial.

MR. MOODY: I'm saying that from the standpoint of a lawyer who has done a little bit of work in representing lenders that any time you see something that threatens the revenue flow that you're looking to for repayment of your debt, you raise a red flag. But then I don't know, I have no judgment as to whether the difference between your one-eighth and eight-eighths is the difference in "go" or "no go" on the line. I'm sorry, I have never done any economic studies on it.

REP. GRUENING: But what you are saying though, it is the difference between "go" and "no go" as to whether a

private financer backs that line?

MR. MOODY: I think they're going to look at this provision very carefully, and a prudent lender is going to look at the reserves and he's going to look at the capacity of the line and the cost and everything else, and maybe this won't be a problem. But somehow I kind of suspect that some day somebody is going to knock on the door and say, "We need to discuss these withdrawal provisions with you."

REP. GRUENING: You mentioned that if the Arctic route is chosen we wouldn't get as favorable a contract. Let's say we don't enter into a contract and the El Paso route is chosen, do we stand to get as favorable a contract?

MR. MOODY: They struck their deal with you once. I guess they'd stick by the same deal, but I don't know them that well and I haven't asked them.

REP. GRUENING: You heard Mr. Tussing's testimony yesterday as to what he thought the international ramifications ---

MR. MOODY: I was enthralled with it.

REP. GRUENING: Yeah, I think the headline should have been "Members Entertained by Testimony," but I think what he says may have some merit. But I want you to comment on his view that the Canadians are going to make the choice and that if they do, in fact, make that choice, or cannot make that choice, isn't the El Paso route inevitable

if they can't make it, and what we do in this contract won't make any difference in that international decision making process?

MR. MOODY: I really had the feeling, listening to Arlon, that if I had his prescience about what our government was going to do, and what the Canadians were going to do, and Congress was going to do, and the FPC was going to co, I ought to be making a lot more money than I'm making. I suspect that an awful lot of what Arlon was saying were very well educated guesses as to what he believed would develop or might develop and, certainly I respect his judgment and the knowledge that he has and the facts from which he draws.

I don't come to the same conclusion about everything being cut and dried and that it's only the Canadians that have something left to say. It's not that I know that that's true, it's just that I am unwilling to recommend to you that you pass up the possibility that you've still got a way to do something. You see, I don't know, and all I've got to do is assume that the FPC and the White House will operate in good faith, that they still have open minds, that they're still willing to listen to reason, to rational arguments from responsible people, and if those assumptions are correct then there is still a way to try to make this routing

decision come out better than it has so far.

REP. GRUENING: I think what you say in terms of rational arguments having some effect is persuasive, I cannot believe anyone who says we can't have any effect on this decision. But the question before us is whether the commitment under this contract will have an effect on the rational part of the decision making. You described earlier that you thought it could have an effect in terms of, I think, the way that the public would perceive what we're doing here. In terms of the amount of gas and date of delivery that could occur under this contract what should we be telling, truthfully telling the American people they're getting under this contract so that they'll be persuaded that they should press their representatives for an all Alaska route?

MR. MOODY: That you're offering a share of your resource, and you're offering it under written contracts with responsible people that operate as buyers, sellers and transporters of gas, and that if the correct route is selected then you fully intend to abide by the terms of this contract.

REP. GRUENING: But can we say that in any other document or any other way and saying in effect that -- is there a more appropriate document than this to say, or a more appropriate spokesman to say this than the gas company?

MR. MOODY: I've forgotten which Justice it was on the English bench that once wrote, "As a man binds himself, so shall he be bound." It seems to me that the most appropriate way to express your sharing of your resource is in a contract. It's very easy for people to say, "Oh, we'll share with you, trust us." But, you know, you're to the point of the State committing itself in writing by solemn legislative and administrative acts that say, "Yes, we will share the resource." It seems to me that's appropriate.

REP. GRUENING: Do you think there is any danger, as long as you're making these political assessments -- could you tell us, is there any danger in assuming that the public is willing to go both ways; in other words, we'll allow you to take it back for any in-State use you want and we'll give you special legislative consideration for it, plus we're going to go along with your route decision? I mean, maybe we're asking for too much; I don't know.

MR. MOODY: It's a valid concern.

REP. GRUENING: One other question. You mentioned the provisions that you've analyzed although, in other words, if you were writing the contract out of the context of trying to affect some political decision you might try to renegotiate it to cover some of these.

MR. MOODY: Representative, I have tried to express in one of the opening paragraphs of this letter. It is very difficult to go in and pick up an executed contract and assess accurately whether it's the best deal that could have been struck or not. Those people who negotiate for you and against you have to go through a process of give and take, and unless you have been a party to the negotiation process and you know where you compromised and where they compromised, and where were the absolute points of no give at all, then you really don't know whether this is the best deal that could have been arranged.

I've read summaries of the contract negotiations. I don't know whether in any particular instance I or anyone else could have driven a better bargain for you, and I just wouldn't want to be in the position of saying that I don't think your negotiators did a good job.

REP. GRUENING: You mentioned that under these contract provisions a letter of agreement, especially 6.1 and I think 6.5 ---

MR. MOODY: Yes.

REP. GRUENING: -- could be corrected by getting a letter agreement or something on the record to clarify the possible ambiguity. As an attorney, wouldn't you recommend to actually get that into the contract?

MR. MOODY: It can be part of the contract by supplement so long as it's been done and properly agreed to by all parties before the Legislature is asked to vote on it. It seems to me that would be the determinative thing. They've laid a proposal before you but I don't see why it could not be supplemented with an additional paragraph or so before the Legislature votes.

REP. GRUENING: Thank you.

SENATOR RADER: Representative Parr.

REP. PARR: Thank you, Mr. Chairman. Mr. Moody, this contract is a twenty-year contract, and you've had a lot of experience with the FPC; what is sort of a rule of thumb, if there is any, on the length of contracts across the country in selling natural gas?

MR. MOODY: Yes, sir. Up until three years ago I would say twenty years was the industry standard contract. About three years ago the Commission went through kind of an evolution in its manner of determining to what gas certain rates would apply, and they permitted a higher price after the expiration of a contract if a new contract was entered into, called roll-over contracts.

You have a contract that expires, you would by FPC vintaging be held at a certain level, but the Commission kind of restructured and they said, "If you enter into a new contract we will permit you a higher rate."

Leaving aside why that happened, whether it was good or whether it was bad, one practical consequence was that contract term shortened because people saw that by contracting for a shorter period of time they would have an opportunity to roll over the contracts and move to a higher price. As a consequence of that trend, the Commission, in Opinion 770-A, abandoned the roll-over contract concept and they refused to permit the higher rate for roll-over contracts. So we may now see a restoration of longer term contracts.

REP. PARR: In this last three-year period you're talking about, what would be sort of a guess as to the usual length?

MR. MOODY: There were still some twenty, some fifteen. The FPC does an every six month analysis on contract terms, and some were as low as two and three years. It would be hard really to say what the industry average was because it was such a short transition period and it really didn't shake out before it got changed again.

REP. PARR: I would like to, Mr. Chairman. You said also a while ago, Mr. Moody, in answer I believe to somebody's question, that we're not likely to get a better contract if we were to wait. Can I assume that you were talking about a regulated, as opposed to a non-regulated, situation in making that statement?

MR. MOODY: Yes.

REP. PARR: You said, when you first started talking, that nobody can really guess whether deregulation is going to come or not; and then just a couple minutes ago you said your own belief is that we will continue to have regulation. Am I quoting you right?

MR. MOODY: Yes, I'm afraid so. I'd like not to be quoted too widely.

REP. PARR: One last question, Mr. Chairman. You said that we might be able to offer some of our resource to some of these states through valid companies with good contractual arrangements, etc., and get their support. Can't we assume that the states which are going to profit by the other route, such as Arctic, are going to be throwing their support behind that route and you're going to wind up, perhaps, with simply a matter of counting the number of votes in Congress in favor of each one, and each one going for the one that seems in its own best interests, Illinois versus (shall we say) Alabama, and Texas versus New Jersey, and so forth?

MR. MOODY: Yes, sir. I would have thought that's the way it was going to develop. But you've got, it seems to me, something kind of unusual operating in your favor on this question. The producers are not entering into contracts because they're concerned about where they're going to be on the price structure. So as of right now

nobody is making a commitment of their gas that they can promise and that the Gas Arctic people can go state by state and say, "You're going to get so much, you're going to get so much." As long as the producers don't contract, you are the one party in a position to say, "We're going to share our resource with you on a specific basis."

REP. PARR: You don't think, Mr. Moody, that the companies such as Michigan/Wisconsin who talked to us the other day, or other big companies in the Midwest, are going to have their people believing they profit by Arctic Gas because there are no signed contracts? Is that what you're saying?

MR. MOODY: No. You know, human nature is a funny thing, and part of what's involved in this whole routing process are certain perceptions in the Lower 48 States. There is a perception that Arctic Gas will bring gas to the Midwest and to the Northeast at a lower cost; there is a perception that El Paso takes gas to the West Coast, that's already afloat in oil; there is a perception that Alcan started too late and hasn't studied their project properly and didn't make as strong a presentation as they could have under other circumstances.

You're dealing with perceptions when you are trying to get people to become involved enough to go to

the FPC or to the White HOuse and say, "Gee, this route would certainly help us." It seems to me that the commitment of specific volumes, even with your oil rights, so specific companies that reach specific states might be of some help in altering those perceptions.

REP. PARR: Thank you, sir.

SENATOR RADER: Senator Sumner.

SENATOR SUMNER: Inasmuch as I get the impression that price is probably going to be determined outside of what the State of Alaska is going to be able to do, doesn't it really come down to a very simplified option that in the end what we are able to provide for Alaskans, or the citizens of Alaska, will depend on whether we have an option of sending part of our royalty gas to an in-State petrochemical type of operation or whether it goes out of the State? Is it that simple?

MR. MOODY: Senator, I offer the judgment that from the very beginning price was of less importance to the State than was retention of the control of the resource.

SENATOR SUMNER: In your view is the Alcan project in a first, second or third running position?

MR. MOODY: I really never have gone into any of them, and I don't mean to dodge you, but the first of these applications were filed when I was on the Commission and some of the evidence came in while I was on the Commission,

and I really have hesitated and don't want to be put in the posture of endorsing one versus the other.

SENATOR SUMNER: And you're here to try as best you can to equip us with the knowledge that you have so that we can punch a button to decide whether we ratify a contract or whether we don't. If you had to punch a button and it comes down to no discussion or no nothing, one day a button has got to be punched; if you had to punch that button, would it be yes or no?

MR. MOODY: Was it Mr. Levy that said, "Elect me to the Legislature and I'll tell you"?

SENATOR SUMNER: But before we let you escape from us today we're going to keep you pretty close to that position. What is your recommendation to the Legislature?

MR. MOODY: I think you've got to go back to where you stand on the routing problem.

SENATOR SUMNER: That goes back to where the option is, and we're now down to the point where our destiny is pretty much controlled as to whether we have the option of using our gas in-State or sending it out.

MR. MOODY: Senator, obviously I have an opinion.

SENATOR SUMNER: Yes, sir, and that's what I'm trying to get.

MR. MOODY: My problem is, I feel very presumptuous, as somebody who grew up in Texas and has been in Washington the past five years, being in the position of saying to

men and women like you, who are elected to and who do represent your constituents, and who know your State, what their needs are and what their concerns are -- you know, how can I tell you what to do?

SENATOR SUMNER: No, that isn't what I'm asking you. I'm not asking you to tell me what to do, I'm asking you to tell me, on the basis of what you know, which you've got lots of years of experience, you're an expert, acknowledged, self-professed, being out of town with a briefcase, and I'm trying to determine in your mind which way would you go if it was your decision, if you were one of those people making a decision.

MR. MOODY: Maybe I ought to put it this way.

SENATOR SUMNER: Sometimes I wish the little button had a message like that.

MR. MOODY: If I lived in Alaska I would probably write my Representative and Senator and express the view that the routing decision was of terrible importance to the State, that this offered a means of perhaps arriving at a happy answer to the routing decision and that, therefore, my Representative would vote for it.

SENATOR SUMNER: Thank you very much. That's all I have, Mr. Chairman.

SENATOR RADER: Mr. Chatterton.

REP. CHATTERTON: Thank you, Mr. Chairman. Mr. Moody, I'm

looking for a value judgment on your part somewhat akin to the question you just had. Let's say that Chat Chatterton takes the position that he just doesn't want any straw, any conduit at all from Prudhoe Bay to Washington, D.C. where they can turn a switch, he wants to delay it as long as he possibly can; do you think that the approval of these gas sales contracts will change, will accelerate it? If I want to delay it, will I be accelerating the issue?

MR. MOODY: Having said that I think that the contracts would be of some benefit in the routing decision, I think it necessarily follows that if you have no contracts, it kind of just may help Gas Arctic, I don't know. I just don't know, and I don't mean to be flip or presumptuous.

REP. CHATTERTON: I'm not worrying about any route, I don't want any route.

MR. MOODY: I can recognize what you're saying and I would have said, "Now, Chat, don't worry about that," a few days ago, but I saw the Congress of the United States pass an allocation bill and, as you know, it was conventional wisdom that the pipeline industry producing states would just never let it happen. But emergency situations came up, the pressure was there, and the bill went through both Houses, and was signed by the President in

three days' time. I recognize your concern.

REP. CHATTERTON: Thank you.

SENATOR RADER: Representative Hayes.

REP. HAYES: Since we've discussed and mentioned several times that the most important aspect of this whole thing is the future in-State use of Alaska's royalty gas, do you think that by signing these contracts that we are in any way jeopardizing that opportunity in the future, as opposed to not signing any contracts?

MR. MOODY: No, sir, because I think the withdrawal rights are clear.

REP. HAYES: But we get into the situation of -- well, first of all, we've got the financing problem that we talked about. So, you know, we're going to be back to the drawing board, possibly.

MR. MOODY: Maybe I shouldn't have mentioned that.

REP. HAYES: The second problem is that once you get it into the system, once it starts flowing out for sale, they may decide that it's in the best interests to the country -- once it starts flowing out it's awfully hard to turn it back around again. That's another possibility of losing it. So it would appear that signing the contracts would put us in a more hazardous situation, could be more jeopardy on the possibility in the future of having our royalty gas available for in-State

use than if we didn't sign anything, we just waited a while.

MR. MOODY: It seems to me that turns on the perception of the same answer that Representative Chatterton asked. If you believe that not signing delays the construction of any pipeline system or transportation system, then what you suggest would follow. But if failure to sign or signing does not slow up the selection on the building of a transportation system, then you are vulnerable to the taking, whether or not you sign the contract.

SENATOR RADER: Any further questions? Senator Huber.

SENATOR HUBER: Most of my questions have been asked, or almost asked, Mr. Moody. One hasn't as yet. The change that you recommend in our severance tax structure, should we rush and make this effective before we get into a contract, from a legal viewpoint?

MR. MOODY: Senator, I'm not an expert on your structure, but I don't think so. I think my answer is that you have time to do it but it ought to be done before gas starts to flow. I don't think you want to tie it to the flow of gas. Somehow that seems like it's to late to do it.

SENATOR HUBER: The time structure then is that we should do it before the flow of gas, but it's not necessary to do it before we enter into the contracts, if we're going to do it?

MR. MOODY: If you will take the word of a Texas lawyer on Alaskan tax matters.

SENATOR HUBER: Would you care to speculate just a little bit further on Charlie Parr's question to you? It got very closely to what I wanted to get into, and the part that it didn't cover is, maybe in what magnitude of lobbying do you think it might take to change the perception of the people in the East that the Canada route is going to bring it to them; the perception in the Northwest that the Alcan route dumps it into them; and the perception in the Southwest, Arizona, California and so forth, that El Paso brings it to them with the first crack? Would you care to speculate briefly on what you think what might be the -- what kind of effort, how big an effort might be needed to overcome those ideas?

MR. MOODY: Senator, I wish I could be some help to you. You know, I think you're talking about a question of political science, or polling, or something I know I don't know, and forgive me, I just can't be of any help to you on that.

SENATOR HUBER: In that question, would you go along with me one more? Would you have any feeling in the area where you are living right now, Washington, D.C., if you and your neighbors feel that, for instance, the

Trans-Arctic Canada route might not give them the best bite on the gas or not? Do you know of any perception like that?

MR. MOODY: No. I think it's still probably as an issue that is being discussed not at the individual consumer level so much as at the State Commission, State Government, certainly involved industry level, but I doubt that Alaskan routing has become a matter about which individual consumers have views at this time.

SENATOR HUBER: I was getting into the end, of course, from necessary lobbying to convince Congress, based upon your earlier remarks. You haven't then noticed this, yourself?

MR. MOODY: No, I haven't, and, you know, you get involved in a certain area yourself and you begin to lose objectivity, because that's all you think about or all you talk about, and I'd be a very poor person to ask what people in Washington, D.C. feel about this, because I would necessarily reflect my own thoughts.

SENATOR RADER: Any further questions of Mr. Moody? Mr. Moody, we thank you very much, and I know that Mr. Kilgore and Mr. Swanson both have reservations out, so I think that we'll excuse you gentlemen from further attendance this afternoon, although we still do have some members of the public to be heard.

You're welcome to stay if you wish, but as far as the committee is concerned I think it would be well to excuse you to try to make your plane connections.

MR. MOODY: Thank you.

SENATOR RADER: Let me find out before we take our ten-minute break where we stand. I have a list of witnesses that are possibly here or possibly not. Is Mr. Heinmiller here to testify? I see Mr. Penney and Paula Easley. Do you wish to testify?

MR. PENNEY: Yes.

SENATOR RADER: Carolyn Berg, is she here? Dennis Schlofeldt, from the Fairbanks Chamber of Commerce. I'll assume that he's not going to testify. Is there someone here from the Associated General Contractors who is going to testify? There's no one from the Associated General Contractors.

Under those circumstances, we have Mr. Penney and Ms. Easley from OMAR here to testify, the only remaining witnesses. Does the committee wish to take a ten-minute recess, or shall we take their testimony?

SENATOR HUBER: Let's take five minutes.

SENATOR RADER: Let's take a five-minute break.

(Whereupon the hearing recessed at 5:25 p.m. and reconvened at 5:35 p.m.)

SENATOR RADER: Would the committee come to order here?

We have Mr. Robert Penney and Ms. Paula Easley. Would you identify yourselves and who you represent? I suppose you would like to make a statement and then open yourselves to questions. Would that be the way to proceed, Mr. Penney?

MR. PENNEY: Yes, that would be fine, Mr. Chairman. Chairpeople, if that is the correct term, my name is Bob Penney, and I'm President of the Organization for the Management of Alaska's Resources. On my left is Ms. Paula Easley, she is our Executive Director.

This month OMAR is two years old. It was started some two years ago, with the idea of having some citizenry input into what happens to the development and/or the management of Alask'a resources. One of the first goals and projects that we took on was the issue of this natural gas line, and since then we've spent many, many hours and an awful lot of time trying to at least get a layman's understanding of what's really happening.

We have an office in Anchorage. The address is the Fourth Avenue Theater Building. We have a one-man office in Fairbanks, Alaska National Bank, and this next month we'll have an office in Seattle, and we have an associate office in Washington, D.C. under USA, Alaska. We have forty-nine directors from all over the State, and we have an executive board of eleven people, and the executive board meets once a week. We have public meetings once every Thursday in the Anchorage office.

I'd like to start off by saying OMAR doesn't really say who builds the gas line, we never have. We don't care where it goes, through what cities it may

pass; we just say it must go to a tidewater, ice-free port within the State of Alaska. And our second point, in our estimation, Prudhoe Bay gas is going to be produced. Now, it's produced with the oil and, as we understand it, we don't own one-eighth of the gas, we own one-eighth of the production and initially, unless we take it in like kind, we own one-eighth of the revenue. And, as we understand it, if we elect to take it in like kind, as Commissioner Martin has done, we then can take one-eighth of that production of that gas in like kind or take the gas itself.

(b) Per Atlantic Richfield Company engineers (Chat was at the meeting) it will cost nine to ten and a half percent of the gas to reinject it into the ground.

(c) It's against the law to flare it, as it should be.

(d) Eighty-seven and a half percent of the gas is already sold to others. It will leave the State, the rest of the country will demand it. There is a Federal law that sets a time frame for delivery of this gas. The gas is going to be produced.

Our share, as brought out by Mr. Moody, of the estimated three and a quarter trillion cubic feet, we have in this contract before you sold or are endeavoring to sell eighty percent of that gas, or 2.6 trillion feet,

and that amounts to eighty percent of the gas. Somebody said the other day they thought only seventy-five percent should be sold, and this is approximately eighty.

Our surplus royalty gas has to be sold for a period of time; that's what our observations have given us. We can't use it all right now in the State. I believe the State of Alaska looked for four and a half months trying to find a user for that gas specifically within our State. OMAR really feels this, and the reason we feel we're for this line is as follows.

We feel that the eventual use of the royalty gas within our State is the number one reason and benefit that Alaskans will accrue from this gas line.

(b) At a flow of three hundred million cubic feet a day, this royalty share equals, according to our figures, 2.2 times the amount of gas presently being used by forty percent of our population, the Anchorage Bull.

Last year the State could not find, nor is there a user at this time, who will agree to use or develop all the gas within our State.

(d) OMAR concluded over a year ago that we have to sell our surplus gas in order to have it back again some day. The eventual use in our State, as we stated before, the eventual use in our State of that gas should

be our number one priority.

Number Four: Prudhoe gas is going to market and the routing of that gas line will be a political decision finally decided by the Congress of the United States of America.

(a) We initially started working for a royalty gas contract at the recommendation of Senator Stevens and Representative Young over one year ago. They told us the route would probably be a political decision, just as the oil line one was.

(b) El Paso's application, in our opinion, is the overall number one choice for Alaska. Let's face it, they're a pretty small company in the big picture, when compared to the forces and money behind Arctic Gas at this time.

(c) We have been urging Commissioner Martin and the Administration since last February to conclude a royalty gas sale as recommended by the Congressional Delegration. As far as we're concerned, Guy Martin took a long time, worked on it very thoroughly, and went through extensive negotiations. We believe that last April 14 the contracts were almost signed and would have possibly been included for review by the last Legislature, but they were not completed until this November.

A sale, to be most effective for our State, should have been concluded, in our estimation, last spring. It has taken twelve months to get this contract before you in the steps it's in. Six to eight months from now it will all be over, the decision for the routing will have been made.

(d) The FPC Judge stated many times during the testimony and asked, "What's Alaska going to do with its gas? Is their gas going to go into the system? Are they going to keep it?" This contract you have before you was entered into the FPC record in its rough draft on the last afternoon of the last day before public testimony was closed.

(e) If all the gas goes to Arctic and if our State found no new reserves for some reason, wouldn't it be something if Alaska ended up some day like Louisiana, some years hence, with a shortage of gas? It's not probable, but it is conceivable.

(f) A political decision? Alaska is using all the forces we can to affect a Congressional decision. Do you mean like we did for the oil line? Or like we did for Statehood? You bet we are! If we don't stick up for our own state, I don't really think anybody else is going to.

Here are some of the letters we have received

from Senator Stevens, Senator Gravel and Representative Young dated November 2, November 5 and November 17, 1976, mandating a royalty gas contract.

MS. EASLEY: Last fall when we were getting pretty nervous about whether the royalty gas contracts would be concluded in time to be included in the FPC record, we asked Don Young and Ted Stevens and Mike Gravel to meet with us, and we did separately. And we asked them each a very important question. We said, "Do you still consider the royalty gas contract critical to the success of the Trans-Alaska gas line."

Ted Stevens told us that if we did not have the royalty gas contracts we didn't have a chance to win. Don Young said the same thing, and Mike Gravel said the same thing in different words. So we were convinced then, as we are now, that that is the most important thing that we need in order to do our job in committing the funds that have been contributed to our organization to carry this fight to the nation.

MR. PENNEY: November 2 in a letter to Honorable Jay Hammond from Mike Gravel: "In response to a request from the Organization of Management of Alaska Resources, I am putting on paper my position with respect to the commitment of Alaska's royalty gas. I have enunciated this position on numerous public occasions, both in Alaska and

Washington, D.C. Without doubt, the commitment of Alaska's share of the Prudhoe Bay natural gas could bring us allies in our cause if only because the beneficiaries would thereby have a proprietory interest in the success of our endeavor, designation of an all-Alaskan gas line."

November 5, in a letter from Senator Stevens, to Paula Easley at OMAR: "Dear Paula: I am writing to confirm to you my feelings that Alaska's royalty gas should be committed so as to pick up as much support as we possibly can gain in the Congress, in the South and in the Southwest. As you know, I have not expressed any opinion on the question of that share that any respective purchaser receives. However, these commitments will only make sense if they are associated with support for the all Alaskan line, and to get that the share to the new supporters must be credible." That's the time when we were being asked by, for instance, Senator Stevens wanted to see Tenneco, I think, at the time get it all, and Senator Gravel was thinking that El Paso should have gotten half. But it was a decision of what the percentages was, was left up to the State Administration. In fact, we didn't make any comments because we don't think that's within our vein.

"The recent report of the Berger Commission's

staff recommendations (continuing with the Senator's letter) reinforces my feeling that we have a real chance to win, and when the review of Alaska's gas transportation system comes before Congress we will need all the help we can get."

November 17 from Don Young to the Honorable Jay Hammond, in addition to a wire he had sent the prior day. "It is timely that the State has taken this action to achieve the goal of an all Alaskan route and to preserve the State's option for use of its royalty gas in the State. In the past, FPC Hearing Judge Nathan Litt has repeatedly inquired about the disposition of the State's royalty gas. It has been argued that if the State sold its gas it would be an unrefutable indication that the State is willing to do all that is in its power to commit itself to an all Alaskan route. Now at last this is the case and any reservations on this point can be swept aside."

Political decision? It is. If we don't listen to and seek the feelings of our Congressional Delegation as to what should be done on an issue decided in Congress, then who should you ask.

Number A: I would like to take a moment out at this time to do the same thing that Russ did, and I would like to publicly say how much I thought Bob Ward's

testimony was really right on the button yesterday, and he renewed my respect for him so much -- that he just told it like he really thought it was. I thought that was probably one of the nicest presentations I ever heard anybody give, particularly when they've got to have the least desired position of anybody involved. I thought it was well done.

We concur with that thinking. We thoroughly endorse the concept of these contracts. As we said, it's taken twelve months to get this far. We weren't privy to the negotiations. When last April we asked Commissioner Martin how negotiations were to be handled he told us no one was going to be involved but the four companies and the State. We understood and agreed. It took almost seven months to conclude these negotiations.

We really can't answer the questions as to the technical terms and things that you've heard now. The only thing that we can do is address ourselves to the concept of the contracts, which was initially told to us by the Congressional Delegation.

We have some concerns about the switching clause, and we've dicussed it at some length. We have a couple of suggestions after, if you want to. It's hard now for us to judge what's going to be hindsight in two to three years from now, and I'm sure it was

awfully hard for Commissioner Martin and the attorneys to judge now the best contract to draw for probably 1982. But I think from testimony I've heard here, I think the contract is probably as well done as it could have possibly been.

After all our encouraging Commissioner Martin to finally conclude a sale, we have to admit we think on an overall basis the contract really exceeds in many ways our best expectations. We think overall that he's done a fine job and actually has done the best he possibly could for our State, particularly under the circumstances.

One of the points that, as we understand it -- in essence if this contract is inked and it goes for approval, or if it doesn't go for approval but if Congress eventually approves the all Alaskan route as it's proposed, as we understand the contract, the next day our Governor could say, "We have the route now; however, we have an in-State use for the gas and two years from now we're going to take it back," and then two years hence, even before the line is even built, before it's ever constructed, we can cancel out the terms of the contract. I just have a feeling that there's got to be a little faith on both sides, because I don't know how I'd sign it if I were a gas company. But evidently they did think it was all right.

One other point that hasn't been brought out and I don't know why they don't want to talk about it, but I'm going to talk about it because I think it's very important. But El Paso, in essence, and I think you'll find that as we go into this the next six months and some more testimony, if you want it, will show that the financing of either one of these three routes is going to be one of the major critical things, and we think at this time it is the major critical stumbling block for Arctic Gas. And we have testimony, if you want to review that further.

But El Paso, in essence, has already got twenty-five percent of their system financed, as we understand it. Their tankers are going to cost 1.6 Billion Dollars, which is a quarter of their project, and under the Maritime Act (I don't remember the name of the Act) there is a low interest rate available for that, and also in a Federal insurance. So, in essence, they've already got twenty-five percent of their package cut and done. I don't know if that's been brought out before, I don't think it has.

In summation, don't forget, we won't have any accessible surplus of royalty gas if Arctic is certified, and I really think people lose sight of that. We will just have dollars of revenue from then on, because Mrs.

Jones is going to be cooking eggs in Ohio for the next twenty-five years with our royalty gas.

And (b), we think this is almost as important: if either Canadian line gains approval, you will then have an established corridor from the heartland of our State funneled directly to the South 48. If we ever want or choose then to see Pet 4 or other resources used or developed within our State, the chances of doing so will become much, much more remote. Whatever you do with this contract, somebody, some day is going to buy a portion of our surplus royalty gas, and we think that if El Paso, Southern and Tenneco would be foolish enough -- they would be foolish, they'd be unfair to their stockholders, and less effective for Alaska if they publicly review their game plan for approval of the Trans Alaska line. If they do, they're almost sure to read again about it in Jack Anderson's column or else somewhere else in national print. If you haven't heard about the column, I'll tell you about that.

They are large companies, they need the gas, and "no ticket, no laundry." If they don't work with us they very probably will get no gas. So we have to have some reliance on their ability to perform.

(e) To me, personally, this contract is also important nationally, as it's like the tapping of a pencil

on the negotiating table by the State of the Far North, that we're not asleep, we are interested in our own destiny, we do want a say in the use of our own natural resources, in our way of life, we do want to get off the Federal dole, and we do want to direct our own heritage.

We have over one hundred and fifty press clippings. Somebody asked if this was going to be news across the nation, and I'll let Paula enunciate on that. This news of the royalty gas sales has already been in most of the major papers in the United States.

MS. EASLEY: I'm sure most of you are aware of that, and unfortunately it has been reported and accepted as an already concluded situation, and quite a few of the articles have mentioned that the contracts do have to have the stamp of approval of the Alaska Legislature. But the way it is stated, it's just been that it is an assumed fact. And we are concerned about this element of it, should the contracts not be approved, the effect of that at the national level in indicating to the public and to the Congress that Alaska is not behind the proposal that it professes to be, and that eighty-five percent of its citizens say they are.

MR. PENNEY: Last, review, assess, discuss, make sure it's right for all of us, if you have to, this contract. The

final terms are in your hands. But, if you will, pass it out as soon as you can with a large majority. Affirm and then make it your first step in the fight for our own gas line.

Then second, (that's the first step) pass an appropriation bill to be used nationally in an effort to tell the Alaskan side of the story, that the all Alaskan U.S. route is the best one for all of the United States.

Then thirdly, we respectfully ask that you do everything you can legislatively to see that it's "easier" to go through Alaska with our gas than through the middle of another country.

SENATOR RADER: Thank you both. Any questions? Senator Huber.

SENATOR HUBER: One short one. Bob, you didn't agree with Bob Ward's testimony so much as to agree with his bottom line, did you, that it wouldn't make any difference?

MR. PENNEY: No, John, but if you'd like to -- some of the points he brought out we think were very valid, particularly as far as the part that gets into problems in Canada, and we researched those very thoroughly. We subscribe to two clipping services from Canada, and it keeps one person busy just reviewing those, and we think we have a pretty good grasp or feeling for what is taking

place in Canada, at least as far as the press reports. And if you want to get in and talk with some of that, we can tell you where we think some of the tough parts and some of the good parts will be.

SENATOR HUBER: You at least agree that he was very candid?

MR. PENNEY: Yes, sir.

SENATOR HUBER: As far as the last line -- I wanted to be sure you didn't agree with his last line.

MR. PENNEY: That's true, John, but I was very impressed with his testimony. One other aside, there has been some mention in talk made about the treaty here, and last February 1, I believe, Aron Tussing brought this up, so we will be able to see how his suggestion worked. But February 1 we sent a letter to Senator Gravel, Senator Stevens and Don Young, and in essence said this, that while we understand that the U. S. and Canada are agreeing to the treaty in which no line will be taxed any different than somebody else's line, as we all know the -- just let me read the paragraph. "We at OMAR are concerned that the provinces through which the Arctic Gas or Alcan Pipeline might pass have not ratified nor endorsed this treaty between U.S. and Canada. We are all aware the provinces of Canada have unusual taxing powers when compared to those enjoyed by each of the states of the United States. We ask that you consider

a proposal requiring each province through which a Prudhoe Bay gas line might pass to give a written pledge to support these treaty provisions before the U. S. Senate ratifies the treaty itself."

SENATOR RADER: Any further questions? Senator Sumner.

SENATOR SUMNER: You mentioned an appropriation. Did you have a figure in mind or have you gone through some other channels with that?

MR. PENNEY: Senator Sumner, Mr. Chairman, yes, we have. We've projected out two or three different things that could be done. But if the State were to hold down its expenses as closely as possible, we think it's going to require a Three Hundred Thousand Dollar contribution just on the part of the State itself to do any kind of effective job. But there are so many things we could be doing in the next six months to try and win this thing. There are so many avenues we could explore. We've asked the Governor, and Lowell Thomas is going to take another trip now for thirty days. We have to raise the funds to take care of his airplane tickets. He was very effective last time. He's written letters to every one of the other Attorney Generals throughout the United States -- or Lt. Governors, excuse me, asking them about the Alaska route. There's an awful lot we could be doing. We're going to have two more flights going back

to Washington, D.C., about a hundred and ten people, later on this spring and early summer, as soon as our Delegation tells us. And there is so much we could be doing, but if we don't start doing it, and if we don't start doing it right away, and really if we do nothing, and we get nothing, that's just about what we deserve.

SENATOR RADER: Any further questions?

MR. PENNEY: Thank you very much.

SENATOR RADER: Thank you very much. We have a number of exhibits that we need to introduce. Let me just identify them. We have a letter from United States Senator Mike Gravel supplementing his wire of several days ago. That will be Exhibit 20. I won't read it, it will be attached. Exhibit 21 is a series of correspondence including a letter from the Lt. Governor of the State of Alabama, a letter from George E. Smith, Alaska Chapter of Associated General Contractors, a letter from Robert L. Hardick, Anchorage Chamber of Commerce, a telegram from A. L. Swalling of Anchorage, Alaska, a telegram from J. A. Sproul, a telegram from Richard L. Maullin, a letter from Mrs. Jeanne Wilson, President of Greater Fairbanks Chamber of Commerce, a letter from George Easley, President of the Easley Construction Company, a telegram from James T. Jefferson, of Jefferson Enterprises, Detroit, Michigan. Most of these were responses to our

invitation to come and testify, and they sent written letters or telegrams expressing approval or disapproval of what we were doing. I don't intend to read them but I intend to make them a part of the record; so that will be Exhibit No. 21, called miscellaneous correspondence.

(Whereupon Exhibits 20 and 21 were duly marked.)

Do we have any other ---

SENATOR HUBER: Mr. President, may the list to whom invitations were sent to be a part of the record?

SENATOR RADER: Senator, I don't know that we can do that. Representative Gruening's office, I know, sent out some and my office sent out some in two different groups that had some overlap. I'd invite you to come to my office. We've got the letter from the Legislative Affairs people, and, Elke, maybe you know more about those lists than anyone. Would you explain to us what ---

MS. KALLAB: Yes, to the extent that I can. As far as on the Senate side, the list that we initially began with was furnished to us by the Department of Natural Resources which are used as lists as far as Oil, Gas and Royalty Board invitation lists. Those are the three lists we worked from.

As it turned out, in the confusion, everybody got an invitation. So I don't think we've lost anybody from the Department of Natural Resources that has been

on that side.

On the House side, as far as Representative Gruening is concerned, I know that he invited several people that were also invited by Senator Rader, namely Dr. Tussing, and in addition he invited Dr. Michael Scott to testify for the joint hearings here. I don't know, but I'm sure aide, Brian Rogers, will have a complete listing as to what other invitations were issued, either verbally or by writing.

The material that went out through Senator Rader's office is very readily available and could be very easily made a part of the record.

SENATOR RADER: Without objection, I will make available a list of the invitations sent out by my office, and it will be marked Exhibit No. 22. Representative Gruening, do you want to supply such a list for Exhibit 23?

REP. GRUENING: That's fine.

(Whereupon Exhibits 22 and 23 were duly marked.)

SENATOR HUBER: My only reason for the request was so that the record should show that we had invited a large cross section of people so it couldn't be said that we had a selected list later on.

SENATOR RADER: Fine.

REP. GRUENING: Mr. Chairman, in that regard you might want to put another exhibit, and that is newspaper ads that

were run by the joint committees, and we might even get a proof from the paper to attach so they know the dates.

SENATOR RADER: How many newspaper ads were run and in what newspapers?

REP. GRUENING: Daily News Miner, the Anchorage Times and the Daily News.

SENATOR RADER: One ad or several ads?

REP. GRUENING: Two days in each paper.

SENATOR RADER: If we can find a copy of that, that will be supplied to the reporter as Exhibit No. 24.

(Whereupon Exhibit 24 was duly marked.)

SENATOR RADER: Do we have any other requests for exhibits to be attached? We have one final exhibit, No. 25, which will be supplied by the Department of Natural Resources, and with that I take it that concludes our joint hearings; is that correct?

(Whereupon Exhibit 25 was duly marked.)

REP. GRUENING: Do we have the relevant statutes attached in there?

SENATOR RADER: No, we do not. Exhibit 26, would your office supply what you consider to be the relevant statutes?

REP. GRUENING: Sure.

SENATOR RADER: Exhibit 26 will be the relevant statutes, to be supplied by Representative Gruening's office to the reporter.

(Whereupon Exhbit 26 was duly marked.)

SENATOR RADER: Ms. Easley.

MS. EASLEY: I'm sorry, I just gave the reporter some telegrams and letters from other organizations that had asked us to speak on their behalf. Can she just do that, write them in?

SENATOR RADER: I'll make that Exhibit 27, it will be called miscellaneous correspondence and written testimony submitted by OMAR on behalf of others.

(Whereupon Exhibit 27 was duly marked.)

SENATOR RADER: Are there any other exhibits that should be made a part of this written record? Ladies and gentlemen---

REP. GRUENING: John?

SENATOR RADER: Yes.

REP. GRUENING: I know you want to get out, but what are your plans for talking to the Department of Resources people?

SENATOR RADER: Mr. Boness was scheduled to leave Sunday for Washington, D.C. and be gone for several weeks to work on the Federal Power Commission brief. Commissioner Martin has submitted to both you and I a schedule of his activities. It appeared to me that if we did not meet with him Monday -- Mr. Boness agreed to stay over and Mr. Martin agreed that Mr. Boness' presence was important if he was going to submit any rebuttal testimony -- it

appeared to me that if we did not meet Mon[illegible]t might be several weeks before we could meet again.

It was my judgment and it was my feeling, as the chairman of our committee, and I've announced it in the Senate, that we will meet with Commissioner Martin and Mr. Boness of the Attorney General's office, and whomever of their staff that they deem important, to take any supplemental, rebuttal or additional testimony that they think has been brought out by any of the testimony that has been presented thus far.

REP. GRUENING: What time?

SENATOR RADER: 10:00 o'clock, here.

REP. GRUENING: We normally have a session. We'd like to attend.

SENATOR RADER: Our problem is our session. I scheduled it for 2:00 o'clock. As I recall, I talked to you and I thought that you were not interested in this, so I scheduled our session for 2:00 o'clock.

REP. GRUENING: It was my understanding it wouldn't be part of the record.

SENATOR RADER: It will not be a part of the record.

REP. GRUENING: But it is from your prior statement that they will be submitting something and you're taking testimony.

SENATOR RADER: They will submit written testimony or whatever

they think is important for this record, and I don't know what that's going to be. But our committee wanted to hear from them and didn't want to wait two weeks for it.

REP. GRUENING: Well, I'm wondering -- I haven't talked to the rest of the committee, but there might be some interest in talking to these folks if it's going to be on the record.

SENATOR RADER: I did not plan to have the reporter here; in fact, the reporter had asked to be relieved. I did not intend that it would be a part of the written record. If you are interested, let's make it 10:30, if we could do that.

REP. GRUENING: Whenever.

SENATOR RADER: All right. Now let me ask you this: if you wish, we can make that a part of the joint hearings and ask the reporter to come back. I don't know whether the reporter can or not.

REP. GRUENING: I don't know if that's necessary, but as long as Mr. Boness is going to be here especially for that, we might as well make it a half an hour later and we'll all attend.

SENATOR RADER: All right. Then I think we should continue the joint hearing, and I will ask the reporter then to come back at that time. I understand we have the

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courtroom committed to us at that time, 10:30 Monday, and I'd like to ask the staff if they will make certain that is posted on the bulletin board; my own staff if they will contact the Department of Natural Resources and inform them, and try to get a page over here from the Senate, or send a page over here at a quarter to 10:00 to inform people who come here for that purpose that the hearings will not commence until 10:30, and to see that order is preserved in the courtroom.

We will adjourn until 10:30 then Monday.

(Whereupon the hearing adjourned at 6:05 p.m.)

RADER

FEBRUARY 4, 1977

SENATOR RADER: The joint hearings of the Alaska State Legislature relative to the sale of royalty gas will come to order.

We've been asked to announce that smoking in the courtroom is absolutely prohibited, and no beverages are permitted in the courtroom, or food either. I don't know if that's any problem, but if it is, be advised.

Today, as we announced yesterday, we're going to go first through our experts, the committee experts that have not yet testified. At the conclusion of that testimony we will consider further public testimony. I'll leave it up to the committee at that time to decide what they want to do, if they want to reopen public testimony at this time, or else request those members of the public who have not testified to submit their testimony independently to the Senate Finance, or Senate Resources Committee, or to the House Resources Committee.

This will be the last session of the joint hearings. Representative Gruening will hear from the Department of Resources and such others as the House determines, I guess next week or thereafter, at their pace; and the Senate will do the same, except that the Senate Committee will at least reconvene here at 10:00 o'clock Monday morning, primarily for the purposes of a

review and a rebuttal by our Department of Administration, Attorney General's office, and whatever, concerning misstatements that may have been made or positions that are unclear, and also submit themselves to questions by the committee members and, of course, other Senators on any questions of which we have reason to question their earlier statements or need clarification.

Representative Gruening, did you have any further announcements as to your committee?

REP. GRUENING: I guess not.

SENATOR RADER: We'll first take up Dr. Carl Swanson. Doctor, would you please identify yourself, give us a resume of your background, your position, and I would suggest that you go through your report and outline to us those portions of your report which you think are most important to us, and then open it up for questions. Would that be appropriate with you?

DR. SWANSON: That would be very appropriate. I have some remarks that I've outlined here which I'd like to give to summarize the report, as well as a few remarks on issues that have been raised during these hearings upon which I'd like to comment. Would that be appropriate for me to do?

SENATOR RADER: That would be appropriate. I'd like to have your background read into the record first.

DR. CARL SWANSON: My name is Carl Swanson, I am Executive Vice President of Jensen Associates, Inc., which is an economic consulting firm with offices in Boston, Washington and Geneva, Switzerland. The company specializes in economic analyses, forecasting, pricing, analysis of investments, advice on contracts, occasionally testimony before various Congressional regulatory bodies, or Legislative bodies, in matters of world oil, natural gas, natural gas liquids, and occasionally some work on electricity prices.

My educational background is at Massachusetts Institute of Technology where I received a Bachelors Degree in Economics and Engineering, and a PhD in Management. I taught for five years at the Sloan School of Management, at M.I.T. as an Assistant Professor. More recently I have been a consultant, since that time.

In my consulting, relevant to the issues that you face, I have assisted in the staff work, backing up, price negotiations on long-term LNG projects, I have performed analyses for computer simulation models of the logistics of moving LNG from the liquefaction line across the Atlantic Ocean to receiving terminals, into distribution systems, and to the burner tip. I have assisted industrial buyers under Order 533, analyzed supplies of natural gas and contracts that are offered to them. We have assisted

producers in analyzing their contracts, producers in analyzing their gas contracts, in order to see if they're well protected. I have looked at supply and demand of natural gas in the United States and impact upon curtailments. I have forecast the world-wide supply and demand to 1985 of propane and butane, that is liquefied petroleum gases, and lastly, relevant to your concerns my firm and I have analyzed the gaseous fuel markets in the states in the northeast quadrant of the United States in order to see the impact of price upon the demand for natural gas and for propane by industrial consumers.

That's my background, and I think what I'd like to do is briefly summarize the report which has been, I believe, distributed to the committee and is available to anyone else. Should I identify this report, Mr. Chairman?

SENATOR RADER: I would like to have the report made an exhibit in our proceedings. Would the reporter inform us as to the exhibit number.

MS. SANDERS: 16.

SENATOR RADER: Exhibit No. "16" will be the "Economic Analysis of Alaskan Royalty Gas Contracts" to the State of Alaska by Jensen Associates, Inc., consisting of some forty-four pages, dated January 1977. Therefore, any matter which the Doctor omits in his testimony will be available in the supplement, or in the exhibit. Would you proceed,

Doctor?

(Whereupon Exhibit "16" was duly marked.)

DR. SWANSON: First let me summarize the report. There is a summary of the report on the first four or five pages, which you may already have read, and I will essentially go through that summary.

Let me first, before I continue, identify who I'm representing. We were hired, Jensen Associates, Inc., were hired by the Legislative Affairs Agency on behalf of you ladies and gentlemen, the Legislature, to assist you in analyzing the contracts that you are now considering. Our mandate was to see if the contracts protect the interests of Alaska. We did not address ourselves to the legal issues; we confined ourselves to economic issues as appropriate to business ---

SENATOR RADER: Excuse me, Doctor, let me interrupt you. I do see some members of the Legislature, and I want to invite you to seat yourselves at the front tables here, if you would care to. It will be easier to participate in the questioning and also address the witness.

I'd ask, do we have a page. We're supposed to have a page here. When we get one I was going to ask the page to invite other legislators who may come in at a later time to come forward.

Proceed, Doctor, I'm sorry for the interruption.

DR. SWANSON: Thank you. We looked at this contract from two points of view, or we asked two questions. One question we asked was, if the El Paso project is not approved has the State preserved itself the right to protect its royalty gas and interest through provisions which allow it to terminate the contract. The answer to that question is yes.

The second question we asked is, if the El Paso project or any pipeline project which the Governor would like to support is approved, does this contract protect the economic interests of Alaska; that is, if this contract is in force is Alaska protected. We examined three different respects in which Alaska might be protected, and one of them is, can Alaska use the gas within its own state. Secondly we asked, are its interests in the natural gas liquids protected. Thirdly we asked, will Alaska, under the terms of this contract, receive a favorable price.

Let me take those questions in order. First, I think this contract has extremely well designed provisions to allow Alaska to reserve natural gas from Prudhoe Bay for its own use. The terms on reservations are unambiguous, and Alaska with what I consider to be short notice, two years, can take back to itself one hundred percent of the royalty gas.

Secondly, there is a provision in the contract which allows Alaska to exchange royalty gas for gas which may be more proximate to its markets and use the royalty gas, taking back the royalty gas in paper at least, in order to trade for gas which may be more available to it. This exchange provision provides a great deal of flexibility to the State of Alaska.

Thirdly, the provisions of the contract do not set any limit to when in the future the State could determine it will need the royalty gas which is in Prudhoe Bay. I interpret this to mean that the State could decide today or sometime when this contract is in force five years downstream gas which is currently being delivered, or part of the gas which is currently being delivered, would be needed in the future and thus Alaska, as I interpret this contract (and you probably should ask others about this) could at any time reduce deliveries to the purchasers. Now, since the Prudhoe Bay field has a gas cap, it would appear to me -- I am not a reservoir engineer and your reservoir engineers could comment on the reality of what I'm about to describe -- but it seems to me that Alaska could work out a deal with the producers to reduce slightly the production of gas from the gas cap and, in effect, store Alaska royalty gas for future years.

The second question we've addressed is, are the

rights of Alaska to the natural gas liquids well protected and the answer is, I think very well protected. Alaska has the right to extract ethane and heavier components at any time before or after delivery to the purchasers. I would interpret this to mean that if a gas processing plant were to be built in Canada or the United States and the liquids extracted there, that the rights of Alaska to the liquids would still be retained. I would suggest you ask Mr. Moody the same question.

Furthermore, within the contract, statements on quality of the gas of the contract, I saw no limitations to the btu content of the gas delivered to the consumers. To be sure, there is a price adjustment clause built in the contract for the btu content of the gas, but I believe there is no quality limitation to the delivery of methane or the natural gas which would restrict removal of liquids.

Third, I think the more important question and lengthier analysis in our report, is what price will Alaska receive for its royalty natural gas under the terms of this contract. I think in order to understand the terms of this contract as written I need to review for you very, very briefly what I believe to be the course of energy prices over the terms of this contract.

This contract has a term of twenty years, beginning upon initial deliveries of natural gas, which

will occur sometime close to 1985 very likely, meaning this contract will exist from sometime around 1985 to about 2005. As we look downstream at the price of energy in the world, I think most energy consultants agree that the Organization of Petroleum Exporting Countries is not likely to lose control of world oil pricing between now and 1985 certainly. I think most agree that the price of oil will continue to increase in world markets. I think the price of energy within the United States is going to rise more rapidly than the price of world oil, largely because at the current time the price of energy in the U.S. is controlled below world levels. As these controls are relaxed, particularly as more and more new oil, as it's defined in the regulations, is produced, and as more imported oil is brought into the United States, the oil prices should increase in the United States more rapidly than world oil prices.

Secondly, I think that it's very clear that there's a consensus developing in the United States that the conservation of energy is a very, very important national objective. There is yet no means that have proven to be effective by which this conservation is to occur.

Europe and Japan have imported oil in great quantities for many years, and they have very actively for many years used taxes to increase the price of energy

to their consumers in order to force conservation and this conservation, through the use of the price mechanism, has proved to be effective. I would expect the U.S. would begin to follow such policies of using prices to bring about conservation.

In sum then, I think that to 1985 we should within the U.S. and the world see increases in the price of energy. After 1985 we believe, Jensen Associates, Inc. believes, there is a very good likelihood, as long as industrialized nations do not fall into worldwide depression, that the production limits of the OPEC nations will begin to be strained by the demand for oil in the industrialized nations, and the chances after 1985 for very sharply rising prices will exist. Between now and 1985 we would expect oil prices to essentially track inflation in the industrialized nations.

This is the price scenario under which we need to examine the price terms of this contract; that is, prices rising gradually to 185 and with sharply rising financial prices thereafter.

The question is, do the price terms of this contract protect the interests of Alaska, its revenues essentially, with sharply rising prices after 1985. I think the people who framed the contract recognized that there is a fair amount of uncertainty about energy

prices, which there are, and they designed the contract to adapt to prices established outside the contract. There is not a price, there is not a set price, a certain number, in this contract for royalty gas. But prices are established within the contract under two different types of regulation that may occur in the future. One of them is deregulation.

If the price of natural gas at the wellhead is completely deregulated the terms of this contract, in my opinion, protect the interests of Alaska well. There is an annual redetermination clause which has been clarified by the purchasers as applying to both Section 6.3 and 6.4 within this contract, which will allow the contract to try prices on the North Slope of Alaska.

Now, the North Slope of Alaska is expected to be producing oil and gas in many other locations in the future. The terms of the deregulation clause in the contract allow the price to attract the highest price paid on the North Slope. One would expect that there will be continuing discoveries on the North Slope, and under deregulation continuing new fairly well market base pricing of natural gas which will be tracked by this contract.

Under deregulation this contract protects the revenues and the prices Alaska will receive for its

royalty gas in interstate commerce very well.

The second scenario one can view with a future is continued regulation of wellhead prices by the Federal Power Commission and possibly by Congress. The shape of that regulation is, hard for -- it's certainly hard for me to discern as regulation has changed from time to time with some fairly sharp shifts. Mr. Moody can explain that to you better than I can. We attempted to indicate it in our report.

But the contract does state clearly that Alaska will accept the regulated ceiling prices for the natural gas which the regulatory agency will set. It also says that the price that Alaska will receive for the gas will never exceed that price which the purchasers can include in their cost of service to their customer. This is the clause which protected purchasers. I would assume that the contract could not have been written without that clause in it. It essentially says that, given the very large volumes of gas which we're discussing in these contracts, that the purchasers will not have their shareholders pay part of the price of the gas if the regulatory agencies do not allow the full price of Alaskan royalty gas to pass to the consumers. I think it is probably likely that the purchasers would not have signed the contract without such protection for their shareholders

and their bankers.

Now, Alaska under regulation, you and anyone else who attempts to understand what the regulated price for gas will be from Alaska, will be faced with some difficulty, and that is because the recent national rate decisions from the Federal Power Commission have clearly excluded Alaska from the national rate, both in the application of a national rate and secondly, in the calculation of the proper national rate for new natural gas. Thus, it's not clear, the precedent is not clear the calculation of the procedures which will be applied under regulation if regulation persists to this North Slope royalty gas.

In our report we've attempted to show that there is a great deal of uncertainty, very significant uncertainty about what this price might be. In 1980 if the current pricing mechanism or the vintaging of 77-A, using the vintaging of 77, and I'm sorry if I'm using some terms with which you may not be familiar, the price which might apply to new natural gas, a Dollar Fifty-Six a million btu's. But Alaska has characteristics which are very different from the characteristics of the Lower 48 States in its gas production, and that is in the calculation of the national rate the calculation is based upon the costs of finding and developing non-associated gas. The reason for this is the Federal Power Commission has had a very

great difficulty in pricing associated natural gas because it had difficulty in allocating costs of drilling, exploration and development between oil and gas.

Thus, the Federal Power Commission, and there's an expert to my left and to your right who can describe it more fully than I the reasons behind it; the Federal Power Commission recently has said that the national rates for non-associated gas, and it simply said that the prices for associated gas will be equal to that calculated for non-associated gas.

Non-associated gas comprises perhaps seventy percent of the Lower 48 gas supply. Such is not true of Alaska. The Prudhoe Bay field is the largest field in North America and it has the predominance of the reserves of Alaska, and it's an associated gas field. If the Federal Power Commission were to apply cost based pricing to Alaska, particularly to the Prudhoe Bay field, you would have to face the issue of how to allocate the costs of drilling, development and exploration between the gas and the oil. The fact about the Prudhoe Bay field which is very delightful for Alaska in its sales of oil is that it is the largest field in the world. From the point of view of selling gas, if a rate were to be applied to Alaska, the fact that it's the largest field in the world may not give you the highest price because

the costs of finding and developing the gas per thousand cubic feet are relatively low.

We've calculated, using some very rough estimates, and ignoring the costs of water flood that may be attributed to the taking back of natural gas and the costs of extraction of carbon dioxide, that the Alaska rate might be somewhere between Twenty and Forty-Five Cents per million btu.

The question remains, however, does this contract protect your interests in your royalty gas, and I think that we can safety say this contract is not going to influence too greatly, with one exception (I'll talk about that in a second) the regulated price of natural gas. This contract can only adapt to prices set by the Federal Power Commission or other regulatory bodies.

Under regulation, the contract clearly states it will accept the regulated price (a), and (b) it says that it can receive a price no less than the price received by any working interest owner. Both clauses, I think, protect your interests reasonably well.

However, there is one concern we had, which we described in the report, which is that most royalty interest owners, and certainly working interest owners, are usually private investors. The State of Alaska is a body different from the private investor. It has social

responsibilities to its citizens.

One question that has been raised is, could Alaska under regulation claim, because of its unique responsibilities as a state, get a higher price for its royalty gas than the price given to the working interest owners. If such were true, this contract does not distinguish Alaska from the working interest owners, it clearly states it will accept that price which will be received by the working interest owners. I think you need to assess, and I would like to help you assess, the probability that Alaska might receive a higher price for royalty gas under regulation than working interest owners.

Let's do it in the following way. If Alaska were to state that it will ask for a price different from the working interest owners, and if Alaska were to ask for a higher price, I think the response could be a varied response. One response might be, and I'm sure there are some people who would make it within the courts and certainly before the Federal Power Commission, is that since Alaska has incurred no costs whatsoever in the discovery and production of its natural gas that if it wishes to separate itself from the working interest owners, it should accept prices based upon its costs, and its costs were zero. This would be unfavorable to Alaska.

The other possibility is that Alaska would claim it should receive a higher price for its gas because of its unique responsibilities to the State, to its current citizens and future generations. The likelihood of such an argument being accepted is one which I have difficulty judging. I think, however, that as we look at the decision of Administrative Law Judge Litt, he did not appear to have an attitude which would be favorable to giving the State of Alaska higher prices for its royalty gas than working interest owners were to receieve under regulation. You may wish to ask me some more questions about that point later.

Let me go on. One of the concerns of the contract that we had as we first read it was that since the State of Alaska does not collect severance taxes from itself that under regulation it might be possible for the purchasers to pay a price higher to the working interest owners, higher by the value of severance taxes, than the State of Alaska. I think the testimony certainly before these two committees by the purchasers was that right in the contract they did not intend to not pay an amount equal to severance taxes to the State of Alaska for royalty gas. Your legal staffs may need to judge whether or not you need to change your severance tax laws in order to insure that under litigation and under regulation, if

regulation occurs, if in fact Alaska will be able to accept a payment in lieu of certain taxes from the purchasers under its current law.

At this point I think I have finished my summary of the contract. The contract overall, I think, is a very good contract. It does protect the interests of Alaska. There has been one clause, which I've described earlier, about Alaska separating itself from working interest owners under regulation.

The thing, however, which is very clear in examining this contract and your sale of natural gas is that the provisions of this contract do not set a price for natural gas. The price of natural gas is going to be set by forces outside of this contract, perhaps market prices. More important, they're going to be set by regulation and legislation.

If Alaska wishes to return to itself favorable revenues for its royalty gas it should, we think, focus its attention more upon regulation and legislation than upon the terms of this contract. The terms of this contract will stand Alaska in good stead, but you need to deal with regulation and legislation in order to increase your revenues from the sale of royalty gas.

I would like to comment now on several issues, three issues, that came up during the course of these

hearings if it's appropriate to do so at this time, or would you like me to stop, Mr. Chairman, and entertain questions about our review of the contract?

SENATOR RADER: Why don't you go ahead and answer those questions that you think are pertinent and we will question you later on it.

DR. SWANSON: Thank you, sir. Several of the witnesses, including Natural Resources Commissioner Guy Martin, stated that, and I believe I quote Commissioner Martin, that very likely a higher price could have been attained in this contract for the royalty natural gas. I thought that was a very important statement that came out in his testimony. A number of other witnesses made the same statement.

I have asked myself can a higher price, in my judgment, be obtained than under the terms of this contract, and I must confess that I think it's highly unlikely. I think the pricing terms of this contract have been very well designed, again with that one proviso that I mentioned earlier. Let me review with you why I came to that conclusion.

I think, first of all, we must understand that royalty gas that Alaska has to sell now is 2.6 trillion feet; it's a large package of gas. I think it is possible in the future that Alaska could sell maybe a billion cubic

feet in a spot market for a higher price than you will get under this contract. But a billion cubic feet is not the same as 2.6 trillion cubic feet. It is possible, for example, under certain shortage conditions to receive a very high price, but not for the volumes of gas, I think, that you have here.

It has been suggested by some other witnesses that Alaska could have received a higher price for its gas had it sold gas directly to gas distributors and then had the gas transported by interstate pipelines, and that gas distributors would be willing to pay a higher price. I think Mr. Moody should discuss this with you more than me, but it is my impression of the Natural Gas Act that if a gas distributor in Boston or Chicago who is not now subject to the jurisdiction of the Federal Power Commission, if that person were to purchase gas in Alaska, move that gas across state lines and resell it in the Lower 48 states anywhere, that gas distributor would be subject to the jurisdiction of the Federal Power Administration. I think no gas distributor would subject himself to such regulation and thus would not purchase gas directly.

Secondly, it was stated that Alaska may be able to receive a higher price for gas if they were to sell it directly to an end user such as, I believe Pacific

Gas and Electric was mentioned, or large industrial consumers of gas. Again, I think Mr. Moody can comment on this with greater knowledge and with greater competence than I. It's my impression, however, the Federal Power Commission currently does not allow direct users of natural gas to transport gas through interstate gas lines for their own use except under Order Number 533. Order Number 533 is a very highly restrictive order which sets the term of any contract to two years and it says that only industrial high priority direct end users of gas may purchase the gas, and they may purchase the gas on a monthly basis, or perhaps on a daily basis, only to that extent of their high priority use is curtailed. Thus, when a winter is very cold and many home owners are burning a great deal of gas, such industrial purchasers could buy a great deal of gas. In warm winters such as we had in 1975 and '76, many industrial purchasers had their full needs of high priority gas met and thus they couldn't receive delivery of gas under direct purchase.

I don't think that any direct user of natural gas will be willing to sign the term of this contract, which says that they will take delivery as you receive delivery from the working interest owners, depending upon the gas production and upon the oil production, and pay for it because the timing of their needs for gas under

Section 533 is probably quite different from the timing of the delivery of gas from the working interest holders to Alaska and thus to your purchasers.

Secondly, let me address one other possible purchaser of your gas. It was suggested that an electric power and generation utility might be willing to purchase gas directly from you and burn it underneath its boilers. I am very, very doubtful if the Federal Power Commission would allow interstate transportation of gas to be burned, purchased in such a way, under boilers.

In fact, in some of its opinions on the purchase or the retention of gas by producers in the Gulf Coast to be used in refineries, the Federal Power Commission has very explicitly stated that gas may not be burned under boilers; in fact, it went beyond that. But I think it's unlikely that anyone who would burn gas under boilers can buy substantial quantities from Alaska or anyone else to be transported through interstate pipelines when high priority users in parts of the pipeline system in units are denied gas.

Let me go on to another issue. We have heard from two or three witnesses descriptions about the setting of price for natural gas under deregulation. The gist of their testimony has been that it's very difficult to set a price at the wellhead under deregulation. We have

been asked by a major pipeline and some liquids sellers to evaluate the industrial market for natural gas in the future in order to help them make investment decisions, in the case of one company in liquified natural gas and goal gasefication and another company in import problems.

So we have gone around, I personally have interviewed plant engineers, plant managers and energy buyers of large and small companies to ask them what price will they pay for natural gas. The price of natural gas will be set by the next buyer who will buy from the seller, the distribution company. If the seller, such as Boston Gas, is really selling to homes, the person, you and I, the home owner, will pay a higher price for natural gas to be burned in our furnace, to cook with, and heat hot water than will an industrial customer. However, if the quantity of natural gas delivered by a distributor is large enough so that he is delivering gas to industrial consumers, the price that that person can pay, that the distributor can pay, will be set by the next industrial customer that he can sell gas to.

In our interviews with industrial consumers of natural gas who were sometimes burning gas under their boilers but more often using the gas in their processes -- by process use of gas I mean the melting of glass, the keeping of glass warm as it moves into bottle making

machines or it moves from the annealing furnaces. The use of gas in annealing furnaces and metal working, the use of gas to heat metal for forging operations, the use of gas to dry the paint on automobiles, these are all processed high priority uses of gas.

In our review of the volumes of gas used in various locations and in the prices that these industrial consumers will pay for gas, we came to the very, very clear conclusion that there is more than enough gas in the United States, perhaps not well distributed, as we've seen this winter -- but there is more than enough gas in the United States to meet the needs of industrial consumers who are willing to pay from forty to sixy percent more per btu than they would have to pay for number two oil.

Also it is very clear that natural gas is a very easy fuel to handle, it's very clean burning fuel, it has flame characteristics which are easier to control in which one can use either fewer supervisory people or less skilled supervisory people to control the process such that industrial consumers will pay a premium for natural gas, five or ten percent, maybe fifteen percent in some cases, for process uses of natural gas.

We thus have concluded that, at least in the northeast quadrant of the U.S., which I might point out is

relatively short at the moment, that in the long run industrial consumers, many of whom have already converted to dual fuel firing of many of their pieces of equipment, will pay (to pick a number) ten percent more for natural gas than they will pay for number two oil. Consequently, when we, in our report, set prices that we believe under free market, under net back calculations, will be received by Alaska at the wellhead, what we asked is in 1980 and 1985 what will the price of number two oil be to the industrial consumer.

We've estimated those prices essentially by taking Arabian like oil, bringing it over to the United States with a transportation charge, moving it either through pipelines, or certainly through import terminals, moving it to a refinery close to the consumer, putting refinery margin on the number two oil and coming up with a price per million btu of number two oil, adding ten percent, and saying, "This is the competitive price for natural gas at this industrial consumer," and then netting back, subtracting the transportation costs to that industrial consumer back to the Alaskan wellhead to come up with some of our prices.

There have been witnesses before you who have argued that such a calculation that I've just described to you is inappropriate for determining the price of

natural gas, and they have argued that the so-called market competition incremental value pricing that I have just described to you doesn't apply because the Federal Power Commission and the State regulatory commissions allow new higher priced natural gas to be (so-called) rolled in or cost averaged with the lower priced, lower contractual, lower regulated price gas they receive such that even if the price of Alaskan gas delivered to a distribution company were to be higher than would be competitive before sold separately, because the higher price Alaskan gas (this is the theory) can be offset by lower controlled price gas from other parts of the Lower 48 States, that the distribution company could pay more than competitive prices for Alaskan gas, and still be able to sell its gas.

I understand the theory behind such an assertion, and the theory is a sound theory. And to be sure, today, in some fuels markets, propane specifically, where today prices of propane are controlled for some companies far below market values, those companies will go out and buy high priced propane, foreign propane, mix it in with their -- at least on their accounting bases, mix it in with their cheap domestic propane and they will be able to sell; they can pay a higher price for foreign propane.

But these purchases are a purchase of a ship-load, and they'll sell the high priced propane within three months, purchase which may exist over a quarter, the next calendar three months. The contract we're talking about is a contract to purchasers of natural gas which will begin close to 1985 and will run for twenty years. So we really must look at the price of natural gas between year 1985 and year 2005 in order to estimate the applicability of so-called rolled in pricing to the distributors to allow Alaska to receive a very high price, a non-competitive, non-market based value price for its gas.

You should be reminded that other sources of natural gas, the distribution companies in the Lower 48, are such projects as coal gasefication, which is very high priced. A number of transmission companies are now importing liquefied natural gas. Some of the price escalation clauses in those importation contracts for liquefied natural gas, I believe, will generate some fairly high prices for that liquefied natural gas. And so on to rolled in pricing, the rolled in pricing of Alaskan royalty gas will not be based solely upon Lower 48 conventional production of natural gas, but will be based upon other alternate sources of natural gas.

I would submit that the rolled in pricing that

you are likely to receive will not be substantially higher than a competitive net back price computed, as we have done so in this report. Further, when I was assisting in the negotiations of the pricing clauses a long-term LNG import project, the clear position of at least the customers was that they would not pay a higher price for that LNG than would compete with two oil. They were unwilling to take the risk that either (a) rolled in pricing could not be applied to them or (b) that there would be sufficient amount of cheap conventionally produced low price controlled, low contract price controlled natural gas to offset higher than competitive price.

Thank you, I have finished. It turned out to be a very long statement.

SENATOR RADER: Representative Gruening.

REP. GRUENING: I have one question I would like to get answered. Is it your intention to start questioning now or after lunch?

SENATOR RADER: It is ten after 12:00. I assume that the committee would like to break for lunch and come back at 1:30. That seems to be the consensus; we will recess until 1:30.

(Whereupon the hearing recessed at 12:15 p.m. and reconvened at 1:30 p.m.)

SENATOR RADER: The committee will come to order. I would

like to ask the page to be certain to advise any Legislators that come in, they're welcome to seat themselves up forward here for more convenient questioning of witnesses and so forth -- and also to make certain that we enforce the "no smoking" rule in the courtroom.

We will continue, unless there is some objection, with the testimony of Dr. Carl Swanson. I believe we're in a situation for questions. Senator Gruening, did you wish to start off with that?

REP. GRUENING: I was waiting for the rest of the members to get here.

SENATOR HUBER: In that case can we take a five-minute recess, Mr. Chairman?

SENATOR RADER: I'm reluctant to do that because I'm afraid we're going to run out of time today. I'm just reluctant to do that, but I will wait so long as my Co-Chairman thinks it necessary for additional members to show.

SENATOR HUBER: I know Senator Butrovich is on his way.

SENATOR RADER: There are several routine matters that we can go through while we're waiting on other persons. We're going to conclude today the joint hearings. There will be additional testimony taken by the individual committees at their discretion at a later time, but the transcript of the record of these proceedings will be concluded today.

I am going to ask the reporter -- she has already been instructed to record some testimony out of order. Whenever such a request is made, I want her to clear that with Representative Gruening and myself. It's been asked that the expert's testimony, Dr. Tussing, be transcribed first and the other expert witnesses' testimony hired by the committee be transcribed in order of their presentation of testimony, then after that start at the beginning of the proceedings and go through them as they occur.

I'll want you to deliver -- the Department of Natural Resources will not be able to give their wrap-up testimony today, therefore, we will save the last exhibit number for them. Their testimony will be submitted in writing sometime next week. I will certify to it and deliver it to the reporter, she will append it to the original record and it will become a part of the official transcript of these proceedings.

After the document has been printed, I will ask the court reporter to certify one original copy for the House and deliver it to Senator Gruening, one for the Senate to be delivered to me, one for the Governor's office, one for the Attorney General's office, one for the Department of Natural Resources and one for each of the purchasers, to be delivered to such other persons

as they may designate in writing in a communication to my office. I will deliver them to them. Is there any further suggestion as to how to handle the record?

REP. GRUENING: It might be good to put the applicable statutes, the applicable statutes, someplace in the supplements to refer to as you read the testimony, if we could include it in the report. I have a stapled copy here that would cover the statutes that deal with the Royalty Board and surplus oil and gas.

SENATOR RADER: Then we will leave open two exhibits, one being the rebuttal and supplemental testimony of the Department of Natural Resources, and the second will be statutes, and I'll leave it up to Representative Gruening and the staff to submit the statutes that you want printed as an exhibit.

REP. GRUENING: I didn't realize you intended to include further testimony as part of the joint hearings, in which case maybe we ought to participate.

SENATOR RADER: Well, I think it's important that the Department of Natural Resources respond to some of the matters that have been raised and I was just going to let them respond in writing as an exhibit. I don't know what they're going to say.

REP. GRUENING: I see.

SENATOR RADER: Although we do intend to question them

personally, but our personal questioning of them Monday morning would not be a part of these hearings. But their written testimony, or their written response, if they care to make any as a part of these hearings, can merely be appended as an exhibit.

REP. GRUENING: We may show up Monday morning too.

SENATOR RADER: You're certainly welcome. We intend to go on at 10:00 o'clock.

SENATOR HUBER: Mr. Chairman.

SENATOR RADER: Yes, Senator Huber.

SENATOR HUBER: I notice from the assignment of the exhibit number 16 today, that that was the next number in line, and I note that the J. McCutcheon written testimony which I had requested be put in as an exhibit must not have got in because number 16 was the next in line. Would you please take care of that at this time, make sure that it appears as an exhibit?

SENATOR RADER: I think yesterday that we established that the secretary took the written statements of Mr. McCutcheon, that he submitted them to her and that she had intended, and does intend, to include his total statement as a part of the transcript of the verbal testimony. Is that not correct, Madam Reporter?

MRS. SANDERS: I believe that's correct.

SENATOR HUBER: We did deviate from it, Mr. Chairman, and

I wanted to make sure the written was in also.

SENATOR RADER: I just don't want you to type it twice. I observed yesterday during the testimony of Mr. McCutcheon, it was my observation that the reporter was not taking notes and, therefore, I assumed she was relying upon his statements and intended to include them in full as a part of the oral testimony given. Is that correct?

MRS. SANDERS: Yes.

SENATOR RADER: Mr. McCutcheon, does that satisfy you?

MR. McCUTCHEON: It wasn't my request.

SENATOR RADER: Senator Huber, does that satisfy you?

SENATOR HUBER: Yes.

SENATOR RADER: Then we will keep the exhibits numbered as we presently have it, with the Economic Analysis, the Jensen Report, as Exhibit No. 16, and Mr. McCutcheon's testimony will be, as I say, reproduced verbatim as a part of the verbatim transcript.

Should we proceed at this time? Any questions of Dr. Swanson? Representative Gruening.

REP. GRUENING: Dr. Swanson, the last couple days you've heard some concern expressed by the various members and Legislators as to the reason why the producers have not already entered into contracts, and various explanations have been given.

Judge Litt, in a report to the Commission in

April of 1976 attributed, at least to the producers, one of their reasons that they expressed to him for not entering into contracts, and I'm going to introduce this as an exhibit. It says, "They, the producers, expressed distress that the Commission has not yet embarked on a proceeding to establish a price for the gas and feared that an early sales contract would lock them into an adverse cutoff date under possible vintage pricing by the Commission, or the possibility of a deregulation statute being enacted by Congress." Now, would those concerns that the producers expressed to Judge Litt also apply to our entering into a contract at this time?

DR. SWANSON: The deregulation bills that have been introduced into the Congress normally deregulate new gas, and there's a definition for new gas. One of the definitions which has -- the definition that has existed in the Pearson-Benson Bill in the Senate and the Krueger Bill in the House, which were the deregulation bills which proceeded furthest in the past session, said new gas would be, among other things, gas which was dedicated to interstate commerce after some date.

Now, Mr. Moody is someone whom you should address the same question to, and I would defer to his knowledge and judgment. He is much more aware of the implications of the definitions of energy than I am. The impression

that I have left, that taken away from reading some of the bills, is that Alaskan gas which did not commence flowing in interstate commerce until sometime in '85 would be classified as new gas. But it's entirely possible that a bill could be introduced which has a different definition of vintaging. For example, the currently applicable opinion which sets the national rate, 77-A, defines new gas as gas flowing from wells which were spudded after January 1, I believe it's 1976, or '75.

Some of the wells which will be producing gas in Prudhoe Bay were spudded before that and would not qualify as new gas under a spud date definition of new gas. Under regulation, or under a deregulation bill everyone runs the risk that part or all of gas will not qualify as new gas.

Probably of greatest concern to this committee would be a definition of new gas which says new gas would be gas which flows into interstate commerce from contracts which are dated after some date which would be after the date of these contracts. Now, there is some precedent for contract dating, I believe. The applicable definition of new or old gas are set in vintaging.

REP. GRUENING: This may be what the producers then are

concerned about in their concern not to enter into contracts as of now.

DR. SWANSON: I would assume there are a number of questions that the producers had in their mind. There may well have been some questions about rolled in pricing versus non rolled in pricing. Certainly there were questions about vintaging, maybe some questions about deregulation. They were prepared, when they felt it to be in their economical advantage, to accept advance payments and to commit gas as they have in the past. Even though all of the same issues existed then, as they do now, they didn't. But those contracts, I do believe, did not set prices for the gas which will flow, even though they committed gas in their advance payments.

REP. GRUENING: Well, is it fair to assume that they're probably concerned about how the regulatory and legislative enactments affect pricing arrangements under the contract?

DR. SWANSON: I assume they are, and they may feel that they can exact a higher price if they wait, although I'm not sure that's the case. I think we should point out that the working interest owners have seven-eighths of the gas and the royalty interest is one-eighth of the gas. One of your concerns may be, if you commit now you will influence the price on the seven-eighths. I find that

dubious.

REP. GRUENING: That isn't -- really, my question goes to, should we not have the same concerns in terms of dealing with trying to write a contract which sets price terms now as opposed to waiting, as the producers seem to be waiting, until a time in the immediate future when pricing arrangements under the FPC and, perhaps, Congress will be more clear?

DR. SWANSON: I think the risks you run, the principal risk you run is if a deregulation bill or a definition of new gas or step price vintaging of gas were to use contract date as the applicable vintage date or new gas date. I am less qualified that Mr. Moody to describe issues of vintaging and the probability that contract date may become the applicable date of vintaging.

Another question that I think you raised was, does this contract fail to protect the interests of Alaska if the royalty gas committed under the contract is treated in the same vintage as working interest owners' gas. My reading of the provisions of the contract state both under regulation and under deregulation that the price of the royalty gas will be the highest price paid.

REP. GRUENING: Do you read that as meaning that vintaging, if I understand that term correctly, is not important for us to concern ourselves with? In other words, that concern

that I think the producers are expressing as to being thrown into a special category because they enter into a contract now doesn't apply to us, as a royalty owner.

DR. SWANSON: I think there is a concern. The degree to which it is a realistic concern or merely one of those very remote possibilities, I'm not able to judge except by citing some history. The real concern that you should have is the probability that vintaging will depend upon not the date of initial deliveries of gas into interstate commerce, but the date of the contract or the point the contract comes in force.

There is, in fact, in our report on page 29 a table listing ways in which gas can be defined, either vintaged or different ways in which gas is put into different price categories. In that table, and you may wish to ask some of the other witnesses about this table and its accuracy -- in this table a Permean base in Opinion 468 of August 1965 did use contract date as a method of vintaging gas.

In none of the recent national rate opinions nor the Krueger nor the Pearson, and this is the Pearson-Homes Bill, has contract date been, if I understand this correctly, an applicable vintage definition.

So we must go back fairly far in order to find contract date as applicable.

REP. GRUENING: I take it that it is possible there might be some disadvantage then if contract date became important as fixing a vintage on this gas?

DR. SWANSON: There is the possibility, yes.

REP. GRUENING: And what we're trying to establish here is just what we're losing by entering the contract, and the question I think that has been stated again and again is, aside from what we're trying to accomplish outside the pricing arrangements what could we be losing by entering a contract now as opposed to later since we're not actually at this time trying to get money for State revenue, we're trying to protect ourselves from any distadvantage by entering into this contract at this time. I think you said timing and price were very important.

DR. SWANSON: Yes. In my opening remarks, I felt that the State was well protected in this contract in the use of liquids, in the ability to reserve gas for in-state use, and I felt that the pricing provisions in the contract protected the interests of the State. I think you certainly have correctly identified a possible cost of the contract; that is, if vintaging in future FPC decisions or in possible deregulation bills or other bills in Congress use contract date as the applicable vintaging criteria, and contract date of this contract, and the date of break point in vintaging were to be between the

contract date of these royalty gas contracts and the working interest owners' contracts, that's a risk.

REP. GRUENING: The problem being an older vintage gets a lower price?

DR. SWANSCN: This has been historically true, yes.

REP. GRUENING: There are some other points the producers make in here. I'd like to introduce this as an exhibit. It's a report to the Commission by Judge Litt.

SENATOR RADER: All right. That will be Exhibit 17.

REP. GRUENING: This is my only copy of it.

SENATOR RADER: Report to the Commission by Judge Litt. And the date of it?

REP. GRUENING: April 27, 1976.

SENATOR RADER: April 27, 1976, and you will deliver a copy of that to the reporter, will you, Representative?

REP. GRUENING: Maybe she can make a copy for me.

SENATOR RADER: If you deliver the original to her she can give you a copy back.

(Whereupon Exhibit 17 was duly marked.)

SENATOR RADER: Representative Parr.

REP. PARR: Mr. Swanson, we have heard testimony that, as you know, the royalty gas price is tied to the price the producers get.

DR. SWANSON: Yes.

REP. PARR: We have heard testimony that it may well be that

the dollar price, let's say, shown on the producers' contracts may not be all they're really getting because they have tie-ins with some of the people to whom they will be selling and there may be, for example, a swap of some oil or gas, and other kinds of things that will not be directly a part of that contract and will not show a dollar value, but which obviously will have value to the producers. If that's true, do the contracts that we presently have, these contracts before us, protect our interests?

DR. SWANSON: I remember the testimony, I've forgotten who testified, as you just described. The concern you have, I believe, is under deregulation where there is somewhat market pricing that might apply. The reason I say that is, if regulation occurs probably the price will be held below market price, the price for Alaskan gas will be held below market price, and there would be no incentive for a producer on the North Slope to keep their prices below the regulated price, the allowable ceiling. So I think you're talking about a case which might exist under deregulation.

Now, on the North Slope or in the Prudhoe Bay area there are at least three major working interest owners, BP-SOHIO, Atlantic Richfield, and Exxon, plus some of the working interest owners are consortiums of

Amarada, Hess, and five, or six or seven different oil companies. Now, the contracts, under deregulation, in Section 6.3 and 6.4 clearly state that the redetermination shall be the highest price paid any working interest owner on the North Slope. It may well be, though I think the possibility remote, but it may well be that one working interest holder may have a somewhat lower price, stated price, in the contract under deregulation than would be justified by an arm's length not around the back deal.

However, in order that the highest price all be held down below market justified pricing would require at least six or seven oil companies to conspire to hold that price down. There are people who argue that the oil companies conspire frequently. It is my opinion that they compete vigorously. I doubt very much -- I think it highly improbable that six or seven oil companies of quite different size, who operate in very different areas of the world and very different areas of the United States, with very different crude balances and very different supplies of natural gas would find such a commonality of interest that they could even structure such a deal.

REP. PARR: I take it then, Dr. Swanson, that your answer to my question is, yes, the contracts do protect us.

DR. SWANSON: Yes, they do.

REP. PARR: Thank you.

SENATOR RADER: Any further questions? Senator Huber?

SENATOR HUBER: Thank you, Mr. Chairman. Mr. Swanson, are there any other reasons which you might be able to think of that the producers appear to have for not committing their gas at this time that might be worth the State's consideration before we commit ourselves, other than you have discussed already?

DR. SWANSON: I can't think of any at the moment. If I do think of one while I'm on the stand, would it be appropriate for me to so indicate and explain it to you?

SENATOR HUBER: Yes, I would appreciate that if you would.

SENATOR RADER: I had a couple questions, Doctor. You've attended the hearings since they commenced last Monday at 2:00 o'clock, is that not correct?

DR. SWANSON: Yes, I have been here all the time.

SENATOR RADER: You've been in constant attendance at all times?

DR. SWANSON: Yes, I have.

SENATOR RADER: Doctor, considering all of the testimony which you have heard and considering the difference between possibilities and probabilities, how would you characterize this contract as to whether or not it protects the State in an overall manner or does not the possibilities of it --

not as against the probabilities of it not -- in other words, I would like to have you use your expertise to help us weigh the value of very conflicting testimony and the statement of possibilities as against probabilities.

DR. SWANSON: In my opening remarks I attempted to deal with some of the issues that were raised in the testimony which precedes mine when I talked about the issue of, can a higher price be obtained than would be obtained under these contracts in the issue of pricing, royalty pricing.

It's my judgment that these are good contracts. I think that they protect the interests of the State in the use of liquids, in its ability to reserve gas and obtaining a favorable price. Very well, given the set of probable circumstances which may emerge in the future, and there is a great deal of uncertainty about the price of natural gas, to be sure, there is -- I think Representative Gruening has identified one possible event, that is the setting of vintage dates on contract date, which hasn't happened recently, which is a risk.

SENATOR RADER: Would you weigh that risk for us as possible, probable, improbable, or whatever terms you might choose to use? Again, it's very difficult for me to know whether that risk is something that is of such a nature that we should reject the contracts or how to weight it. In other words, place a value on this, recognizing again

that's really what you're hired for, is for your value judgment on matters in which we are not experts, on which there are conflicting possibilities and probabilities.

DR. SWANSON: I recognize that, and I think that's a valid question. You're asking me to evaluate probability of any legislative or regulatory event. Now, that is the using of contract date as the appropriate time for vintaging. If we look to recent history being in the last ten years, contract date was not used in such a way that the value of this contract to the State -- this contract compared to that with the State -- to be sure, the course of regulation and legislation is something which can be, particularly in the area of natural gas, can be highly unpredictable, as it has proven to be in the past two or three years. I would say that the chances that contract date will be used as a vintage date to the detriment of the State, if this contract were to be approved now, is probably less than fifty percent, and it may be quite a bit less than that. I'm not sure I've answered your question.

SENATOR RADER: Well, does it approach fifty percent? In other words, we signed this contract, we have a fifty/fifty chance of having signed a disadvantageous pricing contract because of vintaging.

DR. SWANSON: If I may just try to think through to myself

what the advantages to advocates of various positions and the position of the Congress might be of a contract date vintaging. Let me just pause a minute and think about it, and I will respond.

Senator Rader, I frankly don't understand the history or regulation well enough to know why a contract date was used in the Permean base in case, rate case for vintaging.

SENATOR RADER: Let me ask you this: I don't want to ask you to go on record here on something on which you are not prepared.

DR. SWANSON: I would like to continue, if I may, sir.

SENATOR RADER: All right.

DR. SWANSON: The reason for using vintages and defining something called new gas is to raise the price of gas to producers so that they are encouraged and have the financial resources to explore and develope natural gas.

The reason there is vintaging is to keep the price of flowing gas down, the theory being that one does not increase the incentive to a producer to find new gas by raising the price of old gas. That strikes one as a reasonable theory.

Both Mr. Moody and Mr. Byrd have done a good deal of natural gas contracting, but my understanding of natural gas contracts (you might want to pose this

same question to them) -- my understanding of natural gas contracts is that under contracts a whole reservoir, where all the natural gas under a lease will be dedicated to the sale, to the contract, often underneath the land area there will be more than one reservoir of natural gas, or often the reservoir may be sufficiently intimiable that after a while it makes sense to drill some additional wells, or it may be that in a natural gas lease, a natural gas reservoir, that after a while the well will sand up, the casing will collapse, or the well will be damaged, and thus a new well will have to be drilled; or if there is a deeper reservoir a well will have to be drilled or an old well re-entered in order to find the gas in a deeper reservoir.

If the vintaging date were the date of the contract -- remember that the whole, all of the gas underneath the lease, perhaps defined by depths, were to be dedicated to the contract, then there would be no incentive for the producer to repair the wells or to redrill the wells or to search deeper for new reservoirs. Thus, it strikes me -- the point I have is, and I guess you should ask other witnesses, is that given some of the conventions of natural gas contracting, that vintaging new gas by date of contract may impair the discovery of additional supplies of natural gas, which would be contrary to what

I understand to be the purpose of deregulation or the purpose of allowing a higher price for new gas, and thus self-defeating. If the theory I have just expounded is true, then I think that a vintaging gas generally within the United States by contract date would be unlikely.

SENATOR RADER: Any further questions? Senator Sumner.

SENATOR SUMNER: Mr. Chairman. Have you evaluated contracts between states and oil companies in the past?

DR. SWANSON: No, sir, I have not.

SENATOR SUMNER: Do you have any basis to compare or to answer a question of how does this contract for the sale of the royalty gas compare with the sale of royalty gas between other states and oil companies?

DR. SWANSON: I happen to have in my possession a very bad photographic copy of a sale of royalty gas from New Mexico to El Paso.

SENATOR SUMNER: How does this sale contract here compare in favor of the State?

DR. SWANSON: I read that contract last night, the one between the Royalty Board of New Mexico and El Paso, and I think that the sale of Alaskan royalty gas compares well. The other contract also was a soundly conceived contract, and it did not have the reservations clause that Alaska has.

SENATOR SUMNER: When you say compares well, is this contract better than, in your view?

DR. SWANSON: The contract you have negotiated is a better contract.

SENATOR SUMNER: There's some confusion in my mind. If the contract says that Alaska is going to get paid as high as any of the producers that are selling to the oil companies for the seven-eighths supply, would the vintaging determine the sale price that Alaska receives, or would the contract dates on their contract with the users or buyers determine the sale price that Alaska gets?

DR. SWANSON: I think you have posed a question which would require legal interpretation and, frankly, I had not thought of it, in response to the earlier questions of Senator Rader and Representative Gruening, because what you're arguing is that through the terms of this contract the vintaging date applicable to this contract alone may not apply. That's a very important question and I would only like to say that I'm not a lawyer, I do not have extensive Power Commission experience, and you have a witness who does. I just am not qualified to answer the question. I do understand the issue, and it's a good point.

SENATOR RADER: Let me go back just a moment then to the question I asked you. Does that change your answer to my

question as to whether or not it is likely in the future, in view of the past policies, that contract date will be the determining factor in vintaging? As I understood your testimony, you said you thought it would be highly unlikely the contract date would be the determining factor in vintaging.

DR. SWANSON: Unlikely, yes.

SENATOR RADER: Now, the question raised by Mr. Sumner does not affect your testimony in that regard, does it?

DR. SWANSON: No, it does not. In fact, if anything, it suggests that at least within the terms of the contract one does not know how those terms will be interpreted in accordance with the Federal Power Commission, at least within the terms of the contract, that there is even less likelihood that contract date vintaging would apply to the price.

SENATOR SUMNER: Mr. Chairman, in response to you, that's the view that I thought.

SENATOR RADER: Senator Colletta, do you have a question?

SENATOR COLLETTA: I believe Senator Huber did.

SENATOR RADER: Oh, Senator Huber.

SENATOR HUBER: I had on your subject in response to Senator Rader I want to get back in. Now there's a second one since you came in. Senator Rader and I apparently didn't hear exactly the same way. I thought I heard you say

that the chance that vintaging would be disadvantageous or that it would happen to the State was on the order of fifty percent, not very unlikely. So which way is it?

DR. SWANSON: Senator Huber, what I attempted to do was, when I said that the probability that vintaging would be based upon contract date, I said I thought the probability was less than fifty percent. I chose a number where I felt extraordinarily confident, and Senator Rader felt that, in his judgment, he needed a finer definition, a more precise statement of probabilities, and he pressed me on the point, and upon thinking about the point, in thinking about the use of contract date for setting vintaging dates for pricing, given the traditions of contracting in natural gas, did not strike me as too sensible, given the purposes of national policy in the use of vintaging. So I think that the probability that contract date will be the applicable vintage definition that dominates price under this contract is quite a bit less, it is unlikely.

SENATOR HUBER: Would you like to give a percentage of less than? You gave less than fifty before. Would you like to give us less than something now?

DR. SWANSON: Less than fifteen, less than ten percent.

SENAGOR HUBER: Less than ten percent. All right, that goes on ---

DR. SWANSON: Now, the difficulty of a number -- excuse me, Senator, I'm sorry.

SENATOR HUBER: Go ahead.

DR. SWANSON: The difficulty of a number given, such as that, is that it's a number which can assume greater importance, or it's an easy number to grab ahold of. You asked me the question straight, and I answered it as straight as I could. Maybe it's fifteen percent, maybe it's five percent, maybe it's ten percent, maybe it's two percent; I don't know, but I think when I state ten percent (maybe it's less) I think that's a fair characterization of unlikely. But remember that that ten percent would be further reduced by the point that Senator Sumner has brought up, which is that there are contract terms in the contract you are examining now which might make the vintaging which would allow working interest holders a higher price than applicable, but that's something presumably which will be worked out in the courts, and also it's something that requires legal judgment, which I would suggest you ask of Mr. Moody.

SENATOR HUBER: Mr. Chairman, that brings me to the second half of my question. Mr. Swanson, your definition that vintaging, I believe, was quite narrow here. In regard to that, have you taken into consideration the precedent that was set by the Federal Government action in disallowing

North Slope oil new status? Do you think that they might use vintaging or some other mechanism there to do the same thing with the gas that they have done with the oil that might affect the status of these contracts?

DR. SWANSON: There are two questions, I think, which we must address, and one question is, will these contracts approved now put the State in a worse position than if they were not approved, which is a very appropriate question, to be sure. My judgment is that these contracts are very good contracts and they do protect interests of the State, and that if they are approved now the chances that the State will suffer value are not great.

The second question arises, and I think it comes out of your point about the Federal Government, and that is, what are the risks to the State of Alaska of receiving very favorable value for its royalty gas and oil. Those risks are great, and I think they are legislative and regulatory risks, but by and large they lie outside of the contract.

SENATOR HUBER: Could I just draw you out a little more? You said there wasn't disadvantages to the contract. Could you conversely say , is there definitely advantages to the contract?

DR. SWANSON: The theory of examining the contract at this time, and many witnesses have testified to this, that by

approving these contracts at this time the likelihood of the El Paso project being approved will be enhanced. That's the theory. I, frankly, am not competent to judge.

SENATOR HUBER: And you don't want to make a judgment of how much enhance them being chosen over Arctic?

DR. SWANSON: No, sir, I'm not competent, and if I were to make a judgment I would be doing you a disservice.

SENATORY HUBER: Thank you, Mr. Swanson.

SENATOR RADER: Representative Gruening had a follow-up question.

REP. GRUENING: Are there any advantages to the State in terms of pricing in these contracts? Let's say if we do sell the gas at a later point under these contracts, have we gained anything in terms of pricing, setting aside the question of political gain that the contract is based on?

DR. SWANSON: It's very hard to be actually sure about what the course of events will be in the future. The contracts do state -- let me step back a second. The question is an important question and I must answer it.

Royalty gas comprises one-eighth of the gas in the Prudhoe Bay field. The contracts are very clear, that both under regulation and under deregulation that the price received by the State will be the highest price. The contracts are unambiguous. I do not believe that one-eighth interest is sufficiently large to swing the

value of the gas such that the prices received by the working interest owners will be less than if you waited.

For example, and let me expand on the point because I'm not sure I'm being very clear. If the amount of gas which you are selling now were enormous, more than enough to satisfy the demands in the Lower 48 States, then possibly by delaying, by not committing gas now and by having these highest prices for other people to obtain, you could depress future prices. But that's not the situation to be faced. The royalty gas interest is only one-eighth, and all of Prudhoe Bay gas, while very large, is not sufficient to solve the lack of natural gas supply in the Lower 48 States; so that your committee now does not so change the balance of supply and demand that future prices will be reduced by your commitment now. Have I answered your question?

SEN. GRUENING: If I interpret it correctly, you were saying that the contract protects us in most regards in your view, but in terms of advantages outside the political aspect of it, you don't see any -- it may be a good contract but you don't see any advantages to entering into a contract now as opposed to, say, trying to acquire these same terms at a future date, and that may be dependent upon whether, in your expert opinion, we could get these terms at a future date.

DR. SWANSON: You would require me to read the minds of the purchasing companies to determine if you could get the same terms that you have in these contracts at a future date. I have difficulty doing that. I would like to point to one section of the contract where you do have some very favorable terms, I think, and that is the purchasing companies have committed to pay the royalty share expenses upstream of the delivery point whether or not they are able to put those expenses into their costs of service. That's a good term, I think. Whether they'll agree to the same term in the future, I really don't know.

SENATOR RADER: Representative Chatterton.

REP. CHATTERTON: Thank you, Mr. Chairman. Dr. Swanson, I don't expect I'm going to ingratiate myself with you with this line of questions, but nothing personal is intended.

DR. SWANSON: You have an obligation, sir, a very important one.

REP. CHATTERTON: To bring everything into perspective, I have before me and have not a little slower than hastily read a November 30, 1976, letter addressed to Ms. Elke Kallab and signed by you, regarding a proposal to make an economic study of the gas sales contracts. That was dated November 30, 1976. And I also have before me a letter, or a document accepting your proposal that was

dated December 27, I believe, 1976, and unless you're like some people who may think that they're willing to commit course money to build a pipeline before you have a contract, I doubt if you started to do much work on this problem prior to the first of the year. I'm not questioning you as to the fact that in context of what you were asked for and what you have presented is, you've fulfilled the obligation completely, and I do concur with you, with slight exceptions of your findings, that this contract permits Alaska to recall and use the gas. It does have that, it does provide the LPG protection, but you did state here that in your proposal you would not involve an analysis of the sale of natural gas liquids, in your economic analysis, does provide for a favorable price. Now, I think it's equally important to this committee to know things that you did not find in arriving at this conclusion, and obviously within the framework of thirty days there's a bunch of things you did not find out.

DR. SWANSON: There's a very large number of things of concern to this committee that we did not state, that's correct.

REP. CHATTERTON: And possibly even the economic considerations, if you had studied these things, if we had paid you more money and you had had more time, it's possible -- it is possible, if you had studied possibly a trade in kind

of gas at Prudhoe Bay with like owned State gas someplace else, or State owned crude with like State owned crude someplace else, or looked to see if in any way this would be jeopardizing the ultimate recovery of hydrocarbons from the Arctic Slope, aiding and abetting the jeopardy thereof, is it possible you could have come up with a slightly different conclusion?

DR. SWANSON: Let me list for you a number of the things which perhaps are of concern which we did not study. I'm not a qualified reservoir engineer. Our firm are not qualified reservoir engineers. We did not study the question of the level of production of natural gas from Prudhoe Bay from the sedilogic sands which are appropriate. On the other hand, I would assume that, given the terms of the contract, that the State is well protected, if it were determined that to maximize the recovery of oil, gas production would need to be cut back, because this contract does not specify any minimum quantity of natural gas which must be delivered to the purchasers.

This contract does specify very clearly that the purchasers must pay for, whether or not they can pass on in their cost of service, the royalty share of facilities required prior to delivery. So I'm not really sure that our lack of knowledge of the specific reservoir characteristics

apply too much to our analysis of this contract.

We did not study, and I have no judgment of the relative merits of the three proposed gas lines, for example. A good deal of testimony has been presented here, and much more before the Federal Power Commission, on that issue, and perhaps you may, as individuals, in your judgment, in your decisions about this contract, weigh the relative merits of the three gas proposals. We have not examined them, and I have no opinion, no professional opinion on it.

We did not attempt to uncover for the State of Alaska other alternate buyers of royalty gas and attempt to understand from them the terms that they might be prepared to offer to you for the purchase of that royalty gas. I presume that in a sense the Administration, under Commissioner Martin, did explore with a variety of purchasers the royalty gas and possible alternate terms; we did not.

So the question you raised, Representative Chatterton, was, is it conceivable, is it remotely possible that our analysis would be altered had we spent more time and more effort in examining these contracts and the alternatives which are applicable to you. And when I was studying physics I read in a book that it's entirely possible, it is remotely possible that

all of the molecules of air in this room will suddenly rush over into that corner and we will all explode; I think that's remote.

In a contract such as this, one can over-study it. One should study to a point where one thinks one has a grasp and can offer sound judgment to a client. If we were to study, and study and study we would charge for that, and perhaps not give value for money received. I'm confident that our analysis is sound, our conclusions are sound; I can no more say that there is no possibility whatsoever of something possibly changing than I can that apples will fall up instead of down. Do I answer your question, sir?

REP. CHATTERTON: Yes, thank you very much.

SENATOR RADER: Senator Colletta.

SENATOR COLLETTA: Dr. Swanson, we have had a lot of talk about the possibility and probability of what could happen, and just taking the one aspect the contract provisions (period), since you deal in that area what is, not the possibility but the probability of duplicating a contract verbatim to what is before us now if, in fact, we wait and see who builds what and when? I make specific reference to one section on the total take-back that we're allowed.

DR. SWANSON: The provisions for reserving natural gas in this

contract are favorable to the State. The reason that the purchasers signed this contract is, as I believe Mr. Tomas of Tenneco stated very clearly, that they frankly don't think that either (a) you're going to take back that much or (b) if you do take back that much they have a good deal of confidence that Alaska will experience a number of additional discoveries of gas and under the terms of this contract they can buy that gas.

Now, if you waited so long that it became more probable that Alaska would take back the gas or that additional discoveries would not be found and other discoveries were to be committed, then perhaps you couldn't get exactly the same terms with the reservation clause as in this contract. I think I'm grasping at something that is relatively small, and I think you may well be able to get reservation clauses in the future. As good as these? I don't really know.

The pricing provisions? I think in the future -- if you were to wait I think you probably will have pricing provisions which are as favorable as these. Whether the purchasers would pay for, at their own risk, the royalty share of the costs of gathering or whatever, I just simply do not know. I think likely they might; I don't know.

SENATOR RADER: Any further questions? Any questions on this side? We'll go a second round here. Senator Huber.

SENATOR HUBER: Thank you, Mr. Chairman. I'm sure that this question was asked of other people but it was not asked of Dr. Swanson, and I would like to know his answer.

I refer generally to the provisions in the contracts that head end money, premium money, whatever you want to call it, will not be allowed or will not be paid to the State, but that the highest unit field prices, in the language that we're both familiar with is there to state that, is used. Assume now that deregulation occurs, which apparently some form of deregulation is going to occur. and the working interests should negotiate large lump sum or front end payments with smaller amounts per mcf, wouldn't our contracts then have a good chance of denying the State the same opportunity for these much higher prices that might be paid, or likely would be paid, would be unlikely to be paid?

DR. SWANSON: Senator Huber, with your indulgence may I characterize what I think is concerning you and then see if I have characterized it correctly and then proceed from there?

SENATOR HUBER: Please do that.

DR. SWANSON: Would that be an appropriate way to proceed? I believe what you're suggesting is that the provisions

of this contract clearly state it shall be the highest price specified in some other contract, and that price will be in so many cents per mcf to the working interest owner. You were concerned, I believe, that potentially the value given in a contract or an interest owner may exceed the price stated in the contract, value being given to the working interest owner by an advance payment on an interest free loan.

SENATOR HUBER: Even if it's a separate document for advance payment.

DR. SWANSON: Or whatever, yes. I believe that is your concern.

SENATOR HUBER: That is my concern.

DR. SWANSON: We have the same concern in our analysis of this contract. Specifically we were aware of advance payments having been made for working interest holders of Alaskan gas. We then reviewed, as best we could, the outstanding advance payments, the ones that had not been terminated, advance payment premiums, so we uncovered, particularly the Columbia Gas advance payment agreement with, I guess it's BP and SOHIO. I'm not sure. And we asked exactly that question in our analysis. We addressed exactly that question in our analysis, would the price as quoted in the contract be lower because of a previous advance payment to a producer and, thus, not give full

value to the State.

Our research, looking at the contracts between SOHIO and Columbia led us to believe that the advance payments given to the producers would not reduce the price as quoted in the contract. That was the conclusion of our research.

Let me continue. One question that can be raised is, will advance payments be allowed in the future. I think the Federal Power Commission has suggested that they won't be. A pipeline will give an advance payment -- well, the Federal Power Commission says they're not doing it now -- a pipeline will give an advance payment only if it can somehow recover the cost of using that money or that money in its rate base. If they can't put it in their rate base or they can't somehow recover it from their consumers, they're unlikely to make advance payment, because they can recover an allowable price.

Secondly, in the repayment -- I would like to say something and I think I'm going beyond my current research and competence and I'm not sure whether I should say it, subject to verification of Mr. Moody or simply not say it. I'll proceed by your judgment.

SENATOR HUBER: If it's part of my question I wish that you would.

DR. SWANSON: I'll do that, but I do want to warn the two

committees that my recollection of the regulation of the law is shaky. My recollection is that the amount of gas that must be delivered for the repayment of an advance payment will depend upon the subsequently negotiated price for the gas. Thus, it is in the interest of the working interest owner to negotiate the highest possible price he can get in order to repay the advance payment as soon as he can.

If that theory or recollection were true, and you can check this with Mr. Moody, then the granting of an advance payment probably would not reduce the stated price in the gas sales contract and, thus, would not provide full value under the most favored nations clauses or the clause of deregulation in them, and in the highest price clauses under this contract.

SENATOR HUBER: Thank you, Mr. Chairman. I feel it is a little better given, the answer, from our experts rather than the oil company in this case on that one. I lay that one to rest as far as I'm concerned.

SENATOR RADER: Any further questions of Mr. Swanson? Mr. Swanson, I think you were trying to catch an airplane, were you, this afternoon?

DR. SWANSON: No, sir, I'm going to catch the 8:30 plane out tonight, so I'm at your service.

SENATOR RADER: Would you stay for the remainder of the

proceedings in case questions do come up later?

DR. SWANSON: Yes, sir.

SENATOR RADER: Thank you very much. I have no particular preference of order myself. Mr. Moody, Dr. Kilgore, do you gentlemen have any idea as to a preference of testimony, your order?

MR. MOODY: Whatever the will of the committee, Mr. Chairman.

SENATOR RADER: Why don't we take a ten-minute break and let me discuss with both of you the nature of your testimony and make a decision?

(Whereupon the hearing recessed at 2:40 p.m. and reconvened at 2:50 p.m.)

SENATOR RADER: The committee will come to order. During recess I discussed with Mr. Moody and the Doctor the order of testimony, and it was the feeling that the Doctor's testimony would be more in line and more relevant to that which has gone immediately preceding and, therefore, it would be logically easier for him to testify at this time along the same lines as indicated previously by Dr. Swanson.

Doctor, of course, you're an old hand here. We all know that you're with the Levy Lipton Associates, but for the record, for those who do not know you, and who may come across this record, would you give us a full statement of your firm and yourself, and then proceed

with the statement, which I presume then we would open to questions.

TUSSING

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DR. TUSSING: I just have one comment. In my opinion the report of the administration's Gas Pipeline Task Force is an exceptionally thorough, fair and objective review of the relative merits of the three competing gas transportation systems. In view of the political sensitivity of the issue and the compulsion that agencies generally have to find the most favorable arguments for the policies adopted, I think that this is a really admirable document.

There are only a few points in the report on which I would have a different emphasis and there are a number of assumptions in Dr. Knudson's report that I think were biased in favor of the kind of answer that supported the policy. But I don't think these are crucial to the main conclusions of the Task Force report, and when I start my presentation I'll summarize what I think are the principal conclusions and what the implications of those would be.

SENATOR RADER: Unless the Committee objects, why don't we go ahead and listen to your presentation and then open questions to both of you. Would that be appropriate?

DR. TUSSING: Yes.

SENATOR RADER: Is there any objection to that procedure, Committee? Fine.

DR. TUSSING: Okay. I didn't come with a prepared statement. I have some fragments of things, two of which I would

like to introduce into the record. One is -- let me back up for a moment and identify myself, as you requested. I'm Arlon Tussing. I'm a professor of Economics at the Institute of Social and Economic Research at the University of Alaska. I have been affiliated with the University for twelve years. I have also served as chief economist of the U.S. Senate's National Fuels and Energy Policy Study under Senator Jackson and continue to serve Senator Jackson as an economic advisor on energy and natural resources.

During the last year I have also served as an advisor on oil and gas issues to the State of California, the Provinces of Nova Scotia, Ontario and British Columbia. I have served for a little over a year on the Royalty Oil and Gas Development Advisory Board, during the period of which the initial negotiations were -- took place on these contracts. I have given consideration in a number of forums and for a number of agencies to various aspects of the Alaska gasline question.

There are a great number of issues I would like to comment on, if I have time. I realize your time is limited and I'm going to try to confine myself to some of the high spots and then let you proceed.

SENATOR RADER: You have two documents that you wanted entered as exhibits?

DR. TUSSING: Yes.

SENATOR RADER: Would you identify those for us?

DR. TUSSING: One is an article headed "An Inkling of the Long Journey", published in "Northern Perspectives", which is the newsletter of the Canadian Arctic Resources Committee. This was published only last month but I wrote it in June. So to the extent that there is anything dated in it, you can understand that.

SENATOR RADER: That would be Exhibit No. 11, according to my records. Is that correct, Recorder?

DR. TUSSING: Yes. Oh.

SENATOR RADER: All right.

DR. TUSSING: The second paper is entitled "Natural Gas Supply Outlook for the West" and it is a summary of my comments at a workshop on economic growth in the West in Los Angeles in August.

SENATOR RADER: And that will be Exhibit No. 12.

(Whereupon Exhibits 11 and 12 were duly marked)

DR. TUSSING: The most important conclusions of the State Task Force report are generally consistent with every other important study and with intuitive common sense, and they are the following: Firstly, that El Paso's Trans-Alaska pipeline LNG tanker system would, if it could be approved, financed, and built and operated in the manner proposed by its sponsors, result in the greatest net revenues to the State treasury and the

greatest increase in Alaska gross product, personal income and population. The Alcan systems impact would be second in these respects and Arctic Gas third.

Secondly, with the Arctic Gas system, if it could be approved, financed, built and operated in the manner proposed by its sponsors, would result in the lowest gas transportation costs to the Lower 48. In this respect, the Alcan system seems to be second best and the LNG system worst among the three.

The Task Force report makes one other crucial point but without the emphasis I believe it deserves. In view of the respective routes, design and construction plans, the Alcan system seems to be least vulnerable to cost and schedule overruns, and Arctic Gas the most vulnerable, with El Paso somewhere in between.

Because of the questionable viability and the financing problems of any transportation system for North Slope gas, the prospect of substantial overruns may be the most critical economic issue in choosing among them.

Moving to the contracts for a moment. I intend to get back to the problems of financing. I make no recommendation on whether the Legislature should ratify these contracts. The members should understand, however, that there is no amount of propaganda for lobbying by Alaska or by the three purchasers which will produce a

decision in favor of an LNG system unless Canada makes it clear than an overland pipeline system will not be licensed or that Canada will not be able to come to a decision in the foreseeable future.

I personally expect an unbroken chain of decisions in the United States in favor of Arctic Gas by the FPC staff, Judge Litt, the Federal Power Commission and President Carter, based upon the record in the FPC hearing and the investigations of other federal agencies. I do not mean to imply that Arctic Gas is certain to be approved and to be able to build its system, but if the Arctic Gas momentum is to be broken, it will not be the result of any domestic politicking, but of some objective development. For example, a clear signal of Canadian intentions one way or another. While it is remotely possible that El Paso or Alcan might get an important endorsement somewhere along the line, what is almost inconceivable is that the United States Congress would overturn a presidential determination in favor of a Canadian overland pipeline system to substitute its judgment in favor of an LNG system.

The manifest superiority from a national point of view of the overland pipeline system as available is so overwhelming and the regional interests in the construction of such a system in preference to an LNG system is so

overwhelming that the number of Congressmen, the number of State Utility Commissions and the number of Governors that the purchasers will be able to move on this is only a small time fraction of the existing lead that Arctic Gas has in this matter.

I think that it is instructive that in El Paso's principal market area that there is virtually no support for its project and in fact great skepticism about El Paso's project for a number of reasons, not least that the gas distributors do not want to be exclusively dependent upon El Paso, as they would be, for all the gas entering their market area. And secondly, they don't want the State of California to be exclusively dependent on a single point for the delivery of their gas, a point which could be interrupted by, for example, a fire at Valdez, which would leave them without any gas supply whatever as their existing supplies would have been displaced eastward into markets or, for example, in the Tenneco and Southern systems, for example.

There is simply no possibility, in my judgment, that Congress would endorse an LNG system. Particularly in the face of the cold wave that has now confronted the Midwest and the East and which will have reinforced its determination to get direct delivery of gas, and in view of the developing Westcoast glut of crude oil which is

retrospectively viewed in Congress as the result of the fact that they approved the wrong pipeline in the first place for the oil.

These are circumstances that -- there is nothing which the State of Alaska can do to change. I believe it is clear the United States will favor an overland pipeline through Canada. It also seems likely, that rightly or wrongly, the Federal Power Commission, the Administration, and Congress will accept Arctic Gas argument that an early attachment of the Mackenzie reserves is in the United States' interest and that the Mackenzie route has significant economies of scale compared to the proposed Alcan system. But, the decision will in fact be made in Canada, not in the United States. The United States will accept any overland system that Canada is willing to build in preference to any alternative system.

Canada's orders of preference between the Mackenzie and Alcan routes are not so clear. There are a number of reasons why the Alcan system may make more sense to Canada and with your permission I would like to read a couple paragraphs of my article in "Northern Perspectives" on some of the Canadian reasons for favoring an Alcan system.

"The probable reception of any Alcan proposal by Canadian authorities has been a most difficult issue to

forecast. A major appeal of the Arctic Gas project is purportedly its early (if not necessarily more economical) attachment to the Mackenzie reserves. Without this feature, it may be asked, what is the advantage to Canada of accommodating the United States in moving Alaska gas?"

"The attachment of the Mackenzie reserves may, on the other hand, be seen as a major disadvantage of the Arctic Gas system, from at least one Canadian standpoint. There is no particular reason why Canada should not accommodate the United States with a transit line across Canadian territory; after all, a substantial portion of Canada's oil and gas supplies transits the United States. There would seem to be little objection in Canada on nationalistic grounds to American gas moving in either an American or a Canadian-owned pipeline across Canada. The Mackenzie project, in contrast, raises the issue of an American-dominated consortium developing an important frontier area of Canada. The fact that an early MacKenzie connection is being justified in the United States by the (doubtful) proposition that it would lead to greater Canadian exports to the United States aggravates its potential difficulties in Canada. Both its timetable and logistics would be dictated by the convenience of the American interests. The native claims and environmental complications of this route are well known."

And incidentally, I expect that Justice Berger, who is the commissioner for the Canadian government in examining native claims and environmental implications of the Mackenzie pipeline, will come out strongly against the Arctic Gas proposal and against any major pipeline development in the Arctic pending the settlement of the native claims and the resolution of some presently unresolvable environmental issues. He will point out, I believe, that neither of these objections is nearly so strong with respect to a pipeline through the Yukon Territory along the Alcan route.

"The 60 trillion cubic feet of proved reserves in the western provinces", I think it's now about 62 trillion cubic feet in Alberta,"are enough to sustain the expected growth of Canadian demand plus present export" commitments "for about ten years. This would be the case even if there were no further discoveries" in Canada, "but recent exploratory results in Alberta have been rather encouraging, more so in fact than in the delta area. For this reason a decision on an Arctic pipeline carries much less urgency for Canada than it does for the United States."

In other words, Canada does not need a pipeline connection to its frontier areas for ten or eleven years even if there were no further -- to be no further discoveries in Alberta or British Columbia.

"More importantly, however, a decision today in favour of immediate development of the Mackenzie Delta-Beaufort Sea region can be seen to prejudice whether that region or the Arctic Islands (where recent exploration seems to have been more successful) shall be developed first. Either project could strain the capacity of domestic capital markets so that simultaneous construction of the two major pipeline systems under Canadian majority ownership is almost out of the question."

And I go on to say that it is not obvious which of these considerations will finally come to play, but "A decision in favour of Arctic Gas would" "be a reluctant one". It would have to be in the face of a firm decision by Justice Berger who in a sense occupies a similar position as Judge Litt in the procedures in the United States, and it"would be opposed by many quarters within the Canadian federal government, by several provinces and by a large body of Canadian opinion."

As you probably know, the Trudeau government faces an election no later than the fall of 1978. The liberal party is in great trouble, Trudeau is very unpopular at the present time and to run over the Natives and the environmentalists at this time in favor of an Arctic Gas pipeline is probably unlikely, it would be a very impolitic. So there is on the other hand and I have absolute

confidence in this, there is a determination at the highest levels of the Canadian government to work out some joint accommodation with the United States for transportation of oil and gas and through exchanges of oil and gas. And I believe that the Alcan proposal offers a very important way out for the Canadian government of its way out of its dilemma.

Turning back to our contracts and the prospects of the Trans-Alaska Pipeline, the only serious substantive argument for the El Paso system from a national standpoint, the only one that has any credibility is that Canada will not license an overland pipeline under terms acceptable to the United States. Only Canada can prove or disprove the truth of this proposition and the Administration and Congress are going to wait for this.

Now the -- I do not want to say that there is no chance for a Trans-Alaska pipeline. There is no chance for a Trans-Alaska pipeline so long as there is a chance of a Trans-Canada pipeline and there is nothing that Alaska or El Paso or any of the purchasers can do to influence the decision from the United States in that respect.

The corollary proposition advanced by El Paso that the Canadian government is incapable of granting acceptable terms for an international pipeline because

its treaties don't bind the provinces is without merit and can be easily dismissed. The premieres of both British Columbia and Alberta have expressed their intention to lay this question to rest to the extent that the Canadian federal government cannot bind the provinces. The provinces have independent authority to make treaties and those of you who are familiar with the Columbia River treaty will recall that it is a treaty between -- or among the United States, Canada and the province of British Columbia. Both Premier Lougheed of Alberta and Premier Bennett of British Columbia have made it absolutely clear that they have no objection to joining in any protocol providing for nondiscriminatory treatment, taxation, regulation, and for that matter a complete quitclaim of regulatory jurisdiction over a transit pipeline that carries United States gas. So I think that that issue is totally a red herring.

The scenario I see developing on the approval of the pipeline -- or on the determination of a pipeline route is that the Federal Power Commission will find in favor of Arctic Gas, along the same lines as Judge Litt's finding, on the basis that it is environmentally superior on the basis that results in lower cost to consumers, the basis it can be built faster, that it is more easily expansible, and the whole range that the Federal Power

Commission will find it superior in every respect.

At about the same time the Berger Commission findings in effect vetoing Arctic Gas will come out in Canada. Now if you'll recall the language of the Alaska Natural Gas Transportation Act, it says the presidential determination -- the FPC recommendation, the presidential determination shall be made without respect to whether Canada has reached a decision on this.

What the FPC decision for Arctic Gas and the Berger decision against Arctic Gas will trigger is negotiations between the United States and Canadian government and among the various proponents of gas pipeline systems to see what kind of system car -- is agreeable to all the parties. And it seems to me that the system that is going to be most acceptable to all the parties is a system along the Alcan Highway but departing in some degree from Northwest's and West Coast's strategy for that. In other words it would be a higher capacity pipeline than envisioned by the sponsors. As -- one combination would be to use El Paso's engineering and pipeline design for the northern part of the route. El Paso believes that with high pressure, with 1670 psi they can move up to 3 1/2 bcf a day through a 42 inch pipe. I think that a 42 inch pipe is one of the strongest elements in the Alcan design because that is

the kind of pipe that can be rerolled in existing North American facilities.

A disadvantage of the Arctic 48 inch scheme is that it requires the building of a new plant by Stelco for the production of that pipe and it introduces another -- just another of a whole series of uncertainties into what I believe is an oversized -- already an oversized project.

So returning again to the contracts, I do not see what the State accomplishes in terms of the advancing of its goal by selling the gas now. I will -- in response to questions I'd be willing to elaborate on what I think the significance of these contracts are, but I would like to go ahead and spend a couple minutes on what I think some of the problems of building and financing an Arctic Gas pipeline are, regardless of who built it.

There -- these projects are enormously risky no matter what the sponsors and their financial advisors say. Their ability to be financed in conventional -- by conventional private means is extremely suspect. And that -- I'm sure that Whitewell's representation to El Paso and the financial advisor's representations to Arctic Gas and to Northwest are qualified in the same way. That is, if you get as much gas as you say you are going to move through this system and if your costs are the

costs that your engineers say you will have and your schedule is what your engineers say you can accomplish and if you do get all the necessary approvals, then the financial -- and you do get the all events full cost of service tariff from the Federal Power Commission and the state utilities that govern the distributors -- or the customers of the system, then you can finance this through conventional project financing.

What I would question is whether all those -- whether all of those conditions are certain enough that the insurance company's pension funds and the other institutional investors that have to buy this pipeline would be willing to risk what may be Ten to Twenty Billion Dollars in financing.

In the first place, there is uncertainty about the gas supply. Now the -- I believe the State's reservior engineers project a probable production, permissible production, or optimum production of about 2 bcf a day. Now that is about or perhaps below the minimum threshold of Arctic and El Paso. That is about the design threshold for Alcan.

Now it is conceivable that after two or three years experience in oil production the Alaska conservation authorities may conclude that that rate of production is not in the State's interest, that the loss of oil -- the

value of the oil foregone by that production is greater than the value of the gas produced. Nobody knows what this is going to be. The fact that all the producers and the State of Alaska and the gas purchasers all believe that they can produce say two bcf a day safely isn't good enough for the lenders. They have to have some notion of what the likelihood -- the downside likelihood is. And the downside likelihood -- if there is only a ten percent chance that production will be 1.6 bcf per day and 1.6 bcf per day is not enough to guarantee the payment of the debt on this pipeline, then you just won't be able to go into the capital market. We have the problem of delays in capital cost overruns. Actual construction costs may exceed estimated costs by substantially more than they affect general inflation.

Two years ago, with the help of the Library of Congress, I did some research on this and was unable to come up with a single large custom engineered construction project in the United States over the last ten years which had not exceeded its initial engineering cost estimates by a factor of less than two. And the experience in North America with big custom-engineered construction projects has been that they typically cost two or three times their original projections, even including an allowance for inflation. The cost estimators are like

accountants and they prefer a solid, empirically based figure. That is, so many cubic yards of cement at so many dollars a cubic yard to a realistic figure. "They do attempt to project the increase in anticipated labour rates and in the prices of specific materials", and the inflation rates for those specific materials, "but they don't take into account the fact that huge projects, particularly if they involve new technology", as both systems do, both Arctic and El Paso does, "or a remote construction site," and this would apply more to Arctic, "usually don't work the first time around, nor that both the purchaser and the licensing authorities change their minds several times in the course of construction. The cost engineers don't appreciate that such projects are usually clumsily managed and are subject to a number of re-organizations during their design and construction. They don't allow for the fact that materials and equipment are always late and often mis-specified or defective," and that such "enterprises" "suffer not normal, but abnormal labour cost increases. Because of their size and urgency, they are especially vulnerable to wage pressure," and "to featherbedding, and" also "to racketeering."

And I needn't go into great lengths on the problems of the Trans-Alaska oil pipeline, which will --

whose costs will exceed by ten times the initial estimates by the sponsoring companies. I do not project a ten time overrun for Arctic Gas but I think that a doubling of their present projections would not be an unreasonable anticipation in view of the history of large projects in North America. Let's assume that Arctic Gas or that El Paso's project would cost Twenty Billion Dollars and that it would have to be paid for in twenty years and "assume that the investors should receive a 15 percent pre-tax rate of return on total" investments. "Under a conventional utility accounting scheme, the project would need a first year cash flow of four billion dollars just to cover its fixed costs. On a discounted cash flow basis" which is a more rational financial way of looking at it but is not customary in utility accounting, "the annual fixed charge would be about $3.2 billion."

But "with a throughput" of about "a trillion cubic feet" a year, that is about three bcf, "we are talking" about "$3.20 to $4.00 per thousand cubic feet" for transportation costs alone. If less gas can be delivered, if we are talking about two bcf a day, we are talking about Five to Seven Dollars a thousand cubic feet. Now "this charge doesn't include the cost of developing the gas fields, any return to the producers," to the royalty owners, any "operating costs or" any "costs of distribution."

Now both El Paso and Arctic insist that the consumers will accept any price because of the rolled in feature. Now not everybody agrees with this and in fact none of the government sponsored studies -- the Aerospace -- FEA study estimated that "no market for Prudhoe Bay gas would exist in 1985 at a 'city gate' price exceeding $2.40 per million BTU (in 1975 dollars). The Interior Department's study reaches a similar conclusion." Now this price you are almost certain to get, "even without implausibly large cost overruns or shortfalls" in the gas distribution system.

Now, "one assumption of" these "studies mentioned" "is that natural gas" prices have been decontrolled, "and that the Alaska gas is" therefore "priced incrementally."

Incidentally, the -- I don't want to spend a lot of time on it but it is not clear whether deregulation would increase or reduce the price of Alaska gas. I think there is a very strong case for expecting that it would make Alaska gas less valuable for a number of reasons. Deregulation would increase the price of gas in the Lower 48 and therefore reduce consumption in the Lower 48, increase production from the Lower 48 and reduce the gap -- the shortage.

It would also reduce the amount of low priced gas that the pipelines and distributors get which they can

roll together with expensive gas to come out with a price that satisfies their consumers. Now I don't want to predict absolutely that deregulation would make Alaska gas less valuable, but I think that that's the probable effect, that by easing the gas shortage in the Lower 48, they make it less willing for gas distributors to pay more for that gas than it is worth at the burner tip.

What it is worth at the burner tip to the average consumer is roughly the price of fuel oil. Now there is some consumers that will pay substantially more and some who will pay only the price of coal or residual oil and so on. But the average consumer is competing with fuel oil. In a deregulated market, after a few years, you'll find that gas distributors will not pay more than that for gas because they don't have any cheap gas to average it with.

So, anyway there are market risks -- there are gas supply risks, market risks, cost overrun risks, and of course you know about the political regulatory and other institutional issues, things like native claims in Canada, the fact that virtually nobody seems able to get any sort of terminal in California. I have looked at this problem again for several different agencies and I wouldn't count on any proposal which requires a major terminal in California at this time until there is a

substantial change in the internal institutions of that state or a substantial change in federal-state relationships.

It may be that there is just no way to put a major terminal in California. Anyway you have these problems, so you have the -- so these risks generate the financing problems.

"The financial consequences of the risks I have listed are magnified by the fact that neither" El Paso nor Arctic "can be built in smaller self-sustaining stages." Each is a total "integrated system which" will not flow any gas or flow any cash until the whole thing is completed. "Most of the capital invested", that is Ten to Twenty Billion Dollars or more, will be exposed to all the risk factors for the entire planning and construction period.

Now private lenders "simply will not accept the risks of this sort, and neither project's sponsors are financially large enough to carry them, even if they were willing to do so", and they are not willing to do so. All of the projects propose an "all events" tariff in which the sponsors would be guaranteed a return on equity, as well as a return to debt service, whether or not any gas is ever carried by their project.

El Paso proposes to use federal loan guarantees

and Arctic has talked about federal indemnification for overruns. But, neither the "full cost of service all-events tariffs" nor government guarantees are presently in the works and none of these projects can be financed without some sort of government backup. And this is something that I think is independent of the numbers you come out with on any particular thing.

The financing schemes are very conditional and I think that all the sponsors are -- expect they will ultimately have to go to the federal trough either for a subsidy or a loan guarantee, which is the same thing as a subsidy, because they will not be able to produce the cash flow that they project and they will have overruns.

The President, when he makes his recommendations, or the President in his negotiations with Canada, are going to have to come up with something that can be financed.

Now, turning to Judge Litt's conclusions on this, Judge Litt is in effect asking somebody to build an over-sized pipeline on speculation. He is saying that in view of the vast amount -- the vast potential of the North Slope, all the way from Pet Four through the State leases, through the wildlife range, through the Beaufort Sea and the Mackenzie Delta, there may be a vast amount of gas and it is wasteful to build a minimum scale system as Alcan

proposes, simply to handle most economically the gas that we know for certain can be produced. But, he is asking somebody to take the risk and the somebody is basically the investment community that is not going to take the risk, even if the probability that the throughputs necessary for Arctic Gas are -- say even if it is a ninety percent probability that Arctic Gas is viable.

Then he turns around and says,"well, the oil companies ought to take this risk." Well, the oil companies are not in this business. The oil -- he is asking the oil companies to put Three, Four, Five Billion Dollars on top of the Four to Seven Billion Dollars it is going to take to develop the field to produce the gas. He is asking them to put it -- to take money that they could use in high return risky ventures and put it into an operation that is going to have a public utility rate of return, where their going to be constrained to make nine percent or something like that. And it just isn't going to happen. It is an appeal to patriotism or altruism or something like that that is completely unrealistic.

If Judge Litt and the Federal Power Commission and the President want a big diameter, high pressure pipeline from the North Slope, they are going to have to get the American people to pay for it and to accept

the risks through the political system and there is nothing wrong, say with the principal of an all events tariff as long as the probabilities are good, as long as consumers have a substantial chance of benefiting, why shouldn't the consumers take part of the risk? It is not going to happen that way. The Public Utility Commissions don't think the risks justify it, they don't like the idea of socializing private risk in a situation where the investors are guaranteed their return while the consumers and the public take -- have the downside risks. So, when the President of the United States and the Premier of Canada get together to figure out what the system is going to be, they are going to have to look hard at the financing and the other system.

Now, looking at the faults of the Alcan system, there is something from the point of view of the Federal Power Commission. It seems to me that this principal fault can easily be resolved. It is desirable to have a forty-two inch pipe because that pipe can be built and can be rolled in present mills and its -- the technology is a lot more practicable.

El Paso believes that it can run a lot of gas through -- a lot more gas at a higher pressure through the pipe. If the Alcan people were granted a certificate on the condition they would put in a heavy guage pipe.

which could operate with sixteen hundred seventy psi, if the gas were available, by adding more power the incremental costs would be relatively small.

I think these things can be settled but they probably have to be settled in negotiations. It seems to me in conclusion that none of the systems as presently proposed and none of the financing arrangements are presently viable, and that we have yet to see the last of the combinations and permutations. I would say, however, that there is nothing the State of Alaska can do to advance a Trans-Alaska Pipeline LNG system within the U.S. political system. If there is going to be such a system, it will be selected by the Canadians because of their inability or unwillingness to authorize the prompt construction of an overland pipeline by one route or another.

SENATOR RADER: Representative Meekins?

REP. MEEKINS: I don't know exactly where to begin.

SENATOR RADER: Maybe a motion to adjourn. As a matter of fact we should have a recess motion. Let's take a recess here for ten minutes.

(Whereupon the hearing was recessed at 4:00 p.m. and reconvened at 4:15 p.m.)

SENATOR RADER: The Committee will come back to order. During the recess we had several conferences and we

decided that no matter what we did, we would have lots of authority for doing it. So, and that includes nothing, I guess. As I recall, Representative Meekins, you had the floor when we recessed.

REP. MEEKINS: Thank you, Mr. Chairman. I hate to try to characterize what you said, but as I understand it, you say that while it is clear that the El Paso line provides great benefits to the State, that in your view it seems very clear that the contracts that were -- that are the subject of this -- of these committees are irrelevant to the decision upon which -- about which gasline will win final approval and that the actual decision will be made in Canada. If that is the case and if it is as clear to you as it seemed in your presentation, how do you explain the fact that administration experts say the opposite?

DR. TUSSING: Well, I think that may be more your speciality than mine. The purpose of these contracts is essentially an internal Alaska political purpose. Suppose you were the Governor and you had become -- and you were under assault from OMAR and the Anchorage Times and from the Anchorage business community for not having given one hundred percent support to everything that the El Paso enthusiasts wanted. And suppose as Governor you were also convinced by your own investigations that El Paso

had very little chance and you're -- you would probably be concerned that when Arctic Gas got the final nod that these people would point the finger at you and say that it is only because you didn't sell the royalty gas, or its only because you made these noises about Alcan being an acceptable second choice and that you didn't dump all over the Canadians like we wanted to.

Well, it would seem that it would be an astute political move to go ahead and call everybody's bluff. You will recall that the Legislature almost unanimously, under the leadership of Senator Rader, urged the -- in fact, demanded that the administration go ahead and do this. So the Governor now can come back to the Legislature with what I think is really a contract that doesn't mean anything for the --

REP. MEEKINS: Is this the hypothetical Governor?

DR. TUSSING: Yes, this is the hypothetical Governor. He now comes back to the Legislature with this can of worms.

SENATOR RADER: A realistic can of worms, huh?

REP. MEEKINS: And a real Legislature.

DR. TUSSING: And you look at it and you decide there is some problems with it, that the State may give up too much in it and I think that Mr. Moody and Dr. Swanson have some valid criticisms -- technical criticisms of the contract or that maybe you shouldn't have sold all the gas, or a

whole series of reasons. Or, you may not be convinced that you are buying any political influence. But, what happens if you vote it down? And say -- where is the finger going to point when Arctic Gas gets approved? El Paso can say -- pick up its marbles and go home or something like that. It becomes a real psychological blow, at least within Alaska, to the El Paso effort. And, you guys, by voting this thing down bear the onus. You're the ones who defeated the Trans-Alaska Gas Pipeline.

If you pass it, this hypothetical Governor has exercised his leadership over this hypothetical fractious and undisciplined Democratic Legislature and carried the ball for Alaska. And, when and if Arctic gets the approval, he can show that he has done everything he could, and, in fact more than anybody reasonably expected him to do. He has done just what the enthusiasts for El Paso -- what OMAR has been saying he should do all along. They can't fault him on that. He has managed to carry along these legislators who were riding off in every direction. So, that -- that is what I think the fundamental significance of these contracts are and that is why I say I am not sitting in your seat, so I won't -- and I'm probably not the kind of person who could ever get into one of your seats. And so I won't advise you -- I won't advise you of what you are doing.

SENATOR RADER: Representative Meekins still has the floor.

REP. MEEKINS: Mr. Chairman, I just want to thank you for pointing that out. I never would have thought of it. I would also like you to direct him to be more forthright.

SENATOR RADER: Quit beating around the bush, now. Senator Colletta?

SENATOR COLLETTA: Yes. Dr. Tussing, you know that opened an area that, since you are venturing opinions, it seems to me out of the presentation on the political activities rather than the economic ones that affect the line. You missed the first day but the entire congressional delegation, without regard to party, also say that on the national level they want unanimity of support for this line. Now, am I you know -- should I believe from a conclusion of your answer to the last question, that all of us are playing a game and isn't the parallel to this line identical to the oil line that came to Alaska on a one vote measure?

You know, I can't help but infer, at least in my own mind, from what you are saying is that regardless of what we do or the congressional delegation does, not only Alaskans, that this decision will be made by two beings and they don't need us, we're playing the game and I would suggest that is wrong. I take offense to it, because in the oil line there were those people who felt

very strongly that possibly a route other than through Alaska was beneficial and stood up and took the flak. And I would suggest that in this body right here there are those who still have not concluded that maybe the all Alaskan route is the way to go.

I really take great offense that you are lumping us into playing a show, and that isn't true.

DR. TUSSING: Well, let me deal with the first question -- or the second question, and that is the parallel with the Alaska oil pipeline. I don't see a significant parallel. In that case there was only one proposition before the Congress. There were no responsible corporate sponsors for a Trans-Canada pipeline. There was the unanimous support, the State of Alaska, the oil companies and the administration behind that proposal. Yet the opposition to it managed to mobilize something like forty-two votes for a Canadian alternative which didn't exist.

Now, we have an entirely different situation. The momentum and the weight of the responsible corporate sponsorship, the weight of the agency endorsements within the federal government are all with the Trans-Canada system. The momentum is there. When the Trans-Alaska Pipeline bill was before the Congress in 1973 it was right at the height of the Arab embargo and it was the

only thing there that Congress could possibly ratify. And, it -- there is some question of whether it would have gone through without all that -- without all those preconditions. Now the momentum, the establishment, the route to be arctic -- and it's got a far higher -- it starts with a far higher proportion of support, despite the fact that it has got responsible corporate opposition and it has got the State of Alaska and a number of other entities opposed to it. It starts -- Arctic starts stronger in Congress than the Trans-Alaska Pipeline -- oil pipeline ever got in Congress. So, that I don't think it is parallel.

Now, going to the question of the delegation. I hate to -- I'm a little diffident about beating my own drum, but on major national, political questions concerning Alaska, the biggest ones, our delegation, whoever they have been, with perhaps one exception, and our administrations, whoever they have been, have been one hundred percent wrong on these issues and I think that I have got a little better record on that.

Going back, for example, to the question of whether the Secretary of the Interior could or would lift the land freeze and be able to authorize the pipeline without the settlement of Alaska native claims, or to a more fundamental issue, whether there was any legal

merit or political horsepower nationally behind the native claims. That were -- with the exception of the second in which Senator Gravel, when he did come in in 1970, was an advocate of the native claims, our delegation and our State administration dismissed the possibility that this could hold up the pipeline and I was practically stoned out of Anchorage in 1969 when I told the Chamber of Commerce that there couldn't be an oil pipeline for maybe seven years and going through the things that had to be done. Well, this was against the unanimous consensus of our administration and our delegation.

Come again to about 1972, when the question of the destination of the oil and the West Coast supply/demand balance, you had unanimous profession by the industry, by the federal administration, by the State administration and by our delegation that demand on the West Coast would exceed production, combined California and Alaska production, and that the question of exports to Japan was not a real question because there would never be a surplus of oil on the West Coast. And, again, I think that I was probably alone in the State in maintaining that this would be a problem.

Our delegation and most Alaska public officials suffer a disease which is endemic to isolated colonial areas and that is, that it is very easy to believe ones

own propaganda, to have wishful thinking. Now, I can't believe that our delegation really believes that there is a substantial chance that they could get a majority political vote for the Trans-Alaska pipeline.

I do know that it would hurt them very badly politically in Alaska to come in and do the same kind of thing I do, that is, deliver the bad news. Again, I have very little chance of replacing Senator Stevens or Senator Gravel because I do tell the voters and the politicians the bad news rather than the good news. And so, I can't go into their heads and say why is it that they give unanimous support. I just ask you, what would be the political -- what are the political risks to them of saying there is nothing you can do to advance the Trans-Alaska pipeline, better forget it, buddy. You know what would happen to them, regardless of whether that is their best judgment. There is no political to them at all in saying, "Go, man, go. Let's do everything we can for El Paso." So, I don't know what -- you know, I don't know what is in their heads but I don't think that you can really weigh their statements as an accurate objective judgment of what is going to happen in the United States Congress.

SENATOR RADER: Any further questions?

REP. CHATTERTON: Yes.

SENATOR RADER: Mr. Chatterton?

REP. CHATTERTON: Thank you, Mr. Chairman. Dr. Tussing, I am told that there was a recent poll conducted by the Rowan group of public opinion and the findings of that indicated in the order of eighty to eighty five percent of the citizens of Alaska favored an all-Alaska gas line. Are you suggesting in the comments you just made that we who represent those people should subvert their opinions?

DR. TUSSING: Not at all. I'm saying that you -- you as members of the Legislature have to make this judgment for yourself on the basis of the way you judge public opinion and the way you judge whats right and wrong. That is not for me to say. I said I will not recommend the vote one way or another on this.

SENATOR RADER: Representative Gruening?

REP. GRUENING: Well, this may be a clarification of Representative Chatterton's question, but, is public opinion subverted whether we reject or approve these contracts? As I understand it, the question before us is approving these contracts and not necessarily the support or non-support of the El Paso line. In your testimony the two are not necessarily, in terms of actual effect, are not synonymous.

DR. TUSSING: Is that a question?

REP. GRUENING: Yes.

DR. TUSSING: I don't -- I agree with you that the -- that it is possible to be in favor of the Trans-Alaska pipeline and to be against this contract, or say to conclude that this contract doesn't affect the outcome.

SENATOR RADER: Representative Miles was seeking the floor.

REP. MILES: Dr. Tussing, you indicated that there was no support for the El Paso project in its market area, I believe. Am I correct there?

DR. TUSSING: No. I said there is no substantial support in California. I was talking of California's principal market area.

REP. MILES: Just California only?

DR. TUSSING: Yes.

REP. MILES: I see. Well, this is a major market area, I understand.

DR. TUSSING: Yes, California is El Paso's biggest market area.

REP. MILES: Why -- getting off of politics and onto economics for awhile, why would El Paso spend so much money in developing a project if there is no support there? Am I missing something? I obviously am.

DR. TUSSING: Well, again you are asking me to speculate about peoples motives and I can just try to put myself in their place. El Paso, in the first place, wants to

assure its customers that it is doing everything it can to obtain gas and a major campaign to build a pipeline system -- a transportation system from Alaska into their market area is such a gesture and it may earn them some Brownie points even if they -- you know, even if they aren't successful. That is one consideration. Now, El Paso is also getting very heavily involved in LNG technology all over the world and wants opportunities to develop and expand this technology.

Now, whether or not how great a probability of success they have, or they believe they have, I don't know. I think it's probably a good gamble for El Paso to stay in the race in the expect -- on the possibility that Canadians might not come through. That then El Paso is posed with an alternative system.

I would not say surely that the El Paso system will be approved even if the Canadians can't get their act together or if they turn down Arctic and Alcan, but at least El Paso is certainly number one -- number one in the line with this and they would -- if they successfully complete it -- financed it and completed it and operated it, they would add more cash flow to the corporate treasury.

Now, why do they want the gas? Why do they want the royalty gas, because they are in the gas business.

They want gas to flow through their system. They would want the gas to flow through their system regardless of what system were chosen. I'm sure that once -- that if a system other than El Paso was approved, El Paso will be back here at the state trying to buy the royalty gas and will be back trying to buy gas from the producers.

I don't think there is any mystery of what their general motivation to the enterprise is and for risking money for the enterprise. It is a perfectly legitimate kind of corporate venture.

SENATOR RADER: Representative Swanson and then Senator Huber

REP. SWANSON: Yes, I just -- I'll turn the clock back just a couple of minutes and something has disturbed me through all of these hearings, that we are here talking about a gas contract and using data that is two years old. Now I'm one of the people who endorsed a all-Alaska route two -- going on three years ago and we are still using that support in the propaganda used today. We have not passed a resolution since we came to this Legislature endorsing --

SENATOR RADER: Representative, do you have a question of the witness?

REP. SWANSON: Yes. Well, I kind of resented what was said here awhile ago and I feel a little bit like that I have the right at this table or any other table to state

that I don't think that the --

SENATOR RADER: If you feel you have been attacked, you have a right of personal privilege but the purpose of this hearing is to make answer -- ask questions of these witnesses now.

REP. SWANSON: All right.

SENATOR RADER: If you wish to why proceed.

REP. SWANSON: I feel like you do, John. I would like to ask you, in your remarks concerning the support of the El Paso route, do you take of what has happened today or two years ago?

DR. TUSSING: I'm not sure what you are referring to.

REP. SWANSON: Well, in your -- in your statements of the Legislature totally supporting the El Paso route.

DR. TUSSING: Oh, the last session of the Legislature adopted a resolution urging the administration to make a gas sale to El Paso and to other supporters in the Trans-Alaska route.

As far as I know, you are perfectly correct, this Legislature has not adopted any resolution to that effect.

REP. SWANSON: Thank you. Thank you, Mr. Chairman.

SENATOR RADER: Senator Huber?

SENATOR HUBER: Thank you, Mr. Chairman. Mr. Tussing, the Four Dollar price that you mentioned on gas, is it correct

to assume that was an Mcf and that it would compare to Twenty Four Dollar a barrel oil price or Sixty-five to Seventy-five Dollar a ton coal price with eight or nine thousand BTU's assumed?

DR. TUSSING: Well, those -- those are the equivalent prices. I don't want to be pressed to give a specific price because one of my points is that nobody knows what the price is going to be. It is very likely to be much higher than the sponsors of any of these projects are telling us, but whether the overruns are going to be five percent or five hundred percent, we can only speculate and so --

SENATOR HUBER: Would you care to expound on the saleability of Four Dollar gas compared to Twenty-four Dollar oil, at this time?

DR. TUSSING: Thats -- it's a complicated question. The value -- as I said before, the value of gas to the average homeowner or commercial user is roughly the value of fuel oil plus the -- say, some amortization of his cost of conversion if he has to convert from oil to gas, and so, so at the burner tip, gas is on the average worth maybe Two Dollars and Twenty-five, Two Dollars and Fifty Cents a million BTU today.

Now, if we expect the OPEC oil price to go up roughly with inflation, maybe six percent a year.

and so on. We can expect that average value of gas to go up. Now, the gas distributors gather together gas from various sources at various prices and they sell it at an average price. The gas distributors and the pipelines are also required by their franchises or by their licenses to provide this service -- to provide gas to all comers at a cost of service price. And so, if they have a shortage, if their demand is greater than their supply, they're often -- they will be willing to pay more than the gas is actually worth at the burner tip to acquire it and put it in their system.

Otherwise, they have consumers in which they have legal -- to whom they have a legal obligation to serve, who go short. So that for small amounts of gas, at the seasonal peak, or when there is some sort of emergency, the gas distributors may be willing to pay Ten Dollars, may be willing to pay the equivalent of One Hundred Dollar a barrel oil to avoid turning off the valve to their consumers. So -- but you can't take Ten Dollars a thousand cubic feet as the value because you have got to look at the whole cycle. Now, if the gas coming out of the pipeline costs the distributors Six Dollars a million cubic feet and he has got to -- or a thousand cubic feet and he has got to sell it at an average price of say Two Fifty, that means he has got to get a hell of

a lot for it in the peak season. He may have to get Ten Dollars for it at the peak season and then he has got surplus gas, he's paying for the gas that comes through that pipeline in midsummer even though his regular residential customers don't need it. And, in that case, he has got to sell it in competition with coal for a dollar or residual fuel oil for Two Dollars.

So, it's not -- there is no single market value price and to know how much, say six hundred fifty bcf of gas or say one hundred million cubic feet of gas per day is worth to a gas distributor in Chicago or Los Angeles depends upon how short they are, how much they have already cut off their low priority customers, what their other alternative gas supplies are. Do they have a lot of flowing -- of gas flowing under old regulated contracts where they are paying Thirty Cents or Fifty Cents and to be used to subsidize the purchase of expensive gas. You have to look at all of these things and then each distributor figures out what the gas is worth to it and what the cheapest alternative is. If it goes to -- say it goes to Four or Five Dollars, they will look at making synthetic methane from oil which is very expensive for base load supply. It is more than the average consumer will pay but if they are trying to -- if they are just trying to fill a gap, it is a lot less risky to build a

propane air plant or a plant to make methane out of naphtha for Four Dollars an mcf than it is to commit yourself to twenty years of take or pay year in and year out Four Dollar gas from Alaska. So, Four Dollars is cheaper from an SNG -- from an oil SNG plant than it is from a gas pipeline and I just can't give you the answer and say at what point, at what price Alaska gas prices itself out of the market.

The Interior Department's -- the FEA study that says Two Forty -- Two Forty, that's too low in view of their opportunity to roll it in. The El Paso's assertion that the distributors will accept the price no matter how much it costs is pure crazy. There is just no substance for that, there is a limit and I can't tell you -- probably Dr. Swanson's firm has done work in this as to what the long term limit to the city gate price is, but I can't tell you. It is somewhere between Two Forty and infinity. And I don't think its -- I really don't think it's much more than Four or Five Dollars.

DR. SCOTT: Somewhat short. This way from infinity.

SENATOR RADER: Senator Huber?

SENATOR HUBER: Mr. Chairman, the other question I have, I have trouble in phrasing it and I have noticed that you have returned to being a bit on the tough side and I don't think you will give me the latitude that you gave Senator

Colletta, so I'll let it go.

SENATOR RADER: Well, now that we have established that I'm an unfair chairman, are there anymore questions? Mr. Carpenter.

REP. CARPENTER: I'm going to make an extension of Senator Colletta's question. Dr. Tussing, you said that you angered the Chambers of Commerce by saying there was going to be a hiatus in construction of a Trans-Alaska oil pipeline due to land claims and so forth?

DR. TUSSING: Yes.

REP. CARPENTER: Well, refreshing your memory a little bit, you actually angered them because you said there was no political chance of a Trans-Alaska oil pipeline, there was going to be a Trans-Canadian oil pipeline and that is what got everybody on you.

DR. TUSSING: I never said that. Never, never, ever.

REP. CARPENTER: Our memories differ.

SENATOR RADER: Are there any other -- I'd like to ask everybody to keep themselves on the subject of inquiry here. There is opportunity -- there will be opportunity for each of us to express ourselves at a later time as to whether Dr. Tussing's remark characterized a hypothetical or a real governor or legislature or a congressman. We needn't confront him with that today. Our purpose here today is to take his testimony on the subject before us and I

would like to limit the questions to that if we might. Senator Croft?

SENATOR CROFT: Could I interrupt your remarks and ask a question? I am curious what you think the prospects are that any pipeline, Arctic, El Paso, Alcan, or another one if it is proposed, will actually begin construction sometime in 1978. Judge Litt talks about a dollar well-head value being about the upper limit and all of the projections are that these -- each of these projects will have a higher amount than that. You have talked about all events tariffs and types of public financing that haven't even been considered yet. What do you think the prospects are? You have indicated Arctic is likely to be approved, do you think that means that they can actually begin the construction on the time schedule they are talking about?

DR. TUSSING: I don't -- I'm very skeptical as to whether Arctic can be built. I think it can be approved, that's the -- I think it can be approved in the United States and all other things being equal, it will be approved in the United States. It will get the endorsement of the FPC. But, shortly after the FPC decision we'll get the Berger decision, the National Energy Board in Canada will be second phase hearings next month. The NEB -- I don't know what the NEB will do, it will probably hand the hot

potato to the cabinet -- to the Canadian cabinet. But, once the FPC makes its decision and once Berger in effect makes a contradictory decision, what is on the agenda is for negotiations between the United States and Canada as to what can be worked out. And the final decision depends first on those negotiations and second on resolving a lot of questions that involve both government and industry that really haven't been confronted yet. One is the financing question and in what manner shall the respective governments provide the guarantees against the risks in this system and practically any proposal is going to be extremely controversial. Loan guarantees come -- again, raise the question that your socializing the private risk and letting the private owners have the profit, and there is going to be a lot of antagonism in both countries.

You may recall that the Diefenbaker government fell as a result of things resulting from the loan guarantees to the Trans-Canada pipeline. The -- so that -- it's a sensitive issue in Canada.

Another issue that hasn't yet become -- begun to be confronted which is relevant to this royalty gas sale, is how the gas is going to be allocated. If the -- if there is still wellhead price control by the FPC, every gas company in the United States is going to want some of that gas and no company can offer the producers or

the State of Alaska more favorable economic terms than any other company. So, there is going to be a lot more -- there is going to be a lot more demand for that gas than there is supply, assuming that some sort of viable pipeline system is hooked up.

The FPC is going to have to decide whose contracts are going to be approved. And even though there is no -- there is no current legal authority for the FPC to allocate gas and -- at least in non-emergency times among pipelines the way it can allocate today and say -- say to Columbia, "you know, Tenneco needs the gas more than you do, so we will turn down the Columbia contract in the -- the proposed contract with Columbia in the public interest because this other system is cut -- it's jeopardizing its number one and number two priority customers while you're still serving threes and fours." So, the FPC is going to decide who gets the gas. That is one of the reasons the producers aren't going out of their way to sign contracts, because -- you know, why should they choose one over another? They are not going to get any price advantage and the contracts -- a lot of them will probably be turned down anyway because the FPC wants somebody else to have the gas. Well, that hasn't yet been dealt with and if gas contracts are going to be used to finance the pipeline, then these have to be executed

before a final financial plan goes together. So, in summary, I don't see much chance for construction in -- beginning in '78 unless the U.S. and Canadian governments bite the bullet and say, "we will provide the interim financing and we'll guarantee the thing until you put the final -- until all the final arrangments are made." And I really don't see -- I don't see that. Maybe next winter, if the questions before Congress and the Parliament, and we have got another cold spell like this years, they'll be willing to do it. They may send the Corps of Engineers out to build the thing for all I know but -- but, I don't see it starting in '78.

SENATOR RADER: Senator Croft, were you through?

SENATOR CROFT: No, I have another question. To what extent do you feel that the assumption of the amount of gas that is available on the reserves in the Arctic, Prudhoe Bay, as well as the Mackenzie is an unrealistically high assumption? Both El Paso and Arctic are big volume lines. To what extent do you think their estimates of their potential build up of throughput are realistic or unrealistic?

DR. TUSSING: Well, if by the time -- by the time the system is completed, I think there is a good chance that there will be a lot more gas than we know about now. That isn't enough to get -- to get the kind of debt financing I'm

talking to. A good chance isn't enough. A good chance is enough to make a risk venture, but if you are risking your own money and you say "I think there is going to be plenty of gas there that we'll be -- that by the time the thing goes on stream we would be able to produce four and one-half bcf from those two areas and that's -- that's the way to average expectation and I'm willing to gamble my money on that." That's fine, but the bond -- the bond-holders want a ninety-nine percent assurance.

I think that there is merit to the notion that society, that is, that the U.S. and Canadian governments should take the risk and build a pipeline that is cheap to expand. Now, if the governments are not going to do it then the -- then the rationale -- the strategy of Alcan is the only one that makes sense. You put in absolutely minimum capital investment necessary to start that gas and that cash flowing. I think that they have -- that the Alcan people haven't scaled down their system as far as they could. That, for example, they could drop Northern Border out of the system and say, "we're going to -- we expect the NEB to authorize or compel Trans-Canada to move this east and then we'll take it through a Great Lakes pipeline and we'll increase the power or whatever is necessary there."

I think -- now, Judge Litt wants a western leg on

the Arctic pipeline and all the Western States want it because they don't believe that they will get the gas under reasonable prices by displacement. Well, the western leg is physically superfluous, at least up to, say one and one-half bcf going to -- going to western systems. Well, so -- so, as part of the political compromise you put the western leg into the system but you don't build it until after the gas starts flowing and the production builds up.

So, but if -- but if Canada and the United States are willing to bite the bullet and say, "our best geological assessment is that there is sixty or one hundred tcf up there which can be discovered within the next ten years, then let's go haul the hog, let's put in a high capacity pipeline. Let's put a MacKenzie link, whether it is on the Dempster Highway or the foothills or whatever, as part of the phase two and build the thing so it is compatible with the Mackenzie link and so on."

SENATOR CROFT: What you are saying is that a sale of the gas will not have any effect on the route decision. What I was really getting at to get you to comment on, do you feel a -- (a) a refusal to sell any gas or (b) a refusal to allow production of gas might influence a route decision?

DR. TUSSING: No. There is no credibility to such a threat by Alaska because once the decision is made, the State's

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got no -- the State's got no alternatives and all you do by not allowing the gas to be produced -- you may cause problems for oil production which causes the State a lot of problems and you forego the revenue. And, I just can't believe the State is stupid and spiteful enough to refuse to produce the gas just because the rest of the country didn't do -- didn't build the route the State wanted. It just doesn't make sense. And so that threat has absolutely no credibility. In the calculation of rates of return or costs assuming only seven-eighths of the production are just meaningless, you are just not going to do that and nobody will believe that you'll do that.

SENATOR CROFT: What about the holding down the rate of production?

DR. TUSSING: Well, there are some difficult -- there are some difficult problems. Suppose your reservior engineering studies show that the optimum rate of production is 1.6 bcf below -- is below the economic threshold of any pipeline system but that you -- but you do run into trouble by keeping injecting that gas and you're not going to flare it. You have some tough -- you have got some tough problems and I don't have an answer to that and let's hope we don't have to face that one. But, it is entirely plausible that you may have the level of production large enough to give you problems as to what to do with the gas,

but not large enough to make any transportation system viable. And, of course in the past what was done in that sort of situation is what is being done is Saudi Arabia and Venezuela and the other big isolated fields in the world, they just burn the stuff.

SENATOR CROFT: Mr. Chairman. If a one in ten chance which you referred to earlier is sufficient to keep investors from backing any gas line, isn't the uncertainty about levels of production such that it might -- that itself might cause a delay in the pipeline?

DR. TUSSING: Yes, I think so. The --

SENATOR CROFT: Particularly when it is coupled with the possible decision by the U.S. Government on deregulation which may make Alaska gas -- not only might they face a lower volume of Alaska gas but a less valuable Alaska gas, if you couple the two together.

DR. TUSSING: Yes, all of these are just parts of a big package of uncertainties that are going to cause difficulties for any of these proposals.

SENATOR CROFT: Thank you.

SENATOR RADER: Representative Gruening?

REP. GRUENING: Dr. Tussing, as I understand what you said earlier was that the Canadian government was going to make the choice as to whether it was for either Alcan or Arctic. How is the President going to feel comfortable

with making a decision, certifying a route without that stage in the negotiations being very certain? Are they going to amend the Alaska Natural Gas Transportation Act so he has more time? In other words, he has until July -- or September first and then ninety days if he wants to extend it. Is he going to feel comfortable with making that kind of decision without those things resolved?

DR. TUSSING: I think what he is going to do is as soon as the FPC decision comes down, and it may be happening right now, he is going to start talking with responsible Canadian authorities about -- oh, to what -- what kind of compatible decision we can come out with. And, I don't think that the Canadian authorities know what their political constraints are yet, until Berger has actually published his findings and there has been the -- a chance for a discussion of it and for the bureaucracy -- for them to read the FPC decision in the United States.

But, if the President makes the decision, say at the end of '77, you can count on its reflecting his discussions with the Canadians and he is not going to make a decision which is totally incompatible with what he thinks the Canadians are going to do. And both countries are going to bend over backwards not to appear to be forcing the hand of the other and to be blackmailing the other that there -- or leapfrogging or something like

that. They're going to try to make it -- they're going to try to come out with compatible decisions, whatever the --

REP. GRUENING: You seem to raise the same arguments that the El Paso people raise in terms of the unsolvable Canadian questions and I think, you know, the same statements seem to be made in terms of the problems. Now, are those problems going to be resolved to the extent that the President can make a decision certifying say a Canadian route and not -- coming back at a later time and say, "I'm sorry, we can't -- the Canadians just decided that they can't go either route, we're going to have to go to an El Paso --"

DR. TUSSING: Well, the law says that he has to make the decision whether or not Canada has -- he has to make a decision on its merits whether or not Canada has made a decision. And, irrespective of what the process in Canada is, in reality it's going to be a joint decision once the -- once the thing has gone through the regulatory and hearing phases of it and I don't know the exact mechanism by which the United States and Canada will consult on this. I'm sure no mechanism has been set up. But, it's not an insoluble problem, it's a problem whose answer -- whose outcome is impossible to predict with competence now. I don't think anybody can come out with

a solid prediction of what will happen in Canada, much less -- I'm as willing to do it as any Canadian. There is no authoritative -- there is nobody who has the authoritative position in Canada to say what Canada's position is on this. But, Canada will have a position of some sort and it will influence the President's decision.

I think that the -- that there is a good chance that the compromise between the FPC's decision in favor of Arctic and Justice Berger's decision against Arctic will be some kind of expanded Alcan system. That is my guess, but I wouldn't give it more than a fifty percent probability. One substantial possibility is that Canada will not authorize any pipeline or will postpone it till after the elections and the President may decide that we have to go ahead with our own system because of our internal needs, even though it's not -- even though it is the second best. So, my ability to forecast or prophecise is strictly limited on that.

SENATOR RADER: Representative Meekins?

REP. MEEKINS: Thank you, Mr. Chairman. Dr. Tussing, you stated in your comments that this contract, in your view, was not essential, that we weren't -- essentially that you weren't getting very much in the contract but looking at it from the other perspective, what are we losing, if anything? Are we losing anything by approving it?

DR. TUSSING: Well, it is -- it is conceivable that the Trans-Alaska route, or for that matter an Alcan route, after the State shifts to it, if it does, will be approved and that these contracts will be the basis of contracts under which gas actually flows.

I'm rather doubtful, even in this situation, whether the FPC will approve just these contracts for a number of reasons. But -- but it's possible you may be stuck with these terms and they are probably not -- not the best terms you could get in a bidding situation after the -- after the pipeline is -- route is clear. Certainly there may be opportunities in a deregulated situation to get a more favorable situation. I don't want -- I don't want to speculate too far on that, but your other consultants who have examined the contracts in detail point out ways in which the State has given up options. So -- So, in case they go into effect you have given it up. I do have one specific criticism of the contracts even starting -- even from the presumption -- the premises from which the administration is starting, that is, that you are going to buy some political support.

And, I don't know why you had to commit one hundred percent of the gas and I think there is some -- there are a couple reasons why you probably shouldn't commit one hundred percent of the gas. Firstly, you have this most

favored nation clause, that is, that the price is the highest price paid by any interstate purchaser. Now, it may well be possible for the State, if it kept some -- held some gas back to find a purchaser who would pay a higher price than any of the others and jack up the fate. If it kept some -- twenty-five percent out and waited until -- waited until the bidding process at the time of the completion of the pipeline, you might be able to get a higher price than any of the sales from the -- by the operators because the State might be in a position to sell to a nonjurisdictional purchaser, or to one that has a special tax advantage, like a state entity.

And, I would like to see you have the opportunity to use that twenty-five percent to jack up the price on the remaining seventy-five. Then the other is -- in the administration's presentation and within the whole rationale for the thing, there seems to be a high probability of a shift in route -- of a shift to Alcan, for example. And, if that is serious, if that is not just window dressing, then it would seem to me you would want to keep twenty-five percent out to -- and to offer it to Northwest at that time that the State moves to the Northwest position. Otherwise, the option of shifting doesn't seem terribly great. So, even if I were -- even if I accepted all the other premises, I don't see the reason for selling more

than three-quarters of the gas at this time.

SENATOR RADER: Representative Meekins?

REP. MEEKINS: Do you happen to know if that -- if the most favored nation provision, as you call it, in there would apply to sales to users? I'm not sure it would.

DR. TUSSING: I don't have it in front of me but if I recall the language, it's in any interstate sale. It doesn't -- or any interstate purchase and so it doesn't characterize the purchaser. It would seem to me it would -- frankly, I don't see why in a deregulated situation it should be limited to interstate sales since -- since, if the gas is worth Two Dollars in-state, to an in-state purchaser, you shouldn't sell it for One Dollar to an out-of-state purchaser.

But, as Mr. Moody says in his prepared statement, it may not be that you can get any contract which includes a -- you know, includes that -- all these provisions. That's a matter of judgment that is up to the negotiator, he really has --

REP. MEEKINS: Well, I'm trying to find out if there is anything we are really losing, in your view, in approving this contract. You know, we've heard that that -- that problem that you point out that we may be losing a higher price by not having reserved the twenty-five percent so we can jack up the most favored nation provision in there.

That might not be a realistic concern because the FPC wouldn't approve of such a contract anyway in their regulation of the transportation of such gas.

DR. TUSSING: Well, no. That's a -- that's one that depends on the -- it's conditional on deregulation. So, it wouldn't require an FPC approval. The FPC will continue to regulate the transportation and the transportation costs but if that's a feature of the wellhead price, conceivably the FPC could reject the whole contract on the grounds the pricing provisions are not in the public interest but I don't see that as a problem. I just -- let's say what you are giving up are the shortcomings identified by Mr. Swanson and Mr. Moody, as far as I can tell. That is, that there -- that you are giving up options or some possible options for getting a higher price by leaving the gas off the market until you see -- until all the circumstances are sorted out. You know -- for example, the amount the gas is worth to a particular gas distributor does depend on the transportation system. Now, the hierarchy -- the ranking and the order of preference of the different potential customers would change. For an Alcan system probably -- probably Northwest would be your preferred customer in a deregulated situation because the value of gas in its market is essentially the same as it is anywhere else in the country but it is

closer, so you have the lowest transportation costs. And, under the LNG system you would probably -- conceivably El Paso would be willing to bid the highest for two reasons. First, because it would be the point of off loading and be closest, and second, because they are quality problems. California probably has the highest premium but as you know, of course PG & E, which is one of El Paso's customers, is part of the Arctic group and would like to bring the stuff overland to California. Now I don't know how much PG & E would give.

REP. MEEKINS: Thank you.

SENATOR RADER: Mr. Chatterton?

REP. CHATTERTON: Mr. Chairman, Dr. Tussing, this is in effect the same question as Mr. Meekins -- Representative Meekins asked and I am going to ask it so I think that we can not be confused by rhetoric about pipeline routes and stay with just one subject, the contract, and I think you can answer it with a "yes" or "no". My question, do you believe that this legislature in approving these three gas sales contracts would be doing the people of Alaska a disservice?

DR. TUSSING: I can't answer that. That's a political question that really goes beyond my competence.

SENATOR RADER: Any further questions? We'll adjourn and subject to an adjournment by the House and Senate

tomorrow morning we will reconvene at 11:00 a.m.

We'll start with the Alcan people and go from Alcan to Arctic Gas and then probably through our consultants and then into the general public testimony.

We stand adjourned.

(Whereupon the hearing was adjourned at 5:15 p.m.)

Perspectives

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AN INKLING OF THE LONG JOURNEY

Arlon R. Tussing

There are, I believe, serious questions about the viability of the transportation systems proposed by both the Arctic Gas consortium and the El Paso Company for taking Alaska natural gas to U.S. markets. An investigation I conducted in 1975 on the economics of the two proposals for the State of Alaska raised the possibility that the cost of delivering the gas might actually exceed its value to consumers. At best, it appears that both projects, as proposed by their sponsors, are so risky that it may not be possible to finance them privately, even if their political and regulatory problems can be overcome — itself a questionable issue.

Both U.S. projects face the following risks:

Gas supplies: Production from the Alaska North Slope, and in the case of the Arctic Gas proposal, from the Mackenzie Delta, may be substantially less than the design capacity of either transportation system, meaning that each unit actually carried would have to bear a larger portion of the system's fixed costs than projected by its sponsors.

Delays and capital cost overruns: Actual construction costs may exceed estimated costs by substantially more than the effect of general inflation. The Arctic Gas project involves construction and operating technology untested in North America, while its route traverses hundreds of miles of difficult Arctic terrain where there has been no previous construction of either pipelines or roads. El Paso proposes a system of unprecedented pipeline pressures and a huge scale-up of existing liquified natural gas (LNG) technology. New technology, unfamiliar environments, and a large scale — relative to previous projects, are exactly the ingredients of the most spectacular cost overruns. Arctic Gas, for example, envisions a system from Alaska, across Canada, and into the Lower 48 States with an estimated cost in 1975 dollars of about 8½ billion. I would not be surprised to see the total cost of either project exceed $20 billion, including interest on funds used during construction.

Experience in North America with big, custom-engineered construction projects has been that they normally cost two or three times their original projections, even including an allowance for inflation. Cost estimators are like accountants in that they prefer a solid, empirically based figure to a realistic figure. They do attempt to project the increase in anticipated labour rates and in the prices of specific materials but they don't take into account the fact that huge projects, particularly if they involve new technology or a remote construction site, usually don't work the first time around, nor that both the purchaser and the licensing authorities change their minds several times in the course of planning and construction. The cost engineers don't appreciate that

"It's new, man—it's bound to have a few little bugs."

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such projects are usually clumsily managed and subject to a number of re-organizations during their design and construction. They don't allow for the fact that materials and equipment are always late and often mis-specified or defective, or that enterprises of this sort suffer not normal, but abnormal labour cost increases. Because of their size and urgency, they are especially vulnerable to wage pressure, even more so to featherbedding, and often to racketeering.

The Alaska oil pipeline was initially estimated at something less than one billion dollars in 1969. It will finally come in at a cost between eight and ten billion. This particular project is an especially horrible example because it has suffered from each of the diseases I mentioned. But it isn't unique. Nuclear generating plants in the United States have been coming in at four to five times their projected cost per online kilowatt.

On this basis the cost of the Arctic Gas project *could* easily become twenty billion dollars. Let's assume it *will* cost twenty billion and also that the project is to be paid for in 20 years, that is, a five percent amortization. Let's also assume that the investors should receive a 15 percent pre-tax rate of return on total assets.* Under a conventional utility accounting scheme, the project would need a first year cash flow of four billion dollars just to cover its fixed costs. On a discounted cash flow basis the annual fixed charge would be about $3.2 billion.

With a throughput of something like a trillion cubic feet per year, we are talking of $3.20 to $4.00 per thousand cubic feet (mcf) for the capital plant just to get the gas into the existing distribution systems in the Lower 48 states and eastern Canada. If less gas can be delivered, as is likely, the cost would be even higher. This charge doesn't include the cost of developing the gas fields, any return to the producers, royalties, operating costs or costs of distribution.

Market: Both El Paso and Arctic Gas insist that the natural gas shortage in the United States is an absolute one, and that Lower 48 markets will accept North Slope natural gas at any price. Not everyone agrees; the Federal Energy Administration, for example, estimates that no market for Prudhoe Bay gas would exist in 1985 at a "city gate" price exceeding $2.40 per million BTU (in 1975 dollars). The Interior Department's study reaches a similar conclusion. This price could easily be exceeded even *without* implausibly large cost overruns or shortfalls in gas supplies to the system.

*Based, for example, on 75 percent debt at an average interest rate of 10 percent, a 15 percent after tax return on equity and a 50 percent average tax rate on profits.

Experience in North America with big, custom-engineered construction projects has been that they normally cost two or three times their original projections, even including an allowance for inflation. New technology, unfamiliar environments, and a large scale — relative to previous projects, are the ingredients of the most spectacular cost overruns.

One assumption of the studies mentioned here is that natural gas field prices are free of Federal Power Commission (FPC) controls, and that the Alaskan gas is priced incrementally. Even relaxing these assumptions, however, it is not at all clear how much customers would be willing to pay on a year-round basis for the quantity of gas that would be carried by this system. The gas delivered through such a pipeline would be a base load supply delivered into southern distribution systems which have typical load factors in their premium markets of less than 40 percent. The seasonal swing in residential and commercial demand is one reason why about half the natural gas produced in the United States is now being burned as a boiler fuel. Some of the gas from the Arctic would have to be "dumped" in the boiler fuel market in competition with heavy fuel oil at an equivalent of about $2.00 or coal at about $1.00. The cost of Arctic gas delivered into the distribution system for premium customers could therefore reach $5.00, $6.00 or even more, per million BTU. Six dollar gas is about equivalent to oil at $30.00 per barrel. It would seem on its surface that there ought to be some question about the economic wisdom of such a project.

Political, regulatory and other institutional issues: Each project would face serious political and legal obstacles, even *after* it received a certificate from the Federal Power Commission. Lack of co-ordination in U.S. and Canadian approvals, for example, could block or delay construction of the Arctic Gas system, while there is some chance that resistance in California to port and terminal facilities would jeopardize completion of the El Paso system. The Arctic Gas system is, significantly, opposed by the governments and the preponderance of public opinion in both Alaska and Alberta, and the El Paso system is widely opposed within the state of California, where the liquified natural gas would be landed. The major environmental organizations are hostile to both projects. Neither they nor various local interest groups are likely to abandon every attempt to obstruct or delay construction simply because the system has been sanctioned by the Federal Power Commission.

Financing problems: The financial consequences of the risks I have listed are magnified by the fact that neither project can be built in smaller self-sustaining stages. Either would be a large integrated system which could not carry any gas or produce any cash flow until it was completed. Most of the capital invested ($10 to $20 billion or more) would therefore be exposed to these risk factors for at least the entire planning and construction period.

Private leaders simply will not accept risks of this sort, and neither project's sponsors are financially large enough to carry them, even if they were willing to do so. They do not in fact seem to be willing, as they both propose tariff conditions which would protect their own profits as well as their debt service obligations against "all events". Only the federal governments and/or, perhaps, potential gas consumers are in a position to carry financial risks of the size associated with either of the systems.

Accordingly, El Paso proposes to use federal loan guarantees (under an existing programme) for its LNG tankers, and spokesmen for Arctic Gas have suggested that governments indemnify the sponsors against cost overruns exceeding 40 percent (nearly certain, in my judgement). But, more importantly, each applicant proposes to rely on "full cost of service all-events tariffs" to cover their debt service obligations and to ensure a return on their equity. These tariffs provide, in brief, that consumers are required to pay the debt service and operating costs of the transportation system (plus a profit to the owners) no matter how great these costs are and whether or not the customers receive any gas. Arctic Gas's tariff would begin to run as soon as gas was first delivered; El Paso's would begin 60 months after approval of its project, even if it were never completed.

The proposition that consumers should bear or share in the risks associated with a project which benefits them is not in itself unreasonable, provided that the economic expectations of the project are clearly favourable and the risks are of a reasonable magnitude. But with these projects there are good reasons for doubt on both scores. Moreover, even if the Federal Power Commission were to approve "all-events" tariffs, local gas distributors would not

sign contracts containing such tariffs unless they were assured *in advance* by their state regulatory commissions (as well as by their own market analyses) that they would be able to pass these charges through to their own customers. Responses by the state commissions to Federal Power Commission enquiries suggest that there is almost no chance that they would give such advance approval.

These considerations lead inexorably to the conclusion that neither system can be built in the form proposed by their sponsors without either substantial federal financial backing, Federal Power Commission authority to preempt the jurisdiction of state utility commissions over the tariffs of local distributors, or both. No plausible proposals of either sort have yet been made, either by the applicants or by any of the responsible federal agencies.

Perhaps the most chilling prospect is that the Federal Power Commission (and the National Energy Board, in the case of the Arctic Gas project) would license one of the projects on the basis of conventionally estimated costs. The Commission would permit the transmission companies to begin collecting interest on construction debt before the project goes on line, and on that assurance the capital market would provide the sponsors with three or four billion dollars for engineering studies, site preparation and materials acquisition.

At the completion of this first phase, the sponsors will try to borrow the money for actual construction. At this time the cost estimators will have brought the figure up to $13 or $14 billion or more. After some point even all-events tariffs would not assure debt repayment, so that the money just won't be there to finish the system.

But a commitment would have been made. The transmission companies and their customers will come to Congress (and the Canadian government) with figures that show the present benefits will still exceed the present costs, because sunk costs don't matter (except to the investors). They'll talk about the pressing need of consumers who don't have any alternative in sight (because they have been counting on Arctic gas), they'll talk about energy self-sufficiency, and they'll talk employment and the balance of payments. If Congress and the Canadian Parliament have any inkling now about the long journey on which they are about to embark, they may hesitate.

In summary, there seem to be two problems that work together to make questionable the completion of either project as proposed: each of them requires too large an initial capital, and that capital would be exposed to too many large risks. Once these are recognized as the critical problems to be overcome, it is obviously worthwhile to investigate whether there might not be some alternative system (or modification of one of the applicant's systems) which could begin with a smaller investment and perhaps be expanded in stages after gas and income begin to flow, a system with a smaller potential for cost overruns, and one which would raise less opposition on environmental, development or economic nationalist grounds.

The proposition that consumers should bear or share in the risks associated with a project which benefits them is not in itself unreasonable, provided that the economic expectations of the project are clearly favourable and the risks are of a reasonable magnitude. But with these projects there are good reasons for doubt on both scores.

The Fairbanks-Alcan route: One system which seems to have the possibility of meeting some of the criteria mentioned here would be an overland natural gas pipeline along the general route of the Trans-Alaska oil pipeline to a point about 100 miles south of Fairbanks, and along the general route of the Alaska Highway into northern British Columbia or Alberta. Such a route has been suggested as an alternative for the Arctic Gas system by various parties, including the FPC environmental staff.* Simply as an optional way of completing the Arctic Gas proposal, however, the Alaska Highway route would result in higher costs, because an additional separate pipeline leg would be required to bring the Mackenzie Delta gas reserves to market.

Use of the Alaska Highway routing would at first seem to have only two advantages over the system proposed by Arctic Gas: a reduction of the likelihood of major cost overruns because the new system would follow existing transportation corridors, where construction conditions are less extreme and better known, and less intense environmental opposition because this route has far fewer river crossings, would not invade the Arctic Wildlife Range, and follows a corridor already affected by development.

Coupled with two other changes relative to the Arctic Gas proposal, however, an Alaska Highway system would appear to be considerably cheaper in initial capital outlay, and still competitive or even superior in terms of expected transportation tariffs for Prudhoe Bay gas. The first of these two variations is to use, as much as is practical, conventional technology and existing transportation facilities in the United States and Canada. The second is to postpone construction of a transportation system to serve the Mackenzie reserves.

Northwest Pipeline Company, a U.S. company, together with three Canadian companies, Westcoast Transmission, Alberta Gas Trunk (AGTL), and Foothills Pipeline Co. (a joint venture of the other two) has formally proposed to build a system from Prudhoe Bay along the oil pipeline route to Fairbanks, then following the Alaska Highway to Fort Nelson, British Columbia and Zama Lake, Alberta, where the gas would enter existing Canadian transmission facilities. These facilities would be expanded where necessary to accommodate the increased volumes.

The pipeline concept proposed by Northwest and its Canadian partners would have several technical and financial advantages over the other two systems. It uses a 42-inch pipe, conventional technology, a corridor where there has already been highway and/or pipeline construction, and maximum employment of existing facilities. By virtue of these changes, the initial capital cost outlay before any gas or cash could begin to flow might be held considerably lower than the cost officially anticipated for the Arctic Gas system. The likelihood of large cost overruns, as well, would be much reduced by these features. Whereas ultimately, higher volumes would be required to cover the investment, the system could begin to operate with a flow of as little as a billion cubic feet per day. And, in my judgement, the political and regulatory barriers to an Alaska Highway system would be far less formidable than for either of the other two systems.

The system proposed by Northwest, Foothills, *et al*, may not yet be the cheapest way of moving Alaska gas to the United States Midwest and East. The Alcan proposal presented to the FPC and NEB still includes the 1117 mile Northern Border pipeline, which is part of the Arctic Gas system. The sys-

*In September 1976 the FPC staff issued an Alcan system supplement to the Final Environmental Impact Statement on Alaska natural gas transportation systems. This supplement urges that none of the proposals be approved as proposed. It concludes that the Arctic gas proposal would be environmentally superior to other alternatives if the leg to the Western United States were dropped (and that area were served with Alaska gas by displacement) and the "Fairbanks Corridor" (Alcan Highway) route were adopted. The FPC staff did not endorse the Alcan proposal of Northwest and Foothills "because it lacks the necessary expansion flexibility."

AGO 799769

tem with the lowest initial capital cost, however, seems to be one which would expand the Trans-Canada pipeline and the Great Lakes pipeline, instead of building an entirely new line across the Prairies. Both the U.S. and Canadian partners in the Alcan project understand the advantages of maximizing the use of existing facilities, and I can only speculate on the reason for retaining Northern Border. The Trans-Canada Pipeline Company, which is part of the Canadian Arctic Gas group, may be unwilling to co-operate with a rival proposal at this time, although there is no reason to suppose that Trans-Canada's facilities would not be available to move Alaska gas if the Arctic Gas proposal were to be rejected by the National Energy Board.

There is good reason to believe that the announcement by Northwest makes the State of Alaska's commitment to support El Paso obsolete, and that this support may deteriorate rapidly. The Northwest project would avoid most of the state's environmental objections to the Arctic Gas system, it also makes gas available in the Fairbanks area and involves almost as much pipeline construction within the state as would the El Paso system. Because it does not involve an LNG terminal, however, the boom resulting from building a pipeline along the Alaska Highway would be substantially smaller than the boom that would be generated by the El Paso project.

Alaska and the Alcan proposal: According to preliminary estimates from the University of Alaska's Man in the Arctic Program, construction of the Arctic Gas system would add $19 million to the state's gross product and three thousand persons to the state's population in the peak year of construction. The El Paso system would increase gross product by $235 million and population by 24 thousand, while the Alaska Highway pipeline routing would increase Alaska's gross product by $111 million and population by 15 thousand. These calculations do not take account of the fact that Haines and Skagway would undoubtedly be major ports of entry for materials and equipment destined for construction activities in Yukon Territory.

For these reasons, the Northwest proposal seems at the very worst to be a workable compromise that would be acceptable to almost every important Alaskan interest group. The newly proposed system may, however, be more attractive to Alaskans than as just a fallback position or a workable compromise. Northwest Pipeline's approach to the state contrasts sharply with the "take it or leave it" stance of both of the original applicants. Northwest has at least informally suggested that the state take an equity share in the pipeline system and take part in its planning and operation. The company also has approached, or plans to approach, Alaska-based corporations for participation, including the Inuit-owned Arctic Slope Regional Corporation and the Athabascan-owned Doyon, Ltd., and has suggested that a block of shares in the enterprise be offered to the general public in Alaska. The effect of these innovations would be to ensure that the system within Alaska would be closely identified with local interests and be responsive to them.

Regional interests outside of Alaska: The Alaska Highway pipeline proposal offers significant advantages over the two other proposed systems to a wide variety of regional and sectoral interests outside of Alaska.

British Columbia

For British Columbia, introduction of Prudhoe Bay gas will more fully utilize the existing facilities of Westcoast Transmission, and thereby reduce the cost of British Columbia gas delivered to consumers in the province. Construction of the pipeline would provide a stimulus to the development of northern British Columbia and Yukon Territory and strengthen the territory's links with market and financial centres in British Columbia. The proposal is now being discussed in the province as a possible justification for extending the British Columbia Railway to Whitehorse and eventually to Fairbanks. For these reasons, the provincial government has endorsed, and is reportedly considering joining in the pipeline project, perhaps as an equity participant.

Alberta

The project could be supported by the crucially important Province of Alberta (which now opposes the Arctic Gas application) because it would contribute to the optimum use of Alberta's own gas transmission system, rather than establishing a competing trunkline through the province. Unlike Arctic Gas, moreover, the new system would not in the immediate future compete with, and require the shutting in of, Alberta gas now dedicated to markets in eastern Canada.

Canada

For Canada as a whole, the Alaska Highway proposal would postpone the necessity of deciding when, how and by whom the Mackenzie Delta — Beaufort Sea region was to be developed, and whether that region or the Arctic Islands should take first priority for development among Canadian frontier regions. By reducing the total amount of new construction and shifting a substantial part of the construction out of Canada and into Alaska, the Alaska Highway system would reduce the stress on Canadian capital and labour markets and on the nation's foreign exchange position.

Pacific Northwest

The system proposed by Northwest Pipeline is by far the most economical method of moving North Slope gas into the Pacific Northwest, and it is for that reason supported by the gas distributors of the region. In contrast to the Arctic Gas proposal (which is a second-best gas supply alternative for the Northwestern states), construction of an Alaska Highway system would rely mainly on Seattle-Tacoma and other ports in the region as supply and transportation bases for the northern half. The Alaska Highway route would not make as large a contribution to Port of Seattle activity and revenues as would El Paso's LNG project but the latter is not in my judgement likely to prevail, and the Alaska Highway system therefore offers maritime interests and construction in the Northwest the greatest volume of business they are actually likely to obtain from any Alaska gas transportation system.

California

For California, the Alaska Highway system offers a comparatively economic and (because it utilizes conventional technology) reliable source of incremental gas supply. Unlike the El Paso project it would not raise novel safety issues nor would it threaten to displace California's present low price gas from the Permian Basin in favour of high price LNG imports from Alaska.

Midwest & East

For the United States' Midwest and East, the Alaska Highway project (like the Arctic Gas project) would provide an assured supply of natural gas directly into the market areas where the shortages are most acute. Because of its smaller risk of construction delays and cost overruns, however, the Alaska Highway system should, on balance, be preferable. By preserving Canada's option to develop the Arctic Islands and the Polar Gas pipeline earlier than the Mackenzie Delta and Beaufort Sea, the Alaska Highway proposal may offer a better possibility (however remote) of increasing producible and transportable Canadian reserves to such a quantity that the Canadian government would be willing to consider new export commitments.

There cannot help but be some losers. First, of course, are those gas transmission companies whose projects would be turned down and the construction and service firms who hoped to build a bigger system or a different system from the one which is finally approved. There is Exxon, whose affiliate Imperial Oil is part of the Canadian Arctic Gas group, and other producers with interests in the Mackenzie, who would be deprived of an early hookup to their Arctic reserves, however superfluous that hookup may be at the present time from the standpoint of Canada's energy economy. Finally, there are those who would expect to build and operate the LNG tankers if the El Paso project prevailed, together with those (in the Port of Seattle, for example) who hope for a larger demand for their transportation and other services than an Alaska Highway project can generate.

For Canada as a whole, the Alaska Highway proposal would postpone the necessity of deciding when, how and by whom the Mackenzie Delta-Beaufort Sea region was to be developed, and whether that region or the Arctic Islands should take first priority for development among Canadian frontier regions.

On balance, however, if we take into account the lower front-end cost, the smaller vulnerability to cost overruns, and the widely agreed-upon environmental advantages of the Alaska Highway route, a system similar to that proposed for the Alcan may be the best practical alternative for almost every region in both Canada and the United States. Together with its broad acceptability to Alaskans these considerations make a system like that proposed by Northwest and Foothills a possible winner despite its late entry into the competition.

Arlon R. Tussing
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Arlon R. Tussing is a professor of economics at the University of Alaska. He has done extensive research and writing on northern oil and gas development and has served as chief economist for the U.S. Senate's National Fuels and Energy Policy Study, headed by Senator Jackson. He is currently completing a term on Alaska's Royalty Oil and Gas Development Board.

What's in it for Canada?

The probable reception of any Alcan proposal by Canadian authorities has been a most difficult issue to forecast. A major appeal of the Arctic Gas project is purportedly its early (if not necessarily more economical) attachment to the Mackenzie reserves. Without this feature, it may be asked, what is the advantage to Canada of accommodating the United States in moving Alaska gas?

The attachment of the Mackenzie reserves may, on the other hand, be seen as a major *disadvantage* of the Arctic Gas system, from at least one Canadian standpoint. There is no particular reason why Canada should *not* accommodate the United States with a transit line across Canadian territory, after all, a substantial portion of Canada's oil and gas supplies transits the United States. There would seem to be little objection in Canada on nationalistic grounds to American gas moving in either an American or a Canadian-owned pipeline across Canada. The Mackenzie project, in contrast, raises the issue of an American-dominated consortium developing an important frontier area of Canada. The fact that an early Mackenzie connection is being justified in the United States by the (doubtful) proposition that it would lead to greater Canadian exports to the United States aggravates its potential difficulties in Canada. Both its timetable and logistics would be dictated by the convenience of the American interests. The native claims and environmental complications of this route are also well known.

If Congress and the Canadian Parliament have any inkling now about the long journey on which they are about to embark, they may hesitate.

The 60 trillion cubic feet of proved reserves in the western provinces are enough to sustain the expected growth of Canadian demand plus present export contracts for about ten years. This would be the case even if there were no further discoveries, but recent exploratory results in Alberta have been rather encouraging, more so in fact than in the delta area. For this reason a decision on an Arctic pipeline carries much less urgency for Canada than it does for the United States.

More importantly, however, a decision today in favour of immediate development of the Mackenzie Delta- Beaufort Sea region can be seen to prejudice whether that region or the Arctic Islands (where recent exploration seems to have been more successful) shall be developed first. Either project could strain the capacity of domestic capital markets so that simultaneous construction of two major pipeline systems under Canadian majority ownership is almost out of the question.

It is not obvious which of several competing considerations is likely to be dominant in the eventual decision by the National Energy Board and the Cabinet, but on balance there now appears to be a favourable climate for a co-operative project with the United States concerning Alaskan gas. If the Alcan project were not a serious contender, this means that the Arctic Gas proposal would be approved. The Maple Leaf project is not timely either in terms of known reserves or in terms of Canadian demand, and it is not a serious contender at this time.

A decision in favour of Arctic Gas would, however, be a reluctant one and would be opposed from many quarters within the Canadian federal government, by several provinces and by a large body of Canadian opinion. These objections rest on a broad range of environmental, economic, nationalistic and native claims considerations, and most decisively perhaps on the fact that the approval of Arctic Gas might effectively preclude or postpone for many years the Polar Gas alternative. For these reasons, my own tentative judgement is that the Canadian government will — once it has had an opportunity to consider the alternative — welcome the opportunity to avoid an early decision one way or another regarding the Mackenzie. This is likely the biggest benefit to Canada from the Alcan proposal.

Arlon R. Tussing
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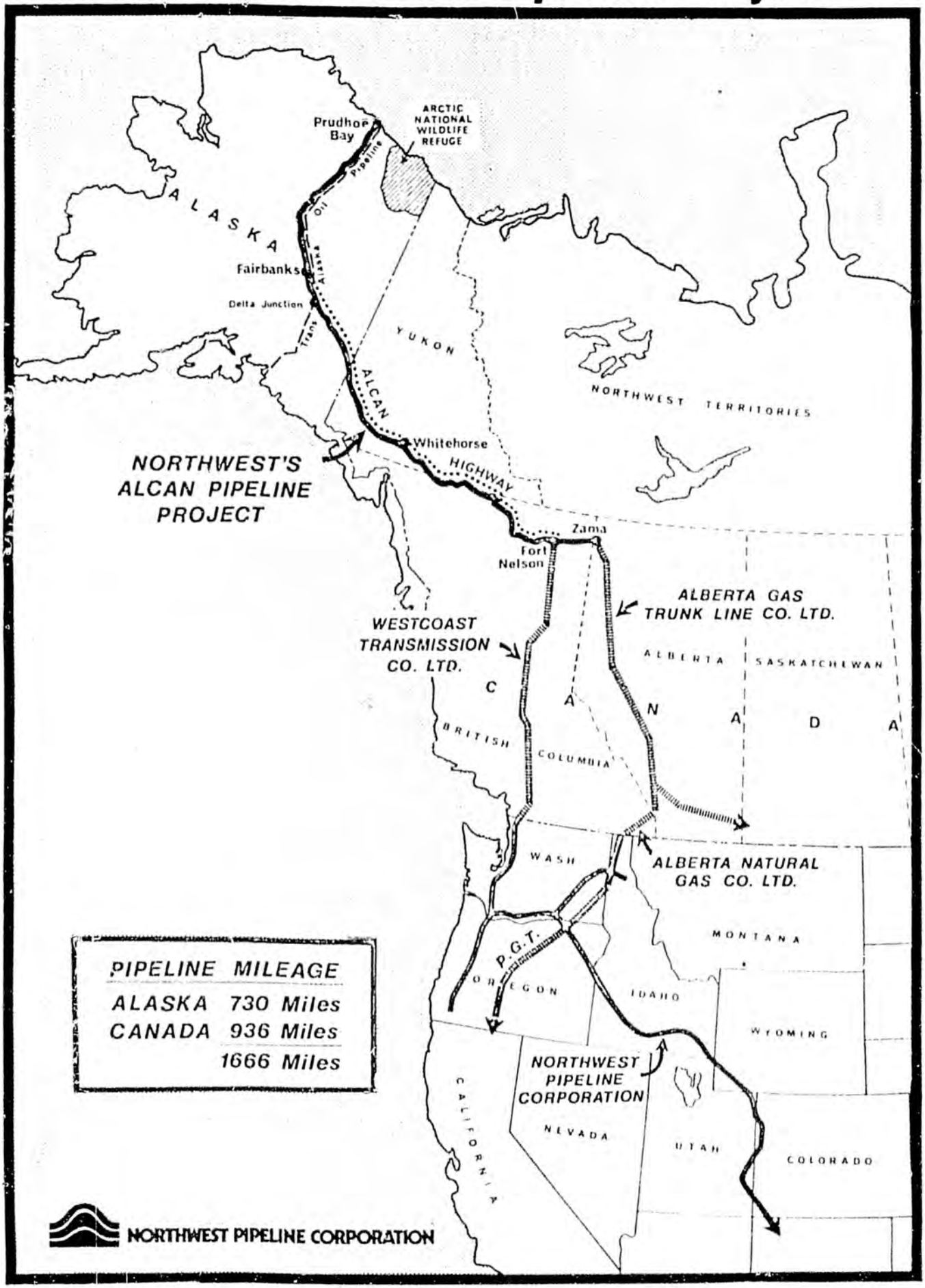
Northwest's Alcan Pipeline Project



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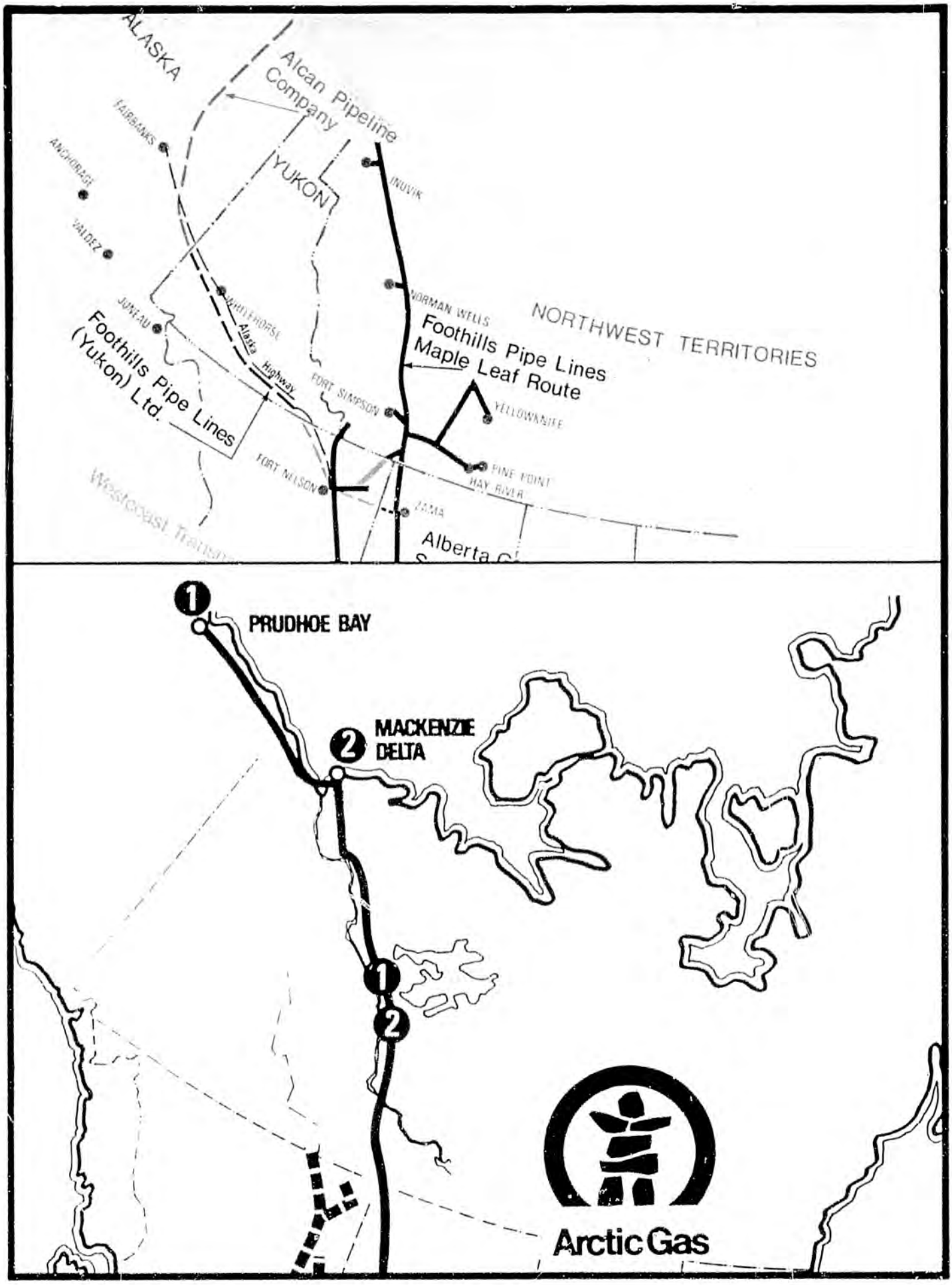
ALASKA
Alcan Pipeline Company
FAIRBANKS
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VALDEZ
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INUVIK
NORMAN WELLS
NORTHWEST TERRITORIES
Foothills Pipe Lines
Maple Leaf Route
JUNEAU
WHITEHORSE
Alaska Highway
Foothills Pipe Lines (Yukon) Ltd.
FORT SIMPSON
YELLOWKNIFE
FORT NELSON
PINE POINT
HAY RIVER
ZAMA
Alberta
1
PRUDHOE BAY
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MACKENZIE DELTA
1
2
Arctic Gas

AGO 799773

"Little haul road, don't you cry, you'll be a highway by and by."

"In the early stages of the Berger Inquiry, CARC looked at the problem of transportation needs. This study included an examination of corridors as a possible means of rationalizing various methods of transportation and minimizing social and environmental impacts. We got into difficulties right from the beginning. There was a lack of scientific data. Instead of a broad transportation policy within which trade-offs could be made, we found ourselves forced to deal with a "first-come, first-served" application for a gas pipeline. Our studies immediately became too detailed. We found ourselves focusing on the minutia of a pipeline; consequently, the evaluation of reasonable alternatives became impossible.

"We found much evidence that the Mackenzie River Valley route is not the best choice. More importantly, we concluded that before one can plan a northern route, one needs comprehensive resource inventory data, and that was lacking. The applicant and the federal government had given only a cursory look at alternatives.

"Although the Mackenzie River is a historical transportation system, it seemed very questionable whether any further demands should be imposed on its capabilities, especially for an oil pipeline and all its attending complications."

excerpt from CARC's appearance before the Standing Committee on National Resources and Public Works, 3 February 1976

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Volume III-IV of 'Northern Perspectives' outlined the engineering and construction plans for the Mackenzie Valley gas pipeline and discussed the method of route selection which governed the choice of the Prime Route. The following article deals with the comparative impacts of the Prime and alternative routes on the land and living environment.

Those who follow the debate over the Mackenzie Valley gas pipeline are aware that Canadian Arctic Gas and Foothills Pipelines are locked in fierce competition for the right to build the line. This should not suggest that their plans are entirely different; in fact, they have many similarities. Both intend to run the pipeline south from the Mackenzie Delta, along the east side of the Mackenzie River and into Alberta. They offer similar arguments for this choice, and accordingly encounter similar objections.

Both companies argue that the Mackenzie Valley provides the shortest distance between the supply and delivery points and hence is the cheapest route. They also argue that the valley provides a natural transportation corridor. Its relatively level topography eliminates the need for major re-routing during construction, and the established barge and wharf system on the river would ease material supply and logistics. Plans for the Mackenzie Highway along the east side of the river also affected their choice, although it is now doubtful that the highway will be completed beyond Fort Wrigley in the southern Mackenzie region.

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"The proposed Alaskan Arctic Gas Company pipeline system would establish a new pipeline corridor in the North.

Associated with this proposal is the establishment of new air and possibly, or probably, road transportation in Alaska where none now exists. Development of a gas pipeline, road and air transportation not associated with the gas pipeline will promote the future establishment of related facilities . . . possibly including new oil and gas pipelines.

R.D. Worton
to Berger Inquiry
14 August 1975

The environmental case put forward by industry is that the shorter the line, the less the disturbance. Their engineers maintain that the Mackenzie is a natural seam facilitating pipeline construction with minimal disruption. Their testimony stated that enough research has been carried out to identify the essential problems and to avoid or minimize them, and what minor route amendment could not avoid, winter construction and careful monitoring could protect.

These arguments sound convincing, but the Mackenzie Valley will present complex engineering problems. Although the valley provides a relatively level topography and is lower than the surrounding terrain, it is poorly drained. The high proportion of ice-rich permafrost soils and bogs — often juxtaposed

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— would require remedial and preventative measures for much of the route; otherwise the pipe would heave and break, or alternatively, be washed out. Considering that the remedial and preventative techniques have been poorly tested and that there is little on-site soil information (*Northern Perspectives, Technology & Optimism*', III-I), it is also clear that there would be many on-site revisions. The construction and maintenance efforts could therefore be much greater and more expensive than anticipated. This has been the experience of the Mackenzie Highway, now halted at 1/3 of its proposed distance.

Because the route lies in a major river valley, it would cross every stream and river that flows in on the east side. Terrain difficulties abound at these crossings and great possibilities exist for fuel and testing-fluid pollution, siltation or blockage of water flow, and erosion and slumping of banks adjacent to the pipeline and the winter construction roads. These problems could drastically affect fish, waterfowl and aquatic fur bearers such as beaver and muskrat. These species could also be vulnerable to disturbance from aircraft harassment, compressor station noise, and to other forms of habitat alteration. Many of these difficulties are avoidable, but only if the builder is willing to pay the additional costs of careful implementation and monitoring.

Nor have Arctic Gas and Foothills witnesses been able to dismiss the potential social problems. When their route was plotted on the map, it was drawn

through or near the many Indian and Inuit communities along the river or in the delta. The Arctic Gas approach was that the project would be a boon to those communities by providing jobs and reviving what the company viewed as a sagging economy. Yet Justice Berger heard from every community that the traditional lifestyle and economy is still viable and that their land is neither the property of the government nor of industry to parcel out for development. Rather, they insist on aboriginal rights to their traditional hunting and trapping areas. After a land settlement they expect to be in a position to negotiate with regard to a Mackenzie Valley gas pipeline.

Vern Horte, President of Arctic Gas, was straightforward about the way these concerns fitted the master route plan. As he saw it, socio-economic concerns were "subjective and subject to flux." Claiming that it was impossible to avoid traplines and traditional hunting and trapping areas completely, he concluded that "efficient construction of a pipeline with a minimum of environmental disruption is a most practical way of minimizing interference with these traditional pursuits." The route choice, he said, involved a tradeoff between locating the line further away to minimize impacts or to placing it closer to the communities to give the local people a chance for the "beneficial effects in the form of employment, infrastructure improvements, etc." But the Indians and Inuit living in those communities would have no say in any such tradeoff about their future.

It is not only the Mackenzie Valley that is threatened by Arctic Gas's choice of the Prime Route. The Arctic Gas line involves the lateral from the Alaskan Prudhoe Bay fields across the Yukon to the Mackenzie Delta. Foothills has admitted that it is investigating a similar plan, but at present is content to rest its case on a rather sanctimonious comparison to Arctic Gas, promoting its all-Canadian image and its willingness to want to take delta gas in the 1980s. For the moment, it is the Arctic Gas proposal which will determine much of the future of the northern Yukon, an area rich not only in terms of its abundant wildlife but in the fact that it is a key link in the evolutionary chain of life in North America.

The preferred or Prime Route of Arctic Gas traverses the coastal region of the Yukon, a route opposed by the company's own ornithological consultants. Along the coast of the Beaufort Sea are found migrating Arctic terns, sabine gulls, and jaegers from the Antarctic and other southern areas; Pacific brant from coastal Mexico and California;

Since Fort Simpson and cross delta route changes involve half the length of the entire project and were not introduced until late in the Inquiry, they should not be considered as part of the application. In the opinion of the Environment Protection Board, these new proposals require the intensive assessment that the first application received.

and murres, eiders and glaucous gulls from the north Pacific and Bering Sea. Whistling swans move westward in the spring from the Mackenzie Delta and travel along the Yukon and Alaska coast. The populations of some of these bird species number into the thousands, with some — such as the eider duck — approximating over one million. The calving grounds for the Porcupine caribou herd are also on the Yukon coast. Scientists agree that these animals are most susceptible to disturbance during this stage of their life cycle. Although Arctic Gas gives assurances that winter construction work will have ceased before the vast herd migrates to the coast, experience with the Alyeska oil pipeline has shown that tight schedules are impossible to maintain. Work stoppages would be inevitable along the Arctic coast where fog, harsh temperatures, and winds would limit the productivity of the construction spreads and the progress of snow roads essential to protect the terrain.

Arctic Gas has introduced two fundamental route changes as part of its Prime Route. The first, known as the Fort Simpson amendment, avoids an unstable crossing of the Liard River but passes through the Ebbutt Hills, which have been recommended as a site to be preserved under the International Biological Program. The Foothills route skirts the Ebbutt Hills.

The second major route change is a more contentious one. This new Cross-Delta Route had first been discounted by the company since it did not appear feasible from an economic or engineering standpoint. However, studies continued and the company's skeptics were soon converted. The fact that it is one hundred million dollars cheaper than the original route helped to weigh the scales in its favour. The environmental repercussions of this choice are much more serious than the impacts of the initial route. Thousands of snow geese and other waterfowl use the Mackenzie Delta as a nesting and staging area, grazing on the grasses and sedges of the low flatlands. Like the caribou, the snow geese are a traditional food source for the native people and are an integral part of their economy. According to COPE witness, Tom Barry, an ornithologist with the Canadian Wildlife Service, the Arctic Gas proponents have chosen some of the best waterfowl habitat for their revised Prime Route.

Furthermore, when this route crosses Shallow Bay, extreme precautions would be required to protect the beluga whale population. Knowledge of the annual travel routes of the beluga is limited, as is the research base for predicting the impacts of noise and other disturbances on calving. Whales arrive in the mouths of the main delta channels in late June or early July and stay until mid-August. They tend to seek out the warmer, shallow waters which are

Nanisivik

The Department of Indian Affairs and Northern Development (DIAND) has pointed out some inaccuracies in our article "Nanisivik" in *Northern Perspectives* volume IV-II-1976. We are happy to print the following corrections:

The first is a minor point. We stated that "the federal government purchased an 18% equity interest in Nanisivik." In fact, the government interest was obtained in exchange for the federal and territorial governments providing an airport, a dock, roads, and townsite facilities. It is expected that over half the cost of these facilities will be recovered from the company.

More significantly, we stated that "projects which are proposed independently by private corporations will not be subject to EARP (the federal government's Environmental Assessment Review Process) unless federal infrastructural assistance is contemplated." In fact, any project on Crown land may be subject to EARP, provided the environmental impact is judged to be significant by the department controlling the land — in this case DIAND.

Further, we were incorrect in asserting that the requirements of the Fisheries Act could be completely circumvented by DIAND in issuing a surface lease for the mine whose conditions would allow offshore dumping of tailings. Because the lease for the mine is for more than 640 acres, the Territorial Lands Act requires that the lease be approved by Cabinet where the requirements of the Fisheries Act may be argued by the Minister of the Environment.

Bill MacLeod
Bob Gibson

AGO 799775

more beneficial to the newborn calves. Since Arctic Gas will be dredging Shallow Bay during the summer months, the company will be challenged to schedule their activities to avoid disturbing the whales during this sensitive period.

Dr. Sergeant, of the Arctic Biological Station, St. Anne de Bellevue, discussed studies at Churchill River which indicated that although whales can generally tolerate human noise and activity, the calving population cannot. Most whales have abandoned their traditional calving waters at the Churchill River since development was initiated. As the estimated number of whales using the Mackenzie system is approximately 5000 — virtually the entire population of the Beaufort Sea — there is not a wide range of suitable waters in which these mammals can calve if their traditional areas are closed to them. Again, the success of the reproduction and rearing of these whales is vital to the subsistence and culture of the native people of the delta.

The hunters and trappers are equally concerned about the effects of the Cross-Delta Route on the habitat of the muskrat, beaver, and marten, which provide food and livelihood throughout the year. The delta is teeming with life during the summer months when Arctic Gas has scheduled construction. Various species of fish enter and leave these areas during their migrations and would be threatened by the siltation caused by dredging. When the timing is correct to mitigate the effects on fish, the timing will not be right for whales and birds, and costly environmental tradeoffs would have to take place.

Tom Barry has proposed that the Cross-Delta Route would have less overall impact of it were moved slightly south, but this would be more expensive and therefore less appealing to industry. Carson Templeton, Chairman of the Environment Protection Board (EPB), told Justice Berger that since Fort Simpson and cross-delta route changes involve half the length of the entire project and were not introduced until late in the Inquiry, they should not be considered as part of the application. In the opinion of the EPB, these new proposals require the intensive assessment that the first application received.

The Interior Route proposed by Arctic Gas is the company's second choice for a lateral line across the Yukon. It traverses the central Yukon in the vicinity of Old Crow. This alignment would affect two areas which are notably sensitive to birds: the Old Crow Flats, an important staging and breeding area of waterfowl; and the steep valley slopes of the Canning River, which are used as nest sites for gyrfalcon, the rare peregrine falcons, and other raptors. In spite of the expected impacts on these birds, ornithological witnesses testifying for Arctic Gas maintain that there would be even greater disruption to birds along the Prime Route.

The State of Alaska has formally taken the position that no new lands, particularly those within the Arctic Wildlife Range, should be made available, as such access would pre-empt land use options for the future.

One option along the Canning River is for the pipeline to cross at Marsh Fork. However, in order to protect its abundant wildlife, and its potential as a scientific study area, land officials in Alaska recommend that the Marsh Fork area "be closed to all development uses, including mining, oil and gas production, and other uses which would alter the existing ecology."

The other Canning River crossing directly affects areas which are extremely valuable as grizzly bear and moose habitat. In both sites, valleys tend to be quite narrow; there would be little hope that resident wildlife populations could avoid construction and maintenance activities. While the noise emitted by compressor stations along the coast could be disturbing to caribou and waterfowl, these stations would be especially damaging in the mountainous areas of the Interior Route, especially if they require ancillary facilities such as airfields and communication towers. There would likely be a station in the sensitive Marsh Fork Valley. Dall sheep, which besides caribou are the only surviving herding herbivores from the preglacial period, would be seriously affected by the Interior Route in terms of both increased access and construction activity. In addition, fish biologists feel that the Interior Route would pose a greater threat to fish populations than the Coastal Route.

Both the Interior and Coastal routes affect the area of the Yukon which archaeologists and ecologists value for its unique character. The northern Yukon was the only area not glaciated during the Ice Age, and as a result, vegetative species extinct in other parts of North America flourish there today. The region can unlock several archaeological mysteries if researchers have the opportunity to delve into the many sites. Already they have proved that giant beaver, camels, elephants and horses were once indigenous, as well as other large animals now extinct.

At the same time as these species were being uncovered, scientists found proof that man had been hunting them as far back as 30,000 years ago. These records provide the earliest evidence of man in North America. The lifestyle of the ancestors of the Loucheux — or Kutchin — people of Old Crow can be traced in the remains of caribou fences or corrals which show a consistency of land use over the ages as well as a uniformity in the migration patterns of the caribou. Furthermore, the high mountains, rivers, wetlands and slowly melting permafrost lakes, barrier beaches and lagoons along the coast are wordless arguments for the protection of the area.

For these reasons, the establishment of the Canadian section of the Arctic National Wildlife Range in Alaska is being promoted as a means of ensuring the preservation of this ecologically rich and sensitive area. This proposal would not ban all resource extraction, but would closely control all such activities, and if necessary ban those inconsistent with the wilderness character of the range. The proposal also recognizes the primary use of the land by the native people, particularly those in Old Crow who still rely heavily on trapping in the nearby Old Crow Flats and hunting the caribou. Officials of Arctic Gas maintain that a pipeline is compatible with the concept of the Alaska Wildlife Range but admit that if the U.S. government forbids their intrusion into that area, they would build either along the Interior Route or would even consider a more southerly routing.

Environmentalists fear that year-round access along either route would inevitably open up the area. Development of either route would initiate a new corridor along the alignment and the likelihood of a permanent haul road makes this prospect more alarming. Exploration would increase and the wilderness character of the range would eventually disappear. Any development such as a pipeline would prevent the Alaskan range from being classified as a wilderness area under the Wilderness Act in the United States, the only legislation tough enough to ensure its preservation. Summing up the case for the International Wildlife Range, Andrew Thompson, Chairman of CARC, argued that, "Since there are values that are intangible, that can't be expressed in dollar terms but which have a strong response from people here in the Yukon, from people in Canada and the United States and even around the world, somehow or other these have to be weighed against the cost savings that are principal reasons for the selection of this route."

It is CARC's position that neither the government nor the pipeline companies credibly examined alternative routes.

AGC 799776

The Committee called Dr. Murray Roed to discuss possible alternatives. He recommended examination of a route roughly 50 miles west of the existing Mackenzie Valley corridor, east of the Franklin Mountains. This route would follow the crest of well-drained ridges for 60 per cent of the distance and would, in his opinion, minimize the erosion and heaving problems of the pipeline. He pointed out that compared to the Mackenzie Valley, the abundant deposits of much needed gravel for construction and the prospect of fewer water crossings (the route parallels drainage) would make this alignment preferable, not only for the gas pipeline, but for any other form of transportation, such as oil pipelines or highways. The main strength of the proposal is that if the hot oil pipeline is built it would be much safer away from the Mackenzie River Valley. This longer range perspective, Dr. Roed argued, should be the basis for choosing the location for the first major project for the region.

On the negative side, sufficient soil data are lacking to be able to verify the advantages of the route in detail. Logistics would be more difficult and expensive than in the Mackenzie Valley as no access to this route exists at present. Also, the route may be no more acceptable to native groups since it involves areas which are part of their land claim. Despite its problems, the fact that this route may be a plausible alternative to the Mackenzie Valley route illustrates the lack of serious or comprehensive study of alternatives by the industry or government.

An option avoiding both the wildlife ranges and the Mackenzie Valley is the Alcan Route. This route, rejected by Arctic Gas, has nevertheless received great attention from the other participants. Under this scheme, Prudhoe Bay gas would be brought south along the alignment of the Alyeska oil pipeline to Fairbanks, Alaska. South of Fairbanks, the pipeline would follow the route of the Alaska Highway into Canada. Delta gas would follow the Dempster Highway to meet the Prudhoe line at Whitehorse, and the line would then proceed southeast to Alberta.

Generally, Arctic Gas objects to this option on the grounds of additional length and extra expense. Its spokesmen also say that the route would be too far away from areas of probable hydrocarbon deposits (mainly in and near the wildlife ranges) and that its length would dictate a construction schedule too tight for completion within the three year period dictated by the economics of repaying money borrowed for construction.

On other grounds, Arctic Gas objected because the mountainous terrain in Alaska would require more blasting during construction, more surveillance for rock slides during operation, and the narrow passes would reduce the flexibility to route around problem areas. This could particularly affect dall sheep lambing areas, bear denning sites, and raptor nests. Although the Porcupine caribou calving and summer range would be avoided, the route would still pass through some critical wildfowl nesting and staging areas on the coastal plain south of Prudhoe Bay. The route would parallel drainage which Arctic Gas claims is a disadvantage for erosion control and hence for the protection of fish. Finally, the route would pass through an area near Fairbanks of higher earthquake risk. In Canada, the main route would skirt the new Kluane National Park and further south, traverse extensive moose habitat. The delta lateral would intersect the Porcupine caribou herd on its winter range and would be built along very difficult ice-rich permafrost terrain.

A stronger indication of the attractiveness of the Alcan Route along the Alaska-Canadian highway has arisen. The Federal Power Commission (FPC) of the United States recently accepted the application of a consortium known as the Northwest Group to build a line from Prudhoe Bay along the Alcan Route to connect with the existing facilities of Westcoast Transmission, Alberta Gas Trunk Line and then to U.S. facilities.

The Northwest Group has also filed to have its application accepted by the National Energy Board (NEB) in Canada. In light of the FPC decision to accept it as a contender in the American project, it would seem unlikely that the NEB could refuse to weigh it in its deliberations. There are four general advantages to such a route:

- it would not disturb any new territory. The State of Alaska has formally taken the position that no new lands, particularly those within the Arctic Wildlife Range, should be made available, as such access would pre-empt land use options for the future. An oil pipeline and a highway have far greater impacts than a gas pipeline, and the route south from Prudhoe Bay would run through territory already opened by the Alyeska oil line and the Alaska Highway. The Alaskan oil pipeline has had a major impact on the areas it has crossed and technical and environmental experts have urged that the gas line follow this alignment where damage has already been done.
- by following the oil pipeline and highway alignments, duplication of facilities (and therefore greater impact) can be avoided through the use of existing airports, work areas, and supply roads.
- the existing on-site information from construction of the Alyeska pipeline and the Alaska Highway would virtually eliminate the likelihood of surprises in the field. As these are highly probable in the undisturbed Mackenzie Valley and northern Yukon, it would be easier for the Alcan project to live up to the protective measures required of it and to stay within its budget. As implementation of the protective measures is essential to environmental protection, such protection would be greatly enhanced along this route;
- unless there is a policy change under its new leadership, the Council of Yukon Indians views this route with least opposition pending a land settlement, while it rejects outright both the Prime and Interior routes.

Two other routes were mentioned during the Mackenzie Valley Pipeline Inquiry — neither of which have been favourable to either the gas industry or the intervenors because of the hurdles involved. It is futile to discuss the possible routes for a gas pipeline without looking at the implications of a total development plan. Even when the Berger Inquiry was first created, the Pipeline Guidelines stipulated that it look at the impact of an oil pipeline as well. The Inquiry was not to ignore the possibilities of a railway, hydro development or communication systems that could possibly follow a gas line. Although the latter are still hypothetical, a group known as the Beaufort Delta Project is currently preparing an application to build the

"The applicant (Gas Arctic) is proposing a temporary road of 375 miles from the Circle almost to Old Crow, and then across to the Dempster Highway at Fort McPherson. If you have a 375 mile gravel road of two to maybe six feet of gravel to protect the permafrost, it's going to be almost politically impossible ... to prevent the connection of the Fairbanks network of roads with the Dempster Highway through to that area. Then you've ruined hundreds of square miles of land on all sides, the wilderness and the lifestyle of the Old Crow Indians. Long ago, Bob Marshall that great Alaskan Arctic explorer, wrote about temporary haul roads

'Little haul road,
don't you cry,
You'll be a highway by and by.'

And all over the United States that have proven true, that when you make a temporary road it just gets better and better until it's finally been known ...

(Closing to Berger Inquiry, 13 August 1976)

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oil line. It is likely that cost savings will be the criterion in building the oil line close to the alignment of the gas pipeline in order to take advantage of facilities such as access roads and air strips. Add the strong possibility of a second gas pipeline or a "looped" line if reserves prove sufficient and the impact projections intensify.

A case in point is the Dempster Highway from Whitehorse to Inuvik, which is in the final stages of construction. Arctic Gas environmental consultants were told to present the company and the Inquiry with only the potential impacts of a gas line, despite the fact that the highway will cause considerable disturbance. If the Interior Route were built, caribou enroute to their calving grounds on the coast might be faced with the crossing of two buried gas lines, an above ground oil pipeline and a highway travelled by curious tourists. When some of these consultants did try to get government reports related to the technical and environmental matters along the Dempster, they were refused because these were not public documents.

It must be clear that the evidence before Justice Berger on these and other less attractive routes has still not produced any easy answer. What the experts have told us, however, is that further developments of far greater potential impact would follow a gas pipeline and that these would be far more difficult to control. From this it follows that without control and without planning, this particular transportation system — a gas pipeline — would set in motion events affecting all the land in the region and the use made of that land.

Currently, land use planning is rudimentary in the North. The land use regulations in force are designed to control exploratory operations only, and they are ill-designed even for those, let alone for major projects or for regional control. The philosophy has been the felicitous "multiple-use" concept of land use that sees no conflict between development and the environment or the use of land by the native people, just as it sees no conflict between underwater seismic explosions and harvesting of seals and fish in the Beaufort Sea. According to this view, there need be no conflict between an open pit mine and a bathing resort.

A major study of existing land use legislation and practices and of mineral and environmental resources, is required as a base before planning can proceed. The only work to date has been extremely narrow in scope, compiled in response to project proposals such as the Mackenzie Valley pipeline. The gaps in elementary knowledge are stupefying, yet little is being done to remedy them.

Currently, land use planning is rudimentary in the North. The land use regulations in force are designed to control exploratory operations only, and they are ill-designed even for those, let alone for major projects or for regional control.

The first major element before planning can progress is a land settlement for the native people of the North. Planning that ignored the need for such a settlement or its results would be unworkable as well as unjust.

But if impact assessment is subjective, so is planning, and for that reason wide access to the planning process and participation is essential. Current government practices whereby information is difficult to obtain must cease, in order for planning to be conducted effectively.

The Berger Inquiry cannot be a planning process because the preliminaries are not settled. Despite the popular journalism that sees Justice Berger as setting the course of future northern development, his jurisdiction is actually quite narrow. His mandate is to examine the regional impact of a gas pipeline and ensuing related developments, there is a limit to how far that mandate can be stretched. Furthermore, he is under great pressure to report by the end of 1976, and would have little time to examine planning possibilities widely even if he wished.

What Justice Berger can do, however, is recommend conditions for the gas pipeline that would allow long-range planning to proceed without being preempted by a barrage of facilities to supply southern demand for oil and gas. He has already set a precedent for openness in the decision-making process in the North.

Assuming the goals are to maximize planning flexibility and protection along the pipeline route, it seems that two options exist: to institute a land freeze pending results from the planning process, or to allow Arctic Gas or the new consortium to proceed using the Alcan Route.

In fact, these two options are not mutually exclusive. It is unlikely, however, that a freeze alone would be acceptable because the Canadian government is under great pressure to honour its commitments to the U.S. to allow passage of U.S. gas through Canada (*Northern Perspectives*, Volume IV-1). Permitting construction of the line along the Alyeska oil pipeline and Alaska Highway routes would honour this commitment without disturbing new areas. As the urgency to bring delta gas south seems less pressing than previously thought, there is still time for reasonable planning.

Delay would allow time for land claims settlements, further consideration of the Foothills proposal, of the Arctic Gas delta lateral proposal, and of the recent proposals to integrate gas transmission from the delta with the gas from the Arctic Islands. This extension would allow planning to proceed for northern land use and national energy policy. Precisely because modern development is only now arriving in the North, a tremendous range of choice exists in how that development shall or should take place. This has made it too easy for the general public to expect so much of Justice Berger.

John Jahn
Pat Anderson

■

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NATURAL GAS SUPPLY OUTLOOK FOR THE WEST

SUMMARY OF COMMENTS

BY

ARLON R. TUSSING

AT

NATIONAL ECONOMIC RESEARCH ASSOCIATES, INC.

WORKSHOP ON ECONOMIC GROWTH IN THE WEST

AND RELATED ENERGY PROBLEMS

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1. It no longer means much to speak of a gas supply outlook for the Pacific states as distinct from the outlook for the contiguous 48 states as a whole. With a nearly complete nationwide gas transmission network and transmission loads that are stagnant or declining, an abundance or shortage of gas in one region can be shifted to any other region or spread evenly across the country, without major investments in new transportation capacity.

2. The emergence of a single national market for natural gas is of course inhibited by FPC wellhead price controls, which discourage both interstate sales generally and reallocation of gas among interstate purchasers. And existing long term sales contracts together with the need for certification and abandonment procedings before the FPC and state commissions make even the most economically logical exchange and displacement arrangements difficult to put into effect.

3. Nevertheless, if institutional obstacles effectively prevent the smoothing out of gross regional disparities in gas supply, we can expect Congress to give the FPC authority to reach into intrastate markets, to allocate new natural and synthetic gas among regions, and perhaps even to reallocate flowing gas among interstate pipelines.

4. Congress would surely direct the FPC to allocate gas nationally if it were to approve any LNG system for the delivery of North Slope natural gas, which would require large areas of the United States to receive new gas supplies by displacement rather than directly. Approval of a MacKenzie or Alcan system without a western leg would also strengthen the demand that the FPC have direct allocation authority. Such an outcome would be unfortunate because any non-market allocation system would blunt the incentives of transmission companies and gas utilities to solve their own supply problems.

5. It is possible to make some broad generalizations about both the commodity value and the cost of gas on a national scale. The demand for gas can be separated into three main components: (a) a premium market in which only electricity is a competitive energy source, (b) an intermediate market in which refined petroleum products (distillate fuel oil, naphtha, propane, etc.) are effective substitutes, and (c) the "black fuels" market in which natural gas can displace coal and residual fuel oil only when it is cheaper.

6. The intermediate market, which is composed of household and small commercial space heating, and use for crop drying, in combustion turbines and for chemical feedstocks

(plus utility boiler fuel in times and places with severe air quality problems), is by far the major part of total consumption, so that all plausible projections of United States natural gas supplies through 1990 fall into this intermediate segment of the demand function. For this reason the long-term commodity value of gas will be equivalent, more or less, to the cost of refined petroleum products. Assuming that the real price of imported crude oil remains about the same as it is today, we can anticipate a long-term demand price for gas of $2.50 to $3.00 in 1976 dollars.

7. The demand price for gas will be somewhat higher than that of distillate fuel oil if total gas supplies continue to decline over the period, because the alternative to gas for many consumers will not be simply the substitution of a petroleum product but will also include the cost of converting or replacing existing gas-burning equipment.

8. The average (rolled in) cost of gas will be just about equivalent to this commodity value or demand price. Pipelines and distributors will continue to get some quantity of gas purchased on long term contracts or controlled at less than its commodity value. They will therefore be able to augment these low price conventional supplies with just enough high cost gas "supplements" at $4, $5, $6 or more per Mcf, to bring their average price up to the demand price.

9. For this reason deregulation (or the level of regulated gas prices) can not be expected to have a great effect on the average price consumers pay for gas. It might, however, have a powerful influence on how much gas is available at that price (although the direction of this influence is not obvious -- see footnote), and upon the economic cost to the nation as a whole of its gas supply. (The national economic cost would be lowest under deregulation, but the larger part of the net benefit would be captured by gas producers rather than by consumers.).

10. The most certain and economical source of additional gas for premium and intermediate markets are the volumes now being burned under industrial and electric utility boilers and as refinery fuel. End use controls

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The question hinges on the responsiveness of conventional gas supplies to price. If supply is relatively price-inelastic, the main impact of deregulation or higher wellhead prices would be to transfer revenue to gas producers and royalty owners at the expense of the pipelines and distributors. Since the latter would otherwise have used this revenue to finance the purchase or production of high-cost gas supplements, total gas supply would be less than it would be at the old regulated prices. On the other hand, if the supply of new reserves of conventional gas is highly responsive to price (as I believe is more likely), an additional dollar paid to the gas producers will elicit a greater volume of gas than the same dollar spent on such projects importing LNG or manufacturing SNG from coal or oil.

by the FPC and state authorities are already encouraging such a shift. But in order to employ existing reserves most efficiently around the year, elimination of interruptible sales for low-priority use must go together with investments in storage facilities and in increased peak deliverability in the field. Incentives for the latter adaptation are now blunted by price controls, but added storage is probably a worthwhile investment for almost every gas transmission company or utility.

11. The main supplemental sources of gas appear to be Canadian pipeline imports, LNG imports, Alaskan natural gas and SNG from coal and petroleum.

12. The price of future Canadian imports is reasonably predictable, but their volume is not. The Canadian federal government and Alberta have adopted an explicit commodity value standard for gas pricing in both domestic and export markets (though it is being implemented more slowly for Canadian consumers), and there is little reason to believe that this policy will be changed.

13. The approximately 60 TCF of presently proved reserves in the Western Provinces are sufficient to serve projected Canadian demand plus existing export commitments for about 10 years without creating deliverability problems. A continuation of recent Alberta discovery

trends may be sufficient to assure that existing export contracts will in fact be honored. But there is no development, short of huge discoveries (perhaps another 60 TCF) in the Arctic that would be likely to induce the Canadian government to approve new export commitments.

13. The sufficiency of present supplies to Canada for about ten years, means that any Mackenzie or Polar pipeline will be superfluous to Canada's needs for at least that period, unless reserve volumes justifying exports are developed. This implies that there is no urgency for Canada in an early determination regarding the desirability, scale or timing of a Mackenzie Valley pipeline.

14. Large LNG import projects, coal gasification, and facilities to deliver gas from the Alaskan (and/or Canadian) Arctic to Lower 48 markets share several features which raise serious questions about their economic viability or practical feasibility. Each of them requires large, "lumpy" investments -- in the billions or tens of billions of dollars -- and involves unproved technology or a substantial scale-up of proved technology. Some proposals involve a unique physical or institutional environment (e.g., the Arctic Gas proposal and Indonesian LNG) in which no engineering projects of their magnitude has ever been attempted. Each of them involves numerous regulatory jurisdictions, including more than one sovereignty or quasi-

sovereignty (states and provinces). Each of them involves major environmental and safety issues, real or imagined, usually in more than one regulatory jurisdiction.

15. The construction and operating cost projections offered by the proponents of each of these gigantic capital-intensive projects are already near the margin of economic feasibility, even assuming the absence of major delays, technological or engineering false starts, or cost overruns.

16. Recent experience with military procurement, nuclear power plants, the Trans-Alaska pipeline and other large custom-engineered construction projects indicates that all the large supplemental gas projects are exceptionally vulnerable to delay and cost-overruns, if not to non-completion.

17. The scale of these projects typically exceeds the net worth of their sponsors, precluding conventional secured financing. Uncertainty about construction costs and completion dates, aggravated by political and licensing uncertainty make no-recourse debt financing equally improbable. Each project therefore probably requires government loan guarantees (increasing their vulnerability to political opposition) and/or all-events tariffs, which state commissions are unlikely to approve.

18. In short, I believe that the odds are against any supplemental gas supply facility with a total projected capital cost of greater than $1 billion. The chances that all the supplemental gas projects considered necessary to provide an adequate gas supply to any region (e.g., California) will be actually completed, is nil.

19. Of the three proposals for transporting North Slope gas, the Alcan project is in my judgment the most credible, even though the comparison of pro-forma cash flow projections would seem to favor Arctic Gas. By using conventional pressures, pipeline size and construction technology, already developed transportation corridors, and existing pipeline routes and systems in Western Canada, Northwest Pipeline's Alcan proposal avoids or mitigates the major sources of cost overruns. Moreover, Alcan is the only proposal of the three which does not depend for its feasibility on larger volumes of gas than can be assured from presently proved reserves.

20. The Alcan proposal is probably the least vulnerable of the three to political opposition on regional or sectoral grounds. It does not involve the siting and safety issues of the LNG system, but unlike Arctic Gas, it is favored or at least is not vehemently opposed by any of the states or provinces (including Alaska and Alberta) which it must transit. The Alcan concept is the one favored by the major U.S. environmental organizations. Native claims issues, moreover, seem to be closer to resolution in the Yukon than in

the Northwest Territories.

21. The synthesis of pipeline quality gas from petroleum does not suffer from most of the handicaps of coal gasification or of the other capital-intensive sources of natural gas supplements. Here again, as in the case of the alternatives for transportation of Alaska gas, a priori cost comparisons may be deceptive. SNG from oil appears to be more costly than SNG from coal, but this comparison ignores the fact that it is a proved technology on a commercial scale, that its optimum economic scale of plant is an order of magnitude smaller, and that the feedstock is (barring a new embargo) available in unlimited quantities.

22. The smaller scale and general abundance of feedstocks for SNG plants using petroleum fractions (naphtha or LPG) means that each plant can be located within the consuming state, (freeing it from FPC jurisdiction), within the service area of the pipeline or utility which distributes it (reducing local opposition), and in a site chosen for environmental acceptability (rather than one dictated by location of the resource or by proximity of a deep water harbor). For all of these reasons, I suspect that the West Coast gas industry's ultimate recourse when almost everything fails (as it probably will) is the construction of decentralized SNG plants using naphtha feedstocks from overseas (or even Alaskan) topping plants which ship their residual crude oil fractions to Japanese or Atlantic customers.

23. The best bets for new pipeline gas supplies, I believe, come from state-of-the-art technologies and scales of effort, not from ten year leaps into the future and tenfold leaps in size. The source of gas that best meets this standard is conventional natural gas conventionally extracted. Exploration for gas (and for oil, which is found in similar environments by the same techniques) is an entirely different kind of business from producing synthetic fuels or building major gas transmission projects or the maximum scale electrical generating plants. The minimum unit of physical capital, a single wildcat well for instance, ranges in cost from tens of thousands of dollars to several millions -- a scale on the order of one thousand times less than the investment thresholds for coal gasification, oil shale, nuclear power or Arctic gas transmission.

24. There are literally thousands of enterprises in the oil and gas producing industry, with perhaps hundreds that are large enough and progressive enough to stand on the cutting edge of new technology. The journey to new frontiers of gas exploration and recovery, whether they are technological frontiers, deeper or stormier water, permafrost or deep rocks, can be taken in small steps, with part of the industry consolidating information and techniques from the last step while other firms take the pioneering risk.

Onshore, the payoff to exploration investment can be a matter of weeks, and is seldom more than two years. Offshore and in the Arctic, it may be three, five or seven years, but seven years is probably the minimum lead time for the big-ticket gas supply projects.

25. Regarding the potential price-responsiveness of natural gas supply, there are an incredible number of different opinions. It is obvious, however, that FPC price controls are not a major obstacle to exploration and development in any state large enough to have a significant intrastate gas market: these include present net exporters of gas like Texas and Louisiana as well as net importers like California. It has now been three years since the Arab embargo and the energy price revolution, so that some evidence one way or another on the price responsiveness of conventional onshore gas supply ought to be available before long.

26. Price controls on gas may or may not be an effective deterrent to development of new gas resources on the Outer Continental Shelf, but they are not the major deterrent. It is unfortunate that environmentalist opposition to energy development has been most effective here, because OCS oil and gas will be in my judgment/the least environmentally harmful source of large new supplies of primary energy for the United States, as well as the least costly in terms of real economic resources.

27. In summary, small seems indeed to be beautiful in energy supply alternatives. Or, at least, small is practical given today's political and financial realities. At the same time, I would urge along with the ecologists that diversity is stable, and so is decentralization. Diversified and decentralized systems are also more predictable in the aggregate. For this reason, a strategy for gas supply which depends mainly on a few large coal gasification and Eastern Hemisphere LNG projects and on the Arctic Gas pipeline stands a large risk of total failure. A strategy which puts even half of the capital projected for these projects into storage and increased peak deliverability, into conventional and modestly innovative onshore and offshore gas exploration, into LNG from naphtha facilities, into small LNG projects (as in Cook Inlet), and into a minimum scale transportation system for North Slope gas (like the Alcan system) may not yield the grandiosely optimistic projections for 1985 or 1990 gas supply which industry and government agencies like to put on their charts. Such a strategy will, however, surely and predictably produce enough gas at acceptable prices to serve the premium markets, and will continue to make some contribution to satisfy the intermediate market.

Scott

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after a ten minute recess and we will be prompt on ten minutes.

(Whereupon the hearing was recessed at 2:50 p.m. and reconvened at 3:00 p.m.)

SENATOR RADER: The committee will come back to order. We have asked Dr. Tussing and his associate to appear out of order or they rather asked that they might appear out of order, Mr. Scott, because of commitments that they have tomorrow.

Dr. Tussing, we will follow whatever order of presentation you and Mr. Scott think would be most appropriate. Do you wish to make a presentation first and then questions? Would that be the way of proceeding?

DR. TUSSING: Well, I think the way to proceed would be to let Dr. Scott go first and then to ask questions of him and I might have some comments on his answers. Dr. Scott has done an analysis of the Task Force Report and the documentation by the Department of Revenue for the Task Force Report. It is a technical analysis.

I intend to range more broadly on national and international political aspects of the contract. I am willing to take responsibility for everything that Dr. Scott is going to say because I have read his analysis. He can't take responsibility for what I am going to say because I don't have a prepared statement and I was not

quite sure what topics I was going to handle before I got here. So don't blame him for anything nasty or unpopular that comes from this side of the table.

SENATOR RADER: I'd like to have both you and Dr. Scott, you are appearing here as expert witnesses and, therefore, a statement of your background and your qualifications would be appropriate in the record.

DR. SCOTT: My name is Dr. Michael J. Scott. I am an assistant professor of Economics at the Institute of Social and Economic Research, University of Alaska. I am a professional economist with a Ph.D. in Economics from the University of Washington. I am associated with the Institute's Man-in-the-Arctic-Program, which is an econometric modelling effort of Alaskan economy, and I have specialties in natural resources, public expenditure modelling and Alaskan cost of living.

I was requested by the committee to evaluate the report, "A Comparative Evaluation, Prudhoe Bay Natural Gas Pipeline Systems", prepared by the Gas Pipeline Task Force, November 1976, to check its technical accuracy as a supporting document to the sale of natural gas to El Paso, Tenneco, and Southern for the expressed purpose of securing an all-Alaska gas pipeline.

I was asked to do this since I had previously, in late November, evaluated for the Legislative Affairs

Special Subcommittee on Oil and Gas Taxation, a study by Dr. David Knudson of the Department of Revenue, which was titled "A Comparative Economic Study of Three Competing Alaskan Prudhoe Bay Natural Gas Transmission Systems", and possibly also since I was involved in the ISER studies on the subject of three gas transporation systems beginning in November 1975.

My comments, accordingly, will be directed to the internal logic of the section of the Gas Pipeline Task Force report entitled Economic Factors. I regret that I am unable to discuss the options for in-state use of gas. At the time ISER was doing its studies (that is April 1975 through June 1976), we were asked to look at only export options. We did this for the Department of Interior and the Federal Power Commission staff. Then, too, our analysis mainly took place before Alcan's proposal was before us, and there may have been delays in construction which we could not anticipate. We had thought, at the time we were doing our studies, that any of the gas transportation systems could have been started in 1977. This, of course, has proved not to be the case so far. There have been some changes in the state fiscal structure, so any studies we have done since the time we did them, have been overtaken by events related to the permanent fund. And so our analysis, while generally

valid, has been overtaken to some degree so I don't want to be held to specific numbers that we have generated.

The economic factors mentioned in the state report are the cost of service, net benefits to the United States as a whole, fiscal impacts, impacts on the private economy and cost of living. The report makes several points with respect to cost of service, based mainly on a study which I mentioned previously I had evaluated earlier, the Department of Revenue study by Dr. Knudson. A large number of variables affect any cost-of-service calculation. Mentioned in the study are throughput, that is the amount of gas that would be forthcoming per day; total capital cost, I might add -- including overruns, if any; the rate of return to equity required by the company; inflation which could be generally categorized as the general decline in the purchasing power of money and then real price increases during construction; interest rates available. And I might also add the duration of the project, which affects the financing risk, and which I expect Dr. Tussing will mention.

The Department of Revenue technical report mainly shows that the cost of service considerations which they mentioned are favorable to the Arctic Gas line are extremely sensitive to changes in many of the variables which determine it, particularly volume of throughput and

the capital cost. While Dr. Knudson does not treat the three proposals symmetrically, he does show that with Arctic Gas at eight-eighths of his proposed volume, that is the total throughput of, I believe, it was 2.5 billion cubic feet per day and with twenty percent cost overruns he is able to move the cost of service from One Dollar Eighty-One Cents per thousand cubic feet to around Two Dollars per thousand, while at seven-eighths of the volume or if the state gas were not available or if the throughput from the pipeline was not as expected, 2.5 billion, that moves the cost of service from -- I'm sorry. With seven-eighths proposed volume and ten percent cost overrun moves it to Two Dollars and Seven Cents, seven cents more; seven-eighths volume and twenty percent cost overrun yields Two Dollars and Seventeen Cents per thousand cubic feet. So that with only nominal cost overrun or changes in the volume of production which are within the realm of possibility, you can move cost of service all the way from One Dollar Eighty-One Cents per thousand up to Two Dollars and Seventeen Cents per thousand. That is holding everything else constant.

The Department of Revenue seems to imply by this -- from this to mean that Arctic is somehow less preferable; I think a more correct conclusion is that the cost of service is an extremely slippery entity. While the

calculations are worth doing as illustrations, we can't know how the cost of service will be influenced by the various parameters at this time, so I don't feel that the argument that for any of the lines ought to heavily lean on the cost of service. The relative costs of service mentioned in the Task Force report may well hold, that is that Arctic would have the least cost of service, I believe it is El Paso next and Alcan the highest. Whatever the relative costs are there are large differences between the two studies they mentioned in the Knudson report and the Pipeline Coordinator's office.

The net national economic benefit, however, they do not have depending on the cost of service. They have it depending more -- they have it depending on the amount that is paid for the gas which is Two Dollars and Eighty Cents, less the cost of construction, allowances for interest on funds committed during construction, working capital, operations and maintenance expenses, taxes paid to foreign governments. I presume only that allocable to the American earnings on Arctic.

At any rate, the analysis, again, is sensitive to the assumption used, particularly to the price of gas and the timing and staging of the projects. It is interesting to note that to get net national benefits

to come our superior for El Paso to the Arctic and Alcan proposals they require the following three assumptions, full production of gas, that is eight-eighths of the 2.5 billion cubic feet for the Trans-Alaska with 1983 production. Full production for Alcan, but later than El Paso, a year later in fact and Arctic Gas assumed to have a ten percent cost overrun and seven-eighths production.

Therefore, I'm not sure that the game was played exactly fairly with the proposals. However, I think it might be fairer to use the real schedules, whatever those happen to be at the moment, they seem to change from time to time, and the same throughput and the same cost overrun considerations.

In any case, I think that since Alaska could influence the benefits by its actions vis-a-vis any of the lines, and since the calculation is sensitive to the assumptions, we ought to be extremely cautious how it is used.

With respect to fiscal impacts, the results of this section depend on an earlier study by the State Department of Labor, Research and Analysis Section. Labor shows that the level of employment rises sharply in each case through about 1981, then levels off. This is supposed to include direct employment on the project,

induced employment in the state economy brought about by the increase in the direct workforce. I did not have access to the report at the time I was preparing my comments here, so I can't compare their model to ours, the Man-in-the-Arctic Program, the econometric model. Their usual procedure, however, has been to use the HRPI, that is Human Resources Planning Institute labor market model, which does not take into account the impact on employment of state spending of additional revenues received by the state as a result of the gas projects.

Our work in this area, which does take this into account through the state government sector, shows that employment impacts are somewhat larger for El Paso than they show, I believe they show around nine thousand and we show around twelve thousand in the year 1990, a little more than for Arctic, and for what it's worth, about the same as the Alcan project.

So we have minor differences about the construction period, but in the main we agree about the ranking and approximate relative impacts on employment and on population, I might add.

I have no real arguments with what the Department did with revenues and expenditures. I would note, however, three things. Spending on local services and state services probably influences migration and population,

especially in the El Paso case, where you have much larger expenditures possible. And in any case, El Paso proposes to use local communities more heavily than the other two lines so that you would probably have higher spending on local services.

All three routes show substantial front-end state deficits which will have to be financed by reduced services, higher taxes on someone, or both.

All three routes show substantial construction employment effects between probably 1978 and 1984. This may coincide with the timing of other major oil and gas developments, for example, the Gulf of Alaska off-shore, and I can foresee that some of these routes may well be competing for transportation links and dock space, particularly in the Gulf of Alaska.

I think that we can safely agree that if the LNG plant proves taxable by the state under its property tax that the rankings that are shown in the report are, in fact, correct.

With respect to impacts on the private economy, we have no fundamental disagreements with this section. The section is based on work done by ISER and by state experts.

With respect to employment, there is an importance of acknowledging there that the fact that the jobs are

available does not say "to whom". In order to really tell what the likely impact will be on state resident employment we would need to know the type of jobs available, including the requisite skills, the number and type of skills available in Alaska to fill those jobs and the type and effectiveness of "Alaska Hire" policies.

With respect to real income, no matter -- with respect to our work in this area, which is mentioned in the report, it seems like no matter what we do with respect to the relative throughputs of the lines, if the revenues of the state are spent in ways that induce migration, we found that it is impossible over the long run to increase the real per capita personal income of "Alaskans" and I say Alaskans advisably because that would include migrants as well as those people who are already in the state. It may well be that you could have a decline in real personal income even though everyone were made better off, in the sense that people who already live in the state could have increased incomes from building the pipelines, and those people who migrate to the state may enjoy increases in real income in spite of the fact that the average dropped. But we don't know what the answer is there yet. We should know in a couple of years. We are doing some work in the

area right now about distribution of income and economic modelling in Alaska.

Results from our community survey in Fairbanks show that economic benefits, however, were much more widely spread than anyone had expected prior to the Alyeska pipeline being built. So that might be something you want to take into consideration.

With respect to cost of living, the analysis in the report seems reasonable and straightforward and I don't think we have any quarrels with that.

I would be happy to entertain any questions at this time.

SENATOR RADER: Let me advise the committee that Commissioner Martin, as you recall when he terminated his testimony Monday, asked for permission to come back after the conclusion of all the testimony and to supply us with any information that he felt was pertinent and I understand that he has an observer here. So I assume that those parts of your report, Doctor, which take issue with the Task Force and the other information will be presented somewhat to the committee at least for some rebuttal and I wanted to advise the committee members of that prior to their going on with Dr. Scott's questioning. But this would be an appropriate time I take it, Dr. Tussing and Dr. Scott for questioning on Dr. Scott's presentation?

SCOMM

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TITLE JOINT PUBLIC HEARINGS OF THE ALASKA STATE LEGISLATURE ON SCR 3, 4, 5 AND HCR 11, 12, 13, THE PROPOSED SALE OF ROYALTY GAS, JANUARY 31, 1977 - FEBRUARY 7, 1977, JUNEAU, ALASKA
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JOINT PUBLIC HEARINGS

of the

ALASKA STATE LEGISLATURE

on

SCR 3, 4, 5 and HCR 11, 12, 13

"THE PROPOSED SALE OF ROYALTY GAS"

January 31, 1977 - February 7, 1977

Juneau, Alaska

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Alaska State Legislature

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SENATE SPECIAL COMMITTEE TO CONSIDER THE SALE OF ROYALTY GAS

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John Huber
Clem Tillion

HOUSE SPECIAL COMMITTEE ON THE SALE OF ROYALTY GAS

Clark Gruening, Chairman
Chat Chatterton
Joe Hayes
Joe McKinnon
Charlie Parr

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AGO 799806

JANUARY 31, 1977

SENATOR RADER: This is the time set for the joint hearings held by the Senate and the House relative to the Governor's proposals to the sale of royalty gas and the resolutions that have been introduced in both the House and Senate concerning those matters.

First of all, I want to introduce myself. I am Senator John Rader and to my left is Representative Clark Gruening. We are each chairmen of independent committees. This is not a joint committee, it is a joint hearing of two committees.

I'm going to introduce the Senators on this side and Representative Gruening will introduce his House members. I'll start with Senator Meland of Sitka, Senator Orsini of Anchorage, Senator Hohman of Bethel, Senator Butrovich of Fairbanks, Senator Poland of Kodiak, Senator Huber of Fairbanks, Senator Croft of Anchorage, Senator Tillion of Halibut Cove, and Senator Colletta of Anchorage. Mr. Gruening.

REP. GRUENING: Thank you. I'd like to represent -- introduce Leo Rhode from Homer at the end of the table, Merle Snider from Kodiak, Red Swanson from Nenana, Larry Carpenter from Fairbanks, and Bob Bradley from Anchorage, Russ Meekins from Anchorage, Chat Chatterton from Anchorage, and Joe Hayes from Anchorage, and Joe McKinnon

from Anchorage, and Charlie Parr from Fairbanks, and I'm Clark Gruening, the chairman of the House Special Committee to consider this gas sale.

SENATOR RADER: We had hoped that we would have a place at the table for every legislator who was interested and I -- in the Senate I asked for persons to let me know and only Senator Kerttula let me know. I do see some legislators in the audience that I would like to recognize. I see Representative Haugen, I see Senator Sumner, Representative Haugen stand up perhaps, Sumner, Representative Bill Miles, Senator Willis, Senator Bradley, and if there is anyone else here, and Representative Miller, Senator Hackney.

We will not take questions from the floor except for legislators. Any legislator who has a question though, whether he is seated at the table or not, will be permitted to ask questions of the witness if he desires. But, because we do want a full transcript of this, I'd ask the legislator to perhaps come forward and if there is an empty seat here, take it for such period of time as he is asking questions. I do want to extend that privilege to all of you who are here if you have any questions. We will not permit questions though from non-legislators. If you have a question, you are going to have to get some legislator to ask it for you or else it probably won't be

asked.

The -- we would like to have everyone sign in that is here. We want to keep a record of attendance, if we can, and who you represent. If you wish to testify, please leave your name with the person at the desk or with any of our staff members here. Elke Kallab, Elke would you stand up. Elke -- if you do wish to testify and are not the list, leave your name with Elke or search her out. If you give it to me, it may get lost. If you give it to Elke, why I'm sure it won't be.

We found out -- our original schedule was for two days here and one day at the Baranof. We have found out that this is available for three days so all of our meetings here are scheduled for today, tomorrow and Wednesday. I'm hopeful that both the House and the Senate will conclude their sessions so that we will be able to have an eleven o'clock session here starting tomorrow, going to twelve with an hour for lunch, coming back at one and going until four thirty or five or exhaustion wipes us out, whichever first occurs. But, of course, our meetings in the mornings and during the days will be subject to the House and Senate meetings on the hill and these committee meetings will of course be subject -- it has a lower priority than do those meetings. I expect, however, that we will be able to convene though tomorrow at eleven o'clock. Those

of you who are wishing -- yes. Those of you who want transcripts, would you leave your name with the court reporter. Prior to building you a transcript, we'll try to give you a price on it so you'll have a chance to back out. If you'll leave your name with her and an address, we will try to work out some sort of a situation here so that we can give you an estimate of the price on the transcript and then she'll contact you at the address you indicate and if you want to buy one, you can. I don't think we are going to be able to print up enough to handle everything at public expense, we'll have to look into that. But, if you want a transcript leave your name with the court reporter.

This room is over capacity, I'm sure. I'm going to ask that you refrain from smoking. We'll try to take a break at least every hour. I don't like to interrupt the witness in the middle of his testimony or a question -- a line of questioning that is being pursued, but subject generally to the convenience of the proceedings at the time, we'll try to take a break every hour to give you a chance to take a smoke and stretch your legs.

We have a tentative agenda that we have developed. It is only tentative. We'll take any witness out of order. We're here to accommodate you for your travel plans and your other commitments. We know that a lot of

you have things to do other than to be here. If you wish to be taken out of order, let me know and I'll try to accommodate you as soon as I understand what your problem is.

It's a public meeting, of course, and everyone is welcome to attend and everyone will be welcome to testify. I suppose that if it went on for three weeks there probably wouldn't be very many people here to listen to you, but there will be someone here to listen.

I can't think of -- Representative Gruening, can you think of any other remarks or ground rules we need to establish?

REP. GRUENING: I'd like to introduce Representative Al Osterback who is sitting on the Senate side but is representing us in the House.

SENATOR RADER: Incidentally, from the Senate's point of the side, we have both the Resources and Finance people on our side. They have referrals of the resolutions after the select committees and there may be some public testimony taken by those committees at a later date. That will be up to the chairmen of those committees to determine whether or not they need it.

I have been contacted by a congressional delegation and told them that I would read their testimony verbally into the record and therefore I am going to do that,

although I think that in some instances we will receive written testimony which will not be read unless it is absolutely -- unless someone insists on it, some committee member.

But, we have a wire from United States Senator Mike Gravel.

(Whereupon Exhibit 1 was duly read into the record.)

That exhibit will be exhibit number one. The reporter will not retype exhibits which are read into the minutes. We will make them exhibits and they will be xeroxed when we make our copies to try to save on the expense.

Exhibit number two, which the reporter need not copy but which will be appended to the transcript is a wire from United States Senator Ted Stevens.

(Whereupon Exhibit 2 was duly read into the record.)

And that will be exhibit two. Representative Don Young called me less than twenty minutes ago from Washington, informed me that he had directed that his testimony be hand carried from Washington and that it left Washington Friday evening. I have been informed since then that it was sent to Washington because of a telecopying process -- sent to Anchorage and that the airplane cannot

leave Anchorage and that the reason that that testimony is here is because of the Anchorage airport and not the Juneau airport. I'm sure we will receive that testimony in the course of the hearings and when we do, it will likewise be read into the record.

REP. GRUENING: Senator?

SENATOR RADER: Representative Gruening.

REP. GRUENING: If I might be permitted a brief remark, it seems to me that this -- these three contracts that are before us now represent the single largest sale of our natural resources since the Prudhoe Bay lease sale and I hope -- I urge the legislators to hold sacred no sacred cows in approaching the assumptions upon which this -- these three contracts are based. And, as the Senators have pointed out, the principal reason that we are considering these contracts today is to effect a political decision in Washington, not to raise revenue for the State. So, I would urge everyone to focus on at least what I believe to be the principal question, what are we giving up by entering this contract, if anything, and what are we getting in return for the State -- for the people of this state.

SENATOR RADER: Unless there are any further remarks, we'll go back to our schedule here. I'll ask Commissioner Martin if he would present his testimony and those of his

associates in whatever order he approves. Commissioner, how would you like to handle questioning?

COMMISSIONER MARTIN: I'd like to ask Attorney General Gross and Commissioner Gallagher to join me here and I'll introduce the other individuals, Mr. Chairman.

SENATOR RADER: Would you want us to defer until the end of your presentation for questions or ask questions as we go along?

COMMISSIONER MARTIN: I think it would be most useful because, as I'll explain, we have a fairly brief presentation, to defer questions until the end, and then just have a continuous question period after that.

SENATOR RADER: Does anyone on the committee object to that procedure, any legislators object? That will be the way we'll proceed then.

COMMISSIONER MARTIN: Is Mr. Gallagher here? I thought I saw him earlier. Do you want to come up, Sterling?

Mr. Chairman, I have spoken, as you know, previously to a joint meeting of the two special committees at least, and to both of the Chairmen of the two special committees and, as I understand it, we have some options for procedure, and I want to explain that before I begin. We discussed either having a prolonged briefing by the Administration in which as many as eight or ten individuals could participate and give really very detailed information

with regard to every phase of this as opposed to a more summarized presentation followed by questions. And my understanding of the consensus of those -- the choice between those two and which I checked with you earlier this morning, was that a more summarized statement of the administration's position, in view of the fact that we have already submitted a tremendous amount of written material to the committees, would be preferred. So, if that's all right, I'll proceed in that vein.

Now, my attention today is to first read a statement sent down by Governor Hammond, followed by a statement by Attorney General Gross, who is a chairman of the State's Gas Line Task Force, and then to -- then allow the committee to simply ask questions of all the individuals that are here. And, let me very quickly indicate who is here and how I think we can be of assistance to the committee's informational needs today. Governor Hammond has asked me to be a principal spokeman on this issue and to attempt to see that you get the answers that you need, both here and otherwise, and I'll be pleased to serve in that capacity. With me here today, in addition to Attorney General Gross, who is the chairman of the Task Force and who was also responsible for putting together our FPC case, is Commissioner Gallagher, who done a -- Commissioner of Revenue, who has done a great

deal of work on the economics associated with the various line proposals and with the royalty gas contracts. Also here, and I'll just ask these individuals to raise their hands so you can identify them, is Mr. Bob LeResche, -- Dr. Bob LeResche, who is the coordinator -- the Director of Division of Policy & Planning in the Governor's office and was basically the substantive coordinator of the comparative route study done on the gas line issue. Also here is E.Z. Gilbreth, who is the Director of the Division of Mineral & Energy Management, the Department of Natural Resources, who is responsible at least for representing here today, the work that the State has done on royalty gas demand and is also in charge of our effort on the unitization of the Prudhoe Bay field. In summary, he is in charge of our management function with regard to the Prudhoe Bay field.

Also here is Mr. Hoyle Hamilton, who is Director of the Division of Oil and Gas Conservation. Mr. Hamilton is in charge of the field operation for the State, pursuant to the State's conservation statute, and is the individual who is coordinating our work on the reservoir simulation study and other aspects of the performance of the reservoir.

Also here is Assistant Attorney General Fred Boness, who is the individual at the Department of Law

who coordinates legal oil and gas work, assisted me staunchly throughout the negotiation of this contract and is also the coordinator from Juneau of the State's work in the FPC case. He's really our man on this issue.

And finally, Jack Byrd, who is sitting on the end there. Jack is a -- I think safe to say a nationally known consultant. He is an attorney, a nationally known legal consultant in the area of natural gas. He is an FPB attorney and has served as our gas contracting consultant, particularly on matters of price and FPC regulations throughout the negotiations.

There are other individuals involved who -- to a lesser extent who can also be here to assist from time to time but this is basically the team. I might say, Mr. Chairman, that we really want to thank the committee for making an effort to consolidate its hearings. We have a number of individuals here who are going to be difficult to get in one room on very many occasions and we appreciate the fact that you allowed us the privilege of making at least our factual presentation on this in one -- in one instance. Mr. Byrd and Mr. Boness, particularly, will have demands on their time in the next couple weeks will make it very difficult to get our entire group together very often, but we'll try to cooperate with the committee as far as we can to see

that we can get the people you need to be available. With that, I would like to read a statement that was sent down by Governor Hammond to the committee and then ask Av Gross to give a statement of his own.

"Members of the Committee, members of my Administration are here today to discuss a proposal of great importance to the future of the State. Because your review of this proposal should be as thorough as possible, I would like to preface the more detailed comments of others with my own statement. My objective is to lend perspective regarding the issues involved, and to define elements important to your ultimate decision.

Like the Native Claims Settlement Act, the Trans-Alaska Oil Pipeline and 17 D(2) Lands, the issue of North Slope natural gas transportation and use is a critical decision for Alaska. Present national emergy emergencies and last year's passage of the Natural Gas Transportation Act of 1976 leave little room to doubt that a national decision on the gas transportation system is imminent. The question is: what, if any, will, can and should -- what role, if any, will, can and should we play in that decision to best protect our own interests within the constraints imposed by overriding national interests?

After first analyzing various alternatives, my Administration concluded that the best, most expeditious

transportation system from both the state and national viewpoint was that which would take gas from Prudhoe Bay to tidewater in Prince William Sound. This legislature reflected a similar conclusion in a resolution adopted two years ago. Polls indicate that almost -- indicated that almost eighty-five percent of the people of Alaska stood solidly behind that choice. The congressional delegation concurred. Such support was not given lightly. Unlike the oil pipeline, the gas pipeline route had been widely discussed through the state, both in the media and through public meetings, before a decision was made. That decision is one which can be supported on principle as well as politics.

Having made the decision on which route to support, we actively participated in Federal Power Commission hearings; successfully advanced the unprecedented amendment to protect later state uses of royalty gas, and took our case to the people in the Lower 48 in an effort to offset the considerable opposition. After all, nearly all major distribution companies favored the Arctic Gas consortium. Mid-western states, which had sought a Trans-Canada oil pipeline, argued that the gas pipeline should go directly to them. After participating in this process for some time, and in light of legislative expression and congressional consultation, I felt it necessary to do more to gain support

for our position from outside the state. That conclusion led to the royalty gas contract you see before you now.

The major purpose of these contracts is to build a national constituency in support of the Trans-Alaska line while protecting and enhancing the in-state utilization of Alaskan royalty gas wherever possible so long as consistent with national needs. We believe the proposed contracts protect the state's interests as fully as possible under the circumstances. We are not, as some suggest, simply trying to buy lobbyists in Washington. That could have been done simply through hiring qualified personnel. The royalty contract does far more. It gives people throughout most other states an interest in seeing that the Trans-Alaska route is approved. A decision on this matter will ultimately be made by the President and the Congress. Their overriding concern will be in the national interst. Overriding national interest can be deomonstrated best if the largest number of people possible directly benefit from approval of the Trans-Alaska line.

Our actions in bringing forth these contracts are what I believe the people of Alaska, the legislature and the congressional delegation believed we should do. I suspect that if my administration had not negotiated the best contracts possible and advanced them under these

circumstances and then given them to you, we would surely be asked by many of you where the royalty gas sale proposals were rather than being questioned about proceeding. As your legislative resolution indicated to use "all resources at my command" to further a Trans-Alaska gas pipeline route. Certainly, there are politics involved in any such contractual agreements. However, there is nothing at all wrong with political forces being countered by political forces when the politics one uses coincide with principle. So long as we believe the Trans-Alaska route truly is in the state's and the nation's best interests, we would be remiss should we not garner what support we can so long as we do not do violence to propriety or principle in the process.

My instructions for our negotiators were to seek the best contract possible for the state to carry out the policies articulated and to do so on a time schedule which would allow the legislature the eariliest possible opportunity to review this alternative. After reviewing the results of the negotiations, I concluded it to be in the best interests of the state that this alternative be advanced. That decision won the endoresement of a broad spectrum of the Alaska public and the congressional delegation and was, as well, accorded approval of the Royalty Board as mandated by statute.

In negotiating the contracts, the State recovered a good price; it protected the future in-state use of gas; it gave the State the best opportunity to utilize and protect its royalty gas pursuant to the amendment we drafted and proposed to Congress for protection of our royalty gas; and at the same time we've gained support for the state's position on the gas pipeline debates. Moreover, the contracts are consistent with the direction the legislature gave to the administration when it not only indicated its support for the Trans-Alaska route but later appropriated money to aid in the negotiation of contracts.

Some concerns have been raised concerning the so-called "flexibility provision" in the contract. That clause would permit the state through the governor to change its position on the route issue at some subsequent time. Some assert that no flexibility at all should be possible and that the state should lock itself into an all or none position in support of the Trans-Alaska route. I think this is self-destructive, for I am sure that nearly every person in the state would agree that if we cannot have the El Paso route, the Alcan route is far more desirable than the Arctic Gas route. And they would want the State to be able to do what it can to gain the next best choice should our first choice be impossible or unwise.

Other persons suggest that while flexibility is desirable, any change of position should only be made with the concurrence of the legislature. Normally I have great sympathy with legislative participation in policy decisions of the nature -- of this nature and my record bears it out, but in this case you must recognize the realities of the situation. Our support for the Trans-Alaska route is strong and will not waiver unless and until it becomes clear that that route cannot succeed. That point, if it comes at all, will probably come at some time later in the pipeline decision--perhaps in the closing debate in Congress. Decisions will have to be made quickly if they are to have any impact at all. I can assure you that if I have to make a decision to shift our support from the El Paso route to the Alcan route it will be only after a clear consensus has emerged from our Congressional Delegation that such a shift was necessary and after a similar consensus had emerged through consultation with the State legislative leadership. We would all recognize it to be in the best interest, I think, if that -- in our best interest, I think, if that moment arose. But, reconvening the legislature and seeking a new full-scale debate on the question would simply be unrealistic considering that we might be dealing with decisions which would have to be made in literally hours or days. If there were time, I

would honor a request by the legislative leadership to call a special session, but I cannot support a requirement for a mandatory session under any circumstaces, for it would tie our hands unnecessarily and perhaps jeopardize the best interests of the state. I hope you will consider these contracts very carefully. I have tried to have them available for you at the onset of the session so that you might move quickly on them, but I do not want in any way to pressure you into a decision before you are satisfied that the contracts are in the state's best interests. At the same time, you know and I know the timetable of the federal decision, and waiting an unreasonable period of time before giving your endorsement to what we have done may indicate on a national level that our support is vacillating or, for that matter, that our support will not be translated into meaningful action in enough time to have an impact. I am sure you are aware of these factors just as I am, and thus will deal with the contracts reasonably and expeditiously.

I hope this brief review clears the air on certain aspects of the decision before you. Members of my administration will be available to you today and later to answer questions which led up to the contracts. I have instructed them to stay here as long as they are needed by the committee and to answer the questions you

have. Some of them will have additional statements to make concerning the contracts. And, the Governor expresses his thanks, Senator Rader.

At this time I would like to ask Attorney General Gross to make a statement, the only other prepared statement we'll be making today, which indicates the work that was done by the Gas Line Task Force.

ATTORNEY GENERAL GROSS: Thank you, Commissioner Martin. As the Governor has just indicated in his statement, one of the major purposes for the contracts before you is to build national support in favor of the Trans-Alaska pipeline route. I think it is fair to say that approval or disapproval of this contract by the legislature will be interpreted in large part as approval or disapproval of the Governor's decision to support the Trans-Alaska line. Since that is the case, it seems to me incumbent upon the administration to outline for you why we have come to the conclusion that support for the all-Alaska line is in the state's best interest. You have an enormous amount of material before you that has already been furnished by the administration to justify its decision, but it is perhaps fitting as we begin these hearings that I briefly outline how we have reached this point in the decision-making process.

As one of the first acts of his administration,

Governor Hammond appointed me as chairman of the Gas Pipeline Task Force. The purpose of that group was to gather and analyze the available data on alternative pipeline routes and then to recommend to the Governor which route was in the state's best interest. The Task Force was composed of commissioners from the departments which would have involvement in the construction of a gas pipeline, such as Community and Regional Affairs, Revenue, Natural Resources, Highways and Commerce. Mr. Champion, the Pipeline Coordinator, served on the committee, as did Lowell Thomas, the Lieutenant Governor.

In candor, there were enormous pressures on the task force. A review of the files indicated that little, if any, prior substantive analysis had been done of the alternate route proposals. Accordingly, we had to develop the information on which our decisions were based from scratch. The members of the task force had little prior expertise in gas pipeline regulation matters or the kinds of decisions which were relevant to choosing a particular route. We had to gain that knowledge before we could make any kind of an intelligent decision. Finally, we were put under a lot of pressure by the schedule of events having to do with the pipeline route decision. The FPC hearings were about to begin and if the state was to take any meaningful position, it was necessary that we

make a prompt decision on what position we would take in those hearings.

We tried to arrive at a position fairly and honestly. By that I mean we tried to evaluate the data made available to us in an unbiased fashion. We did not try to reach a politically popular result just for the sake of that popularity. The Governor instructed us to reach a position that we could rationally support, and we knew we had to do that since if we were to promote our case before the FPC and in the national forum, a decision based purely on political considerations would be quickly and obviously exposed for exactly what it was. We may have made mistakes, Mr. Chairman, in our deliberations, but I can assure you that they have not been through lack of commitment or effort to do what was best for the state.

Initially we had but two alternative route proposals--the Arctic Gas route and the El Paso route. In analyzing those choices, we used information provided by the companies both to us and in their filings before the Federal Power Commission. That information was subjected to the scrutiny of various departments which evaluated the information with a view toward testing its authenticity. We commissioned an economic study on the alternative routes. Evaluating all the evidence, the

task force concluded unanimously that from both economic and environmental viewpoints, the El Paso route was clearly the best for the state. We recommended it to the Governor and he accepted our recommendation, committing the state to supporting that choice.

The reasons for the choice are, I think, now obvious, at least in retrospect. From an economic standpoint, the El Paso route generated a great deal of in-state employment during construction and created a number of long-term job opportunities within the state. The El Paso project meant a greater amount of capital investment in the state. It also provided opportunity for in-state use of gas, a matter of critical importance. The Arctic Gas route provided little lasting economic base for the state. Environmentally the Arctic Gas route intruded on the Arctic Wildlife Range, one of the last undisturbed wilderness areas in Alaska, while the El Paso route for the most part utilized an existing pipeline corridor developed for the Alyeska route. Every single major environmental group involved in this matter joined us in our support of the El Paso route as opposed to the Arctic Gas route. It was one of the few issues on which those who promote rapid development in our state and those who are strict conservationists agreed.

Finally, very real questions have been raised as

to whether the Arctic Gas route can even be built, at least in the forseeable future. Native land claims problems in Canada are very real right now. And, as we all know, from our personal experience, those claims can have very real impact.

Now, approximately a year after our initial decision and a good part of the way through the presentation of the case before the Federal Power Commission, a new route alternative developed. That was the route from Prudhoe Bay to Fairbanks, and then down the Alcan Highway. That is the route that is now known as the Alcan proposal, and it has some real benefits for Alaska. For instance, it permits in-state use of royalty gas (though it does not bring the gas to tidewater), and it provides a greater long-term economic base in the state than is provided by the Arctic Gas route. Environmentally the Alcan route uses existing pipeline corridors to Fairbanks and then follows the highway to the Canadian border, with minimal environmental impact. Environmental groups started to split with the surfacing of this proposal. Some of them now advocate the Alcan route.

The Governor asked at that time that the task force re-evaluate our position in light of the Alcan proposal, and we did so, using basically the same process as we used to reach our original decision. The task

force concluded after substantial study, including two additional comprehensive economic analyses, that while the Alcan route was far better than the Arctic Gas route, it still was not as beneficial to the state as the El Paso route. In long-term employment, for instance, the El Paso proposal will create nearly one thousand more jobs in the state than the Alcan proposal. On a net basis, the El Paso route will produce approximately Five Hundred and Twenty-five Million Dollars in income for the state treasury during the effective life of the line, as opposed to approximately Three Hundred and Fifty-seven Million Dollars for the Alcan route. Only the El Paso route will take gas to tidewater where prospective use of our royalty gas will probably be greatest. Moreover, from a national viewpoint, our analyses indicate that the El Paso route can give as much as One Billion Dollars more net benefit to the nation, primarily through the fact that more of the project is built with American labor and materials, and is subject to only United States taxation.

Environmentally the case between Alcan and El Paso is very close. The task force favored El Paso since it used existing corridor technology. Now, that is important, since it means that we can use the wealth of material that we have developed on rivers, tundra, and wildlife

as the Trans-Alaska pipeline was built. Moreover, we would, in effect, channelize our pipeline development in the state. But there are real benefits to Alcan as well. It is a purely subjective judgment and I would not seriously quarrel with any of you who felt that Alcan was the better environmental choice, but, in my view, it is not so much better as to countervail the substantial economic benefits which flow to the state if the Trans-Alaska pipeline route is selected.

As chairman of the task force, it was my basic function to coordinate the efforts of the various departments involved. I do not pretend to be an expert on the various studies which have been done, technical aspects of construction or difficult questions involving environmental matters. We have here today, however, people who can answer those questions, and Commissioner Martin and I can direct your questions to the people who can best respond to them. We are available to help you in any way we can in explaining what we have done and why. I think we have made the right decision and I hope we can convince you that we have made the right decision. Thank you.

COMMISSIONER MARTIN: Mr. Chairman, I'm -- having said a great deal on these contracts in prepared statements and the other night before Senator Gruening's committee, I'm not going to make a prepared statement in addition to

that made by the Governor and Attorney General Gross, but I'm prepared to answer what questions I can and direct your others to any other individuals we have here who can help. Thank you very much.

SENATOR RADER: Thank you, Commissioner, Attorney General. Have we any questions from any members?

REP. GRUENING: Somebody has got to start here.

SENATOR RADER: Mr. Gruening?

REP. GRUENING: I think this goes to Mr. Gross. In the comparative evaluation it stated -- November of '76, there is a letter, December 2nd, 1976, to the Governor in which on page three of that letter, on the bottom of the third paragraph, Chairman Gross makes these remarks: "I think Alaska would agree that if we reached a point where support of the El Paso route was no longer feasible, the state should throw its support behind the Alcan route. The only real question is at what point." And then in the next paragraph you suggest a number of points at which that support might be switched, and one of them was the decision of the Federal Power Commission Hearing Judge. And that decision, as I understand it, will be made tomorrow, and I don't know what the decision will be, but let's assume that it is not favorable to the all-Alaska Route. Is it your position now that that is not an important stage at which we should consider the -- our

first choice or is it important as you see it?

ATTORNEY GENERAL GROSS: Well, it is certainly important, Representative Gruening. I think that since I wrote this letter we have had an opportunity to discuss with both the Congressional Delegation and the people involved in the effort in Washington, what the impact will be of an adverse decision before the Federal Power Commission. It is my impression, from discussing that with those people, that the fight will still be very much an open one at that stage, that the basic decision is going to be made by the President and the Congress, and that the issue will not be foretold by a Federal Power Commission decision even if it were adverse. So I would say at this point that an adverse decision would not cause me, at least, to recommend to the Governor a re-evaluation of our position.

Commissioner Martin has been more in charge of the Washington aspects of this and I think he would be more appropriate to answer that; but that would be my own reflection on what I consider.

COMMISSIONER MARTIN: I'd only add, Mr. Chairman, that I think the circumstances that exist now, after the passage of the Alaska Natural Gas Transportation Act, should be noted to be substantially different than that which would exist under ordinary certification processes. As that bill is

structured the FPC administrative law judge's opinion ultimately leading to an FPC decision becomes only a part on an overall structure which will involve a number of other federal agencies, the President and Congress prior to the decision. Whereas, under the ordinary circumstances the finding of the judge followed by the Commission would be determinative. So, I think that the circumstances change but I would want to add that we intend to look at that decision and we anticipate, quite frankly, that it will be lengthy, several hundred pages, and we anticipate that it will have a number of subtle and sophisticated points in it. So that I think that it would be very difficult now to say before seeing it what the position would be. But, standing alone I don't think that it represents a -- necessarily a single factor to change the state's position.

REP. GRUENING: In this new legislation, what role or what importance would you play on the presidential -- the President's decision?

COMMISSIONER MARTIN: Well, all of these are somewhat subjective judgments. My own feeling would be that the way the decision will be made, and I guess I say this from the perspective of my experience somewhat from the oil line as well as this present dispute, Mr. Chairman, is this, that my guess is that the President will take advantage

of the fact finding period set up in the bill utilizing the federal agencies as well as the FPC. He will then move toward a position on it without probably taking a final position and then work with members of Congress to see if the issue can somehow be brokered or somehow resolved between the two branches prior to the time that it goes.

So my guess is that the President is going to be very important but that he will not send a recommendation to Congress without having a fairly good idea of how it will be returned. His role is unquestionably crucial.

REP. GRUENING: What I'm trying to determine, Commissioner, is at what point, interpreting the Governor's remarks today that you read, at what point would he make a re-consideration? If I understood it correctly, he said in Congress. In other words, the President's decision wasn't as important to him -- or I'm trying to understand at just what point you think these considerations that Chairman Gross pointed out earlier are important.

COMMISSIONER MARTIN: I don't think that you can identify a single instance but I can give you some examples that would be the sort of thing that would be important. For instance, if we get an early indication that the -- if the President simply does what I suggest, he may not, and that is, takes a position simply within the next sixty or

ninety days, stakes out a position and says "I'm going to support the Arctic route" or "I'm going to support the El Paso route", we will know something then that will be definitive. We don't know whether he will do that.

Similarly there could be an action taken in Canada, a definitive action which would give us an idea whether Canada has any capability at all to approve any pipeline through its country or whether it will act so as to facilitate it. And I really think that you're not going to get an answer as to a definitive point in time and this is what we think is one of the strengths of the contracts, that it puts us in a position where we can be somewhat flexible in response to that but at the same time have our basic position well established and well supported.

SENATOR RADER: Senator Croft?

SENATOR CROFT: Could I ask -- I'd like to get back to Attorney General Gross' letter of December 2nd. You said in the last sentence -- the last paragraph of that, "I feel there is every possibility that the Trans-Alaska project will eventually be selected for the transportation of North Slope gas." Do you expect Judge Litt tomorrow to in effect recommend the El Paso route?

ATTORNEY GENERAL GROSS: No.

SENATOR CROFT: What has happened to date to make you think there is every possibility that that route will be

selected?

ATTORNEY GENERAL GROSS: I think the indications I have, Senator Croft, primarily revolve about the Canadian situation. I think that the Canadian situation is going to be a great deal more formidable than the administrative law judge contemplates and that the land claims issue -- the national situation in Canada at the present time are going to create a climate in which a Trans-Canadian route of any kind is going to be difficult. And I think that will be a highly determinative force on a national level.

SENATOR CROFT: Mr. --

SENATOR RADER: Senator?

SENATOR CROFT: Unless somebody else has another question. I was going to ask in that regard that the Anchorage Times of Saturday had reference to a treaty that had been recently concluded with Canada and somebody had said that that treaty had no material effect on the pipeline debate. Do you believe that's correct and exactly what does that treaty do?

ATTORNEY GENERAL GROSS: I do believe that is correct but I think Commissioner Martin can better explain it if that is all right.

COMMISSIONER MARTIN: Well, I think that it has some effect. I don't think that it is going to be determinative in any way. That's -- the treaty that was signed and now

subsequently has to be ratified in each country, is basically a formalization of the ad referendum agreement that was made earlier and that agreement really doesn't resolve any of the difficult questions that confront Canada on this issue. It tends to be more of an agreement to agree than anything else. I can have Assistant Attorney General Boness describe the terms of that treaty, I'm sure you are already familiar with them, but I don't think that treaty in any way is an agreement for a Trans-Canadian pipeline, either Alcan or Arctic.

SENATOR CROFT: The reason I ask is because I had heard that there was going to be a move on the part of our congressional delegation to fight this because it did have implications. You would expect then no fight out of our congressional delegation as a result of it?

COMMISSIONER MARTIN: I would think that they might oppose it but my own indication is that they share the view that I just expressed regarding the treaty, that it essentially establishes more normalized working relations between the United States and Canada on sort of a broad range of issues, but it does virtually nothing to materially advance either an Alcan or Arctic route.

SENATOR CROFT: Mr. Chairman, would you expect that the administration in conjunction with the Congressional Delegation and the purchasers of the North Slope gas would

then oppose that treaty in Congress?

COMMISSIONER MARTIN: I really wouldn't take a position on that. Our position throughout has been not to obstruct relationships with Canada nor to highlight differences between Alaska or the U.S. and Canada on this issue. I think the bigger issue really is simply the Canadian self-interest and the internal Canadian problems in terms of approving it. But, without examining in detail, my preliminary guess would be no, that we would not make major efforts to oppose it, if any.

SENATOR RADER: Any other questions? Mr. Parr?

REP. PARR: Yes. I believe my question would be for Commissioner Martin. In reading the Governor's statement, Mr. Martin, the purpose of this is to build a constituency in the Lower 48. Now, the Governor in dealing with the reason for not getting legislative concurrence in his switch said that a decision to shift, and these are almost his exact words, would have to be reached quickly and perhaps in hours or days and therefore it wouldn't be possible to get the legislature back into it. I would like to know what credibility you think we would have if on July 3rd we are supporting the El Paso route and July 4th we are supporting the Alcan, not only what credibility we'd have but what credibility our presumed allies would have?

COMMISSIONER MARTIN: Mr. Parr, as I see it there are really two situations that might exist to change the state's position on this issue. One could occur any time and one could occur, as I see it, only relatively early in the debate. The one that could occur relatively early would involve the substantive merits of the routes themselves and that is the emergence of facts, whether those facts are deregulation of gas or other factors, which would just simply change the substantive judgment of Alaskans on which routes are in its best interest.

The second factor which I think could occur at any point, would be the development of facts which indicate that our first choice, El Paso, simply cannot succeed and that we would lose to Arctic, a third choice, unless we changed our support to a second.

Now, in terms of your question about credibility, I think that most of the early development with regard to new substantive aspects will happen probably during the time -- or a good part of it will happen during the time that the legislature is considering this issue and should be very much a part of our debate.

With regard to the second factor, I think that anytime we switch, based on the fact that El Paso can no longer prevail, we are simply -- we are not impairing credibility because we are not changing our mind about

which is the best route. We are simply saying that the best route can't succeed and we're changing our allegience of support to the one that is the next best in our interest. So, I think that either the State or the companies could make that argument.

REP. PARR: Then you would say that the people down in Tennessee or wherever who were supposedly writing their Congressman in support of the El Paso route would understand that they were being asked to switch the next day as to writing their Congressman to support the Alcan route?

COMMISSIONER MARTIN: I don't think that they would know, Mr. Parr. I think that it is a very difficult situation. I mean, there is no question in my mind that you have -- that your point is valid to some extent. The logical extension of it, however, is that we lock ourselves into a single avenue of support at this time and give ourselves no avenue to get out of it if circumstances do change.

REP. PARR: Thank you.

ATTORNEY GENERAL GROSS: Representative Parr, I think -- is it any more -- is it any different than in any political process where a position is reached where a compromise must be made which some person may not wish independently but, forced to it is, nonetheless, required to make a compromise? It happens in the Legislature, it happens in

the Congress, it happens all the time and I don't think it is a question of credibility. It is a question of you seeking the best thing you can get for your constituents. View it to the extent you can and I don't think it is a question that will be not credible, it's simply dealing with reality.

COMMISSIONER MARTIN: Representative Parr, I'd like to add one other thing when you asked about your constituency in Tennessee. Under those circumstances they are not going to lose the gas if the position changes. I mean those same people who have been writing the letters are going to be getting the gas but getting it through a system which can succeed rather than through one that may be a hopeless -- you know, a loser and can't succeed at some later time. So those individuals will still have the gas supply.

REP. PARR: May I reply?

SENATOR RADER: You still have the floor.

REP. PARR: Well, in reply to Mr. Gross, I see his point and after all we all know that politics is the art of compromise, right? But, that is a little bit different from what I was talking about, I think. We were talking about persuading a bunch or ordinary people who are just -- who are not politicians but to support our cause by persuading their politicians, right? And I think that is

quite a bit different from the fact that we in the legislature and in the Governor's office and everywhere else all have to accept compromise as a political fact of life. I think there is quite a little difference there.

ATTORNEY GENERAL GROSS: I think Commissioner Martin's point is well taken. If the compromise will still protect the interests of those individuals, I think they would support it.

REP. PARR: Mr. Chairman, well, of course and if that's the case, what we ought to do is make it pretty clear, "look, we want you to support whatever the State of Alaska wants supported, so you can get the gas. not that we want you to support El Paso so you can get the gas." Right? We were telling them that El Paso is the best route, okay?

ATTORNEY GENERAL GROSS: Right.

REP. PARR: And they are supposed to honestly believe that and try and persuade their congressmen, not just because they are going to get the gas because that is purely a selfish motive and if that is the way we are going to play it, we ought to know it. But I felt we were going to persuade them that El Paso was the best route and then we come along and say, "well, no soap, boys, now it's Alcan we have to go for." That's all I have Mr. Chairman.

SENATOR RADER: Mr. Chatterton?

REP. CHATTERTON: Mr. Chairman, Mr. Commissioner, on November 22, 1976, why the Alaska Royalty Oil and Gas Development Advisory Board met and did indeed approve your determination to waive the competitive bid process and subsequent to that why you as required by statute set forth some findings and conclusions. And I realize fully, Commissioner, that you were operating within a time frame, that you had to come up with something prior to the early portion of the first session of the Tenth Legislature. But, you in effect say that one of the rationales for not having any competitive bidding as far as intrastate use of gas is that no specific proposals for such purchases were forthcoming. Now, and in your judgment, how far on down through the future calendar time do you think that situation would remain in effect?

COMMISSIONER MARTIN: My experience thus far with the royalty oil and gas, Representative Chatterton, would indicate that rather than a highly competitive situation arising, what will happen is that a series of possible users of royalty oil or gas will develop. Now these may be small utilities, Golden Valley or some other electric cooperative, they may be municipal -- municipalities that go toward some gas system or a system that uses oil as a fuel for electrical generation or other purposes, or there may be large users that develop from major petrochemical or other

projects, and it may be that as those uses develop or we define uses that are beneficial to the state, that we can structure competitive sales to reach particular objectives but that they will be largely predicated on individual development or uses that may be competitive. For instance, in the case of Golden Valley Electric, it is very unlikely that we would expose Golden Valley Electric to a highly competitive sale which might be at the expense of consumers along with somebody else who had come in to compete with Golden Valley Electric. Now, we have not made any final determination on this but I think we'll see that situation confronted. So, I don't foreclose the possibility of competitive sales but I think it will arise in the context of a lot of individual proposed uses that will have to face a competitive sale on one of those proposals.

REP. CHATTERTON: My follow-up question, Mr. Chairman. Is it further and under your finding speaking to interstate sale of gas -- you say, "under present legal and regulatory circumstances a competitive sale based on price competition is not feasible because the price at which natural gas may be sold in interstate commerce is controlled by the Federal Power Commission." And, I ask you, Commissioner, how far into the future can you guarantee the citizens of Alaska that "present legal and regulatory circumstances"

will make it -- will keep the situation so that you cannot ask for competitive bids for interstate sale?

COMMISSIONER MARTIN: Well, I don't think I can give you a figure of guarantee and I doubt that you would force me to come up with it in a short period of time. Under the new administration I'm sure you are aware that the President has indicated his desire to move toward de-regulation. Exactly how reliable that makes an absolute promise for deregulation is anyone's guess and I think it is something that might well be granted with our congressional delegation. I do think that the situation is unpredictable. The odds are now substantially higher in favor of deregulation occurring than they were before President Carter made that statement.

In terms of this contract, we would be again benefiting by prices realized from the Prudhoe Bay field if we went to a deregulated situation. I know that later in this week there is going to be additional testimony on the price provision that deals with de-regulation and I'm hopeful that perhaps at sometime we can come back and have a discussion which I think will be complex and an interesting discussion on what that means. And, I think that there will be -- that we are largely protected under a deregulated or regulated situation to get the highest price from that field. I

will not tell you that there may not be circumstances that can arise that are unforeseeable at this time which may not make some differences and I want to discuss that with the committee. But, basically speaking, I think that this contract ties itself to the highest price, whether or not deregulation occurs.

REP. CHATTERTON: Thank you, Mr. Commissioner, thank you.

SENATOR RADER: Any further questions? Senator Croft?

SENATOR CROFT: I'm curious in regard to the use of political influence exactly where you expect that political influence to fall? Whom are we trying to effect?

ATTORNEY GENERAL GROSS: Political influence, I think the Governor's words, I think, are more apropos. I think he called it "building a national constituency". I think what he is trying to do, Senator Croft, is to give people in other states as well as Alaska, an interest in seeing the Trans-Alaska pipeline route approved. Now in -- as they are influenced, as they desire that route, hopefully their congressional representatives will also desire that route. Hopefully there will be more of a national constitutency as would influence the President in his decision. That is the type of thing we are talking about.

SENATOR CROFT: You don't anticipate these contracts having any effect on the FPC then?

ATTORNEY GENERAL GROSS: I think that frankly the contracts

have come too late to influence the FPC decision except as it indicates a commitment of the gas. But in terms of building a constituency for the pipeline, no. I think the FPC decision is probably already written.

COMMISSIONER MARTIN: Each of the buyers, Senator, did intervene in the FPC in favor of the Trans-Alaska route but I think beyond that it is certainly not a political situation with the FPC from here on out. They'll be participating in the standard legal procedures of the FPC and doing so on behalf of the Trans-Alaska route.

SENATOR CROFT: As an educated guess, is it fair to assume that you anticipate that Judge Litt tomorrow will basically rule in favor -- or recommend in favor of the Arctic route and that the FPC in its full commission hearing, which decision they have to make prior -- or on or before May 1st will likely follow his recommendations?

COMMISSIONER MARTIN: Well, the former question with regard to Judge Litt's decision is difficult to guess. The only way that you can guess is the way in which the Judge has asked his questions and made his statements during the hearing. In my own view that has tended to follow a strong bias toward the Arctic route and some dissatisfaction with both of the other alternatives. So, I -- my honest personal expectation is he will rule in a fairly complicated decision probably, in favor of the Arctic route

and the decision will be somewhat complex beyond that.

In terms of the FPC following his decision, I think that's just too speculative to really guess. I believe there is one and possibly two seats vacant on the FPC. The way those seats are filled will have a tremendous impact on that and I think that the information that is produced outside of the FPC proceeding from here on out will also have an impact on it, and that is one case in which I think the State will want to participate. As you may know, during that period of time the ex parte rule is waived for some purposes and a great deal of information will be made available to FPC commissioners in addition to that which is made available for the record itself. So, I just think it is too unpredictable to know.

SENATOR CROFT: Do you think then that these contracts may have an effect on the FPC?

COMMISSIONER MARTIN: I think they'll have a substantive effect and I think it will be important that the people that we have working for us will be able to produce new information and hopefully develop better information on the routes but I don't think they will have a political -- To answer your questions in terms of politics, I doubt if it will have a political effect. I think, Senator, it is very important to say a couple things here to at least give my own personal opinion with regard to this idea

about politics being at the heart of it. I don't share that view. First of all, someone said earlier, I think it was Clark, that what is important is what you get and what you give up. In terms of what you get, I think we spend too much of our time really dealing with thinking the only thing we get is political support. As I see it, there are really four major things, some of them having sub-parts that we get. One is, we get a good price for this gas and we get it, I think, according to a term that gives us the best protection we can get aside from getting a premium. We may at a later time be able to get a premium and I'm -- I've said that throughout this entire consideration. It's a matter of whether or not you want to withhold this action waiting for that time to possibly arise. It is not here now and we can't get it now, but we get a good price.

Secondly, we get a contract which very closely follows the theory that Mr. Moody advanced last year and that could be followed to protect our royalty gas. We get in-state protection of gas by a total take back provision, which I think most people agree is extraordinary in its coverage of future in-state uses and to protect. That may or may not be something we can accomplish later.

Third, we get, I think, a reasonable exercise of the rights that we gain through the amendment that passed the Gas Transportation Act and last years Congress. There

has been some disagreement over whether or not this is the way and the time in which that should be exercised. I personally believe it is a reasonable way and a reasonable time to exercise it, and I think the Congressional Delegation agrees with that.

And, fourth, and only fourth do we get the support for the pipeline that we are talking about and even there, that support while it has a political aspect, that is it builds a constituency in a certain area and it puts people on our side working for it. It also has a substantive aspect, Senator Croft, in that these companies, Tenneco and Southern, are companies with great resources in terms of their substantive capability, whether it is LNG or offshore operations and the way in which they merge into the El Paso system in a logical distribution pattern. They bring a great deal more to it than politics. So, I think that while it is unquestionable that there will be political or other -- you know, something to be characterized as political support. There is much more to the contract than that that is of benefit to the state.

SENATOR CROFT: Mr. Chairman, could I reply to that? The phrase "political support" did not originate with me.

COMMISSIONER MARTIN: I understand.

SENATOR CROFT: I don't know whether it did with you or the

Attorney General but on page twelve of the Governor's speech dated November 12th, he says, "Gaining political support at this critical stage of the pipeline proceedings is the major reason for acting now on royalty gas, but there are other reasons also." And then on page fifteen he says, "The primary objective of this sale is to gain additional support for the pipeline route the State supports."

COMMISSIONER MARTIN: I understand that and I think it is fair to characterize it as a primary reason, or the primary reason, but I'm trying to make it a point ---

SENATOR CROFT: The primary reason is political support?

COMMISSIONER MARTIN: That -- in my view, it is not. I think in my view there are many reasons and they are all of somewhat equal character. I think the Governor said that, and that is his view, that he thinks it is a primary reason.

ATTORNEY GENERAL GROSS: I think you may be getting into a semantic difficulty here. I think what you read, Senator Croft, said the reason for selling the gas now is to generate political support, and I think that's unquestionably accurate and the Governor stressed it. That is the reason we are doing it now as opposed to doing it a year from now, that a year from now it will have no impact in gaining us any support for our posiiton

in the Trans-Alaska pipeline dispute. I think Commissioner Martin is stressing that the contract itself whenever made, also has certain highly desirable features to it, which he has stressed. And I think that is absolutely accurate too.

SENATOR CROFT: Could I ask one more question and then Mr. Chatterton has one. To what extent does either the Federal Power Commission or the United States Congress have authority or the possibility of allocating this gas wherever it goes anyway? Couldn't they simply say, "we approve this route and we determine that 2.5 billion cubic feet a day are to be sold east of the Mississippi River"? And doesn't -- I mean, doesn't Congress have the power to allocate that gas rather than them having to say, "We're going to approve a route because then a supplier may buy it through some contract"?

COMMISSIONER MARTIN: Well, Senator, I think you know partially what the answer to that is. That is the stuff with which interstate commerce clause battles are made between states and the federal government. Under some circumstances I would say, yes. Under the -- as you know, oil is allocated and I don't suppose that there is any over-riding reason that they couldn't do that. The circumstances would have to exist to do so.

Let me just point out on the other side, though,

that we were successful in drafting a proposal and our delegation was even more successful in gaining the passage of the amendment which gave Alaska the right to utilize its gas in-state. So that I think all you can do is judge that subjectively as a political possibility. In other words, a legislative congressional possibility. Right now, I think, that given the gas shortage in the Lower 48, how we react, responsibly or not to that in Alaska, has a great deal to do with that. How other gas producing states react has something to do with that.

In my view, the passage of the amendment was a hopeful sign and it may be one that we can capitalize on and protect future in-state uses. But -- the question is simply, can they do it? I would say, sure.

SENATOR CROFT: I have some additional questions but I notice Mr. Chatterton wants the floor.

SENATOR RADER: First of all, anybody who has not yet asked a question, who would like to, we'll open it up to everyone before we get to -- Mr. Chatterton, then.

REP. HAYES: Mr. Chairman?

SENATOR RADER: Mr. Hayes?

REP. HAYES: Commissioner Martin, just one item of clarification. The statement regarding the primary purpose of the contract which had to do with political considerations, that was the Governor's position and not yours?

COMMISSIONER MARTIN: Yes, sir.

REP. HAYES: I read it in the transcript of your Royalty Oil and Gas Development Advisory Board of November 22nd, where I got the impression that it was your opinion.

COMMISSIONER MARTIN: My view is that -- just to clarify it, Mr. Hayes, is that all of these purposes are extremely important and that is one of them. Whether it is not the most important or not, or the primary purpose, is that I think it is subjective judgment. I think each of them are important, in a combination they make up a very good argument.

SENATOR RADER: Mr. Chatterton?

REP. CHATTERTON: Thank you, Mr. Chairman. I'm sorry, Mr. Commissioner, but I would like to recall your memory and see if you still stay. Going back to those findings that I referred to that you made following the November board meeting, why you do say that the "primary objective of the proposed" -- "presently proposed sales to improve and strengthen the position of the state with respect to the decision process for the system to transport North Slope natural gas" and I gather --

COMMISSIONER MARTIN: Well, Mr. Chatterton, I'd stand by that statement.

REP. CHATTERTON: Yes, I think that is what you said here.

ATTORNEY GENERAL GROSS: Mr. Chatterton, as one who has been

involved in this from the Gas Pipeline Task Force point of view, I think when you say "political influence", what you are really saying is that it is a roundabout way of saying any influence. This is a political decision which is going to be made in the larger sense. A political decision as to policy consideration clashing to produce a decision as to where this pipeline route is going to be built. If the state is going to have any influence in this, it is going to have to have political influence in this. That's -- we either have the choice of doing nothing and watching it happen, or we have the choice of becoming actively involved and trying to influence the decision. The Governor made the latter choice.

SENATOR RADER: Senator Poland, then Senator Bradley.

REP. BRADLEY: Representative.

SENATOR RADER: Representative Bradley.

REP. BRADLEY: You don't know what an insult that is.

SENATOR RADER: I didn't mean to insult you, Representative. Senator Poland?

SENATOR POLAND: As long as we are on this political issue, one of the things that has bothered me about the switch provision in there is what incentives do these three companies particularly have when they're going --as I read the contract, they're going to get the gas no matter what route.

COMMISSIONER MARTIN: You have made a common error, Senator Poland, I believe in reading the contracts, because they will not get the gas no matter which route it is. I have talked to a number of legislators who have made the same error reading the contracts.

The gas will only be given -- if they are supporting the position that the state supports and if that position prevails so that if the state never changes its position from El Paso and Alcan is certificated, none -- these contracts will simply be void.

If the state changes its position to a second route, let's say Alcan, and one of the companies refuses to switch at the time the state does so and then Alcan prevails, or the other route prevails, they similarly lose the gas. So, the only circumstances under which they get gas is if they are supporting the state position and if that position prevails. Under all other circumstances the contracts would be void, so they have an undeniable incentive to be with the state on the prevailing position.

SENATOR POLAND: Excuse me, Commissioner, I didn't express myself well because I understood that the state had to switch its position for their contracts still to be in power. But, if the state does -- I mean, they have no incentive to particularly work to hold the state on the all-Alaska position.

COMMISSIONER MARTIN: I would think they would have the incentive of wanting to prevail since that is the position we are going to take and the position we believe would prevail.

SENATOR POLAND: Mr. Chairman, I have one other question that I would like to ask.the Commissioner.

SENATOR RADER: You still have the floor.

SENATOR POLAND: The state has the right to take back whatever gas it needs for in-state use, including the exchange of Prudhoe Bay gas for other gas elsewhere in Alaska. If the exchange gas is used in Alaska and including liquefaction of the gas provided the liquid gas is used in Alaska, now, does this mean that we cannot sell gas to a third party for liquefaction and export?

COMMISSIONER MARTIN: Let me ask. Yes, that is right. I wanted to make sure that I had followed your question.

SENATOR POLAND: Then if we want to use those things we have to go into that business ourselves?

COMMISSIONER MARTIN: I want to be sure I understand your question, Senator Poland. Would you run that by one more time? I'm not sure I understood it.

SENATOR POLAND: Does this mean that we can't use -- we can't sell to a third party for liquefaction and export?

COMMISSIONER MARTIN: That is right, we could not do that. In my view that is right but we could sell for liquefaction

and use. The statement we make is protected from all in-state uses except liquefaction for export. What you are suggesting is a way that we might essentially cheat that provision. What we have sold in these contracts, I have made it clear in all my statements, is the -- the one thing we have sold is gas that is surplus to state needs and the sole judge of state needs is the state itself through its statutory process. But, anything that's surplus the state needs by our own choice is committed under those contracts and what you're suggesting is a way to -- essentially to surrogate that bargain, if the bargain is to sell gas that's surplus.

SENATOR POLAND: In other words, you don't consider that the state needs the liquids?

COMMISSIONER MARTIN: This has -- I assume -- I didn't understand your question to have anything to do with gas liquids, Senator Poland. I can discuss that -- I didn't think -- were you asking about gas liquids?

SENATOR POLAND: No, I asked on this other and then I'm also interested in -- what about the liquids? Because your answer --

COMMISSIONER MARTIN: Well, the liquids have been the subject, I think, of some misunderstanding. Under the terms of this contract Alaska has a full right to the liquids from this gas. Let me give it to you in practical terms. It

first has a right -- and this has nothing to do with the notice provisions under the contract, it has a right to take those liquids and do whatever it wishes with them, including exporting them or any use in Alaska and to take them at any point where those liquids are taken from the gas, whether it's in Alaska or outside.

In addition to that, it has the right to take the liquid -- the gas off itself and take the liquids from the gas and to use it in Alaska. The only limitation is not in the contract but it is a practical economic limitation as to whether or not those liquids will actually be taken out in Alaska or whether or not the state can justify the building of a plant to take out the liquids itself for only the royalty share. Now, it's been suggested and I think by several people, that one of the things the state did not do in this contract is to use the contract to coerce in some way or to negotiate for the fact that the liquids of all of the gas would be taken out in Alaska. That is accurate, we did not. But I can assure you that we would not have been able to get this contract if that were our objective. Now, if the legislature believes or other believe that that should be our objective, to force the eight-eighths on us -- every-one to take out their liquids in Alaska, we can take a run at doing that but that is not one of the objectives

of the contracts. Other than that, we have a full right to our liquids anywhere they come out or we want to take them.

SENATOR RADER: Representative Bradley?

REP. BRADLEY: Commissioner Martin, is the State of Alaska engaged -- and this is somewhat in following the four or five or six or eight questions regarding political clout, is the State of Alaska embarking on some sort of unprecedented new morality or new ethics or something that is unusual that's ever been done -- that's never been done by any other states. I mean it doesn't -- I'm -- this is somewhat rhetorical. It doesn't appear to me that way but some people have commented on bad morality and some people have -- and of course when people mention politics, I guess in a lot of cases they're talking about it as being bad. I don't feel that way and I don't think some people do but -- are we entering into some sort of new era of sin regarding our resource development?

COMMISSIONER MARTIN: Well, I have never heard the point raised by anyone until raised by one -- raised by Lieutenant Governor Boucher at the Royalty Board and raised just in the last week. Those are the two occasions on which I heard the issue raised in the whole last year or so that this issue has been discussed and quite frankly has been very openly known.

My own view of that is, no, we are not entering into any new period and we don't intend to. I don't think there is a specific precedent for a state doing what we have done. Let me try to answer the question this way in terms of what was involved. First of all, other states don't fool around with -- you know, even the kind of contract we have, which is I think a reasonably complex answer to a problem that is itself complex, they just simply spend money and they pay people money to go down and lobby people in Washington and lobby people elsewhere to do what they want.

Secondly, I think it is very important to remember that we are not coercing the national will using our resources. If we were in a position of saying, "we want the Trans-Alaska pipeline and we are not going to let our gas leave this state to go to the people in the Lower 48 under any circumstances except the certification of this route", I would think then we would be in a coercive and somewhat morally questionable position. What we're saying is we're expressing a preference for the route we want and we're making a contract that would award gas only to companies that help us get that route. If the route fails the contract -- the only implication of that is that the route fails. The implication of it is not that the people in the Lower 48 who may need it,

are deprived of some portion of our surplus gas, so we're not coercing.

And finally let me just say that there is only certain tests of what may or may not be politically or ethically acceptable actions and I think that a year of public debate on which that question simply was not raised, followed by what I would say is ongoing consultations with our Congressional Delegation with regard to their perception of the way this would be heard in Washington. This indicated to me that they consider it to be a highly proper and in fact, a desirable course of action and not one, which at least to them, has indicated moral questions.

SENATOR RADER: We have gone a little bit more than an hour. We will take a ten minute break and we'll strictly limit it to ten minutes. We will bang it back to order in ten minutes sharp. We're adjourning -- or recessing.

(Whereupon the hearing was recessed at 3:30 p.m. and reconvened at 3:40 p.m.)

SENATOR RADER: Representative Rhode has to leave the hearing and asked to be permitted to ask a question. Mr. Rhode?

REP. RHODE: Thank you, Mr. Chairman. I have just one question and I'll be satisfied with a short answer. Under the present law, as I understand it, we have the privilege of taking our one-eighths share of the gas out of this

line at any place and anytime. Now, if this contract is not approved -- or I should say, if this contract is approved and the Congress repeals that privilege, where do you stand with this contract?

COMMISSIONER MARTIN: Representative Rhode, the Congressional amendment indicates that we have that right and it orders the Federal Power Commission to approve any contract that does that. If we have approved this contract and if the amendment is repealed prior to the time we get that FPC approval, it's our legal belief that we are not protected, that we would then have to rely on FPC approval without the amendment. That is still possible but the chances of it being approved at that point are substantially less.

SENATOR RADER: Mr. Gruening had an exhibit, I believe.

REP. GRUENING: I have an exhibit but I would like to ask some questions based on facts that appear in this. The exhibit numbered exhibit three is based on Tenneco's interstate natural gas pipeline market areas and it has some figures on the states that are served and the amount of gas that they provided these states. And based on that the staff for the House Special Committee has come up with some figures that show that Tenneco's share of its twenty-five states that they serve is about ten percent. In other words, they provide about ten percent of the natural gas to these twenty-five states in 1975.

Tenneco's share of royalty gas under these contracts, based on those same figures, would be less than three-tenths of a percent. Now, that is fifty percent of our royalty gas. You put that in juxtaposition with the fact that there is twenty trillion cubic feet consumed in the United States in 1975, what impact is this going to have on building a constituency? It appears to me -- doesn't it -- it appears to me and does it appear to you, Commissioner, that the amount of royalty gas we're committing really is infintesimal when you are trying to deal with the energy gas shortage problem that we have?

COMMISSIONER MARTIN: I think you can only answer that in terms of the -- you know, rather than looking at the numbers and I do agree with your analysis. I'd like to see the figures but I understand what you are saying, three trillion cubic feet. And, in fact the entire Prudhoe Bay, which is let's say twenty-six to thirty-one trillion cubic feet, about one years supply in the United States. People forget that. We're very limited by the importance of any amount, getting our royalty amount. But the true measure of it is the level of interest and the level of support it genders and it seems to me that in terms of the effort that it has generated and the support that it has generated and the interest it has

generated, we're making it go pretty far, but we can't be right, we can't make it go any farther than the basic amount and that is somewhat limited. That is about all I can say.

REP. GRUENING: Commissioner, unless the -- you know, the emotionalism of the crisis that is presently in the Lower 48, you know, upsets Congress to the degree that they don't look at these facts, won't Congress really look at the total energy picture and determine that if they are going to solve the gas problem, it is not going to be through, you know, picking a pipeline route, but reallocating the gas on a major basis as legislation is already introduced to do?

COMMISSIONER MARTIN: I mean it is a subjective judgment. I think that that is a possibility but right now we have a gas line procedural act that sets up an exactly opposite procedure to reach a decision on the route. So, that if you have to bet on what is the most expectable thing to happen, I would put my trust in the fact to carry out the terms of the gas line procedural act and try to reach a decision on the route. Now, whether or not allocation comes with that, I don't know. It's -- it's intangible.

REP. GRUENING: What I'm trying to get at though is what are we actually receiving by selling the gas now? In other

words, I understand your concern and I think the contract really has addressed itself to a lot of the points in terms of price, but even the best attorneys can't see six, seven, ten years in the future. So, if we're getting very marginal influence -- in other words, if Congress looks at it and says, "this isn't going to make it -- a lot of difference, this commitment one way or another" and this constituency really won't exist.

I'm trying to determine whether we really are building a constituency.

COMMISSIONER MARTIN: Clark, I've never tried to change what I think was the basic position on what we get in terms of support for the route. It is a subjective judgment. It could be analyzed, as you have done it, by trying to figure out the amount of gas as it compares to something else or it can be done by talking about whether Tenneco's a good or bad company or any other number of ways. I can only judge it myself in terms of what it appears to be doing and what it appears that it would do in that decision. And I've tried to apply the judgment of many people doing it. To me, the fact that our Congressional Delegation has to make that fight thinks that it is one of the most important things that we can do and they believe that it is crucially important to win the debate is a very important factor and goes beyond what

we can find on paper to demonstrate that it is not an important factor. So what we get, it seems to me, is more than just the figures on the paper but what people think they can make out of that. Right now that appears to be important.

REP. GRUENING: Will the companies' own decision on which route to support have an effect? I relate back to Senator Poland's earlier question in that what is the incentive of these companies to lobby for the first choice, El Paso, when in fact they know that the state would accept a certification of the Alcan line. I mean I don't think logically or reasonably we'd reject that certification if it was the only one and why not -- what's -- I mean, won't they be in the drivers seat in determining which one they want --

COMMISSIONER MARTIN: Well, we would accept it. We would accept it but the question is whether or not we will be supporting it at the time. That is what we're left with. It may well be that we conclude throughout the procedure that El Paso's in our best interest and that the companies stay with us throughout and that that route simply loses.

I made an error earlier and I want to correct it. I said that the contracts would terminate. The contracts may be terminated rather than they would terminate. It's policy that we would terminate it and I said it that way

because if it's policy then that would be the case. But under any circumstances, they're under incentive to support the state position because they must be with that position when it prevails.

ATTORNEY GENERAL GROSS: If I might add to that, the Congressional Delegation, Representative Gruening, can shift its support to an Alcan route without the Governor shifting his support. That the result that even if an Alcan route prevailed in Congress, these companies would not receive the royalty gas.

SENATOR RADER: Any further questions?

REP. GRUENING: Not at this time.

UNIDENTIFIED VOICE: Would you explain that again, please?

ATTORNEY GENERAL GROSS: Sure. The Congressional Delegation could in the end end up voting for somebody supporting an Alcan route. If the Governor did not formally shift the state support under the contract to the Alcan route, these companies would not receive any gas because they would not be -- they would not be in support of the route that the state would be supporting and that route would not be successful. So long as the state stayed with support of the El Paso route.

SENATOR RADER: Representative --

COMMISSIONER MARTIN: I think --

SENATOR RADER: Excuse me, sir.

COMMISSIONER MARTIN: I was just going to say that I think that is an entirely appropriate question to ask the buyers and I'm sure you will, in terms of how they're basing their activities and their judgment. There is no question in my mind that based on the activity that has already been undertaken and based on the preference of the buyers and based on what would be done -- you know, even during the time that the legislature is working on this, that a case for support of the El Paso route is being put together. It has been put together basically without any difference of opinion from many people in the state for some time.

I think questions about how difficult it is to change are appropriate but nevertheless we think we may reach that time.

REP. GRUENING: I have just a comment on -- the hypothetical that the delegation would be for one line and the Governor the other is pretty improbable. If I understand what you said earlier is that if the delegation -- whatever they say goes as far as you're concerned, they're --

COMMISSIONER MARTIN: No.

REP. GRUENING: No?

COMMISSIONER MARTIN: What the Governor said is pretty clear. He said that we may reach a time at which it is appropriate to change. If it looks like El Paso can't prevail and

we'll lose to Arctic without -- unless we switch our support to Alcan. He'd base his decision to change on the consensus of the delegation and legislative leadership and gave his pledge in his statement, as I understand it, to call a special session after consultation with the legislative leadership if time permits.

ATTORNEY GENERAL GROSS: I suppose as a scenario you are suggesting that the companies behind the scenes could be working in support of an Alcan route, which they hope would ultimately prevail, under the assumption that eventually the state would have to come over to that when they saw that the El Paso route would collapse. I think the state would probably take it amiss if it found that the people who were receiving the gas under the contract who had been committed to supporting a Trans-Alaska route were actually working under the scenes to support an Alcan route. I think that would probably affect the state's decision as to what it did and I don't think the companies would in any sense do that. I don't think that they would act in such a fashion.

REP. GRUENING: I can't believe the state in a myth would then forego the opportunity -- In other words, you are saying that it would -- if it found that, it would not -- it would reject the contract, if it found that they weren't living up to snuff, in your view?

ATTORNEY GENERAL GROSS: Well, I suppose what you are asking is would the state approve it after the fact. I mean if the Alcan proposal was then approved by Congress, would the state switch its support so it could give the royalty gas to these people. If that is what you are asking I can't imagine why that decision would be made just for that. I don't know.

SENATOR RADER: Representative Chatterton, I'm going to tend to go to persons who have not previously asked a question, however, Representative Chatterton did want to have a follow-up on something that occurred before the recess and then I'm going to start recognizing persons who have not yet spoken. Representative Chatterton?

REP. CHATTERTON: Thank you, Mr. Chairman. Commissioner, I sense that there is a consensus of agreement amongst this group with your statement that the primary objective of these gas sales contracts are to strengthen our end in the decision making process that you get an all-Alaska line. Just before we broke for coffee I very admirably -- I think I heard you speak to the point that you would in no way want to coerce any decision as far as Alaska gas is concerned to the South 48. Now, as I say, I think that is admirable and I share that position with you. Now my question to you, Mr. Commissioner,

is very simply this: That if subsequent testimony before here develops that the city gate price in Columbus, Ohio, would be lower by some route other than the all-Alaska line, would you still favor these contracts?

COMMISSIONER MARTIN: Well, I don't know.

ATTORNEY GENERAL GROSS: Can I respond to that, Representative Chatterton?

REP. CHATTERTON: Please.

ATTORNEY GENERAL GROSS: For one thing, I think that the price in Ohio probably is going to be lower by another route than the all-Alaska line. I think that the evidence which has developed indicates that the delivered price of the gas down below will probably be the cheapest by the Arctic Gas route, next by the Alcan route and finally by the El Paso route. So, the decision already has been made to make -- to support that and that is for a number of reasons. Some environmental, having to do with environmental considerations other than purely economic ones, the other having to do with political problems with building the lines themselves. Now the Arctic Gas, for instance, the model for Arctic Gas is constructed under the assumption of certain provisions for construction -- Arctic construction, using snow roads. Our people in the state government believe that that is a totally unfeasible way of constructing the

line and that as a practical matter if Arctic Gas is certificated they will end up spending a great deal more building the line than they anticipate spending at this time, that their cost overruns will be substantially greater and that therefore their cost of delivery will be substantially more.

Similarly, the political problems in Canada may mean that the lines may not be able to be constructed until many years in the future, beyond the point at which the gas under the El Paso proposal could be traveling southward. So, price is one consideration. An additional factor is the point that construction of an all-Alaska line will be using American labor and materials, it will be constructed wholly within the United States and the net economic benefit of that for the country is higher than using a gas Arctic proposal. So, there are other economic benefits to the country than just the price of delivered gas.

REP. CHATTERTON: Thank you.

SENATOR RADER: Representative Meekins?

REP. MEEKINS: Commissioner Martin, following up on what Senator Poland asked you about, the liquefaction, invoking the take back provision in order to commit our royalty gas to a third party for liquefaction and export, you indicated, as I understand it, that that would not be

possible in this contract. Is that correct?

COMMISSIONER MARTIN: That is right.

REP. MEEKINS: What about taking back our royalty gas for purposes of using -- to then recommit it to a third party in order to give an incentive for the location of a petrochemical industry?

COMMISSIONER MARTIN: We could not take it back if they subsequently exported it but we could certainly take it back to be used in such a facility.

REP. MEEKINS: But we could not -- for instance, if that exactly was our purpose, to increase the incentive if necessary, for a location of a petrochemical industry at tidewater for export to the Lower 48 or elsewhere, we could not do that under this contract?

COMMISSIONER MARTIN: That is right and that's a very -- I think a very important question. It is one of the alternative courses that I think ought to be very carefully considered by the legislature. I tried to point this out before. What we have committed in this contract and it's a fairly -- in other words, I said this last year to this committee. You really have to sell something in order to get anything back. Now, the only thing that we have committed is whatever gas is surplused to any state needs in the future and is going to be exported. So that the only -- the only really meaningful arrangement that will

be difficult to enter into with regard to that surplus gas in the future is one where someone comes to us and says "we will build you a petrochemical plant in five years if you will let us export your surplus gas for five years and then use it." That we would not be able to do but what we would be able to do is to take it back and commit it to that plant in five years, as soon as they are ready to build.

Incidentally, we have looked at -- in the oil situation we have looked at a couple contracts and we are still actively looking at them, where they proposed to do this kind of thing. In other words, to take an export for a period of time and then tie it back to a -- what I'd say a possible refinery at some later time. And, at least thus far we haven't found anything that looks like a good deal for the state.

REP. MEEKINS: Thank you.

SENATOR RADER: Representative Rudd?

REP. RUDD: Mr. Martin, I would like to follow up on Representative Rhode's question having to do with the possibility that Congress would repeal the Alaska exemption.

SENATOR RADER: Representative, would you speak a little louder, please?

REP. RUDD: I'd like to follow up Representative Rhode's

question on the possibility that Congress will repeal the Alaska exemption. If that happens, does it depend on Congress as to whether or not they make it retroactive or would our contracts, if we had entered into them, then be void?

COMMISSIONER MARTIN: Well, let me be very clear. We don't believe as a legal matter that simply entering into the contract now gives us any special protection. We believe we not only have to enter into the contract but we have to advance it to the FPC using that provision in order to gain protection. Congress could do basically anything it wants and there is no reason -- at the time that it repealed it, it would act retroactively. My feeling would be that if it wanted to repeal it, it would vary. It would not be likely that they would be in a mood to make it retroactive to pick up this contract.

REP. RUDD: But you feel even if they don't make it retroactive that our contracts are in danger at that point?

COMMISSIONER MARTIN: Well, I discussed this the other night with the House Special Committee. It's again a subjective judgment, what the risk of repeal of that provision is. I made the statement that Congressmen have said they are going to try to repeal it. I have no question but what some attempt will be made. Whether or not it will be successful is a purely subjective judgment and I've tried

to poll our delegation on that on a continuing basis and they have no strong feeling for it other than the fact that they believe that an attempt will be made and that there is some risk of repeal.

REP. RUDD: And may I ask you, how much weight did this possibility of repeal carry in your negotiations in the contract? In other words, how much weight did you give to the idea that you wanted to get something started before --

COMMISSIONER MARTIN: It carried -- it carried very little in my personal opinion, Representative Rudd. What it did do, not the threat of repeal, but what the provision did was change somewhat my position on the issue of the contracts themselves. This is one reason I stress other values of the contract other than the political aspects. Last year I testified before Senator Rader's committee and others that I was quite skeptical about the meaning of any of these contracts because I thought that they had almost no chance of ever being realized because it was doubtful the FPC would ever approve of a take back provision absent some Congressional assistance.

But once Section 13(b) was enacted, it increased substantially, in fact it increased almost to the extent of making it virtually certain, that we could get approval of such a provision if we could put one together, get

it advanced and approved and put it before the FPC while the provision was in place. But, it came along late enough that it really didn't change the nature of the negotiations a great deal. We were working on the contracts and quite frankly if we had finished the contracts and Congress had not acted to put that provision in as they did in the closing hours, I would -- we might be advancing the contracts to the legislature right now but I would be saying to you quite honestly that they would have a very low chance of being approved in the FPC. Now I can say to you I think they have a very good chance of being approved in the FPC.

REP. RUDD: May I ask just one more?

SENATOR RADER: Certainly.

REP. RUDD: Do you think that there is an element of time that is involved here, that we must move rapidly?

COMMISSIONER MARTIN: Judgment with respect to time again is subjective but I personally think there are two things to be said. One, I think that we have a responsible attempt together to try to utilize the benefits of that provision. I think that the way we have done it is responsible and I think we're capable of selling it. Obviously our delegation agrees because they think they can live with the results of this contract and preserve the amendment. Whether or not we can wait and bank on the

fact that the amendment will stay in place and go to some other kind of arrangment is simply a calculated risk that everyone will just have to take.

SENATOR RADER: Senator Huber?

SENATOR HUBER: Thank you, Mr. Chairman. I think my question is mostly for Guy.

SEANTOR RADER: Senator, you are going to have to speak up. I am certain they can't hear you.

SENATOR HUBER: All right, Senator, I'll speak up. I think my question is mostly for Guy. We have -- in the gas contracts themselves there is a provision that says pretty close like this, that there is no front end money but that whatever the highest price paid by anybody that is allowable by the FPC or if in case the FPC isn't controlling it, whatever the highest price is that is paid to any of the producers in the field will be what the price is to the Alaska royalty share. Is that roughly correct?

COMMISSIONER MARTIN: I think so. Let me defer to our two price experts. They're with me on that.

SENATOR HUBER: Well, in effect that says that if anybody else who has a share that is proportionate to ours, let's say that ARCO has twice twelve and one-half, they probably have got a little more than that, or twenty-four percent, and they get Fifty Million Dollars of head end money.

Proportionately if any head end money is allowed by anybody, shouldn't we have had a provision that also bounces back and says that we'll get the highest price per cubic foot, no head end money unless anybody else gets head end money, if anybody else gets head end money, we'll get a proportionate amount in accordance with our percentage. Wouldn't that protect the State of Alaska a lot better on price?

COMMISSIONER MARTIN: No, we don't have such a provision and it could be something that could be negotiated for, Senator.

SENATOR HUBER: Is it still negotiable?

COMMISSIONER MARTIN: Well, not under the present circumstances. I would say that it would have to be capable of being passed through in the rate base. I will tell you this, that if that could not be passed through either in the ARCO situation or in ours, these contracts would not be possible. In other words, the company -- we may be able to negotiate some other kind of a deal but I don't believe we could have negotiated these contracts -- included that provision unless it could have been passed through totally.

SENATOR HUBER: Well, Mr. Chairman, I --

COMMISSIONER MARTIN: And it is not legal to pass it through now.

SENATOR HUBER: I could foresee the possibility under deregulation that they may allow front end payments and in which case other people would quickly negotiate them, being they don't have them, and we would be left out in the cold at the lower price. And it don't look like the contracts protect us sufficiently in that area.

COMMISSIONER MARTIN: I don't think the terms of the contracts as they are presently drafted would include that. That is right, sir.

SENATOR RADER: Senator Croft?

SENATOR CROFT: Commissioner, before we leave the subject, you made the statement that no front end payment could be built into the rate base. Is that -- is that statement actually correct? Aren't there circumstances in which it can be built into the rate base?

COMMISSIONER MARTIN: The -- yes.

SENATOR CROFT: And in that regard we have not gotten the highest possible price for our gas, isn't that correct?

COMMISSIONER MARTIN: Jack, do you want to answer that?

MR. BYRD: Under the present FPC rules --

SENATOR RADER: Mr. Byrd, why don't you sit down and identify yourself for the record? You'll be the first new voice here and --

MR. BYRD: Thank you, Senator. I'm Jack Byrd from Kansas. Under the present FPC rules if front end money is advanced

and included by the pipeline to advance freight rates, then you -- whoever sells the gas takes a penalty on the price.

SENATOR CROFT: That is right, but what as to companies that are not regulated by the FPC?

MR. BYRD: On intrastate purchasers?

SENATOR CROFT: Right.

MR. BYRD: They could still do it.

SENATOR CROFT: So there could have been intrastate purchasers not subject to FPC regulations who would have bought this gas and could have paid us front end money --

MR. BYRD: Still can, under the contract.

SENATOR CROFT: And there are utilities in California that could do that?

MR. BYRD: Well, no, not in California.

SENATOR CROFT: Where are they?

MR. BYRD: The only intrastate purchaser you would have would be in Alaska and you could still sell -- withdraw gas to an intrastate purchaser in Alaska and demand front end money, if you want.

COMMISSIONER MARTIN: And you could not do that and sell to -- as you suggested, we disagree that you could do that to anyone in California because the transportation would be regulated, Senator, and the same provisions would apply.

SENATOR CROFT: The transportation, but would the distribution

with the utility itself, if it bought the gas not for resale to somebody else, would that sale itself be regulated as well as the transportation tariff?

MR. BYRD: The only provision I know of in which you can do that now would be under order 533, the transportation provision. The direct sale to an industrial customer for a high priority use, not for resale, a distribution company cannot do that.

SENATOR CROFT: But somebody that used it themselves could pay front end money?

MR. BYRD: Right. They could pay a premium price, they are exempt from regulation under the FPC.

SENATOR CROFT: Thank you.

SENATOR RADER: Representative Hayes -- excuse me, were you through with your --

MR. BYRD: One other point, the transportation of any such moving of gas from Alaska to California would have to be certified by the FPC. They would have no control over the price paid if it was not for resale and it was used for a high priority industrial use.

SENATOR CROFT: A higher price than what we have in these contracts could be paid in that situation?

MR. BYRD: Yes. But we have a provision in here that if any of our working interest owners sells theirs under that kind of a rule, these -- then our prices go up.

SENATOR CROFT: Yes, but whether they do or not, we could have sold our gas conceivably -- legally sold our gas for a higher price than what we have in these contracts.

COMMISSIONER MARTIN: Only by pursuing a completely different objective. We don't deny that, Senator. I mean, the fact is that we could have chosen a number of different objectives including not selling and waiting to do it later after deregulation. So, we think there are a number of possibilities in not carrying out these objectives we're doing it.

SENATOR CROFT: I understand that. But if I could, just so that we understand the policy questions that are involved, this sale does involve a sale of our gas at not the highest possible price?

COMMISSIONER MARTIN: That is a great overstatement, Senator Croft.

SENATOR CROFT: But isn't it correct?

COMMISSIONER MARTIN: No. It's correct but in the context of a number of other things. It's correct in the context of selling the gas for other purposes in this, but selling it for the purposes that we have attempted to carry out here, we believe that we have gotten the highest price. If we sold it for other purposes in which we subjected all other considerations to price, I think it is possible we could have gotten a higher price, yes.

SENATOR CROFT: As I understand it, if we sell it primarily for political purposes, we got the highest possible price.

SENATOR RADER: Representative --

COMMISSIONER MARTIN: You are still wrong, Senator. I mean I think he is wrong factually, Senator. Maybe we ought to respond. Let me ask Mr. Boness to do it. He is characterizing my answers.

MR. BONESS: Senator Croft, the FPC regulates two things. It regulates transportation and it regulates the sale. In a direct sale -- do not have to have -- a direct sale is not regulated. In that sense you seem to be suggesting that the FPC -- the higher price could be paid or front end money could be paid. However, the FPC has the power to prevent that kind of sale from taking effect by virtue of its control over the transportation aspects of the pipeline. The Transco case was a case which involved essentially that set of facts, where a sale took place, the shipment of the gas was to be over an interstate pipeline to be sold -- to be delivered, I believe, between Texas and New Jersey. The Federal Power Commission said they don't like the terms under which that sale takes place, therefore we are not going to approve the transportation. They had no authority over the sale itself but they did have authority over the transportation.

Whenever you are talking about moving the gas outside of Alaska, you're not within the realm of 13(b), and the Federal Power Commission would have authority over whether or not to approve the sale. They couldn't regulate the price but they could absolutely preclude the sale.

MR. BYRD: Plus the fact that under the contract, if Atlantic Richfield or one of our -- one of the lessees up here sold royalty -- or sold their gas under 533 and got a higher price, then our gas from those leases would escalate up to that price.

COMMISSIONER MARTIN: Jack, but Senator Croft's question was going to our gas.

SENATOR CROFT: My question is, regardless of what they do with ours -- with theirs, what could we have done with ours?

COMMISSIONER MARTIN: Yes, I understand.

SENATOR CROFT: And as I understand the answer, it is we could have gotten a higher price but Commissioner Martin feels there were other factors that weigh into the decision that means that it was not in our interest to do it, and secondly, it might have been unlikely that we would have gotten a higher price. It is legally possible.

COMMISSIONER MARTIN: That's -- yes.

SENATOR RADER: Mr. Hayes?

REP. HAYES: Thank you. I was wanting to pursue that line of questioning that Senator Croft was just pursuing, regarding just how much we might be paying for -- by giving up alternative sales that might have some front end money involved for this political clout that we're going to get from the three gas companies that are purchasing our royalty gas. But it is probably not a figure that you can put any -- that you can put an exact number on, however, I think testimony indicates that under certain circumstances that we are giving up some -- something of value. Whatever that is, I don't know, but we are pursuing this on the basis -- that there is no front end money possible on the basis that the payment of front end money for interstate sale would not allow the incorporation of the front end money in the price scheduling. But, isn't it possible that -- I'll ask this to Commissioner Martin, isn't it possible or conceivable that a purchaser for interstate sale purposes might be willing to give up to the State of Alaska a portion of his anticipated profit in the way of front end money, regardless of whether he's ever passed it on? And in that event there is a possibility of getting the premium price.

COMMISSIONER MARTIN: Representative Hayes, yes. I think it is conceivable that we could have structured a

situation where maybe even in a -- you know, maybe a competitive situation or maybe a situation where we simply just solicited people to do that, that we could have gotten some amount. In other words if the question is how much would some interstate buyer eat of their proceeds, I think the answer -- our determination basically is that it would be generally quite a small amount and secondly that it was certainly not possible with these buyers. And quite frankly, it was not consistent with at least the purpose of the contract which had to do with getting the best and strongest support for the pipeline route.

I might just say that our process in attempting to do that was to try to work with the available buyers we have and then to consult pretty much continuously with the delegation of others to try to see who could give us the greatest amount of help. So that trading all those things off, I don't think we got a realistic expectation of getting a small enough front end.

SENATOR RADER: Any members who have not yet asked questions, first?

SENATOR HUBER: I'd like to pursue this same thing.

SENATOR RADER: Well, Mr. Carpenter has not yet had a question. Mr. Carpenter, unless you want to waive --

REP. CARPENTER: I'll yield. I'll yield to the Senator.

SENATOR HUBER: Well, I think we was to a point, Mr. Chairman, and I'd like to pursue the same thing being I started this.

SENATOR RADER: Proceed.

SENATOR HUBER: We have picked our purchasers that we have contracts with that are now going for approval from a certain group of purchasers. These are pipeline transporters, not users, for instance. A user has different rules applied to him. If we had sold six percent to Pacific Gas and Electric and six percent to Wentworth Brothers for making into methanol and certain other things and certain other people -- for users there is different set of rules applied. Would you care to discuss that and have you shown in your deliberations consideration for these other type of contractors -- or these other type of purchasers?

COMMISSIONER MARTIN: Only to this extent, Senator, that we dealt to some extent with everyone who came to us with an offer to deal with us. We made some tough decisions as to who we would work with. To finally go through, and we consulted broadly to try to get the ones that could do the most good. These are the ones that ended up in our final judgment being that. Now, we're willing to stand with that. We did not consider Wentworth Brothers nor did Wentworth Brothers approach us with the idea of

buying under these terms and adding their support to the pipeline that we favor, nor the other one you mentioned.

SENATOR HUBER: I'm trying to get back to the basic consideration of whether we're getting the highest price, which this contract says we are. What it really says is that we're getting the highest price from a certain class of buyer only, those who are in the pipeline transportation distribution business, and cannot enter into -- by FPC rule, cannot enter into another phase of the business. Isn't that right?

MR. BYRD: Whoever bought it would have to have the certification of the FPC to get it transported, and if you'd sell it to Pacific Gas and Electric for boiler fuel you'd never get a certificate.

SENATOR HUBER: Well, I didn't say for boiler fuel, you said that.

MR. BYRD: I don't know what they would do with it. It would have to be for a high priority industrial use and not for resale.

SENATOR RADER: Mr. Carpenter.

REP. CARPENTER: I'm departing from the present line of questioning.

SENATOR RADER: Did somebody wish to pursue this line of questioning, or were you through?

SENATOR HUBER: Mr. Carpenter yielded to me, Mr. Chairman,

and I thank him very much. So we can continue.

SENATOR RADER: I think Mr. Meekins wanted to pursue the same line of questioning. You have the floor, Mr. Meekins.

REP. MEEKINS: Thank you, Mr. Chairman. Just to clarify that then, there are trade-offs here involved, and there are some things we give up in order to have this contract. One of those, I understand, is a small premium (in your view), a fairly small premium, if that premium comes out of profits of the companies because it can't be passed through into the rate base; is that correct?

COMMISSIONER MARTIN: Under future circumstances, the size of it is unknown.

REP. MEEKINS: If there was deregulation?

COMMISSIONER MARTIN: These questions, you know, stand in the present time frame. It may well be under deregulation there are different terms in the future, we could restructure it and do something else. That has to be balanced against how important it is, how important the gas line decision is to the use of the amendment in Congress and so on. So our view is that for now this is a good alternative. It may be that under changing circumstances that the premium could be larger, or the price could be unregulated.

REP. MEEKINS: Right. That's a possiblity; we don't know it as yet ---

COMMISSIONER MARTIN: That's right.

REP. MEEKINS: -- whether that's going to be the case. But in any case, that small premium, in your view a small premium, is one of the trade-offs, and I'm not quite sure if the higher price by sale to users or not -- I seem to get contradictory information -- on the one hand, it seems that the FPC would not approve transportation of such a sale, and on the other hand it seems like they would. I'm not sure what ---

COMMISSIONER MARTIN: I think Mr. Byrd's answer is the proper one, for certain high priority users they would have a chance of getting approval of the transportation. For most users, and certainly any large scale ones that are not priority, they would have virtually none.

REP. MEEKINS: So what you're saying is it is conceivable to some scale to get a higher price if that sale was to a high priority use and, therefore, it would be approved.

COMMISSIONER MARTIN: Yes, it's possible, and it may have been possible to accomplish, but we had no indication that it was and no offer.

REP. MEEKINS: Thank you.

SENATOR RADER: Any further questionsalong this line? Senator Croft.

SENATOR CROFT: When was the decision that prohibited

building advance payments into the rate base?

MR. BYRD: It became effective November 5.

SENATOR CROFT: Of '76?

MR. BYRD: '76.

SENATOR CROFT: So that it is true that if this sale had been entered into possibly a year ago we could have gotten a higher price?

MR. BYRD: No. That November 5 date affected only advance payment or interest free loans that were made prior to an order that came out abolishing it, but it was the end of 1975. But there were a lot of advances, advance payment contracts, that still had not been executed, or advancements had not been made. Those were not abolished. Then the order coming out effective November 5, in 770-A they say that if the producer draws those down and the purchaser puts them in rate base, then the producer has to decrease his price, pay the carrying charges on it.

SENATOR CROFT: Then is it correct that if these contracts had been entered into in 1975 we could have gotten a higher price?

MR. BYRD: It would have been legal to extract ---

SENATOR CROFT: Front end money.

MR. BYRD: -- an advance payment.

SENATOR RADER: Any further questions on this line of

questions?

SENATOR HUBER: Just one, Mr. Chairman.

SENATOR RADER: Senator Huber.

SENATOR HUBER: Then in a deregulated system, and we look like we're headed toward deregulation now, some of the gas that will be in the deregulated system will be gas that has had front end money paid on it from Prudhoe Bay gas that's had front end money paid on it, and is also paying a certain rate to the field gas, which is apparently what we're getting, and if we had just held our gas until deregulation we could sell it for any price we wanted to make up for that, couldn't we?

COMMISSIONER MARTIN: Yes, assuming, Senator, that deregulation occurs, that we can structure the kind of contract that allows us to take back, and that that contract is approved, then you can be in a similar circumstance and you get more money and sort of have, you know, guns and butter at the same time. But you have to make all those assumptions to get there, and I think some of them are at least speculative.

SENATOR HUBER: These early sales, the amount that goes in is a very large amount of the sale price too, isn't it?

COMMISSIONER MARTIN: I'm sorry?

SENATOR HUBER: These early sales that were made that were approved, the front end money really amounts to a large

amount.

COMMISSIONER MARTIN: There were some large advance payments, that's right.

SENATOR HUBER: Thank you.

SENATOR RADER: Representative Gruening.

REP. GRUENING: Commissioner, if, given the fact we have an active Congress allowing us to take back our gas for in-State use and if we assume that the primary goal was not to affect a political decision on the line, how long could the State wait safely to decide what to do under contract or how it wanted to sell its gas?

COMMISSIONER MARTIN: Mr. Chairman, there's only a subjective answer to that question. It could be years or it could be terminated during the next year. It seems to me that what we have now is a good alternative to take advantage of, and it may be that we want to pass that one up and try to structure another one.

REP. GRUENING: If I understand what you were saying earlier, we don't gain any rights by entering the contract in terms of this amendment. I mean, the amendment is there.

COMMISSIONER MARTIN: We only gain rights by having the contract approved by the FPC at a time that the amendment is in place. So our question is, how long will we have the amendment in place, and I made it very clear the other night that I'm not trying to create an atmosphere

of fear that it will be repealed. I honestly don't know if it will be repealed. I'm almost certain an attempt will be made to repeal it, and what we have is an opportunity now to take advantage of it while it's in place.

REP. GRUENING: Do you read that amendment as allowing the FPC to do anything other than approve the take back provisions in the contract?

COMMISSIONER MARTIN: Yes, I think they might be able to approve -- well, let me ask to be certain of that. I think they would be able to approve something of a sale. They could approve a direct application, couldn't they?

MR. BONESS: They could approve.

COMMISSIONER MARTIN: I guess the answer is, there are other formulations that they can approve.

REP. GRUENING: Well, like price. But I'm talking about the take back.

COMMISSIONER MARTIN: No, I'm talking about the take back. I mean, I think that there would be other ways to approach them other than a sale configuration, but I'm not certain what those would be at this time. I'm not saying there aren't other avenues that you could approach the FPC with using 13-B. The question is really, how long you'll have the ability to use 13-B and whether or not this is a satisfactory way or not to

exercise the privileges. If this one were approved, putting aside all other things, it would give the State unprecedented protection for its royalty gas never before enjoyed by any state; there's no question about that. Whether or not we could do it in a better or more successful way, I don't know. It's pretty hard for me to imagine a more comprehensive coverage of future in-State use than this one. I can think of a few ways to do it, but not very many.

REP. GRUENING: Despite that do you think there's a danger that the FPC may not approve?

COMMISSIONER MARTIN: No, I think that 13-B pretty much mandates FPC approval.

REP. GRUENING: Where the slippage might occur is in their approval of the price, the pricing arrangements under the contract; is that what you're referring to?

COMMISSIONER MARTIN: I'm sorry if I'm not making myself clear, Mr. Gruening.

REP. GRUENING: No, I understood what you said before, but if that last statement of mine about the pricing isn't correct ---

COMMISSIONER MARTIN: Would you repeat it? I'm sorry, I didn't understand.

REP. GRUENING: I do understand correctly that as you see, the FPC would have to approve the take back provisions

in this contract, these contracts, under the Congressional Act.

COMMISSIONER MARTIN: Right.

REP. GRUENING: Is there a problem then with the pricing provisions of the Act in terms of the FPC approving them?

COMMISSIONER MARTIN: I don't see any, Mr. Chairman.

MR. BONESS: Again, the amendment addresses the problems related to transportation aspects of the FPC's jurisdiction. Even though the State is not subject to FPC jurisdiction for purposes of sale, the FPC could have prevented the State from getting, either effect to the take off provision in the contract or entry into the contract because it didn't like the prices the State was getting; the State had extracted a price higher than the price which the FPC approved. They could have prevented the transportation aspects of it. The amendment, Section 13-B, prohibits the FPC from doing that with respect to transporting the gas for intrastate uses. There is no problem with respect to the FPC regulating a sale which is the price provision, and under the amendment we're free with respect to both taking off and the price. Absent the amendment, we have to convince the FPC to authorize the transportation of the gas for use in the State.

REP. GRUENING: Reading the amendment, do I understand

correctly, the FPC could disapprove pricing arrangements?

MR. BONESS: No.

REP. GRUENING: Under the contract, they cannot?

MR. BONESS: Not under that amendment. They have to give effect to the transportation and they have no other basis for disapproving of it.

REP. GRUENING: Maybe I should follow this up because the last part of that amendment says that the FPC shall only review the justness and reasonableness of the rate charge for such transportation.

MR. BONESS: Yes, I apologize. I should have picked up on that was what you were concerned about. What it addresses is the notion of the transportation charges for moving the gas, say, as far as Fairbanks or as far as Valdez. Obviously, intrastate transportation of gas is going to affect the overall tariff for everybody else, and the FPC is given authority to review that rate and make sure that it's just and reasonable. That is really for the State's protection and also for the protection of all the other shippers on the line, to make sure that costs are allocated between interstate and intrastate shipping in a just and reasonable fashion.

COMMISSIONER MARTIN: Rather than going to the price paid for the gas itself.

MR BONESS: But it's like the price of a ticket for moving

on the line, is what we're talking about, not the price of the sale of the gas.

REP. GRUENING: But do you see any danger, other than the fact we're losing, maybe losing options on dealing with which route we want, in delaying then a decision on how we want to sell the gas? Put aside the question, just for a moment, of which route we're trying to affect; is there any danger in delay, because I understand it you don't buy the theory that without the amendment that there's much advantage in getting the FPC to approve a contract?

COMMISSIONER MARTIN: Well, I don't reject it, but I don't think that -- you know, Dr. Moody thinks that's a controlling theory, and I don't think it is. I think there are still problems, but I think it's a valid theory, it's something that could be tried. You only made one exclusion. You said that if we exclude the purpose of helping the line.

REP. GRUENING: Yes. I know that's a major exclusion, but ---

COMMISSIONER MARTIN: Even if you exclude that, then there would be a great value in attempting to take advantage of 13-B before it's lost. There would also be an advantage, some advantage, I would think, in this contract over others in terms of price. I'm not saying we couldn't do better, depending where our objectives are,

but there are advantages in each of those four categories I indicated you would be giving up. There are also improvements that you might seek in another direction if you take out one of the objectives. If you take out the political assistance objective, you might be able to substitute another one.

SENATOR RADER: Mr. Carpenter now.

REP. CARPENTER: Thank you, Mr. Chairman.

SENATOR RADER: You've been very patient.

REP. CARPENTER: After all this time, I really wish that my question were an exciting one, but it's not. It relates to a technical provision in the sales agreement, in Article Five, which addresses quality. In Section One we mention that the gas to be delivered by the seller to the buyer at the delivery points shall conform to the quality spectifications, etc. But in the preceding paragraph, Article Four, Section Four, we say the seller shall retain the right to receive all liquids removed from the gas prior to its delivery to the pipeline, etc. My question is this: if the liquids are removed as provided in that section in Article Four, I understand that the quality specifications will drop because the btu content will change. Doesn't Section One of Article Five negate Section Four of Article Four?

COMMISSIONER MARTIN: Representative Carpenter, I've heard

that concern expressed before, and we've looked at it. Mr. Boness, I think, can answer that question.

MR. BONESS: Yes. 5.1 deals with the delivery point, which is a point on the North Slope prior to the time the gas will be put in the pipeline, and our gas will be at the same quality, wherever our delivery point to, as the gas the producer is moving along that stream and, therefore, we don't have to do anything special to it. Once the gas is put on the pipeline to move south we will have the opportunity to take that gas off and change it without being in violation of 5.1, because 5.1 addresses only the question of the quality of gas at the delivery point.

REP. GRUENING: I see.

COMMISSIONER MARTIN: We looked at that carefully, and when I heard it the first time it sounded like it was a good argument. But it looks like it only applies to that one point.

REP GRUENING: I see.

SENATOR RADER: I have one question, myself. Do you have staff that will be able to analyze the decision of the Trial Judge if it comes out today or tomorrow and be able to report back to us, at least in a summary sense, the day after tomorrow perhaps, as to whether or not that decision does, in fact, substantially affect the

posture of the situation?

COMMISSIONER MARTIN: You are looking at the group that will probably try to do that, and Mr. Byrd, and Mr. Boness and others will probably try to do that, and we'll try our very best to get a report back.

SENATOR RADER: So we'll expect to hear from you perhaps Wednesday then on that item?

COMMISSIONER MARTIN: If we get the decision in a form that we can analyze I think we can do that, sir.

ATTORNEY GENERAL GROSS: Senator Rader, we do have Washington, D.C. counsel that are, of course, participating for us in the hearing, and I anticipate that they should have a report to us probably by tomorrow night as to at least a summary of what's happening, and we'll share it with the committee.

SENATOR RADER: You will share it?

ATTORNEY GENERAL GROSS: Yes.

SENATOR RADER: There were some other questions. Mr. Swanson, did you have a question?

REP. SWANSON: I never said a word.

SENATOR RADER: Anybody who has not? Senator Hohman and then Senator Sumner.

SENATOR HOHMAN: I was calling your attention to Senator Sumner.

SENATOR RADER: Senator Sumner.

SENATOR SUMNER: Mr. Chairman, I'd like to ask the Commissioner, I get the impression from Senator Croft that maybe Senator Croft is still under the impression that the State could have got a higher price for its gas. I'd really like to put that to rest. Do you think there is any real probability, under any circumstances, that reflect reality at all, that the State should have negotiated for a higher price in this contract or in other contracts?

COMMISSIONER MARTIN: Generally, no; but only if it had picked a completely different objective related to only price itself.

SENATOR SUMNER: Mr. Chairman, I'm not so concerned about picking a different objective if it's real. Is it real to expect that the State could have gotten more money?

COMMISSIONER MARTIN: I think it's, yes -- real isn't exactly it -- I think it would have been unlikely that we would have gotten more money.

SENATOR SUMNER: On a scale of one to ten, where would you say?

COMMISSIONER MARTIN: I couldn't give you that, I don't know.

SENATOR SUMNER: Well, it creates some serious doubts.

COMMISSIONER MARTIN: I would be pleased to do this, Senator Croft and Senator Sumner -- you know, I understand your question, and I'll look back at the transcript to get

the intent of it rather than trading back characterizations of one another's answers. I would be pleased to look at that and give you something at least indicating what I think the alternatives were for getting a higher price and the probabilities. Would that be acceptable to the Chair?

SENATOR RADER: It would be, although I'm sure the committee would like to share in that dialogue. Do you mean tomorrow, perhaps?

COMMISSIONER MARTIN: Tomorrow or Wednesday. I mean, we'll look at it and give you back an answer that's more definitive.

SENATOR RADER: Senator Croft, does that sound all right to you?

SENATOR CROFT: Maybe in the meantime you could tell me, as well, whether you initiated any contact with anybody that might have paid a higher price and asked them to bid as well.

COMMISSIONER MARTIN: No, I don't think that we did, because we weren't pursuing that as the principal objective.

SENATOR SUMNER: Mr. Chairman, let me continue for just one minute then.

SENATOR RADER: Senator Sumner.

SENATOR SUMNER: Do you think at this time it's worthwhile to postpone this contract in view of the merits of the

contract and what you're aware of at the present time that it can buy in the form of developing an expanded constituency for support in the South 48?

COMMISSIONER MARTIN: No, I don't.

SENATOR SUMNER: And on a scale of one to ten, how sure are you of that position regarding that? I'm really interested in knowing where your impact is.

COMMISSIONER MARTIN: I don't know where on a scale of one to ten, but I'm quite sure that that's right, I think, this objective as opposed to that one, is more important to pursue at the present time.

SENATOR SUMNER: Then would it follow that you believe that to the benefit of most Alaskans that the sale, that the contracts you've drawn here relating to the sales of royalty gas, is the best under most reasonable circumstances?

COMMISSIONER MARTIN: Yes.

SENATOR SUMNER: Thank you, Mr. Chairman.

SENATOR RADER: Senator Huber.

SENATOR HUBER: One short one to get in perspective again, one short little question came up. The class of people that we dealt with here, the three companies that we have sold to, are they, under FPC type language, are these the type of customers that are called common purchasers--the regulations that apply to common purchasers?

MR. BYRD: They're natural gas companies that are under the jurisdiction of the Federal Power Commission.

SENATOR HUBER: For instance, I am aware that all three of these companies do not sell any gas to anyone, they purchase the gas here and sell the gas to other gas companies that sell the gas, at exactly the same price they purchase it at, plus their transportation charges. Isn't that correct?

MR. BYRD: I don't know whether any of them are burner tip distributors or not.

SENATOR HUBER: The only thing I wanted to know so I can analyze it, are all three of these classed as common purchasers by the FPC?

MR. BYRD: I don't know what you mean by common purchasers. They're all natural gas companies under the regulation of the Federal Power Commission. They buy gas and transport it for resale.

SENATOR HUBER: Could you try to find the answer?

COMMISSIONER MARTIN: Could you say what you mean by common purchasers? What statutes would you reference?

SENATOR HUBER: FPC requires that pipeline companies be both common carriers and common purchasers. That's not true in oil pipelines but it is true in gas pipelines. I don't know about the next term, whether it's a correct one or not. Rather than analyzing it against

specific purchasers, maybe somebody who sells to customers in Northwest Michigan, for instance, and then in turn purchases from Tenneco or something.

MR. BYRD: I'm not familiar, Senator, with the terms "common purchaser" and "common carrier". There are natural gas companies and there are distribution companies. Distribution companies normally buy gas at the city gate from the natural gas companies, which these three companies are, and then they distribute it to the burner tip and sell it. They're under the jurisdiction of the State Commission. I don't know of any place in the Natural Gas Act where it refers to common purchasers or common carriers. They are not common carriers. They're natural gas companies and pipeline companies that are moving gas interstate for resale. They do move the gas interstate that's not for resale, it's sold directly to an end user, and they do do that. But that still doesn't make them common purchasers or common carriers.

SENATOR HUBER: So you can't list whether these three class as common purchasers or some other term?

MR. BYRD: As we use common purchasers in oil proration in the Lower 48, because you have to purchase commonly or equally from all the producers, but that doesn't apply to natural gas piplines. There's no use of the term "common carrier" or "common purchaser" in the Natural

Gas Act that I'm familiar with.

SENATOR RADER: Any further questions? Mr. Parr.

REP. McKINNON: I had a couple questions, Senator.

SENATOR RADER: Oh, excuse me, Mr. McKinnon, did you have a question?

REP. McKINNON: No.

SENATOR RADER: Mr. Parr.

REP. PARR: Going back to what we were talking about a while ago, other possible sales and so forth, who is buying the other seven-eighths, the producers' gas?

COMMISSIONER MARTIN: At the present time, Mr. Parr, I don't have the precise percentages. There is one contract which is valid, that's the Columbia contract we discussed at length the other night, which is approximately thirty percent. I'll be honest, I haven't been able to nail down the figure, but that's roughly accurate. And we believe that there's a small contract, and I can't recall, but it's less than one percent.

REP. PARR: Who is that?

COMMISSIONER MARTIN: Texas Eastern, we think. So far as we know, it's less than one percent. Those are the two that are still outstanding. The Columbia contract is the one we discussed at length at the hearing the other night.

REP. PARR: I realize, of course, that we're talking now about contracts which we know have been signed and are a

matter of public record and so forth. Do we have any information as to where this gas is going that is not a matter of public record, officially signed contracts, etc.? I would assume some of your high-powered experts would probably know.

COMMISSIONER MARTIN: Mr. Parr, I asked them -- in fact, after we had our conversation the other night in the committee, I attempted to find out. I wanted to know essentially if there was industry scuttlebutt or, you know, just information that was around that there were contracts. My best information, and it's limited by what is on the record, is that there are no others and there are no shadow contracts as far as I know that commit the gas, that people are waiting for the certification decision or for price information to firm up before those contracts are made. I've heard various rumors, but I know of no information with regard to other contracts.

REP. PARR: Mr. Chairman, I have just one other question.

SENATOR RADER: You still have the floor, Mr. Parr.

REP. PARR: Would it be your assumption that either one of the three companies that are involved in this is one of the three companies that is probably getting a good, large share of the producers' gas as well?

COMMISSIONER MARTIN: The company, our purchasers?

REP. PARR: These three.

COMMISSIONER MARTIN: No. In fact, my information is that none of them have made any commitments, informally or otherwise, any other contracts for any other part of it.

REP. PARR: Were there any of the other companies who were interested in getting our royalty gas whom we even know or have reason to assume were getting producer gas? Now, the only one you know for sure is Columbia. Did, for example, Columbia try to get in on the royalty gas deal as well?

COMMISSIONER MARTIN: No, they did not come to us. Northwest attempted to get into the royalty gas and, so far as I know, is attempting to buy producer gas, without success.

REP. PARR: I guess that leads up to my final question, Mr. Martin, and that is that I presume there were a lot of companies back in '75 that put up a lot of money and made all sorts of deals of lending money, and various other ways, in order to get this gas on the North Slope, and the FPC, I guess, or the courts, or somebody put the Kibash on this; right? These people were interested in getting large amounts and so forth. What is it that these companies such as Tenneco and Southern and El Paso actually have to gain by getting such minute amounts? I get the impression, or apparently at least as far as we know, that they have not tried to get the producer gas.

One would assume that ---

COMMISSIONER MARTIN: No, I didn't say that, Mr. Chairman. I thought you asked if they had it. I think they're all making substantial efforts to buy as much gas as they possibly can, as are a number of others.

REP. PARR: Is the amount of gas that is available from the royalty gas really significant? I mean, it's one-eighth less whatever we keep, right?

COMMISSIONER MARTIN: Representative Parr, again I'd just very briefly say, I think part of that is going to have to be judged by how important people think it is. I urge you to direct that question also to the producers and to the Delegation. They think it's important; three trillion cubic feet of gas, or whatever percentage they get, they believe it to be important, and I think it's a mistake to assume that that amount of gas is minuscule or unimportant. It is an important supply of gas, given the fact that we're talking about very limited gas supplies. The thing that holds this contract together, obviously, is that they believe that we will not be using great amounts of our royalty gas, and we believe that we will be using it all. Those beliefs are in conflict and we think that we have the ability to take it back if we want it. If they didn't have confidence they would get a substantial portion of it

they wouldn't invest their time and effort in the contract.

REP. PARR: Mr. Chairman.

SENATOR RADER: Certainly.

REP. PARR: I guess the thing that kind of bothers me is that in the initial commitments by the producers, at least the information I've seen, no one of these three companies was listed as getting it. There were a number of other companies listed. Now, these other companies would also have an interest in the route taken. Presumably, they were buying an awful lot more gas. I don't know how they compare in size to the three companies we're dealing with, but they must be pretty large, and presumably would have the money and the expertise for a lot of political clout. It just sort of disturbs me -- we keep acting as if this one-eighth is going to be the tail wagging the dog.

COMMISSIONER MARTIN: Mr. Parr, if I can suggest, there are some very important differences. For instance, we had a prolonged discussion the other night about the Columbia contract. There's quite a great difference between the Columbia commitment and ours. The fact, I think Mr. Gruening used the words, "Let's don't play the constituency game," -- well, we think it could conceivably be very important. The difference between the Columbia contract and this one is this: Columbia is going to get that gas

whatever way the route goes. They're going to get the gas whether it goes El Paso, or Alcan, or Arctic. In fact, they're on record with the FPC as saying that, that they think they'll get the gas just as well through any route. Our contract is different in that ours is the only contract, and may remain the only contract, where our buyers only get it if they back the successful route that's also backed by the State. So where we are different from them is that we have gained support in addition to simply committing our gas, generally speaking.

REP. PARR: Do you think the statement you just made about Columbia is true of the other major companies that were trying to buy the producer gas?

COMMISSIONER MARTIN: I would guess it would be, yes.

REP. PARR: In any event, it doesn't make any difference which route is chosen, they get the gas?

COMMISSIONER MARTIN: I don't know of any of those contracts that limit it.

REP. PARR: Thank you.

SENATOR RADER: Senator Croft and then Representative Chatterton.

SENATOR CROFT: I just want to pursue what Representative Parr was talking about. There is nothing that prohibits Tenneco from negotiating with the other owners of gas at Prudhoe Bay to purchase gas; is that right?

COMMISSIONER MARTIN: No.

SENATOR CROFT: And as far as you know, more than fifty percent of the gas at Prudhoe Bay is uncommitted?

COMMISSIONER MARTIN: That's accurate.

SENATOR CROFT: And for Tenneco to decide that it no longer wants to support the Alaska route, the only penalty under the contract is it doesn't get the Alaska gas. So, quite conceivably, since it's not prohibited from negotiating with other owners of gas, it could enter into an agreement, perfectly legal under the contract, with somebody that would furnish them more gas than the State, and the condition of that would be to support some other route in Congress.

COMMISSIONER MARTIN: That would be possible, but unlikely.

SENATOR CROFT: But it's not prohibited by the contract?

COMMISSIONER MARTIN: No.

SENATOR CROFT: Thank you.

SENATOR RADER: Mr. Chatterton.

REP. CHATTERTON: Thank you, Mr. Chairman. Commissioner, I've been told, rightly or wrongly, that some of the routes proposed need as an economic threshold a daily through-put on the magnitude of two billion to 2.4 billion cubic feet per day, and over probably a twenty-year period, in order to be economically viable. Is what I've been told roughly right, in your opinion?

COMMISSIONER MARTIN: That's right.

REP. CHATTERTON: At what point in time, Mr. Commissioner, are you willing to guarantee to anyone that is willing to build a transmission line that you will make available from the Prudhoe Bay pool 2.4 billion cubic feet a day of pipeline gas, available for them without jeopardizing ultimate recovery?

COMMISSIONER MARTIN: The point at which that could be guaranteed (if you want to stay with that word) is probably several years away, Mr. Chatterton. And I want to make it clear that that will be a guiding pivotal decision. That decision will be determined, as opposed to the decision with regard to the route. We intend to carry out the conservation statute of the State, and it's my feeling that the way it will go, roughly, is that an initial off-take rate will probably be approved based on a reservoir simulation study. A subsequent decision will be based on early field history, and decisions past that time will be based on the field performance to date.

REP. CHATTERTON: A follow-up question. Do you have any feeling whatsoever that any good business-minded company would commit funds for rolling of steel for pipelines, or for permits, or you name it, until they were completely assured of a study supply of gas and with no possibility, in other words, beyond all reasonable doubt, that they

would steadily have that supply of gas, it would not be cut off for conservation purposes?

COMMISSIONER MARTIN: If I can get myself there for just a second -- your question is just about as complicated and confusing as some of my answers, Representative Chatterton.

REP. CHATTERTON: I learned from you, Commissioner.

COMMISSIONER MARTIN: So, I'm willing to take the rap for that. Let me say this: I think that, you know, putting it your way, maybe no one would do it. But I think, as a practical matter, what is likely to happen is that a number of reservoir simulation studies and the early field history will be extremely indicative of the way in which that field is going to perform, and those who are interested, who are certificated and interested in building a pipeline, are going to have to make a hard decision in regard to the reliability of that information. But, my own opinion is they are not going to get a guarantee because no one can guarantee how a field will perform, and our conservation statute is rather clear in terms of which demands to make that field operate properly. So I think that there is a possibility, yes, the people will invest based on what they believe, based on sound information will be the deliverability figures through that route. As you may know, this was a point

of substantial controversy between the State and the Administrative Law Judge of the FPC, in which he demanded with, quite frankly, some anger that we guarantee him a figure. And I spent eight hours on the stand one day basically answering the questions for him that I just answered to you, saying that I couldn't and wouldn't give him a guarantee, at which point he concluded that we were obstructing the line because I wouldn't give him a once and for all figure.

REP. CHATTERTON: Thank you, Commissioner.

SENATOR RADER: Mr. Meekins.

REP. MEEKINS: Thank you, Mr. Chairman. I'm trying to approach this through the cost benefit analysis that Representative Gruening indicated, that we should look at it in terms of what we're giving up and what we're getting. I want to come back to the question about location of a petrochemical industry at tidewater. As I've been approaching this, it seems to me one of the benefits of a line reaching all the way to tidewater is to increase the competitiveness of petrochemcial products in Lower 48 markets and other markets because they wouldn't have to include in their costs the costs of overland transport and trans-shipment. So what I'm wondering is, does the contracts' prohibition against taking back the royalty gas and using it for an incentive

to locate reduce the possibility or the likelihood of a petrochemical industry locating in Alaska.

COMMISSIONER MARTIN: I really don't know if it reduces it or not. I think it limits our flexibility in regard to what we can offer, and maybe in that sense it does reduce it, Representative Meekins. How much is something I don't know. Let me say this: we've looked at that question seriously as we can in trying to consider various options before Royalty Board, and thus far at least there has been a pretty low level of confidence in the kind of deal where someone comes to you and says, "Let us export for blank-number of years, during which time we'll do a feasibility study or attempt to take some type of action, and at the end of that period if it looks good, build a refinery or a petrochemical plant." So I think it may well reduce the options, but it reduces one that thus far has not been particularly attractive.

REP. MEEKINS: Do you know if any of the companies that are in the contract that are getting the commitment of our royalty gas are also in the business of petrochemical products?

COMMISSIONER MARTIN: Yes, I'm certain there are subsidiaries of Tenneco. I prefer for them to answer themselves. There are probably subsidiaries in some cases.

REP. MEEKINS: Thank you.

SENATOR RADER: Any further questions?

REP. HAYES: I have one question, Mr. Chairman.

SENATOR RADER: Mr. Hayes.

REP. HAYES: Was the gas company mentioned that owns thirty to forty percent -- what's the name -- Columbia Gas? I've heard that they were so interested in getting that quantity of gas, or in tying it up from SOHIO that they went so far as to make a loan, an interest free loan of several hundred million dollars as an incentive, or whatever their purpose was. Anyway I understand it was tied in with the right to buy that gas, and my question is, when we were looking for purchasers for our royalty gas did we contact them and, if so, what was their reaction?

COMMISSIONER MARTIN: I can't say. I don't think we did contact Columbia Natural Gas, Mr. Hayes. They were unquestionably aware of the proceeding, and I made a number of public statements indicating that we wanted to hear proposals from anyone interested in engaging in this type of contract with a take back provision and supporting the Trans-Alaska route.

MR. BYRD: I might make one comment. There's been a lot of talk about the front end loan and interest free loans. You want to keep in mind that those are made to producers

for development and exploration, and I question whether or not they would ever be made to a royalty owner that doesn't really spend money for development of the acreage. All of them that I'm familiar with have gone to producers, and they have a commitment to develop, and then when the gas is developed the advancer has the priority to buy. I've never known of one to go to a royalty owner.

SENATOR HUBER: Mr. Chairman.

SENATOR RADER: Senator Huber.

SENATOR HUBER: Shouldn't that answer have been predicated also that this is maybe the only state that's able to take its gas in kind instead of otherwise?

MR. BYRD: Texas and New Mexico are taking theirs.

COMMISSIONER MARTIN: We're not the only state.

SENATOR HUBER: Well, we're virtually, aren't we?

COMMISSIONER MARTIN: Just a couple other little ones like Texas.

SENATOR HUBER: Like Texas? Is that relatively recent though?

MR. BYRD: They've had the right for several years but they haven't exercised it.

SENATOR HUBER: They haven't exercised it though, have they?

MR. BYRD: They are now, and so is New Mexico.

SENATOR HUBER: They're doing it now, but they haven't been up until very recently.

MR. BYRD: That's right.

SENATOR HUBER: Mr. Chairman, I was taken by the remark that a producer could expect this, but a royalty owner couldn't, especially under the condition that the royalty owner takes his gas in kind. If you will excuse me, sir, it appeared to me, the separation, to be completely ridiculous.

SENATOR RADER: Mr. Gruening.

REP. GRUENING: I just want a clarification of that last statement. Isn't the reason Columbia Gas would pay a cash bonus is to get a certain amount of gas committed, it could care less what the producer does with it. I mean, isn't the primary motivation of the gas company to get the gas, and that's why they pay the bonus?

MR. BONESS: Representative Gruening, after the discussion on Thursday night I attempted to find out additional information about the Columbia sale. The Columbia sale was entered into in 1971 ---

SENATOR RADER: Mr. Boness, would you speak up a little bit more?

MR. BONESS: The Columbia sale was initially entered into between SOHIO and Columbia in 1971. It involved actually six separate documents -- well, at that time it involved, I believe, four separate documents, two of which were amended in 1974. I don't have all of those documents, but those that I did have available I made available

to the committee's staff.

It's a very complicated arrangement, and the basic purpose of it was to make money available for development of the reservoirs and to insure that gas would be produced at some time. When it was entered into in 1971 the thought was the oil pipeline would be built at an early date and gas would be moving many years ago.

In '74 when it was realized that the gas wasn't going to move, some amendments were made to insure that the gas would eventually move. The purpose behind the advance payment orders, just in terms of the FPC policy, was to encourage exploration for gas. That's the reason (Mr. Byrd pointed out) it goes to producers and not royalty owners. Royalty owners don't explore for gas, producers do. It was to encourage the exploration of gas and a commitment to that gas to the interstate market. It was made at a time when oil companies were saying the reason they couldn't explore was they didn't have enough money to go out and explore.

Eventually, when the FPC reviewed that decision pursuant to a court order, it concluded that particularly with respect to Alaska the gas was going to be committed in the interstate market in any event and, therefore, advance payments with respect to Alaska were inappropriate.

In response to an earlier question by Senator

Croft, whether had the State entered into this advance payment, into this contract, we could have gotten front end money at an earlier time, the answer is only if we had entered it between 1973 -- there were two orders dealing with advance payment -- I believe August, but I'd have to check the month. There were two orders, and when the FPC issued its decision of December 31, 1976, it ordered a show cause order with respect to those that were entered into prior to 1973.

That included, I believe, four different companies, El Paso, Columbia, -- I'm afraid I can't mention the other two. Only the contractor Columbia dealt with North Slope gas. All of the advance payment contracts which had been entered into, and they had been for virtually all of the gas, were ordered to refund the money. So all of those contracts were refunded and, of course, the gas companies were not allowed to put in the rate base the terminated contract. The Columbia one, the show cause order was issued, they filed the response in March, and nothing has happened since then.

The Columbia contract, as a practical matter, could be terminated. Columbia has out, I believe, a Hundred and Seventy-Five Million Dollars in advance payments. Their net cash flow, I believe, is around a Hundred and Three Million Dollars, according to the

transcript, and obviously if a company has out a Hundred and Seventy-Five Million Dollars and can't put it in its rate base, it's going to be in a very difficult situation. Columbia witnesses testifying in the FPC proceeding testified that probably they would have to terminate the contract if they were ordered to refund the money.

REP. GRUENING: That question really went to the willingness of the gas company to pay it in order to get the gas. I can understand why the FPC wouldn't want it maybe paid if it weren't going to be used for exploration and development, but as far as the gas company went, their prime motive was to get the gas.

SENATOR HUBER: Mr. Chairman, may I get back with Fred?

SEANTOR RADER: Were you through, Mr. Gruening?

REP. GRUENING: Yes.

SENATOR RADER: Senator Huber.

SENATOR HUBER: Mr. Boness, right exactly where you left off, in the case of deregulation, which looks like it's imminent right now in Congress, or appears to be at least, wouldn't it be, if we approved these contracts, only our commitment with these three contractors that would prevent us from receiving a price that would allow us to recover proportionately what other people got in front end payments, by getting a higher price for our

royalty gas, because in effect others have got front end payments -- or did some of them, at least Columbia did. Wouldn't it be our contracts in case of the deregulation that would stand in the way of us doing that?

MR. BONESS: Do you mean the Columbia contract? That's the only one where advance payment happened.

SENATOR HUBER: No. For instance, right now Columbia has a contract that had front end, and apparently they'll get the highest field price that's allowed by the FPC to be paid for that. Isn't it true that for the State of Alaska to get that same higher price, including the front end money, our contracts will be standing in the way of that provided the gas is deregulated?

MR. BONESS: Let me start with the regulated situation. In the regulated situation there is a penalty that takes into account the fact that in the price, if everybody else was getting the highest price, Columbia would be paying something less because they'd already had some money.

In the deregulated situation it depends on what the contract between Columbia and SOHIO provides. I'm not completely familiar with that contract, but I suspect that Columbia will not be paying the same price for the gas it receives that some other pipeline company will be paying from somebody that had not advanced front end

money. In other words, I believe the Columbia contract more than likely takes into account the fact that, if degregulation occurs, some money has been paid already and, therefore -- say, Texas Eastern may be able to pay Arco a higher price than Columbia will be paying SOHIO.

SENATOR HUBER: You'd believe that we would be protected by this highest field price clause where they wouldn't be?

MR. BONESS: Yes, sir.

SENATOR HUBER: Thank you, Fred.

SENATOR RADER: Any further questions of these witnesses?

SENATOR CROFT: Mr. Chairman.

SENATOR RADER: Senator Croft.

SENATOR CROFT: So that I can get in context some of the questions that Representative Meekins has been asking, is it true -- and I guess maybe Mr. Byrd would be the one that might know this best, or Fred -- is it true that once the route is certified that there is going to be a tariff, in effect, approved for that basic facility? Whatever the plan that's submitted at that time, that's going to set that; is that basically correct?

MR. BONESS: Once the route is selected by the President and approved by the Congress, it will go back to the FPC and they will establish a tariff at that time.

SENATOR CROFT: Based on that particular facility?

MR. BONESS: That's right.

SENATOR CROFT: And any additions, changes, in that facility, any spurs off that facility, would then have to stand on their own weight in terms of economic viability; is that correct?

MR. BONESS: Well, any spur off the line would have to be certified first by the FPC in the new Section Seven proceeding.

SENATOR CROFT: And when you tried to certify that spur, would the FPC then go back and re-establish the tariff for the whole line with that spur as an addition, or would it keep the tariff on the existing line and set a new tariff for that spur?

MR. BONESS: I believe it would set a new tariff for the spur. The tariff sets a price for transportation between point "A" and point "B".

SENATOR CROFT: Right, and with regard to the El Paso line as it's proposed now, the tariff would be between Prudhoe Bay and Valdez, is that correct, and there would be intermediate tariffs for points in between?

MR. BONESS: Yes.

SENATOR CROFT: But there wouldn't be any other tariffs in Alaska established except along the route of that line?

MR. BONESS: There would also be a separate tariff for the LNG facility.

SENATOR CROFT: Right. But suppose somebody wanted to take a

portion of that to the Delta area, to Anchorage, or wherever, and you had to construct a small line in order to do that? The tariff for that small line would have to be such as to pay for that entire facility, is that correct, the entire spur?

MR. BONESS: That spur would be regulated by the State Pipeline Commission, not by the Federal Power Commission.

SENATOR CROFT: And it would have to be economically viable by itself; you wouldn't go back and get the FPC to come up with a new tariff for the Prudhoe Bay to Valdez line; is that correct?

MR. BYRD: It depends on where the sale was made. If the sale was made by the State to somebody at a point where the spur was going on, then that would be intrastate and the FPC would already have collected their proportionate share to get it there, and from the point of sale off the certificated FPC line to Anchorage, say, that would be a State regulated project and it would have to stand on its own feet.

SENATOR CROFT: So my question is, to what extent, in order to make sure that we have the maximum potential for developing and using the gas intrastate -- shouldn't we insist that any spurs be built into the basic line and, thus, reflected in the overall tariff to pay for that line rather than waiting until a later date and having

those spurs which then have to be economically justified by themselves alone?

MR. BYRD: I question if the FPC would certificate on this main line a facility solely for the movement of intrastate gas. The legislation that was passed prohibits them from preventing a take off and preventing the transportation through the facility to the point of take off, but I think from that point on it would be an intrastate project.

SENATOR CROFT: But suppose that we wanted to build a spur to Anchorage because, for some reason, it was more suitable to an LNG type of operation or to a petrochemical operation than Point Gravina is? Then that spur would have to stand on its own, would it not?

MR. BYRD: Yes.

SENATOR CROFT: But that if we built that in at this point, prior to certification if we insisted on the spur, it could be built in the overall tariff.

MR. BYRD: But the interstate shipper wouldn't pay any part of it.

SENATOR CROFT: Why not?

MR. BYRD: The FPC just wouldn't let them. The interstate shippers are only going to pay their proportionate share of the cost of the pipeline and whatever facilities are built that go on into interstate commerce.

SENATOR CROFT: Yes, and suppose you had a petrochemical complex that did send it on into interstate commerce at Anchorage so that it would be a part of interstate's interests?

MR. BYRD: You're thinking about a cryogenic plant at Anchorage that would move liquid gas on to the 48 States. I question whether the FPC or El Paso, either one, would. Under our contracts we couldn't do that, we couldn't take the gas out to liquefy it and move it to the 48 States. If we were going to use the gas in a petrochemical plant we could take it and move it to Anchorage or some other point, but we would pay the tariff from the North Slope to the point of the take off, and we'd pay the intrastate transportation, or our purchaser would, for moving it from the point off on the FPC certificated line over to Anchorage, and that spur wouldn't be FPC jurisdiction.

SENATOR CROFT: Was the question of any type of spurs to be constructed by El Paso considered during the negotiations? Were they requested to make any change with regard to their line?

COMMISSIONER MARTIN: Not during negotiations, Mr. Croft, but we have demanded on several occasions that they or other companies add spurs, or come forward with a proposal of spurs, for instance, in the case of Haines or some

other place, and they have refused steadfastly to do that.

SENATOR CROFT: As I understand it, they're going to be back Tuesday or Wednesday. I have some additional questions, the hour is getting late.

SENATOR RADER: Well, we can -- if it's in the nature of a general examination, then maybe we ought to pursue them the first thing in the morning. I do expect you to be back though probably -- first of all you said you would like to be able to sum up anything that might develop and secondly, you hope to report to us on the decision if it can be analyzed. What's your desire, Commissioner?

COMMISSIONER MARTIN: We're fine. We're in good shape until about Thursday of this week, Senator, and then we'll be sending -- I think Jack will have to return and Fred will be heading to Washington to work on the reply brief in the FPC, so Wednesday will be fine.

SENATOR RADER: Would you prefer that instead of tomorrow?

COMMISSIONER MARTIN: We'll be glad to come back and spend any amount of time. Tomorrow is also fine.

SENATOR RADER: Any other questions of these witnesses? If not, we will tentatively start out with Tenneco, Southern and El Paso tomorrow, hopefully at 11:00 o'clock, or as soon thereafter as the House and Senate adjourn.

(Whereupon the hearing adjourned at 5:00 p.m.)

SENATOR RADER: The Joint Committee Hearings of the House and Senate Royalty Gas Sale Committees will come to order. We invited Commissioner Martin and such other persons as he might deem appropriate to respond in any manner, that they see fit, to questions that have been raised that they think should be dealt with, or supplementary information. Particularly did we want to get from you an analysis of the opinion from the Trial Judge from your point of view as to what it says and what it doesn't say, and such other matters as you think may be pertinent to the committee.

I think the best thing would be for you and Mr. Boness, or either of you, directly to give us sort of a rundown on where you think we are and then start the questions, if that would be all right to do.

COMMISSIONER MARTIN: Yes, sir. Thank you, Senator Rader. I should say that after talking to you last week I've not come prepared to give you a full briefing and rundown on the FPC Judge's opinion. In fact, my understanding of last week was that once the thing was cancelled on Friday that we had moved beyond that, and the decision has been well distributed up here now. We can do that in rough form but, quite frankly, we didn't come prepared to do that; we came prepared to try

to respond to some of the questions that were raised and to take all your questions.

SENATOR RADER: I would appreciate your doing it just in rough form then as to your understanding generally, just for purposes of the committee. I know I haven't seen a copy of the decision, and I know that either you or Mr. Boness will have read it in full and analyzed it, and I would like to know what effect it has, if any, on these hearings, and on your position or on a position that we should take or might want to take.

COMMISSIONER MARTIN: Senator, let's take it on this way. I think we can say that Fred has read the opinion, at least largely. It's awfully long, and I have not gotten all the way through it. I have read certain parts of it, and I think we can give you a brief summary. Let's just start by having Fred run down some of the key points that are in the decision and then maybe we can talk about the meaning of them.

SENATOR RADER: Excuse me. I see Senator Kerttula. Senator, would you like to -- you're certainly welcome if you'd like to join us up here for the questioning.

SENATOR KERTTULA: Thank you, Senator Rader. If I have something I'll come up there. Thanks very much.

SENATOR RADER: Or you can stand and address the questions there, if you wish, from your seat. Yes, Mr. Nakak,

also. Would you care to join us?

MR. NAKAK: Not presently.

SENATOR RADER: Proceed, Commissioner.

COMMISSIONER MARTIN: I'll let Fred just give a brief run-down of the things.

MR. BONESS: I would like to start by indicating just a little bit about the procedure, what will happen now. The opinion, as you know, was issued on February 1. We have thirty days in which to file a brief of exceptions. Basically what that means is that the Judge throughout the opinion says, "I find Arctic Gas will be able to construct from snow roads in the time frame they've projected," and numerous other findings of that nature.

The State doesn't believe that that can be done. It will have a number of exceptions to findings of the Judge. We will have thirty days in which to file the brief, and the purpose of my going back to Washington, D.C. is to work with our attorneys back in Washington to prepare that brief, and all the other parties will be doing the same. Once that brief is filed, the Judge's decision, the whole record and those briefs will go to the Commission.

They will issue a decision, a recommendation to the President on May 1. The opinion itself is very long, it's four hundred and thirty pages with about another

seventy pages of appendices, some of which are also pertinent to the decision and must be read to understand the decision itself. It's organized into a number of sections, there's a Gas Supply Section, a Construction and Logistics Section, an Environmental Section, a Tariff Section, a Financing Section; and within each of those sections the Judge addresses generally what Arctic Gas says it can do, what he believes they can do, what El Paso says they can do, what he believes they can do. There is some discussion in each section of Alcan although, rather interestingly, the Judge at times just seems to ignore the Alcan proposal altogether. He never praises it, he occasionally criticizes it, but in general he just doesn't treat the Alcan proposal in anywhere near the same length as he treats the El Paso and Arctic Gas proposals.

I have not read all of the decision. I'm half way to three-quarters of the way through the decision. There are a number of places where the State of Alaska is mentioned in terms of the positions it has taken. We will have things to respond. As you may know or may have heard, the Judge asserts that the State is a person under the Natural Gas Act and that our sales will have to be certificated by the Federal Power Commission.

As I indicated on Thursday night to Representative

Gruening's committee a week ago, we are intervening in other cases -- we have intervened in other cases which address that issue and which may form the precedent for what would be the eventual finding in the Alaska proceeding. But, in any event, I would point out that the Judge's position is contrary to the position taken by the Office of General Counsel for the Federal Power Commission, and it will be a legal issue which will ultimately be resolved, I feel quite certain, by the courts.

I don't believe the Judge's assertion that jurisdiction exists is really in any particular fashion detrimental to the State's position. It is really based more on an assertion that it just must be so rather than on any serious legal analysis, in my opinion.

I believe I would prefer to leave it there rather than going into the number of specific issues that the Judge addresses unless it would be the committee's pleasure that I attempt to do that.

SENATOR RADER: Of course, the inquiry here is, should we or should we not pass the resolutions approving the sale. Is there anything in the decision from the point of view of the State that would impinge upon our decision as to one way or another in that regard, in your view -- or in your recommendation to us in that regard?

COMMISSIONER MARTIN: I would stick by the statement that we

made earlier, Mr. Chairman. This decision, once the procedural bill passed last year, is made less important than it would be under ordinary circumstances, and I'm not going to change that position because of the way the decision came out. On the other hand, the strength of the decision, it seems to me, points out two things very clearly. One is that the State has a tremendously long way to go to support either of the two routes that are in the State's interests; and the second thing it points out, and I want to mention this in the statement that I'm going to make to you today, is that this is a terrifically Federally oriented decision and points out, sort of in the most vivid terms, the kinds of things that we may be running up against in attempting to protect the future in-State use of our gas and running up against in terms of Federal jurisdiction over our gas.

So those two things very much, in my view, make what we're considering here more important -- in my view, make it substantially more important that we take action at an early time, and make it more important that we do what we can to support the El Paso route.

SENATOR RADER: I really didn't mean to open the questions at this stage. However, inasmuch as I have, do other members of the committee have any questions particularly concerning the decision, and then we would go into the

other. Senator Croft.

SENATOR CROFT: I do on that point. One of the reasons these contracts were announced on November 12 was so that they could become a part of the record, and both the staff report which was issued in December, and Judge Litt's decision which came out in February thus considered those contracts. What did the staff report and what did Judge Litt say about these contracts? What effect did the contracts have on their decisions?

COMMISSIONER MARTIN: I think they had pretty much the effect that I thought, and that was less effect on the FPC proceeding than they'll have on any subsequent proceeding. I stated that before publicly, and that was a point I made basically in trying to take additional time before they were introduced. I think that they didn't affect the decision a great deal, nor did I expect it to.

SENATOR CROFT: What did Judge Litt say about the contracts?

COMMISSIONER MARTIN: I don't recall that he treated them in length at all.

SENATOR RADER: Any further questions on the decision? Representative Parr.

REP. PARR: Mr. Martin, you used the term "Federally oriented" a minute ago. Do you mean that this was the same thing as what sometimes is called "In the National interest"?

COMMISSIONER MARTIN: Well, I don't know what sort of semantics

you're after, Mr. Parr.

REP. PARR: I'm not looking for semantics, Mr. Martin. You said "Federally oriented" and I don't understand the term.

COMMISSIONER MARTIN: Let me try to explain that. It seems to me that the best that the State of Alaska can hope to come out of this is with some agreed understanding between the Federal Government and the State with regard to the State's ability to use the royalty gas of their own. That understanding, in my view, would be to acknowledge that because of Alaska's production of these resources and distance from other markets, the needs we have in the State, that we will have a somewhat free hand to use our own resources.

At worst, on the other hand, the Federal Government will assert total jurisdiction over not just the gas that comes out of Prudhoe Bay, but the royalty gas that comes out of Prudhoe Bay, and direct that that gas be sent somewhere else other than Alaska.

Now, that's a whole spectrum of possibilities with respect to the gas that we own. When I say Federally oriented, in this context I'm referring to the fact that Judge Litt took the position that they should have virtually total control not over just the Prudhoe Bay gas but our State owned gas as well.

REP. PARR: In other words, what you're saying is Judge Litt said that the Federal Government would have the power then to decide where the gas would be most needed, including our royalty gas.

COMMISSIONER MARTIN: That's right.

REP. PARR: And then to send it there.

COMMISSIONER MARTIN: And went much further than that to advocate the repeal of Section 13-B and immediate assertion of Federal jurisdiction over our gas right from the wellhead.

REP. PARR: Thank you.

SENATOR RADER: Any other questions? Representative Gruening.

REP. GRUENING: Commissioner and Mr. Boness, is there anything in the decision that indicates why he thinks 13-B ought to be repealed?

COMMISSIONER MARTIN: Yes. He discusses it, not at length, but he basically makes the assertion that the Federal Government again should control all of the gas in the national interest rather than just the seven-eighths that belong to the producers, and really indicates that the Federal Gas Act, in his opinion, has applicability to all of it and that then all of the Federal powers given to the Federal Power Commission under its act would apply.

REP. GRUENING: You mentioned just earlier that the decision behooved us to move faster on these contracts. I think

that was your comment. What is there in the decision that compels us to do that?

COMMISSIONER MARTIN: Basically the fact that it pointed up the terribly uphill battle that the State faces in supporting either one of its two routes, and it seems to me that it just emphasizes the need for whatever additional assistance we can get from these contracts or the support that comes as a result of them.

REP. GRUENING: You recall that in the task force evaluation that there was mention of the fact that at some point the State would consider switching its support to Alcan, and now having been asked that question, and the decision hadn't come out yet -- now that it's out is there anything in that decision that would give the Administration cause to reflect and to change their position?

COMMISSIONER MARTIN: I think we'll continue to consider it, and we'll probably be discussing it this week, but my present reading of the situation is that the decision would not indicate a change is necessary.

REP. GRUENING: You will be discussing the possibility of switching support next week?

COMMISSIONER MARTIN: Yes, but I don't think that there is any strong possibility that we'll change.

REP. GRUENING: But that matter will come up?

COMMISSIONER MARTIN: I should say, that matter is under

just continual scrutiny and discussion because we want to make sure that whatever is in the State's best interests is protected. But I think it highly unlikely that we'd want to change because of this decision. In fact, our present directive is for Mr. Boness to go to Washington and prepare a brief opposing the recommendations made by Judge Litt.

SENATOR RADER: Any further questions on the decision? Representative Miles.

REP. MILES: Regarding Judge Litt's advocacy of repeal of the exemption, Commissioner, has anybody been in contact with our Congressional Delegation to gain a feel of how Congress feels since the Litt decision came down, and are you familiar with ---

COMMISSIONER MARTIN: Well, I've been in contact with the staff of our Delegation. I think I've been in contact with all of the staff since that time, not only on that question or precisely on that question. But I've discussed this issue, although not personally with any of the Delegation. What I'm learning from them is that it's really too early to assess what happened in Congress as a result of that decision. I don't think they've really digested it really anymore than we've been able to here. But they see the decision as damaging to the El Paso and Alcan case.

REP. MILES: But they don't have any strong feeling on the exemption either?

COMMISSIONER MARTIN: No.

SENATOR RADER: Senator Croft.

SENATOR CROFT: Could I -- just so we get it in perspective, the State had certain points that it wanted to make in the FPC hearing. One was support of the El Paso route, two was, I guess, some support of Alcan just so the State could keep that option open, three was to convince Judge Litt that we were not a person within the meaning of the Natural Gas Act and thus were not under the terms of it. Obviously, we didn't want him to come out for repeal of 13-B. Could you list the major objectives that the State had in its participation before the FPC? Just kind of run through it as to how we came out under his decision.

COMMISSIONER MARTIN: I don't think a list is necessary, Senator Croft. I'll just say that you listed at least the major ones, and there are a number of minor ones. My thought is that Judge Litt's decision went very much against the State's interests.

SENATOR CROFT: On all of the major points?

COMMISSIONER MARTIN: On the major points.

SENATOR CROFT: On the most of the minor ones too?

COMMISSIONER MARTIN: Yes.

MR. BONESS: Senator, I'd like to respond to that. What I believe you stated are really the ultimate objectives that the State's case took. But, in fact, there are a number of specific kinds of points which come up during the hearing; for example, the question of whether Arctic Gas would be able to construct its line from snow roads was debated at length. That's a much finer question. It goes to the State's objective because part of the reason the State opposes Arctic Gas is that it is going to involve substantial delays and substantial increases. The State put on considerable testimony on that point.

El Paso hired special consultants to put on considerable testimony on that point. Mr. Latts, who was the Federal Government pipeline person, put on testimony to the effect that it couldn't be done, and the Judge essentially rejected all of that testimony.

There are a number of other kinds of things like that, the question of whether adequate water would be available to manufacture snow if, indeed, they were going to use snow roads; the question of whether snow fences would be adequate. It really breaks down into a number of very specific kinds of things.

With respect to the El Paso proposal, questions with respect to the amount of gravel available and a number of things like that. And the Judge, in my opinion,

as far as his opinion that I've read, really accepted Arctic Gas' arguments in almost all cases and ignored the arguments of the State and others with experience in the gas pipeline construction here in Alaska.

COMMISSIONER MARTIN: I might just add to that, I think your question -- I don't think you assume this, but it may create the implication that it was sort of the State against these others. But the State was merely a part of a much larger presentation, whereas the bulk of the evidence was put on by El Paso, by Alcan, or some of the other parties who were intervenors to the case. Although we took a major role on most of these issues, we were not (let's say) the leading case.

SENATOR CROFT: On some of them we were the only people that were really interested in it, and that is particularly true with regard to whether the State is a person within the interpretation of the Natural Gas Act.

MR. BONESS: Senator, if I may respond to that one. The State filed a brief on that very early in the proceeding. No one filed a brief in opposition to that and, in fact, I believe you would not find that in the record at all except occasionally the Judge making a comment, "Well, whether the State is or isn't a person, will you tell us what you're going to do?"

The legal merits of that question were never

discussed or debated in the hearing at any point and, quite frankly, I'm a little bit surprised to find as much discussion of the issue in the Judge's opinion as there is. I think it was, if anything, a gratuitous effort on the part of the Judge to make sure that the State does not get powers beyond those which he believes we should have.

SENATOR CROFT: But in terms of that, in terms of 13-B, in terms of the regulation of rates within the State, which I think you, Commissioner Martin, made reference to Tuesday when we had the first summary of Judge Litt's decision, all of those points were basically points that it was not particularly an adversary situation, and yet he recommended against us on all of those as well; is that correct?

COMMISSIONER MARTIN: Exactly right, and that's exactly why I answered Mr. Parr's question that it was a very overtly Federally oriented decision. On the question of, let's say, rates he treated it very lightly in the decision in most cases, much more lightly than I thought he would given the fact I had been on the stand for eight hours on that issue one day. But, you're right, he took it on his own initiative to deal with those issues, as Fred says, gratuitously.

SENATOR RADER: Any further questions just on the decision?

Commissioner, why don't you go ahead and give us your general presentation?

COMMISSIONER MARTIN: Thank you, Senator. Last week, Mr. Chairman, the committee had comprehensive hearings on the gas line route issue and on the contracts, and as the opening witness for the State and the spokesman designated by the Governor, I took the approach basically of attempting to lay the contracts and the route preference decision before this committee, and to do so, at least in my own view, for my own part without heavy advocacy or really without a series of conclusionary statements. I, in fact, didn't make an opening statement. And I did that for several reasons that are somewhat important to me and I think to the proceedings.

One is, I think this issue is critical, and I believe it to be (like you) basically non-adversary and non-partisan.

Secondly, to a very large extent I served as not just the negotiator for the State, but the negotiator for the Legislature as well as the Executive on this matter, and I wanted the committee to have the best opportunity to understand factually what the contracts did as opposed to having to deal initially with a large number of the conclusions or implications that might spring from the contracts.

And I also wanted to hear, as a negotiator, very much what other people had to say about the contracts because no matter how substantial the level of care is, and it was substantial on these contracts, there is always a great deal more to be learned, particularly from the consultants and others that have an opportunity to examine these contracts in a clear, objective light. Basically I guess what I wanted to do was to see how well the contracts and the route preference stood on their own merits and to get an indication for my own part how well we did.

I've never said to this committee, and I'm not going to start saying today, that State decisions on this issue are clear-cut. Yet I heard a number of people say statements last week that were amazingly absolute, in my view. Virtually any course that we take, Senator, and I wouldn't want the committee to be mistaken about this, is going to have substantial trade-offs, it's going to have risks associated with it, and it's going to have both advantages and disadvantages. I think that although there are a number of people that really don't like to hear this kind of conclusion, I think that the differences between the alternative courses that are available to us are going to depend very much on subjective judgments made not just by myself or by the Governor, but by members

of this committee. Some things are going to be, and remain, difficult to quantify. I think they're going to have to be worked out subjectively by all of us working together. That's very true of these contracts.

Now, my opinion after seeing the hearings for a week, Senator, is that they were very useful. They were comprehensive, and on balance I think they developed some good information on very complex issues. There were a number of factual errors made, and we're going to try to be able to respond to those today. There were some very legitimate differences expressed with regard to State policy objectives that might be pursued. There were some wide ranging political judgments expressed. I think there was some good, expert consultation supplied to the committee.

We paid close attention to the hearings. We had them monitored throughout your consideration, and I think we came away with a pretty good idea of what it was we ought to do in future response to this committee.

I'm going to say some things in my statement today and I'm going to be prepared to respond to questions, and it may well be that we'll turn in additional written information at a later time if we feel that everything hasn't been covered.

It was a little hard to tell, looking at the

testimony last week, what the most shocking piece of testimony was. It was probably a toss-up between Arlon Tussing telling us that the entire State and its leadership have been tricked into believing that we have any role in this decision at all; it could have been Mr. Dallas telling us we made a big mistake by not coercing a gasoline plant in Fairbanks as a part of these contracts; or it might have been that the buyers couldn't assign a dollar for dollar value to what it was they proposed to do.

But let me say that, at least from my personal judgment, the most shocking piece of evidence before the committee last week was probably Judge Litt's decision. It was something that didn't happen here at all. In the terms of the sort of significance that we have to deal with in these hearings, it seemed to me that, as I said earlier in response to Mr. Croft's question -- it seems to me that we learned from that decision a great deal more about the uphill battle we have to face and a good deal more about the sorts of Federal orientation that we're likely to meet as this issue is developed in Congress.

What I'd like to do today, Mr. Chairman, is to continue in the role of elaborating on the contract factually and to respond to your questions. But I'd also

like to do one other thing that I feel somewhat compelled to do in the role that I've tried to fulfill for the State, and that is to try to add at least some perspective to the issue based on my own judgment and on my experience as a negotiator for this contract and on my experience in dealing with this issue on behalf of the State in the Federal context. I've spent time on this issue, both for this Administration and for the last one, and think that the committee probably can benefit from at least what some of my judgments, again admitting that they're only subjective, with some of the others that have been made, to add my words to theirs.

In other words, I feel that after hearing a great deal of useful testimony last week, I think that it will be useful for me to at least give you the benefit of my advice as well as the information I can supply. First, I want to make it clear that I believe after hearing everything, and you always hear these things with a certain amount of trepidation as a person who negotiates it, particularly in the context of our statute, I want to share with you my belief that both the contract and the route preference held up remarkably well during the course of the hearings last week. No witness, with the exception of those who favor another route, such as Mr. Ward, Mr. Thompson or Mr. Tussing, made any substantial

allegation that the best route for Alaska was anything but the Trans-Alaska route.

In addition to that, the clear-cut consensus of the consulting experts hired by the Legislature was that these are good contracts achieving some objectives now which may not be reasonably expected to be surpassed or even equalled later. Third, on taking into account all that was discussed last week, I believe that no questions have been raised which cannot be reasonably answered and none that persuaded me on balance that these contracts do not best achieve a series of crucially important objectives for the State.

Now, beneath all of the specifics which have been raised is the overall issue raised best by Mr. Gruening, "What do we get and what do we give up?" Slightly below that is a similar question, and I think it went unspoken in many cases last week, "Can't we do better in the future if we just wait now?" The answers to those questions are complex and they depend on many variables, and rather than cite them all, let me give you an example of what I mean.

To the question, "What do we get," the variable is, "What do we want?" And I think that what we want is something that people have not been clear in addressing beyond the words and the implications that were created

by public opinion and legislative actions and administrative actions since last year.

What do we want? It might be price, it might be in-State use in the future, it might be the route that's best for Alaska, it might be a lump sum payment, it might be total future flexibility with regard to this gas for the next three or four years. But in any case, at some point what we want has to be defined rather clearly. In my view it was defined rather clearly at the time we led up to these contracts, and we ought to establish that ground again.

To the question, what do we want, my own fear is that one of the things that comes out of the hearings last week is that the answer of too many people is "everything." I just want to make it clear, both as an advisor and a negotiator, I don't think we can expect to get everything, and perhaps we didn't in these contracts. But I don't think we can answer that question by saying, "Everything."

Over all, and I want to make this very clear because I believe the hearings narrowed in many cases to an investigation of specific values, pro or con, that were inherent in the contract. Let me make clear what my own feeling as your advisor is on this matter. Over all, what I believe we got in the contracts is a

balanced package of terms on key objectives for the State. In my view the objectives are right, the terms are solid, and there exists real risk that such a package cannot come together in the future in exactly this way. That may not mean, in your own mind, that you should do it. But I want you to be clear that my feeling is that that's my conclusion, and it will be difficult to put this kind of package together again in this way.

I believe that many of the statements that were made last week missed the balanced nature of these contracts, and I believe they missed the present opportunity they represent, and I believe that there was a certain misconception with regard to what we can absolutely rely on to be accomplished in the future.

What you get, in other words, is an approach with many facets and many aspects to it, which is available now, and one which provides a whole series of terms giving protections for the State which may or may not be available later, but achieving this combination at a later time, if it does represent desirable alternatives and desirable objectives, may not be a dependable assumption.

I do not propose to speak to you in absolute terms as some did last week because I don't think this is an absolute issue. I am going to lay out, however,

some of the benefits and risks as I see them, and to give you the opportunity to work with me to try to balance those risks and benefits, to look at these contracts as a unit rather than in looking at them, as we did last week in so many instances, as a series of specific issues, all of which can be considered, I think according to the assumption that we can achieve the same combination again or whether we can't achieve it again.

First, in these contracts the State gets a reasonable approach, in my view, to a decision on this entire issue, and it gets it within the formidable constraints of our royalty process. Now, our statute is wise in the public interest, and I've said so before; but it's cumbersome and it's politically charged. It's a one-year cycle or perhaps somewhat less in which the Administration, the Commissioner of Natural Resources and others must either guess or ascertain what the public will and the legislative will is with regard to royalty oil or gas, then must work through the businesslike task of negotiating an entire contract to deal with these issues, and then must go through two levels of review, which can be extremely time consuming, during which time the circumstances that favor or disfavor any deals so made can change.

The present contracts, in my opinion, have done

very well in this process, and they're based on a reasonably identifiable public and legislative will. In other words, we started with a reasonably good idea of what was desired and we went through at least a very large percentage of the complicated and cumbersome nature of our process in fairly good form, and we're still proceeding in that, in my view. Now, how well this process works in the future is going to have a great deal with how well it works in this instance and how well all of us work with the process, and that has nothing to do with whether the contracts are approved or not. It has to do with the way in which we deal with them.

To reject these contracts now, particularly without a good understandable, specific basis of guidance as to where we go next, leaves us with a process which is neither rapid nor flexible, our royalty process, and perhaps without clear direction, and still facing the same problems which we believe were answered very successfully in this contract. So I think that there's an inherent risk in starting over again without clear guidance. If we have the clear guidance and we have the time, then it may well be a different case. But I think that we have an alternative now that it's going to be difficult to duplicate given the nature of the

process. I think it's a risk of rejection you should clearly face; that is, very simply, the risk of putting together a deal in this form and of this nature again.

Second, in these contracts we did get the best price for royalty gas sold under any reasonably foreseeable circumstances. I say that after listening to testimony last week, hearing your consultants deal with it very thoroughly. Quite frankly, after the strong testimony that your own consultants gave, I'm hopeful that this issue is put largely to rest. If it is not, simply let me say that I believe that it should be, and that the State can say with some certainty that it did get the best price that it can reasonably expect to get under any foreseeable circumstances.

For you to reject these contracts on this basis, you must conclude that it is not only technically possible to get a better price later, but that it is probable or even possible that we can better or even equal what is presently available to us.

For the record, my advice to you is that it is not a risk worth taking, and it's not a possibility that you can or should rely on, and not something you can assure the people of the State is capable of accomplishment. Remember that under these contracts we tie the price the State gets for its gas to the best

price coming from the Prudhoe Bay oil field, oil and gas field, so that if only one buyer gets a terrific deal on his gas we're tied to that price. So we have the benefit of virtually every other good negotiation for gas from that field.

Third, there is the issue of in-State use. What we get, again in a balanced package, is a negotiated term in this contract that allows us to sell our gas but not really to sell it, to take back virtually every cubic foot of gas that we can use for Alaska's future. So far as I am aware, this term is without precedent in gas purchase history. The driving force for the term, in my view, is uncertainty; uncertainty about what we will ever use, which allows both the buyer and the seller to make of it what they wish.

To reject this contract, you must accept the risk that this total take-back term can be equalled or surpassed later. I do not know how, quite frankly, it can be surpassed. And as your negotiator, I can advise you that I believe there are substantial risks to be acknowledged if you were to act in the belief that such a term can simply be renegotiated equally. I think there are a number of reasons that indicate that it will be quite difficult to establish such a term again.

Fourth, there is the protection of the take-back

provision itself. What we get, in my view, is the best foreseeable opportunity that Alaska will have to protect its ability to use gas in the State. We not only have negotiated the best possible take-back provision, simply the right to take back all of the gas, but we are able to advance it for Federal approval at probably the most advantageous time foreseeable for doing so..

To reject the contract now, I believe that you must accept the risk that Section 13-B will remain unchallenged and on the books and that at some later time you will be not only able to negotiate the same kick-back term, but that we will have the same or better chance to get it approved at the Federal level. My opinion, and again I'm acting in an advisory capacity here, is that our best chance to avoid that risk is by acting now.

And fifth, there is just the question of the route itself. On the one hand we had Arlon Tussing, a good friend on whom I've shared many opinions on this issue, who basically indicated that we should fold our tents and wait quietly for the end on the gas line issue. On the other hand, we have the Congressional Delegation and the Governor stating in no uncertain terms, as I see it, that the State does have a definite role in this gas line proceeding and that these contracts are important

to the outcome, that the combination of buyers is right, and that the decision should be made as reasonably quickly as possible.

For my own part, again giving you the benefit of my feeling about this, I certainly want to come down on the side of saying I think we do have a role in this, and I say it from the perspective of participating both in the Native Land Claims and Trans-Alaska Pipeline decisions in Washington. I think it's simply fallacious to assume the State has no role whatever and that we should simply accept what comes our way. Again, I would reiterate that what I say about the route is totally separate from all the other points about the protections that we may be able to gain from these contracts.

To reject these contracts, in my view, you have to be willing to accept the risk that the additional help afforded by the buyers either won't be any help at all or that it won't help enough, and accept the fact that no matter what your individual reasons, your action in rejecting these contracts is going to be perceived broadly as a rejection of the Trans-Alaska route. For my own part, given the fact that the contracts will be void if we lose, given the fact that they are clearly of extreme importance to our Congressional Delegation, given the fact that they will be void if

the full take-back scheme is not approved Federally, given the fact that we will be doing all we can to develop the in-State uses which could conceivably mean that we never really sell a cubic foot of gas, that is, get something for nothing; given those facts, I don't think the risk of rejecting the additional assistance makes a great deal of sense.

In conclusion, I would say that after a full week of testimony a number of specific points have been raised, but no one has yet suggested a concrete comprehensive alternative to the kind of advantages that are suggested by these contracts.

Now, I'm going to be pleased to answer your questions, but I hope that that additional subjective judgment helps you at least to understand what I think is important about the contracts.

Thank you, Mr. Chairman.

SENATOR RADER: Senator Huber.

SENATOR HUBER: Thank you, Mr. Chairman. Commissioner Martin, would you care to comment on whether the course that we embark upon with these contracts is anywhere as near strong enough to win the route decision, especially in light of Judge Litt's decision? Might not we be relying on too little too late? Might not the contracts' greatest drawbacks be that they stand in the way of an all-out

effort, such as that outlined by Jess Barry of Anchorage when he talked to us Friday?

COMMISSIONER MARTIN: I'm sorry that I didn't read that statement, but it seems to me that you're going to get the maximum amount of effort that we can expect to see from these contracts as they're presently framed. In my view that would be my position, Senator Huber, and it seems to me that we can always say that we're later than we would like to be. Had not legislative approval been necessary, had it not been as difficult as it was to negotiate what I think are good contracts, we may very well have been able to go earlier. But it seems to me that we have an opportunity to do the right thing now.

SENATOR HUBER: You're not familiar with Jess Barry's proposal that he made before us Friday then?

COMMISSIONER MARTIN: Is it the proposal to eliminate the flexibility provision in the contract?

SENATOR HUBER: No. It's a total proposal to get behind it much harder. He likened it onto the way Alaska got behind the Tennessee Plan to become a State, and he meant getting with El Paso and joining with them, using the State's bonding ability and everything else to help in building the line so that we had something really to sell to the people of the Lower 48, that Alaska is

getting in there to get them the energy they need.

COMMISSIONER MARTIN: I'd say two things, Senator. I haven't read the proposal in detail. I'd be glad to do it. I think that there will probably be things that we should consider that would be of even more assistance. But if I understand what you're saying, nothing that he proposes in any way conflicts with the value or the benefits of engaging in this contract.

SENATOR HUBER: That part may be true. Thank you.

SENATOR RADER: Representative Hayes.

REP. HAYES: Mr. Martin, on Friday Mr. Moody, who was retained by this group, testified regarding one provision in the contract which has been discussed as being one of the major pluses, and that was the take-back provision. He indicated that the contract was so strong in favor of the State, particularly in that respect, that when the producer/owners get around to financing the project they may very well be faced with the problem, in dealing with the financial institutions, of coming back to the State and asking for some subordination or some relief relating to that particular paragraph of the contract. Have you taken that into consideration, or do you have any opinion on it as far as ---

COMMISSIONER MARTIN: I've heard that point, Representative Hayes, and, of course, it came up in negotiations as the

buyers attempted to tell us that we may, indeed, be driving too hard a bargain. But it seems to me that that again does not supply a reason to vote against the contract, but only a fact that we may have to acknowledge in the future. My own view is that he over-stated the possibility of that happening. But, in any sense, I think we ought to acknowledge it; but it doesn't give me any pause at all in going ahead with the contracts.

REP. HAYES I think he made a statement to deal with the alternative, which would not be entering into any contract, and by not entering into any contract you would not be put into the p.sition of having to commit your royalty gas. But then I think he, on the other hand, said that if the State doesn't have their act together by that time, by the time the pipeline is built, that we may very well lose it anyway, the FPC may take it. Do you agree with that?

COMMISSIONER MARTIN: That's the point I guess I was getting at, and I would say this: a number of factors are going to have to develop. Certification is the first of several. Beyond certification, for which financing will be a part, there will actually be the putting together of a package to build whatever pipeline is certificated. I think the State gives up nothing by going with these contracts now that it can't adjust to and have a reasonable

opportunity to adjust to at a later time.

REP. HAYES: Thank you.

SENATOR RADER: Representative Gruening.

REP. GRUENING: Commissioner, can we infer from what you've said that the Administration would not take kindly to any suggestions of amendment to this contract? Do you see any -- in other words, let me just say the consultants did suggest some areas where the contracts weren't perfect and there were some areas where we could lose something in terms of price.

COMMISSIONER MARTIN: So far as I'm aware, Mr. Gruening, none of the consultants suggested amendment. They suggested in many cases clarifications which they felt would be useful, and we'll attempt to supply those. Our position on amending the contract is that if it's in the public interest to do so, we're not totally closed to the possibility. The Legislature should be advised that amendments are a rejection of the present contracts. Our procedure doesn't provide for amendments, but merely approval or disapproval by the Legislature. We'll take into consideration the reasons, if they're stated in a unified manner, that a rejection is undertaken and attempt to renegotiate the contract if it seems desirable to do so. At the present time, frankly, we have not yet had pointed out to us in any unified way suggestions for

amendments of the contract which would cause us to believe they ought to be amended. I'm not saying we're closed to it, but I'm saying it has implications for timing and it has implications for future decisions on this which we'll just have to discuss.

REP. GRUENING: Have you considered a special bill to allow an expedited procedure for amendment?

COMMISSIONER MARTIN: I've given it some thought and I'm not unwilling to discuss it. But as I've said before, the way in which the Legislature deals with these contracts is going to have a great deal to do with what happens in the future in the royalty process. I think you are well familiar with my view, that that's going to have to be done in a way that doesn't create the impression of the Legislature renegotiating the contracts. I think that if you do that you'll simply find that future individuals occupying my office are not going to be willing to put anything on the line in negotiations.

REP. GRUENING: I'd like to call your attention to the statutory provisions I think that govern you and the Royalty Board, and I don't know if you were here but you probably had an observer when Red Boucher made his comments on a finding of surplus and immediate, domestic--along with domestic and industrial needs for the royalty gas. He stated that he was aware of no study that had been

submitted in accordance with the statute; in other words, a report showing an immediate and long-range domestic and industrial needs of the State for royalty gas. Is that a correct assessment, or what reports or report have been submitted in accordance with the statute?

COMMISSIONER MARTIN: There are really two answers to that question. First, I don't believe it's a correct statement. Two items have been submitted to the Legislature to fulfill that requirement. The first is this analysis, which is included in all the legislative packets. I understood that it got left out of a few, but eighty came over to the Legislature. The second was, this document here, which wasn't in all the packets but which was given to the Chairmen, at least to Senator Rader, which is the background document for this. And this document, Mr. Chairman, is a lengthy bibliography which indicates the nature of all backup information dealing with surplus gas.

Now, these things do exactly what the statute demands, and that is to analyze the present and future demands for surplus royalty gas. I'll go one step further than that. The Legislature has a question before it. I think we could spend a good deal of time deciding whether or not this is exactly what you had in mind for your report. In my mind it's unquestionable that this

deals with what we have, what the future may bring, and what kind of surplus we have. So it's a technical decision for the Legislature, which gives you every ability to deal with the issue of future surplus. I should also say that the Legislature received a copy of the Royalty Board minutes and the indications of the Royalty Board's consideration of this in which this was also well discussed, and all of these documents referenced.

But as a further point, let me just say that that point as a technical objection is exactly the kind of thing that the Legislature should avoid to use as an escape hatch for this kind of decision. The plain and simple fact of the matter is that these contracts take care of the surplus provision by definition. There is no question that the future uses of royalty gas in these contracts are protected by the terms of the contract itself. Any future use -- and those future uses are unknown -- is protected by the terms of the contract. So that the analysis itself, while it's interesting and fulfills the terms of the statutes, is really not necessary to appreciate the fact that we don't sell any future gas that's not surplus.

REP. GRUENING: Mr. Martin, I don't think it was the intention of that question or any of the Legislators here in raising that, to find an escape. I think we're looking

to see whether you and the Board have complied with the law.

COMMISSIONER MARTIN: I understand.

REP. GRUENING: We have to examine, you know, it's our role to examine that.

COMMISSIONER MARTIN: I understand, and I wasn't suggesting that. I'm saying that -- I wasn't suggesting that motive. I was suggesting that I think that it's not an appropriate one, either in terms of being fulfilled or in reading the contract fairly. I might say that I've asked Mr. Boness, as well, to look at the material that was submitted and to consider whether or not he thinks it's reasonable in terms of fulfilling the law, that the procedure might not have been fulfilled, and I'd ask him to talk to that.

REP. GRUENING: No, let me just mention, you stated that the take-back provisions in the contract -- the inference was that that made the subject irrelevant as far as surplus ---

COMMISSIONER MARTIN: No, I didn't say irrelevant.

REP. GRUENING: The inference was that the take-back provisions had something to do with the compliance with the statute, and it's just my reading that whether or not there are take-back provisions in the contract wouldn't have any effect on whether we find, in fact,

that you complied with the need to find a surplus.

COMMISSIONER MARTIN: I'm in agreement with you on that. I didn't mean to suggest that they avoid the need for fulfilling the requirement. I don't think they do. But I think, to a large extent, the relationship between those two ought to be understood in terms of the objective of the statute, which is to protect us from contracting away anything that is not surplus.

REP. GRUENING: These two reports, these are the documents in which you place your reliance for compliance with the statute?

COMMISSIONER MARTIN: That's right.

MR. BONESS: Representative Gruening ---

SENATOR CROFT: Could I ask?

SENATOR RADER: Senator Croft.

SENATOR CROFT: That particular statute, 38.05.184(d), that's what we're referring to; right?

It says, "The Commissioner shall make public, in writing, the specific findings and reasons on which his determination is based and shall, within 10 days of the convening of a regular session ..." -- I must have missed that in my copy. Did you, yourself, Commissioner, make specific findings?

MR. BONESS: Senator Croft, that refers to specific findings in writing, I believe, for waiving of the competitive

bid provision; is that not correct?

SENATOR CROFT: That's not correct. "...within 10 days of the convening of a regular session of the legislature, submit a report showing the immediate and long-range domestic and industrial needs of the State for oil and gas and an analysis of how these needs are to be met."

MR. BONESS: That's right, that's the statute.

SENATOR CROFT: My question is, where are the specific findings by the Commissioner?

MR. BONESS: These documents.

SENATOR CROFT: I thought those were done by the staff.

COMMISSIONER MARTIN: They were submitted as a part of the information submitted from my office to the Legislature, and by the Governor.

MR. BONESS: Senator Croft, you're not suggesting that the Commissioner, himself, personally has to perform the economic analysis, are you?

SENATOR CROFT: Yes. It seems to me that the Supreme Court in the Kachemak Bay decision would probably read that statute the same way.

MR. BONESS: Well, I would not recommend that. If you look at the ---

SENATOR CROFT: That was the argument the State was making in the Kachemak Bay case, wasn't it, that the Director of the Division of Lands didn't actually have to do it?

MR. BONESS: Senator, I'd prefer not to debate that point. I would point out that almost all of the statutes dealing with the responsibilities of the Department of Natural Resources refer only to two persons, the Commissioner of Natural Resources and the Director of the Division of Lands. As a legal matter, I would not render an opinion that said that those two individuals had to perform all of the tasks now being performed by however many people are employed in that agency.

SENATOR CROFT: But isn't that the question we're talking about with regard to whether 38.05.184(d) has been complied with?

MR. BONESS: Yes, it is, and I believe these documents do comply with that.

SENATOR CROFT: Then you are rendering a legal opinion that that statute has been complied with?

MR. BONESS: That's right.

SENATOR RADER: Any further questions?

SENATOR CROFT: I had some additional questions. Commissioner, with regard to your statement that, "We have gotten the best price we could reasonably expect to get under the circumstances," one of the things that Mr. Moody said was that we are conceding by these contracts that the State sale price is limited to the amount which the Commission will permit the buyers to retain in their

jurisdictional rates. Do you mean by saying that we've got the best price reasonably possible that we had no chance of making the argument before the FPC and won't be able to make the argument successfully before the FPC that we are not a person within the meaning of the Natural Gas Act?

MR. BONESS: No, Senator, it does not mean that at all.

SENATOR CROFT: Are we going to concede the point before the FPC that we are a person?

MR. BONESS: No, we are not. We definitely are not going to concede that point.

SENATOR CROFT: Do you think we have a reasonable chance of prevailing on that?

MR. BONESS: Yes, I do.

SENATOR CROFT: And if we do prevail on that point then our rates are not limited by the FPC?

MR. BONESS: No, I can't agree with that.

SENATOR CROFT: Isn't that what Mr. Moody said?

MR. BONESS: No. Let me tell you what I believe Mr. Moody had in mind. Mr. Moody and Mr. Swanson both addressed the question to the effect that the State might argue in the rate setting proceeding which will occur sometime in the future before the Federal Power Commission, that the State might have a special argument to the effect

that royalty gas should receive a higher price than working interest gas because the State is a state, and the money received by the State will go to public purposes. I'm afraid I don't recall what Mr. Swanson and Mr. Moody's assessment of that is. I believe their assessment was that that's pretty unlikely, although I'm afraid I don't know whether they told the committee that or I just recollect that from conversations with them. But I am willing to state that it's my opinion that that outcome is extremely unlikely, and there are two reasons for it. First of all, in effect, what you're doing is, you're saying that the working interest owners have put money in at risk and have incurred certain costs, they should receive a price less than the State, where the State hasn't incurred any costs, hasn't put any money at risk in terms of the development or exploration of the field, and yet should receive a higher price simply because it's going to put its money to a public purpose presumably, and the oil companies are not.

Furthermore, when you analyze that through, what you're really saying is the purchasers of gas are going to be paying a higher price for that gas which is sold by the State of Alaska. I think when you carry that argument through, what you're really saying is consumers

in New York and in the East are transferring money to the treasury of the State of Alaska, and I think when the argument is cast in those terms it's unlikely to be persuasive at the Federal Power Commission. There is no obligation on the Federal Power Commission to so find that State owned royalty gas should receive a higher price, and I just personally do not believe that there are many compelling arguments that can be made to cause the FPC to associate a higher price with respect to State royalty gas than other gas.

SENATOR CROFT: I had thought that the position of the State, Mr. Chairman, was that sales of royalty gas are not to be regulated by the Federal Power Commission.

MR. BONESS: That's right.

SENATOR CROFT: And that was what Mr. Moody was also suggesting.

MR. BONESS: That's right.

SENATOR CROFT: And if they're not regulated, then a price higher than what they allow could be obtained?

MR. BONESS: Only if you can find somebody to pay it.

SENATOR CROFT: That's correct, and what you're saying is you think that there may well be -- we may well win with regard to this point before the Federal Power Commission if we don't execute these contracts, but that we can't find anybody to pay the higher price?

MR. BONESS: I think that's a part of the problem.

SENATOR CROFT: And who did we negotiate with to determine if they would pay a higher price?

COMMISSIONER MARTIN: We didn't negotiate with anybody, Senator Croft, but we've solicited nation-wide two times to attempt to find buyers who would come and negotiate with us on those or any other terms to provide for in-State use or for other purchases of our gas, and we haven't found people who will do it. So the answer is, we didn't negotiate with anybody, but we didn't find anybody to negotiate with.

MR. BONESS: I would go beyond that, Senator. We still confront another legal problem, and Mr. Moody did concur on this, and that is the problem of sales to people who are not regulated by the Federal Power Commission and whom you seem to be suggesting might be willing to pay a higher price.

SENATOR CROFT: No, no. What I'm talking about is because this sale is not regulated. That's the State's position, isn't it?

MR. BONESS: That's correct.

SENATOR CROFT: Do you agree with Mr. Moody that we are now conceding that the FPC does regulate the price?

MR. BONESS: No, I certainly do not. In fact, Mr. Byrd pointed out that the contracts were drafted to make sure that there was no argument available to the Federal

Power Commission that the State was placing itself in a position identical to that of the producer. We tie ourselves to the price the pipeline companies are allowed to include in their jurisdictional rate base. We do not, although as a matter of convenience it's easy to think of us as tying ourselves to the producers, and indeed in many ways we do, as a legal matter I believe we protected ourselves from an argument that these contracts constitute an admission that we're subject to the Federal Power Commission's jurisdiction because of the way it's drafted.

SENATOR CROFT: So that you disagree with his statement that we are conceding the point of FPC regulation?

MR. BONESS: Senator, I never understood Mr. Moody to say that we were conceding we were subject to jurisdiction. I understood him to say that we would find ourselves being indirectly regulated by the Federal Power Commission with respect to price. I agree with that, I believe it's inescapable for us. But if you're talking about a technical, legal matter, I do not believe we have conceded it.

SENATOR CROFT: We've conceded that the only price that these buyers can pay is what can be built into their rate base?

MR. BONESS: That's correct.

SENATOR CROFT: And so that we have, in effect, given any authority that we have to try and determine a rate.

MR. BONESS: That's correct.

SENATOR CROFT: And you'd agree with his point on that?

MR. BONESS: Yes, I do.

SENATOR CROFT: That whatever authority we had to try and get the highest rate with regard to future sales is given up and our sole rate determination is based upon what third parties agree to?

MR. BONESS: The rate will be determined by outside parties, yes.

SENATOR CROFT: Do you also agree with his point that there is no price at this time and that if the status quo remains that you will have to go back and renegotiate these contracts in order to get a price?

MR. BONESS: No. If the status quo remains, there will be no gas produced in Prudhoe Bay. The producers haven't entered into contracts.

SENATOR CROFT: If the status quo with regard to no deregulation, his point in item number three ---

MR. BONESS: If gas continues to be regulated the price that Prudhoe Bay gas may be sold in interstate commerce for resale will be set by the Federal Power Commission. It will not be necessary to renegotiate the contracts. We will accept the price that the pipeline companies are

allowed to include in their jurisdictional rate base. That price will be determined by the Federal Power Commission. I believe what Mr. Moody said was the State ought to be prepared to participate in that rate setting proceeding.

SENATOR CROFT: Maybe I'm missing something. What I'm referring to, so there is no question, if I could, Mr. Chairman, is on his page seven of his report, Item Number Three.

MR. BONESS: Neither Section 6.3 nor 6.4 yields a present price for their conditions precedent deregulation has not occurred. Now, it's your suggestion that deregulation does occur.

SENATOR CROFT: No, I'm saying if it doesn't. Isn't that what he says, "I am at a loss, therefore, to advise the committee on the sale price which will be applicable at the time of first delivery."

MR. BONESS: If the status quo prevails.

SENATOR CROFT: Which means no deregulation, I assume?

MR. BONESS: All right, and the reason he's at a loss is because -- it relates to the first sentence in that paragraph, which says, "At this time the State cannot determine its sale price because no rates have been set for Alaska gas at this time." That's why he's at a loss to tell you whether you're going to get Twenty Cents

or Two Dollars an mcf, because that rate making proceeding has not occurred yet. It will occur before gas flows.

SENATOR CROFT: Then what does he mean by, " if the status quo prevails through the time of first delivery"?

MR. BONESS: Meaning if no rate making hearing occurs before the time of first delivery there will be no rate established. I believe Mr. Moody went at some length to indicate how the various ways of rate making proceeding could come up. As you recall, he indicated there were a number of ways. The FPC could adopt a rule making proceeding and just decide to establish an Alaska rate as it did for the National rate. The producers could enter into contracts and file those contracts with the Federal Power Commission, and a rate could be established that way. And the third way a rate could be established is, gas would start to flow and the pipeline company would file a tariff, and the purchasers, or the producers' gas would file tariffs for sales of it, and the FPC would then investigate those tariffs and decide whether it is. One of those three ways of rate making will come about. It is most likely that will occur before the gas begins to flow. It's conceivable it will not.

SENATOR CROFT: And that's what he's referring to?

MR. BONESS: That's right.

SENATOR CROFT: When he says the status quo?

MR. BONESS: That's right.

SENATOR CROFT: And if it doesn't occur, if none of those three things occur, then there will have to be an addendum to the contracts or modification

MR. BONESS: There will have to be a rate established at that time, yes.

SENATOR CROFT: So as I understand it, with regard to point three, you agree that there is no price in these contracts but you think that by the time the gas is produced there likely will be.

MR. BONESS: That's correct.

SENATOR RADER: Let me ask a question here. As I understood it -- I think maybe you've answered the question and maybe you haven't, I don't know. These contracts, as I understand it, do not for a moment admit that the State is under the regulation or jurisdiction for purposes of sale of our gas, but what it does recognize is the purchasers are under regulation, because it has to go in a pipeline which is under regulation and that, therefore, we indirectly, because our purchasers are under regulation, that the price that we can get on an interstate commerce carrier here will be regulated because the purchaser is regulated; not because we're regulated; is that correct?

MR. BONESS: Yes, it is.

SENATOR RADER: There is no way to avoid that for any gas that goes into interstate commerce, is there?

MR. BONESS: Any gas that goes into interstate commerce for resale would be the problem with respect to the provisions we're now talking about, the regulation of natural gas companies. Even if we made a sale of gas into interstate commerce which was not for resale, the problem would still exist because of the Federal Power Commission's jurisdiction over the transportation aspects of the pipeline. They could, in effect, veto a sale of gas over which they did not have any direct jurisdiction by vetoing transportation authority, and they have done that in many cases. In fact, I was advised over the weekend that last week the Federal Power Commission, with respect to emergency sales in Tennessee Natural, which is not related in any way to the pipeline we're selling gas to, but in that proceeding they have a special procedure called emergency sales which allows gas to be sold for sixty days in an essentially unregulated fashion. The FPC routinely grants certificates. Nevertheless, Tennessee Natural negotiated a contract for Two Dollars and Seventy-Five Cents per mcf, which the FPC felt was too high and denied that certificate. They can apply the same kind of approach to the State. If we were to negotiate a contract for the sale of gas, for example, for boiler

fuel, which would be a direct use and the FPC wouldn't have jurisdiction over that sale, even assuming we were a person, they could veto and probably would veto the transportation aspects of that arrangement.

SENATOR RADER: Senator Croft.

SENATOR CROFT: I had a couple more. With regard, Commissioner Martin, to these people that you had asked to bid, as I understand it, competitive bidding and public bidding, you asked for competitive bids?

COMMISSIONER MARTIN: No, sir. We went though, two times, by national publication to express interest in having buyers for Alaska royalty oil or gas. In each case we indicated we wanted to have all expressions of interest but that we favored expressions of interest which leaned toward in-State use. I've expressed to this committee and others before that, at least at this time, not a great deal of interest has been expressed. I've given the committee my findings with respect to competitive sales in this situation and I've told them my view that competitive sales are going to be difficult, even though they're desirable, so long as we have fixed stated objectives, and some people would be better than others at fulfilling them.

SENATOR CROFT: Is competitive bidding, in your mind, the same as public bidding?

COMMISSIONER MARTIN: No, I think that you could make distinctions between the two.

SENATOR CROFT: I don't want to be overly technical, but I noticed that the approval of the request of Commissioner of Natural Resources to waive requirements of competitive bidding, that it actually says that, "Now, therefor, the Alaska Royalty Oil and Gas Development Advisory Board hereby grants to the Commissioner of Natural Resources its approval of his request to waive public bidding." What's actually meant was competitive bidding?

COMMISSIONER MARTIN: I would think so in that context, yes.

SENATOR CROFT: I assume, Mr. Boness, you'd say legally that there is no problem with that?

MR. BONESS: Senator, I haven't been involved in the drafting of those. I apologize for the error, but I assure you that it was not my intent and, I suspect, the intent of the Royalty Board to draw any distinction between public and competitive bidding.

SENATOR CROFT: But there is a difference between the two?

COMMISSONER MARTIN: There could be in some context; I don't think there is one intended there.

SENATOR CROFT: One final question, if I could. Commissioner Martin, before the Royalty Gas Advisory Board, I think you made some apologies to the Governor and said that what you had thought we had done here was harness a team

of powerful horses to plow a very rocky field. I'm curious with regard to, say, the Tenneco provision, or the switching provision and Tenneco, who said basically that they didn't think they would be able to switch; do you really believe that with that switching provision you're going to be able to take all of these powerful horses with you if you decide to go in some other direction?

COMMISSIONER MARTIN: I've always regretted that statement, right from the time I wrote it, Senator. First of all, we don't intend to switch. I've said that on many occasions.

Secondly, it seems to me the situation that would have to exist at the time any switch were desirable would be really quite an extraordinary one. But my point has been continually that I think that it's an important benefit for the State to preserve, simply because of the kind of flexibility that's afforded may turn out to be in our interest at a later time.

For political purposes, I think it would clearly be a greater expression of political faith for the Governor, for the Legislature or for others to say, "We're going all or none for one route." Quite frankly, that's the position I take. I think that's where we are going. But it does seem to me that it is at least

possible in the future that circumstances could change and that El Paso could be shown to be and concluded to be, by all the important decision-makers in this State, a loser in the process, and it could be at that time that Alcan, which is a second choice, far superior to Arctic, could be at some future time our only remaining alternative. If that situation existed it would not be any lack of credibility that would confront us, because our first choice would simply be out of the field and we would not be saying that it's a worse possibility; we'd simply be saying that that is no longer a possibility and then we could switch the support.

SENATOR CROFT: I understand that that wouldn't cause you a credibility problem, but Tenneco said it would cause them a problem. My question is, do you believe that if you switched you'd take Tenneco and El Paso with you?

COMMISSIONER MARTIN: My belief is yes, and I haven't read the transcript of their response. But I recall talking at length with our buyers on this issue really to ascertain their level of commitment to the route that the State favored. My feeling was that the buyers that we eventually sold to do have a deep commitment to the El Paso route. I never have heard them address the question that you just said and the context I just did, "What if it were only a choice between Alcan and Arctic, and

could you then with credibility switch and support another route?" I would think that their answer would be pretty much the same as mine, and that is, "If those are your two alternatives, yes." You could make a credible argument as between the two alternatives, so I don't even agree with their assessment and I don't think they answered in that context. I may be wrong.

SENATOR CROFT: Well, I guess the hearings will show whether they did or not. Let me ask one final question in that regard, with regard to this team of powerful horses, and if it makes you uncomfortable I don't want to belabor it, but I am curious as to exactly why you feel that way with regard to El Paso. I mean, it seems to me, and as Professor Tussing pointed out, that El Paso's primary sales area is California, and yet one of the areas of the country where most resistance to the El Paso project exists, if not the area in which the greatest opposition exists is in the primary market area of one of the three companies with whom you contracted; how can you really say El Paso brings to these contracts a tremendous ability when their track record of two years, more than two years now in California indicates just the opposite?

COMMISSIONER MARTIN: Well, I think I tried to address this question with you before, Senator Croft. I'll say two

things. One is, that's a subjective judgment I think a number of people are going to have to make on their own. In trying to assess that I've tried to do what I have with the others, and that is to get the broadest consensus as to which companies can help. Our Delegation is unanimous in feeling, to the contrary of what you've just suggested, that El Paso can be of help and should get gas under this contract, and that it will help.

It seems to me that in spite of whatever difficulties exist in California, their argument is enhanced by sale of the gas because they then can say that they will not only win the route but will have a gas supply to bring to their constituency, and that's the difference. The difference is that they are put in a position of being able to give gas to their consumers as opposed to simply having a pipeline certificated in their name but with no gas to go through it to their consumers, and that, I suppose, is a very important difference.

SENATOR RADER: Representative Parr:

REP. PARR: One final question, Mr. Chairman. Mr. Martin, in talking about what went on last week there's one point you went over in kind of a hurry and yet to me it is one of the rather difficult points. The reason that we're talking about going into contracts at this time is

very simple; we want to get some political clout, national constituency, call it what you will, right, to help us get the Trans-Alaska route ---

COMMISSIONER MARTIN: Mr. Parr ---

REP. PARR: Let me finish my question.

COMMISSIONER MARTIN: I'm sorry. You asked me "right" and I thought that was the question.

REP. PARR: I'm sorry, I'm leading up to it; beg your pardon. That was the reason that we were going into these contracts at all, as I understood it. So we thought, "Well, now, what kind of assistance are these companies going to give us?" The contract, I think, just says actively support; without looking back at it, that's my recollection of what it says. And we tried to get that made a little more specific, and we never got it last week. At least I never heard it. In fact, I think I phrased the question to the gentleman from Tenneco who had told us they had Seven Billion Dollars in assets and did a Five Hundred Million Dollar business. You know, I couldn't quite believe they weren't going to budget something for this effort. They weren't, or at least they haven't.

So would you mind commenting on that whole area, please?

COMMISSIONER MARTIN: Yes, Mr. Parr. I wish I could somehow communicate to you, in spite of your characterization of the issue, make it clear that my feeling is that that's

not the only reason. I tried very hard in my opening statement to lay out a number of areas that I thought were of equal importance in these contracts. So I'm going to lay it on you squarely, that in rejecting these contracts, should you choose to do so -- I want you to know that my view is that regardless of your own characterization, my feeling is that you would not just be rejecting whatever political clout you choose to assign to these contracts, but one of the best opportunities we have to accomplish all of the other objectives I laid out. Now, in terms of the political issue itself, which is one of many, let me say again, I don't think that you are going to get a quantifiable idea of what these companies will do.

Let me try to give you an idea of what I think will happen. First, they've already intervened in the FPC, as I discussed with Senator Croft. I don't think they were the difference, pro or con, in that fight.

Secondly, I think each of them will mount substantial efforts in support of the Trans-Alaska pipeline in Congress. Those efforts will consist of the retention of lobbyists, assignment of company personnel, and the development of information within their companies in support of that route, information which, quite frankly, would be very difficult to produce

in the volumes and to disseminate in the way that would be useful, without additional parties in the fight. In addition to that I expect that they'll do substantial work in their constituent areas to attempt to indicate to people the benefits of the Trans-Alaska line as a way to bring gas into their areas and will try to mobilize those people at a local level to deal with their Congressmen and Senators on the issue.

I also think that they'll participate with El Paso as the design, and the details of any El Paso route through Alaska that are put together. Both Tenneco and Southern have substantial offshore capability and substantial LNG experience. In my view, and I think in the view of others, they have an opportunity to substantially and materially improve the quality of the overall project once it's funded and to prove to Members of Congress and the Administration that they're capable of doing so as it's developed.

One of the problems with El Paso that's been pointed out in the past has been that El Paso has not done as well or as complete a job in its homework in terms of design in proposing this route as they could have. I think that both Tenneco and Southern have the capability to substantially improve that.

I think that generally categorizes the sorts of

things that they're expected to do. My guess is that overall the expenditures, while I can't give you a budget figure either, will be in the over Hundred Thousand Dollar category, and I also believe, it's my personal belief -- and I also believe that this view can only be made subjectively. In trying to deal with my own subjective judgment, I feel compelled not to try to rely on an individual judgment, but to check it with others.

I've consulted with the Congressional Delegation from beginning to end on this and they share, generally speaking, the advantages that I outlined. But I don't think that even the Congressional Delegation will be able to give you a dollar for dollar quantification of what will happen. They only know that it's very valuable.

REP. PARR: Mr. Chairman.

SENATOR RADER: I'm quite certain that we're not going to be able to conclude with the witnesses here. It's 12:00 o'clock now. The Senate goes in at 2:00 o'clock and we should be through at 3:00 o'clock. I know that Representative Chatterton has a series of questions that he wants answered, and I think there's still a number of unanswered questions that other members want to depose. It would be my suggestion that we recess until

3:00 o'clock. I don't think there's any point in coming back here at 1:30 for twenty minutes to try to put anything together between 1:30 and the time the Senate goes into session, although I think that we could have a good two-hour shot at it between 3:00 and 5:00, or if we want to go we can go beyond that.

Does that sound appropriate to the committee?

Now, unless I'm interrupting you right in the middle of a series of questions.

REP. PARR: No, a very short thing, Mr. Chairman, since I won't be able to be back at 3:00. I've cancelled committee meetings all last week for this and I can't keep on doing it. I'd like to ask one very brief one.

SENATOR RADER: Go ahead.

REP. PARR: The first thing I'd like to say is to summarize what Mr. Martin just said as I understand it, and I guess this is where we have subjective judgment disagreeing. First, I do think that perhaps my characterization is accurate. If it weren't for the chance to get a political clout we would be in no hurry to enter into any contracts, number one.

Secondly, that what Mr. Martin has just said, and if you listened to it carefully, he kept saying, "I think," "I believe," and "the Congressional Delegation believes," and he admitted, he said at the end -- not

admitted, he said at the end, "This is a subjective judgment." So what we're really face down to is, are we willing to subjectively have faith in these companies to really make a significant effort. They have been unwilling to quantify in any way the number of people they will assign, the number of dollars they will spend, or anything else at all. So we simply either have to have faith in them or not.

I'm sorry, Mr. Chairman, to take so long but that's the end of my statement, and I won't be here this afternoon.

SENATOR RADER: Do we have any further questions that cannot wait until 3:00 o'clock? We will stand in recess until 3:00 o'clock.

(Whereupon the hearing recessed at 12:05 p.m. and reconvened at 3:00 p.m.)

SENATOR RADER: The joint hearing will come to order. We have clean copies of two documents which should be made exhibits. The first would be the Federal Power Commission News Release No. 22868. It will be Exhibit 28.

(Whereupon Exhibit 28 was duly marked.)

SENATOR RADER: That one is entitled "FPC Judge Recommends Approval of Arctic Gas' $8.5 Billion Alaskan Gas Project." It consists of eleven pages. And Exhibit 29 will be Federal Power Commission News Release No. 22869, entitled

"Alaskan Natural Gas Fact Sheet," consisting of four numbered pages and three unnumbered attachments. Give those to the reporter.

(Whereupon Exhibit 29 was duly marked.)

SENATOR RADER: Exhibit No. 30 is a letter from Ruth A. M. Schmidt, Ph.D. of Anchorage, Alaska, dated January 30, 1977, consisting of two pages, addressed to the House Special Committee on Royalty Gas Sale, Attention Representative Clark Gruening. That will be introduced then as Exhibit 30.

(Whereupon Exhibit 30 was duly marked.)

SENATOR RADER: Did you want this read or just introduced as an exhibit?

REP. GRUENING: Introduced as an exhibit. Why don't we make copies for everybody?

SENATOR RADER: Besides, I hate to keep our witnesses longer. Senator Poland, why don't you join us up here? It would be more convenient, I think, for participation, and if Colletta or Senator Butrovich come we can make some other arrangements.

SENATOR CROFT: Mr. Chairman, I might indicate that at 3:30 I'm going to have to go to a Judiciary Committee meeting. When that's over I'll return here.

SENATOR RADER: Fine. Under those circumstances, Senator Croft, do you have any particular further questions of

these witnesses?

SENATOR CROFT: I do, but I think Mr. Chatterton and Mr. Hayes do.

REP. CHATTERTON: I'll yield to you.

SENATOR CROFT: Let me ask, in light of the fact, Mr. Chairman, that we've now been furnished pages two and three of the Power Commission news release that summarized in ten pages Judge Litt's decision in that regard, (or eleven pages) and the two and three that we had were a part of another press release of the same date from the Federal Power Commission, and the two and three that we now have have some information that refer to prices, which is what my questions were about, Commissioner Martin and Mr. Boness. On page two there's some obviously different language. Instead of describing the El Paso and the Alcan projects he talked about rolled in prices and city gate. But on page three in the next to the last full paragraph of that page and in the last full paragraph, he makes two comments.

In the middle of the next to the last full paragraph he says, "The important missing ingredient was sales contracts by any of the thirteen producers who hold interest in Prudhoe Bay reserves." Then at the last of the last full paragraph he says, "The producers, like G. B. Shaw's dinnertime companion, have a price at which

they would sell their 'service,' and all their protestations to the contrary cannot hide that they are mainly dickering over price. Then on page ten, it seemed to me, he made another reference to the fact that the producers' failure to sign sales contracts indicates where their concern lies.

I understand your feeling that the State got the best possible price under the circumstances, but isn't that a pretty clear indication that Judge Litt believes that it's the producers' opinion that if they wait until a later date that they can get the highest price, and his feeling that the reason they are waiting is solely to get a higher price?

COMMISSIONER MARTIN: Yes, sir, we think they're dickering with the FPC over price. Let me put that in some perspective in terms of what that means to us. They definitely are trying to deal with the FPC and to maximize their advantage. But let me point out that it may or may not be the case at a later time that they get a better price. For instance, it may be they don't or, on the other hand, it may be that some get a very good price under a deregulated situation and others get a worse price. But whatever that price is, under the contracts we have we're going to get the benefit of the best deal that anybody makes. So we basically tied ourselves to the

very best that anyone can do.

The second factor is simply to, I think, look just very briefly at the fact that the significance that he attaches to it beyond that is simply not to regard it as an important influence on the decision, but simply his irritation in not having information in regard to who the buyers will be for financing purposes. So I think that the State still stands in a better situation by having sold and created some kind of an incentive in favor of the route we support, as opposed to these guys who, you know, are going to sell -- just like Columbia -- to people who believe that they'll get the gas whichever way the pipeline goes. Let me ask Mr. Boness to respond a little further.

MR. BONESS: Yes. There's a basic difference between the producers and the State that has to be faced up to, and that is, the producers get to decide whether the gas is ever produced or not. The State does not find itself in that position.

The producers are telling the Federal Power Commission, "If you don't set a high enough price for us we're not going to sell the gas, we're never going to commit it to the interstate market; we're not going to produce it; we'll continue to reinject it as long as we're allowed to do so." And in that context, they are

dickering with the FPC.

As you recall, both Rush Moody and Dr. Swanson indicated that the range of the price that could be set for this gas is very wide. That gas could be set as low as Twenty Cents because of the problems associated with establishing gas prices for a reservoir which has both oil and gas in it, or it could be as high as the national price, which is now a Dollar Forty-Two, and conceivably it could be higher. That's the dickering that's going on between the Federal Power Commission and the producers. But the State does not participate in that threshold decision with respect to whether the gas is produced, except for the conservation statute, but you have to realize that's a limited powers kind of statute.

If I may, Senator Croft, I would quote to you from a statement made by an attorney for Exxon to the Federal Power Commission at the time the Judge was asking why they wouldn't enter into contracts. I think it really offers a great deal of insight into where the producers are at. And with the committee's indulgence I would do that, if I may.

Mr. Erck, (who is the attorney for Exxon) said, "First of all, Exxon's position with respect to the negotiation of definitive gas purchase and sales contracts

concerning the North Slope of Alaska has not changed. If a favorable regulatory climate exists and the State of Alaska has approved a unitization agreement and operating plan at the time the Commission certificates a viable transportation system, Exxon will enter into negotiations leading to the sale of gas from the North Slope pending the resolution of other uncertainties of the Commission. The Commission's removal of such disincentives as Order No. 53 and Opinion 740-B would improve the regulatory environment for gas purchase and sales contracts. Apparently the Commission is not totally unaware of these impediments since it has issued Opinion No. 766 and 767 in Dockets No. (and I won't burden you with those). These are progressive opinions, and hopefully indicate a trend towards improvement of the regulatory climate.

"Now, the pervading attitude of the Commission at the time one of the competing projects in this proceeding is certificated is inextricably connected to Exxon's willingness to negotiate definitive gas purchase and sale contracts.

"So let me hasten to reaffirm that we do not want to delay this pipeline. It is in our interest that the gas pipeline proceed as fast as possible. And as far as we know -- as far as our willingness to proceed

in light of what I have indicated, we would foresee that gas should be deliverable into the line when it is laid."

Senator, as I read that, and other statements of a similar nature have been made, I think the producers are telling the Commision that they want a favorable regulatory climate, and what they are really doing is tying their ability to withhold Prudhoe Bay gas to the overall position that the Federal Power Commission has taken on any number of issues of a regulatory nature, which are not necessarily related at all to Prudhoe Bay gas. They realize that they have the upper hand at this time, and I think they are making the most of it.

The State doesn't participate in that kind of dealings with the Federal Power Commission. I think that's what Judge Litt is really referring to. Judge Litt believes it is in the national interest for the producers to commit their gas at this time, and maybe it is; but the producers are taking the position that they want to do everything they can to "create a favorable climate," regulatory climate.

SENATOR CROFT: One further question in that regard. Your statement is that we're going to get whatever the comparable private sales will produce, even if the companies are correct in their efforts, that we'll benefit from them. In that regard, what would be your

response to Mr. Moody's comment on page eight at the top, number five, when he says by these contracts you have limited yourself to whatever private sales produce and you've given up your capacity to insist on a higher rate?

MR. BONESS: That again goes to the question of whether the State can make any separate arguments that it, as a State and owner of royalty gas, should be treated better than the producers. As I indicated this morning, there is certainly no compulsion and legal requirement that the FPC find that because the State will dedicate its share of the revenues to public purposes that the State thereby is automatically entitled to higher revenues. As I indicated, I believe that argument ultimately comes down to requiring consumers in Midwestern and Eastern States and the Lower 48 States generally, to pay a higher price which, in effect, is transferred into the State treasury and I think when cast in those terms, it's an argument very likely not to succeed before the Federal Power Commission.

SENATOR CROFT: You do agree with him that through these contracts we're giving up our right to make that argument?

MR. BONESS: No, I wouldn't even agree with that, Senator, and here's why -- if, indeed, the argument is a valid argument, then it can be made that our gas purchasers

should be allowed to pass that through. Our contract says they can pay us whatever they're allowed to include in the jurisdictional rate base. To the extent that that argument can be made, we can make it and say they should be allowed to include it in their jurisdictional rate base. If the argument has any validity, I believe that would be as valid in that context as in the context of simply establishing a higher price for State royalty gas.

SENATOR CROFT: Even if we've tied ourselves to whatever they agreed to privately?

MR. BONESS: Well now, you see, that's the point I made this morning. As a general matter, people are saying we are tying ourselves to the producers, and in practice that's usually the case. But as a technical, legal matter, the contract is drafted to allow us to receive whatever price our purchasers are allowed to include in their jurisdictional rate base. If the argument has validity that the State should receive a higher price because of its royalty gas, then that argument can be put forward before the FPC with respect to the price we charge our purchasers, wholly independent of the question of whether or not the FPC can regulate the producers and whether or not they can regulate us.

SENATOR CROFT: So your position is that we've not given up on it, even if he feels that we have.

MR. BONESS: Well, I haven't discussed that point with Mr. Moody, but I believe what I have said is correct, that we could make that argument and if it does have validity then the purchasers would be allowed to include the rate in their jurisdictional ---

SENATOR CROFT: You don't question that he doesn't take that point of view?

MR. BONESS: Well, if I had time I would read it, and could I respond to that and say what I think he's saying there?

SENATOR CROFT: You haven't had a chance to go through this before?

MR. BONESS: I have read it, but I would like to read that again if you're asking me to interpret what Mr. Moody's position is.

COMMISSIONER MARTIN: I might also say, Senator, he doesn't address here, but I understood that he addressed, at least in some of his testimony, the probability of that argument, aside from the technical ability of it to ever be made, the probability of it ever succeeding, which, at least in my understanding, he feels is extremely low.

MR. BONESS: I have read it and to the extent that I do disagree with him, I believe we can still make the argument in the context of the present contracts, and I believe we have not tied ourselves exactly to the price

the producers are allowed to receive. We have tied ourselves to the price the pipeline companies are allowed to include in their jurisdictional rate base. Therefore, I believe we could make the argument that we, as a State, ought to be treated separate and differently.

I would also point out that even as a legal matter I am not convinced we would want to make that argument. As Mr. Moody, himself, pointed out, or perhaps it was Dr. Swanson, pointed out the other side of that argument is the State should receive less because the State has incurred no risk and, therefore, it would have to be a well researched and carefully thought out decision to pursue that line of argument, recognizing that if we did pursue it somebody would take the other side of it.

SENATOR CROFT: Thank you.

SENATOR HUBER: Mr. Chairman, I have something that came up.

SENATOR RADER: Senator Huber, go ahead.

SENATOR HUBER: I just wanted to get something clear that came up out of Senator Croft's questioning. I believe I understood you to say the companies could withhold the production to gas, and this is the context I wanted to ask it in. Doesn't the State still have the right under lease terms to cancel leases for failure to produce when the ability to do so is possible but not exercised by the lessee? Don't we have that right?

MR. BONESS: I believe that's correct, Senator. But if there's no pipeline in which they can deliver the gas then I doubt that we can cancel the lease.

SENATOR HUBER: Well, if there's no way to use the gas, let's put it that way.

COMMISSIONER MARTIN: That's right.

SENATOR HUBER: If there is no way to sell the gas. I hate to see them keep tying this to an FPC controlled pipeline. I wanted to make sure that there wasn't something that was cancelling or changing the provisions that are in the lease that the State has the right to force them to produce.

MR. BONESS: You're correct, Senator.

SENATOR HUBER: Thank you.

SENATOR RADER: Mr. Chatterton.

REP. CHATTERTON: Mr. Chairman, thank you. Mr. Commissioner, I have a series of questions that you will have to accept me on faith are not meant to be controversial, argumentative or in any way entrapment questions. Please accept me on faith. The reason for the series of questions will be to put into the record something that I believe should be put into the record from a document that is too much, too voluminous, in the interest of efficiency, to make an exhibit. So I will attempt to get the salient points of that document into the record

through the question and answer route.

So, I'll start my questions: are you aware of a report that was prepared and presented by H. K. Van Poollen to your Department dated January 1976?

COMMISSIONER MARTIN: Yes.

REP. CHATTERTON: You also are aware that that report, in effect, includes the comparison of some twenty-nine separate forecasts based on various operating programs and production schedules for the Prudhoe Bay field?

COMMISSIONER MARTIN: Yes.

REP. CHATTERTON: Are you aware of this section on page five, and I will quote, and I will quote in context. It's on page five of that report entitled "Prediction of Reservoir Fluid Recovery Sadlerochit Formation Prudhoe Bay Field", and again dated January 1976. On page five and under "Qualifications" that the authors placed before here, before you, it says, "The numbers in this report should be considered relative rather than absolute. Reservoir performance predictions on a field without production history are approximate at best. Absolute values should be used with caution, but relative values can be used to compare production schedules with confidence", relative to one another, absolute number not. Do you concur with that premise?

COMMISSIONER MARTIN: Yes, I concur with that statement.

REP. CHATTERTON: I would now like to ask you if you would concur with this statement which appears on page three of the aforementioned report, and I will quote in context. It's under "Summary" of the report, and it's item two under that summary. It says, "The highest oil recoveries were obtained under conditions of an aquifer supplemented by water injection and no gas sales." I'll get the numbers later. Do you concur with that?

COMMISSIONER MARTIN: Mr. Chatterton, let me say before I agree to this, I don't have the document before me. I've studied it and ---

REP. CHATTERTON: I'm not trying to trip you up.

COMMISSIONER MARTIN: I understand you're not and I'm not trying to be defensive against that. I just want to say as a preface to all my answers, I'll give you the best answers I can, but within the context of being the Commissioner and not a technical expert with regard to this study. I believe that that conclusion is right and that sounds accurate from the study, as I recall.

REP. CHATTERTON: Maybe we can get it this way. You, as Commissioner for the Department, did accept the report?

COMMISSIONER MARTIN: I've accepted the report, and let me say that there is still work being done on that report. As a matter of fact, as you may know, one of the reasons we brought Mr. Hamilton here last week was to update the

committee on the new work. The trend of the new work is similar to the work in the report you have in your hands.

REP. CHATTERTON: I believe his testimony, or an answer to a question was that trend of the new work that had been accomplished to date indicates that's there is no substantive change to the findings of this report.

COMMISSIONER MARTIN: That is accurate.

SENATOR HUBER: He didn't testify; isn't that clear? He did not testify, he went back without testifying.

REP. CHATTERTON: He answered a question to our Chairman from the floor.

SENATOR RADER: I think that's correct. We asked him if the updating material would substantially change the material previously submitted to the committee, and he said that he did not feel that it would make a substantial difference.

COMMISSIONER MARTIN: The answer is yes, it generally tends to bear out the work already done.

SENATOR RADER: Although he did not take a seat and testify, he stated that from the floor.

COMMISSIONER MARTIN: In any event, the answer to your last question is yes, I recall that statement.

SENATOR RADER: I'd like to ask the reporter, did the reporter take down that dialogue between me and Mr.

Hamilton when I asked him about his testimony, and I think Senator Huber also at the same time suggested that he would be the best judge of whether or not he should testify.

MRS. SANDERS: I've taken down everything, but that notebook is not here; it's at my office.

SENATOR RADER: If it's important, I'm sure we can get Mr. Hamilton back.

REP. CHATTERTON: I do not think it's important as far as I'm concerned, Mr. Chairman. Thank you, I will continue. I would now like to read to you off of page seven of the aforementioned report and under "Recommendations" there are three, and this is half of recommendation number three. In the interest of time I'll read half. I'll read it all if you like. It says, "Although the prediction runs made in this study indicate that early gas sales will generally result in reduced oil recoveries, it should be recognized that important economic factors were not included in any of the boundary conditions." And I again, Mr. Commissioner, call your attention to the "early gas sales will generally result in reduced oil recoveries." Realizing you're not testifying expertly, you do accept that part of the recommendation of the report?

COMMISSIONER MARTIN: Yes, that there were not economic parameters set on the various variables.

REP. CHATTERTON: Thank you. Now, just to get into the record some numbers, I would now like to go to Table Number One of that report, which is a tabulation of the twenty-nine runs of various operating conditions and production schedules forecast for the field, to give this committee and the record some ideas of the importance of gas sales versus no gas sales.

There's actually four different conditions here as far as operating conditions and production schedules. I'll take condition one first for a comparison. Keeping common will be no aquifer activity. Production will be at the rate, black oil production at the rate of 1.2 million barrels per day. All other conditions will be the same with the exception of gas sales.

Run number one gives an estimated cumulative oil recovery from the Prudhoe Bay field of 7.38 billion barrels. That run, there is no gas sales.

Run number four is an ultimate economic recovery of 610 billion, that is 1.28 billion barrels less where again all conditions are the same excepting after two and three-quarter years following the commencement of oil production gas production will start at the rate of two billion cubic feet per day. Will you accept this as I've read it correctly?

COMMISSIONER MARTIN: I think so, Mr. Chatterton. It sounds like one of the scenarios.

REP. PARR: In the interest of time I will not carry this on other than to say that anyone referring to runs seven as compared to runs thirteen will see the same type of difference between ultimate recovery of gas sales versus no gas sales. They will see the same results between runs number ten and number sixteen, no gas sales and gas sales; again the recovery will be lower in this case by the amount of 1.24 billion barrels -- not million, billion. And again you'll see the same thing between runs twenty and runs twenty-five. If you'll accept that I will go to the next question, and this ceases to be necessarily non-argumentative or non-controversial or non-entrapping. So it's varied there.

My question is one where we have to hypothesize. If we had had gas cap producibility at Prudhoe Bay last week and a transmission system from Prudhoe Bay to the South 48, do you believe that possibly, because of quasi-emergency situations, the South 48 might have called upon Prudhoe Bay gas production even though it might well have been in the disinterest of Alaskans?

COMMISSIONER MARTIN: Rather than speculate on what they might have done last week, let me just say that it's clear to me (I consulted with Mr. Boness) the Federal

Government certainly has the power in time of national emergency to do that. It seems to me that that is a power limited to extraordinary circumstances which could well exist under certain circumstances. Whether last week's would have qualified, I really don't know.

REP. CHATTERTON: Thank you. The last question, Mr. Chairman, Mr. Commissioner. As Commissioner of your Department, would you be fairly certain that you would support the findings of your Oil and Gas Conservation Committee even though their findings might strongly recommend that there not be any export of associated gas from the Prudhoe Bay field?

COMMISSIONER MARTIN: I've been on the record pretty clearly on this, in the FPC, and in this committee, and publicly, Representative Chatterton, saying that I believe the decisions of the committee, so long as they are legitimately guided by the confines of the State Conservation Statute, will be a controlling factor in this matter and not overturned by other political factors. So in that regard, I have advised, under some pressure by the FPC Hearing Judge, advised the Federal Government that they could not have an absolute guarantee or absolute predictability with regard to rates of production from the Prudhoe Bay field.

REP. CHATTERTON: Thank you, Commissioner and Mr. Chairman.

SENATOR RADER: Any further questions? Representative Gruening.

REP. GRUENING: There is one provision that concerns me and I'm wondering whether the three purchasers, any one of the three purchasers insisted on its inclusion. That has to do with the replacement of gas taken back at one and one half times the rate. Was Tenneco one of the purchasers, or the purchaser to insist on that provision?

COMMISSIONER MARTIN: They were the major purchaser to insist on it. The others asked for it and indicated that they wanted it, and we included it in all the contracts to make them uniform. I should point out that this was clearly a term that allowed us to come to an agreement with Tenneco and without it we would have been unable to do so. If they had not been in we might have been able to negotiate the others out of that.

I should also indicate, if it's of interest to you, Mr. Chairman, that I assume you appreciate the limitations of that additional fifty percent recovery term.

MR. BONESS: No, the first recovery, everybody demanded that.

COMMISSIONER MARTIN: Yes, the first recovery, everybody demanded. It's the additional fifty percent that was primarily demanded by Tenneco, was asked by the others,

and we included it to make the terms uniform.

SENATOR RADER: Any further question of any members, or Senator Poland?

COMMISSIONER MARTIN: Senator Rader.

SENATOR RADER: Yes, did you wish to sum up?

COMMISSIONER MARTIN: Senator, I don't want to make a lengthy summary. I just want to go back a little bit, and I'm not going to review all the points I made this morning but I don't want to leave the committee without trying to stress again that there's no question that the centerpiece, or the most important aspect, or the most important aspect of these contracts now relates to the fact that we can get whatever support, political or substantive or otherwise comes to us on the gas line route issue. This is the only time it's important. It may have been important somewhat earlier. It won't be important again.

But I do want to add to that that the other provisions in this contract, whether they come from the 13-B argument, or Mr. Moody's theory of last year, or the fact that we've negotiated a very good price term, or the fact that we've negotiated good terms for take-back, are extremely important aspects of this contract, and I think the committee must take very seriously the possibility that certain of these terms cannot be renegotiated and put in a new contract. I do not think that, as your

negotiator you can act with absolute certainty that those terms are going to come our way every time we sit down to negotiate gas contracts. I'm not saying we can't accomplish them again; we'll certainly try to. But I do not want to leave the committee with the impression that they are automatically to be included in any contract, or that they can be protected in any subsequent contract at a later time. They came hard and we had some very difficult negotiations to get there.

Let me indicate just very briefly, at least on a couple of those points, just to give you an idea of why I think that it may be difficult in the future. If you consider the situation that we'll be in later, there are several factors that deal with the issue of price. One is, of course, the fact that I tried to bring up of the institutional constraints that we have on royalty gas contracting.

If we are caught in a crunch where the State does not have a position and does not have a contract, yet we get caught in a situation where perhaps Arctic is certified, if we lose support and if this is a fact, we're losing support and Arctic is certified, we are then under a time pressure that we are not now under and our buyers will know that. They will know that our alternatives are limited and they will know that they

have us much more at their mercy than they do at the present time. I'm not saying that will happen, but it could put us in a bargaining position we're not in now.

At the same time, if the State is the last one-eighth to sell, if the producers go ahead and sell, consider the alternatives that we face. By selling now and including the term that gives us the best price, we automatically benefit by the very best deal that any producer makes.

If we wait and we are one of the last eighths, or we're the last eighth or the last percentage to sell it could very well be the case that one of the producers has made an extraordinarily good deal. It will then be our job to try to make a better deal than they made, and I should point out that that will be a good deal more difficult to equal or surpass than it would be by simply taking advantage of it right now.

At the same time, I think that once in-State uses are developed and the present period of uncertainty is past, so that we know what it is we're going to use our royalty gas for, we can offer less to buyers. Under the present circumstances, our buyers think they're going to get most of our gas and we think we're going to use most of it. But as we continue to develop in-State uses they're going to know that they're going to get less.

And in the case of a company like Tenneco, they're interested in fairly substantial volumes of gas. They have other alternatives, as to other gas companies such as Algerian projects, Russian projects or other large fields, and as the amount that they know they will get from us diminishes, I think our field of negotiation diminishes somewhat also.

I might also indicate, if there is any action -- we've been dealing in these hearings on many occasions with possible but unlikely situations and I've been, I think, fairly frank in admitting what is possible in trying to give you an idea of what is probable. One of the things that may well happen if we wait, and this goes to the idea of future negotiations, is that if Congress is likely to take any action with regard to controlling gas in the future, my guess is that they will take it with respect to uncommitted gas. There is no reason that Congress should reward people who are presently withholding their gas from the market. If I were a Congressman, I would not lean heavily toward the position of favoring the producers who are now dickering with the FPC. I would lean toward favoring the individuals who have committed their gas and attempted to make it known how they're going to put it into the national consumer supply.

So I think that all of these factors added up provide extremely cogent reasons for considering that some of these terms may be difficult to immediately recapture. As I say, I'm not saying it can't be done, but I'm saying that it's difficult and we ought to acknowledge those factors. It's a calculated risk that has to be considered. I think the Legislature has to consider it as it considers these contracts.

SENATOR RADER: Representative Gruening.

REP. GRUENING: That raises a question. You mentioned the disadvantage we might be at in terms of just selling it for the price, for a certain price if the Arctic route is certified. Rush Moody's testimony was that our one-eighth is very crucial to the financing of that line. He, frankly, didn't see under present economics how it could be financed without the eight-eighths. Wouldn't that make you conclude that our one-eighth share would have some leverage in dealing with somebody in selling our gas?

COMMISSIONER MARTIN: Yes, but we'll have exactly the same leverage in that regard whether or not we've gone into these contracts. If Arctic is certified it will have to be with the knowledge that it will not have state royalty gas. Whether or not we sign these contracts, that will be the case. There will be, of course, the strong feeling

that they will get our gas one way or the other, but as I see it that argument doesn't go to whether or not these contracts should be approved.

REP. GRUENING: And conversely, if El Paso is selected and we don't go into these contracts, do you see any reason to believe that we would be at any disadvantage in dealing with El Paso or anybody else that is building an all Alaska line?

COMMISSIONER MARTIN: For some of the reasons I just explained, yes, I think we would be at a greater disadvantage than we are now, particularly if all of the other buyers have sold or are in the process of selling and that one or more of them have driven a particularly excellent bargain. Under these contracts we have the benefit of that bargain. Without these contracts we would have the duty of trying to come up to it or surpass it and, depending on what that is, it might be a very difficult task.

REP. GRUENING: Given the fact that we might know better what our in-State uses are, we may only wish to sell a portion of it; isn't a spot sale, or a sale of a smaller amount, sometimes not able to bring a higher price?

COMMISSIONER MARTIN: Mr. Gruening, that's one of the reasons that I've focused on something that I don't think people are too interested in, and that is the institutional

constraints under which we operate. To be very frank with you, I don't think our system is set up to do a good job of spot selling of royalty oil or gas and I don't think it will be so long as we have to negotiate with somebody and then go through a Royalty Board and the Legislature. It simply asks the buyer to do too much. It asks them to have the State assess its position, negotiate with them, and then wait for a period of months while economic conditions change, to have it approved. So I think that spot selling, while it's a possibility, represents a dim possibility for ever being a major policy of the State.

REP. GRUENING: I might suggest, Commissioner, that one of the reasons this hearing process has been maybe a little longer than it might be is because the contracts are being offered for other than for money return; they're being offered for political purposes.

COMMISSIONER MARTIN: Absolutely.

REP. GRUENING: They are, as you admit, quite unique, probably very unique.

COMMISSIONER MARTIN: That's right.

REP. GRUENING: But anyway, I do want to nail down exactly what was behind this report. Could you identify for the record exactly -- this is the report upon which you feel that you're in compliance with this 38.05.184(d), I guess.

COMMISSIONER MARTIN: Yes, in the document cited therein. But also we filed, Mr. Gruening, this report here, which is the more formidable statement. The blue document is actually a summary of this one. But it also references all the other documents that are a part of the analysis.

REP. GRUENING: So you're saying that all the references on page eleven of this January 7, 1977, report are included as constituting a report showing the immediate and long-range gas needs?

COMMISSIONER MARTIN: That's right.

REP. GRUENING: This morning it was just the one report, and now it's the whole ---

COMMISSIONER MARTIN: No, I think I mentioned the reference reports, Mr. Chairman.

REP. GRUENING: Oh, the entire list of references would be included?

COMMISSIONER MARTIN: Yes.

SENATOR RADER: Do you have anything further? Any further questions of the Commissioner or Mr. Boness? Thank you, gentlemen, both very much.

We have the Lt. Governor with us, who said that he would like to make a very, very brief statement.

COMMISSIONER MARTIN: Mr. Chairman, I take it the committee is aware of the relative schedules of Mr. Boness and myself; that's been communicated to the committee?

SENATOR RADER: I have a schedule and I believe Mr. Gruening has a schedule. Yes, we both have your schedules. I don't know whether Senator Poland has a schedule.

SENATOR POLAND: I do.

SENATOR RADER: You do.

SENATOR POLAND: Yes.

SENATOR RADER: And I assume Senator Sackett. Commissioner, I did not give Mr. Sackett a schedule.

COMMISSIONER MARTIN: I sent him one.

SENATOR RADER: All right, fine.

LT. GOVERNOR THOMAS: Mr. Chairman.

SENATOR RADER: Lt. Governor.

LT. GOVERNOR THOMAS: Thank you very much. I'll be very brief, Members of the Joint Committee. I wanted to just say a word or two regarding the other than monetary aspects of this contract, going to the political, public information, generally gaining support in the rest of the nation for the route, that most of us, I think eighty-five percent of Alaskans, wish to see win out.

I just received a copy of a Resolution that has been passed by both Houses of the State of Alabama, and I'd like to turn that over to you, Mr. Chairman. I'll read only the last Whereas and the first Resolve clause.

"WHEREAS, this contract must be approved by the legislature of the State of Alaska; now therefore

"BE IT RESOLVED BY THE LEGISLATURE OF ALABAMA, BOTH HOUSES THEREOF CONCURRING, That the State of Alabama urges the Legislature of our sister state, the State of Alaska, to lend its approval to this contract and to take the necessary steps to the end that the contract will be ratified and the natural gas can be expeditiously transported for use by our citizens and industries."

Mr. Chairman, that I think, in conjunction with a letter that you all have received a copy of, the letter from Jerry Beasley, Lt. Governor of Alabama, indicates the kind of friends and allies and support that this contract we're dealing with, our surplus royalty gas, can engender.

I have one other point I would like to make, and this is from the point of view of one who expects to go out and do a selling job, radio and television, wherever possible, as I've done before, and that is to say that with the passage of this contract, your endorsement of this contract, we will have an awful lot more horsepower, the ground will be well laid for us to go on.

I would say that it's probably not so important that it pass as that it would be very detrimental if it did not pass because our opponents would quickly get the word around the country that the Legislature of Alaska saw fit not to endorse this proposal, and it would be

interpreted, I'm sure, and I see really no easy way or any way at all overcome the interpretation that this would show "Alaskans really don't care which way the gas flows." So from that point of view, I would urge you to be as hasty as possible, while at the same time taking plenty of time to deliberate, and having sat where you are I understand that you're moving as rapidly as you possibly can right now; but I think it would be a great assist to all of us who will be out, and our allies such as the people in these other states, in trying to gain approval in Washington of the all-American delivery system.

That's all I have to say, Mr. Chairman.

SENATOR RADER: Mr. Lt. Governor, can we enter Exhibit 31, the Resolution to which you just made reference?

LT. GOVERNOR THOMAS: Yes, sir. I'll leave it right here.

SENATOR RADER: That will be Exhibit No. 31 according to my numbering system. Is that correct?

MRS. SANDERS: Yes.

(Whereupon Exhibit 31 was duly marked.)

SENATOR RADER: Just a second. Do you have any questions of the Lt. Governor, or did you wish to submit to questions here?

LT. GOVERNOR THOMAS: I'd be happy to, but I'm not the technician regarding the contract.

SENATOR RADER: Does anybody have any questions of the Lt. Governor? Thank you very much, sir.

LT. GOVERNOR THOMAS: Thank you.

SENATOR RADER: Are there any other persons who desire to be heard on the subject that we've been discussing and hearing so much about the last three or four days?

Under the circumstances, these joint hearings are adjourned with no intention to reconvene.

(Whereupon the hearing was concluded at 4:00 p.m.)

SENATOR RADER: The committee will take that up at a later date. Commissioner Martin called me and asked if he might take the stand for a few moments this morning to clarify testimony given yesterday or make additional points. Commissioner, glad to have you back.

COMMISSIONER MARTIN: Senator, thank you. Then I will be very brief. I know the schedule you have. I really had two purposes. The first I see has been taken care of after coming down. I was concerned -- as you said yesterday, I don't think -- notwithstanding some remarks that we're in an adversary proceeding, we want to share everything with the committee. I wanted to bring down the press release from the Federal Power Commission but I see that the committee got it about the same time we did. It was probably a bonanza for the telephone company

this morning, as I think it was telecopied about three different ways. In any case, I have several extra copies of it here and I also have one copy, Senator Rader, of something we're doing now, and that is we're telecopying up what we think at least are pages that have something to do with the State in the four hundred and thirty-three page or four hundred and thirty page decision. We're making arrangements to have the opinion itself flown up, but it looks like the best we're going to be able to do, even with good weather, is to get it up here on the first plane tomorrow morning from Seattle, which means 9:00 or 10:00 o'clock, as I understand it. We'll take a look at it immediately and try to give you the best summary we can late in your hearings tomorrow afternoon, if that's acceptable to the committee, and try to duplicate copies for everyone as a part of that.

I might just say that in looking through the decision, just very briefly, Senator, for those -- has it been distributed? Well, I'll be glad to make these copies available to the committee. I didn't bring enough for everyone, but let me pass them around. I understood that the committee had been distributed copies but ---

SENATOR RADER: I don't know whether all the committee has. I see that this area here though all has copies.

COMMISSIONER MARTIN: Just very briefly and I don't intend to summarize this at all, Senator Rader. The decision is extremely heavily weighted in favor of Arctic Gas, substantially more weighted than we had expected or I think most had expected. It takes up most of the opinion really dealing with the benefits of Arctic Natural Gas' proposal which is regarded by the judge as superior on most -- on every ground for the permit.

And then on page nine near the bottom there is a short summary paragraph dealing with El Paso, which the judge says that, "if Arctic Gas is unable to accept a certificate, El Paso's proposal, with modifications, would also meet the public convenience and necessity." He goes on to call it a "viable" proposal and then criticizes it on a number of grounds following. A short summary of the Alcan route follows on page ten of the lengthy memorandum in which he says, "As to Alcan, Judge Litt said the record does not support even the possibility that a certificate could be granted it. Its design is clearly neither efficient nor economic since the pipeline is undersized." And then goes on to criticize it on a number of other grounds, putting it sort of in a third position in his release. So, I think at the very minimum we can regard both of the choices that we favor as possibilities for Alaska taking a very substantial blow

in this Hearing Judge's opinion this morning, probably Alcan slightly more than El Paso.

I also will give you the first five pages of approximately twenty pages we hoped to telecopy yesterday. I don't have copies of these, Senator, which seem to affect the State. And there is some good news and some bad news. I might say in view of the recent letter that you just read from Farmland that there is at least some disagreement on that because, contrary to their assertions that the State is opposed to the economic development, Judge Litt finds that we are so much in favor of it that he finds it irresponsible. So, it's a can't win situation. He thinks we are going too far and Farmland, apparently, not far enough.

With very quick reference to that, let me say that so far as I'm aware, we have opened our files one hundred percent to the committee and that communication that Senator Huber talked to has been, so far as I know, either forwarded to the committee or made available to it along with all the other information. I don't want to take the time of other witnesses now to respond to that, but I assure you I'll be more than pleased to do so at an appropriate time.

Two very quick points, Senator. First -- and they both relate to what I think were factual misrepresentations

based on testimony given yesterday that may have been either members' misunderstandings or my failure to explain myself properly. First, I understand that it was indicated last night in some news reports that people couldn't understand how the state would oppose the treaty. I specifically said yesterday, that without actually seeing the treaty I couldn't take a final position on it, but the state in no way intends to oppose the treaty and in fact supports the enhanced relationship with Canada on all matters including energy matters. And, I want to be very clear about that now. We simply -- I'm not going to say we absolutely won't until I read the words and I don't think you'd expect me to. But I see no chance that we would and we don't want to and we don't intend to. So let that be well understood.

Secondly, there apparently was some substantial misunderstanding about whether or not the state could take the gas off under this contract in the state, use it for a petrochemical plant and then export the results of that process. The answer to that is unquestionably "yes". There is no qualification at all that the state must then subsequently utilize all the products from such a process in the state. We have the total right to take the gas off under this contract so long as it is used in the state for some process except liquefaction for export.

And there is no limitation on that in terms of utilization of the product.

One final very quick matter and that is on the matter of price. We do disagree with some of the characterizations about the state not getting the best price. We do believe that we have gotten the best price under the circumstances and tomorrow, as I indicated, after hearing the testimony of some of your consultants, Senator, we'll be prepared to respond to that at the end of the hearings as the committee sees fit.

SENATOR RADER: Are there any questions of the Commissioner?

SENATOR HUBER: One quick one.

SENATOR RADER: Senator Huber?

SENATOR HUBER: Mr. Commissioner, you might ask the judge there when he is finished with his crystal ball, knowing what's in the structure down there, to send it up to you so you can give it to your Department of Oil and Gas so we can get on with determining what we should be taking up there.

COMMISSIONER MARTIN: We'll ask them that, Senator.

SENATOR RADER: Representative Chatterton?

REP. CHATTERTON: Mr. Chairman, Mr. Commissioner, in view of this much stronger position of Judge Litt than what you anticipated yesterday, are you now possibily willing to give reconsideration in exchanging taxpayer's gas for

lobbying rights?

COMMISSIONER MARTIN: No, sir. We believe the contracts are still a viable and important alternative. This morning I made the comment after seeing the opinion that maybe those yesterday who leaned toward the Alcan route and wanted us to regard the decision as very, very crucial, and we said we think this decision is only a part of the process may now change and say this decision is determinative. We still think this decision is an important part but hardly determinative in the final outcome and that the contracts we're advancing may be possibly a little more important by virtue of it, rather than less.

REP. CHATTERTON: Thank you.

SENATOR RADER: Any further questions of the Commissioner? Senator Croft?

SENATOR CROFT: Commissioner, just so I understand it, because I heard your testimony yesterday, did I understand you to say that you testified yesterday that the unequivocal answer is "yes" that we can export those products after they are used in a pretrochemical facility? Because I understood you yesterday to say --

COMMISSIONER MARTIN: Apparently that was misunderstood and I talked to several people. Most people understood it the way I expressed it a second ago rather than your way, Senator Croft, but I wanted to clear it up today. There

is no question under the contract, in my view, that we have the right to take the gas off, to utilize it in Alaska for any purpose except liquefaction for export and then to export the products that are made therefrom.

SENATOR CROFT: And can we then export the LNG under the contract?

COMMISSIONER MARTIN: No, sir. If we take it --

SENATOR CROFT: Does it all have to be used in the state?

COMMISSIONER MARTIN: That's what I made clear yesterday. But we can liquefy gas so long as the LNG is being used in the state, so we even have the flexibility to go through liquefaction and then tanker that around and use it in other communities on the coast.

SENATOR CROFT: One final question. If -- and this didn't originate with me but somebody else asked me to ask it. If the primary purpose of these contracts is to gain additional support for the El Paso route, why did the state contract with El Paso to give them twenty-five percent of the Prudhoe Bay --

COMMISSIONER MARTIN: That is a very good question and I think the answer to it goes very much to the reason that these contracts are a little misleading in terms of totally construing them as pure political support. The fact is that El Paso can benefit just as much from telling its citizens that it has an opportunity to own gas pursuant

to its success as any other company. As it was before, El Paso was a sponsor of the gas line which was very much in the state's interest but without any ownership of gas and only a prospective chance of getting it. But under these contracts they too could say that they have an opportunity to supply gas to their constituents where they couldn't have said that before.

SENATOR RADER: Any further questions of the Commissioner? Mr. Swanson?

REP. SWANSON: Yes. If we lose both these battles, both the El Paso and the Alcan will you switch your support now to Arctic or Tenneco?

COMMISSIONER MARTIN: No, sir. The state's position, I think, on that by all its findings is very clear. We believe that the Arctic offers very little benefit to the state and would be a last choice. We have testified to that extensively in the FPC.

SENATOR RADER: Any further questions, Mr. Swanson? Mr. Gruening?

REP. GRUENING: Yesterday I think a questions was asked by Representative Meekins if a commitment of royalty gas prior to construction, let's say the petrochemical facility in Alaska would not be considered an in-state use. It's a commitment on an arrangement where the gas went out of the state but that was part of the contract

under which this construction --

COMMISSIONER MARTIN: Yes, sir. I responded to Mr. Meekins that that is the item that we have committed, the export of gas -- of surplus gas is the thing that we have sold under this contract and that kind of a negotiated deal would not be possible.

REP. GRUENING: Regardless of whether it was part of a contract to build a petrochemical facility?

COMMISSIONER MARTIN: That's right, because that gas would not be used in Alaska. It would be used as an enticement to come. That in fact is the sort of deal that Farmland International offered and it's one of the reasons why it was unacceptable.

SENATOR RADER: Representative Chatterton?

REP. CHATTERTON: Mr. Chairman, I'm sorry. Commissioner, in answer to a question that you gave here just a moment ago, I think I have got to ask you another question. You answered a question as to whether you would switch your support in any way, in any shape or form to the Arctic Gas proposal and you answered that "no", I believe.

COMMISSIONER MARTIN: Yes.

REP. CHATTERTON: So, in effect you're really saying -- or reconfirming that the only reason for these gas sales contracts are to gain or buy additional lobbying effort for one or two choices. There is no other advantage to

the contracts, is that right?

COMMISSIONER MARTIN: No. I think I made it clear yesterday in great detail that I thought there were several advantages to the contract of which that one may very well be the principal one. But the contracts would be, I think, valuable under any circumstances. I think Mr. Swanson's question, does the state intend to switch its support to Arctic in certain circumstances, my answer was "no". The present Arctic proposal would be of very little benefit to the state.

REP. CHATTERTON: Thank you, Commissioner.

SENATOR RADER: Senator Huber? Incidentally, I want to invite legislators in the audience to seat themselves at vacant places at the table if you desire, with the understanding that if committee members come in that you will relinquish your seat to them. But if you wish to participate, it's a little bit easier and more convenient, you are certainly welcome. There are two seats here and there is one over here to take advantage of that. Senator Huber?

SENATOR HUBER: Mr. Chairman, Commissioner, I want to clear up something that looked like, from press reports and so forth last night, it kind of sounded like from the meeting the amendment that was gotten in Congress by our delegation to allow us to withdraw our gas, it seemed like the testimony was such to make one believe that we had no

choice other than that and I think that's what is causing part of the confusion about the Arctic Gas. And would you reaffirm if we never --

COMMISSIONER MARTIN: Oh, I understand.

SENATOR HUBER: If we never commit our gas, say the Arctic route is chosen and the State of Alaska never commits any of its gas thereby not allowing any of it to flow -- to start flowing to the South 48, that it is still our gas under current laws in Congress -- previous laws or current laws, we can't have it confiscated on us until --

COMMISSIONER MARTIN: I understand the question now, Senator. I think that is a good question if that is the way you are going. I think that the committee could very well conclude, based on the utilization of Section 13(b) or the theory that Mr. Moody advanced last year, that there might be enough benefits in these contracts to consider going ahead with them or something very much like them under any circumstances. But, as I understood Mr. Swanson's question, he asked if we would switch our support to Arctic and I took it in terms of just an evaluation of the route, my answer would be "no". But yes, I think that it would be a legitimate consideration, given the other benefits of this contract, to at least consider utilizing either the contracts or the format to try to gain the same kinds of protection.

I might add that Judge Litt's decision is apparently going to be very sobering in that regard because he specifically recommends the repeal of 13(b) and makes it plenty clear that as far as he is concerned, unless there is something like that, the FPC will have no intention whatever of approving any state off take. It's a decision highly influenced by strong national interest.

SENATOR HUBER: And, Mr. Chairman, even if 13(b) is repealed, the State of Alaska if it wants to ever use any of this gas, the only choice we would have would be never to commit it in the first place thereby depriving the people of the Southern 48 states of having any portion of it because there is no law that says they can confiscate our gas.

COMMISSIONER MARTIN: Well, Senator, that's not the only alternative we would have because as you know, the terms of this contract provide that should the arrangement for off take not be approved by the federal government, the contracts fail. In other words, we are then back to ground zero and have whatever alternatives we might have minus the loss of time which is inherent in attempting to get that approval.

SENATOR HUBER: I wanted it clear that the FPC can't just assert our royalty share of gas. It requires us to have

committed it in the first place and allowed it to flow before they can assert it even without 13(b)?

COMMISSIONER MARTIN: Yes, but not through the contract. It means allowing it to flow, it is different from committing it. It is the first flow of the gas which we believe is the most substantial problem. And so, in the event that these contracts were approved, but not subsequently approved to the federal level in terms of the off-take provisions, we would then be back in the situation where we would have to act before the gas first started to flow to look at our other alternatives. The other alternatives being in-state pipelines or other alternatives.

SENATOR HUBER: That's why it would seem that the judge's strong decision for Arctic Gas, as he made it, didn't take into consideration the fact that if he allows Alaska no use of their gas and you may very well get to the point where Alaska says "you don't get our gas then." We certainly haven't taken that stance.

COMMISSIONER MARTIN: We haven't taken that position. We think that is not a good position to take in the national decision process at this time, Senator Huber, although I can understand your sentiment in perhaps wanting to get there. We have not taken that tack, attempting to carve out a way to utilize the gas on a cooperative way rather than doing it through confrontation.

SENATOR HUBER: That is why I'm disappointed in his determination.

COMMISSIONER MARTIN: He incidentally has searched, as you'll see from the release and then later from the decision, substantial state jurisdiction, including the ability for the FPC to allocate and take the gas. So I think that while this doesn't speak to the FPC or to the federal decision making process, there are a number of things of great concern to the state in this contract -- or in this decision.

SENATOR HUBER: Thank you, Mr. Commissioner.

SENATOR RADER: Any further questions?

REP. CHATTERTON: Yes, Mr. Chairman.

SENATOR RADER: Mr. Chatterton?

REP. CHATTERTON: Mr. Commissioner, if we initially take our royalty gas in value instead of in-kind, do we keep all options open for intrastate usage?

COMMISSIONER MARTIN: Mr. Chatterton, rather than whether it is taken in value or kind, the point you must operate from is the point that gas first flows through the pipeline and if at the time it first flows through the pipeline and is merged in the interstate stream, we are allowing our gas to flow without any arrangement to take it off -- any approved federal arrangement to take it off. That is the risk of loss of the gas, if at that time we

have not taken in-kind and protected it, then the problem would attach.

SENATOR RADER: Mr. Parr?

REP. PARR: Mr. Commissioner, in this press release on page four, the second paragraph, Judge Litt finds that "The Commission clearly has full jurisdiction over producer wellhead sales in interstate commerce, transport of the gas within Alaska, and transport and sale within the lower 48 states". Now at that second clause, does that mean in the judge's opinion that if we built our own pipeline, let's say from Prudhoe Bay to Anchorage, that the FPC would still have jurisdiction?

COMMISSIONER MARTIN: Yes, sir.

REP. PARR: Even if it never got into the interstate pipeline? Intrastate pipelines are not regulated by the FPC.

COMMISSIONER MARTIN: We're giving you the present state of the law. The judge is apparently making a somewhat extended statement regarding it.

REP. PARR: Under existing law, as far as you know, intrastate pipelines are not regulated by FPC?

COMMISSIONER MARTIN: Yes.

REP. PARR: Is that correct?

COMMISSIONER MARTIN: That's right.

REP. PARR: And so what the judge is doing is either trying to change it by his statement or interpreting it different

than you?

COMMISSIONER MARTIN: He has made a number of very extreme statements, obviously taking a very strong position in the case, Mr. Parr.

REP. PARR: Thank you.

SENATOR RADER: Any further questions of the Commissioner? Thank you very much, Commissioner.

COMMISSIONER MARTIN: Thank you for your courtesy. I thought it would be helpful, Mr. Chairman.

SENATOR RADER: We appreciate it.

COMMISSIONER MARTIN: We will give you additional copies of this today as they come in that are out of the decision. Those are just miscellaneous pages.

SENATOR RADER: Well, I think that we will probably rely upon your analysis of this tomorrow rather than our hour by hour report here.

COMMISSIONER MARTIN: Those are all out of context.

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SCOMM 15:3
ROYALTY GAS SALES TESTIMONY!
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Book II (v. 3-6)

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SUBJECT oil; gas; SCR 3, 1977; SCR 4, 1977; SCR 5, 1977; HCR 11, 1977; HCR 12, 1977; HCR 13, 1977; contracts, contractors; pipeline; revenue
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?0601 * END OF DOCUMENTS IN LIST - ENTER RETURN OR ANOTHER COMMAND.

JOINT PUBLIC HEARINGS

of the

ALASKA STATE LEGISLATURE

on

SCR 3, 4, 5 and HCR 11, 12, 13

"THE PROPOSED SALE OF ROYALTY GAS"

January 31, 1977 - February 7, 1977

Juneau, Alaska

VOLUME III

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February 1, 1977

SENATOR RADER: The next series of witnesses will be those of the purchasers. Tenneco, I believe, is prepared to go forward. Would you introduce yourself for the record, and also your associates?

MR. THOMAS: Thank you, Mr. Chairman. I'm Robert C. Thomas representing Tenneco Alaska, and joining me here at the table is Gared Carter acting as a consultant to Tenneco, and behind me, Mr. Bob Hardig working with Tenneco, and

Mr. Bill Thornhill.

SENATOR RADER: I'm going to ask the reporter, is it possible for -- I hate to have people keep repeating their names for purposes of the recorded record. I assume that you will be able to identify in your recording of it.

COURT REPORTER: Yes.

SENATOR RADER: Would you proceed, Mr. Thomas? Mr. Thomas, the question of answers, would you prefer that you make a presentation or that we ask you questions as you go or what is your suggested method of operation?

MR. THOMAS: Mr. Chairman, I have about twelve or fourteen minutes of comments at which time then I would be available for questions afterward. I think that would be the more convenient way to go, if that is satisfactory with you.

SENATOR RADER: Yes, that is satisfactory with me. How about the committee? That would be fine. Thank you very much.

MR. THOMAS: Thank you, Mr. Chairman. By way of further introduction, I'm a Senior Vice President of Tennessee Gas Transmission Company and I have responsibility for energy supply for all of Tenneco's interstate transmission companies. I am also a Vice President of Tenneco Alaska, an Alaskan corporation, which has entered into this

royalty agreement with the State.

My purposes in appearing before you today is to urge your early approval of the Royalty Gas Sales Agreements, to explain why we believe these interests are in the best interests of Tenneco and the State, and to answer your questions.

The State yesterday presented to you the terms of the agreements and the benefits that would accrue to the State. For that reason I would start with the reasons that Tenneco has signed the agreement.

Each day, Tenneco's interstate system supplies an average of 3.2 billion cubic feet of natural gas to their customers. This volume is now insufficient to meet demands. As customer demands are growing, our reserves in our traditional supply area of the Gulf Coast are declining.

To meet this supply/demand situation, Tenneco is working in many different areas to secure energy supplies from non-traditional sources. These sources include liquefied natural gas from Algeria, Trinidad, Nigeria, the USSR and several other countries. We are also pursuing synthetic natural gas to be manufactured from domestic coal deposits and we're also searching for additional natural gas from the Canadian Arctic Islands.

We are vitally interested in purchasing natural

gas in Alaska, not only because of the large volumes of currently proven reserves, but because we feel Alaska will be the most active area in the United States for the exploration for major new energy supplies during the next twenty to thirty years. We want to be a part of this future exploratory activity. And we also believe that there are substantial advantages in purchasing domestic, as opposed to foreign, gas.

Now these few facts tend to explain our needs but as you are all aware, the fulfillment of needs, inevitably encounters obstacles and I'll assure you that the securing of natural gas supply from Alaska was no exception to that.

Tenneco looked at the obstacles from the viewpoint of the largest natural gas transmission system in the United States that was uncommitted to any of the competing proposals for the delivery of Prudhoe Bay gas to the lower 48 states. We recognized at that time that we, as well as any other purchaser in the lower 48, could transmit this gas to our customers through any of the systems proposed. The State, however, made it very clear that the primary condition in any sales agreement would be support for the Trans-Alaska delivery system.

We considered carefully three fundamental questions before determining that we could undertake such

a commitment. First, we had to answer would there be sufficient reserves available, either now or in the future, to justify our efforts in this project.

Secondly, if we committed our resources of time, money, and people to the project, was there a substantial likelihood it would succeed.

And third, would such an effort adversely affect Tenneco's substantial business interests in Canada which we intend to maintain and to further.

Our analysis concluded that we could not only agree to support the Trans-Alaska route but could also agree to condition our right to purchase the royalty gas upon the eventual designation of that route by the federal government and these terms are in the agreement before you.

Our conclusion was based upon the belief that with a strong, responsible team supporting the Trans-Alaska project and making the objective arguments in its behalf, the federal decision makers, after extensive and careful analysis, would conclude that the Trans-Alaska system would get North Slope gas to the lower 48 at the earliest possible date. While early delivery, we feel, is the most important element of national interest, and the other issues such as jobs and taxes also clearly favor the Trans-Alaska route, in our opinion.

It has always been our firm opinion that federal acceptance of the Trans-Alaska delivery system and therefore the benefits to both of the parties to the contract, depends upon prompt approval of the royalty sales agreement by this legislature.

A major factor crucial to your deliberations is the strength that Tenneco can add to the team that is dedicated to the securing of a Trans-Alaska route. So let me give you a brief summary of our technical capabilities. We maintain a staff of approximately one hundred forty engineers in our pipeline headquarters in Houston. This department not only supervised the construction of our fifteen thousand plus miles of interstate pipeline system, but was also involved in the construction of the existing Trans-Canada pipeline of which we were a part at that time in the mid-fifties. Our operations people routinely run an interstate system transporting in the range of five billion cubic feet per day on peak days.

Tenneco is dedicated to the conduct of its operations within the proper environmental framework. To that end the corporation maintains its staff of approximately sixty environmentalists.

Tenneco maintains a staff of cryogenic, process, and LNG systems engineers plus the services of numerous

consultants with expertise in LNG projects. We have had a great deal of experience in the planning of major LNG projects.

As a corporation, Tenneco has annual capital expenditures in the range of Five Hundred Million Dollars. In the thirty-four years of our existence, our assets have grown from zero to approximately Seven Billion Dollars. The strength and the financial experience that we gained through this evolution, we feel, is invaluable in the planning and execution of multi-billion dollar energy projects.

All of these areas of expertise that I have mentioned are now being readied in preparation for our participation in the Trans-Alaska project.

There has been a great deal of reference through the negotiations of this agreement and in the presentations yesterday to the "political influence" to be contributed by each party. It is unfortunate that this gives some people the impression that the purchasers control specific votes in the Congress or in the Executive Branch which can be used on behalf of the Trans-Alaska project just as soon as this agreement is ratified. And this, of course, is not true.

There is no amount of narrow so-called political clout or pressure going to determine the federal decision

on this matter. We are convinced that the decision will be made on the merits of the issues. Neither we nor the new Administration have incentive to proceed in any other way. This approach is also assured by the detailed and comprehensive provisions of the Alaska Natural Gas Transportation Act of 1976.

For these reasons, we think, it is essential that all of the issues involved be thoroughly discussed at both the regional and national levels with all parties having input into the final decision. This will present a monumental job of planning and coordination to insure that knowledgeable staff, both technical and nontechnical, are made available to discuss all of these issues with the people requiring the information.

From a regional standpoint, it is essential that the issues be reviewed and analyzed as they effect different parts of the lower 48 states and Canada. The perspective and the needs of these different regions vary and their views must be analyzed and their questions effectively answered.

We feel that we are best qualified to present the Trans-Alaska merits in our market area. This market area covers twenty-five states in the general area of New England, New York-New Jersey, Appalachia and the Upper Midwest. These states embrace sixty-five percent

of the U.S. population and much of its industrial capacity.

We feel that Southern and El Paso will be most effective in their market areas. We also feel that all three companies will be effective on the national scene.

The combined facilities of Tenneco, El Paso and Southern with minor modifications could deliver gas to at least forty-two of the lower 48 states. We feel it improbable, and probably impossible, that any other group of three or more companies presently uncommitted to any pipeline route could equal this coverage.

El Paso has made and is continuing to make a tremendous effort on behalf of the Trans-Alaska project. We feel more help is needed and we are prepared to provide this help.

We believe it is essential that the legislature act promptly to approve these agreements. The time available to make all necessary contacts is becoming extremely short. As mentioned earlier, the U.S.-Canadian pipeline treaty was signed last Friday. This morning the presiding Administrative Law Judge of the FPC issued his decision and had expected that this decision would favor the Arctic Gas proposal. All of the participants before the FPC, of which we are one, will be permitted to file comments on his decision, however, by March 1st.

The Alaskan Transportation Act provides that the full FPC must submit its recommendations to the President by May 1. Federal agencies are now preparing their comments to the FPC and federal and state officers and agencies may submit their comments to the President by July 1. Our views must be made known to all of these people as soon as possible in order to have any effect on their comments. The President's decision is due September 1 and the Congress has sixty days in which to approve this decision.

We feel there is much to be done and the federal timetable leaves no time for delay. In anticipation of your approval of these agreements, Tenneco has already taken substantial efforts in preparation for the support of this project. We have had many meetings with representatives of the states, El Paso and Southern to insure a maximum cooperation, coordination and effectiveness in our combined efforts.

El Paso has given our engineering, environmental, LNG and financial experts several detailed reviews of their plans. We intend to work very closely with them toward assuring the best possible project and to answer the questions that will be raised throughout the U.S. and Canada concerning the physical, environmental and financial integrity of this project.

We have designated a project manager within Tenneco with authority to call upon and coordinate the activities of all of our interested departments.

We have retained counsel in Alaska and in Washington to assist in the planning and the execution of our overall plan to insure adoption of the Trans-Alaska delivery system.

We have communicated to the State of California our reasons for supporting the Trans-Alaska project and I believe that was the letter that was introduced as an exhibit earlier by the Chairman.

These efforts are, however, only a beginning. Further efforts to implement a detailed plan to secure adoption of a Trans-Alaska route, however, will not be credible if the State of Alaska does not act promptly to approve the agreement which provides the basis and the reason for our support.

In summary, Mr. Chairman, Tenneco is prepared to invest their time, their money and their people in a maximum effort to secure a Trans-Alaska route. We are prepared to begin as soon as the agreement with the state is approved by this legislature.

The state has retained the ultimate assurance of our performance. If the Trans-Alaska route is not approved, the state has the right to terminate the agreement.

Should that happen, we will have wasted our manpower and our money and our people.

The state has assembled a strong team, the contest is well underway and in progress and we are ready to participate when we receive your approval.

Mr. Chairman, that concludes my prepared remarks. With your permission I would like to make a few other comments concerning a matter that has been indicated to be of concern to the members of both committees, concerning at item that appeared in some of the Alaska newspapers entitled "Questionable or Sensitive Payments by Tenneco." I would like to point out that this information came from an Eight K report that was filed by Tenneco with the Securities and Exchange Commission over a year ago in January, 1976, and has been a matter of public record since that date. Tenneco themselves submitted copies of that report to all of their stockholders which number over three hundred and fifty thousand.

There are several points, however, concerning the report that I would like to emphasize for the benefit of the members of the committee. First, the report was a voluntary disclosure by Tenneco of information that was obtained as a result of an investigation initiated and authorized by our own Board of Directors. The investigation was done by outside independent accounting and legal

organizations. The relevant information was made available to both the FCC and the IRS. The company has adopted detailed procedures to implement and monitor compliance with their business ethics policy. These procedures have been disseminated to all employees and to all consultants representing the company regardless of the area.

The Royalty Board and the Department of Natural Resources were made aware of this report after it had been filed early last year.

To summarize the current status of this situation, Tenneco considers its internal investigation as closed. Federal grand juries are conducting investigations in Washington, D.C., Milwaukee and New Orleans. They are presumably investigating matters referred to in this 8-K report. To our knowledge, no action has been taken by these grand juries. The matters referred to in the 8-K report were subsequently investigated by the SEC, although the company has not been informed that this investigation had been terminated, no request for additional information or for further interviews by any of our people have been received for several months.

The IRS initiated an investigation in early 1976. Voluminous documentation has been furnished to the IRS concerning the matter and numerous present and former employees have been interviewed. To our knowledge this

investigation is continuing. There have been stockholder suits filed as a result of this disclosure. The actions that have been instituted in the state courts have been stayed pending disposition of actions filed in federal courts. The federal actions have been consolidated recently in the U.S. District Court for Texas. No discovery has commenced nor has a trial date been set. So, Mr. Chairman, this represents the history and the current status of the matter. The general counsel for Tenneco has advised me that there is no significant matter of the type disclosed in the 8-K report in which such an investigation is now pending.

I have a copy of the 8-K report which I'll be happy to submit for the record of your committees.

SENATOR RADER: I'm sorry, I don't understand that. 8-K?

MR. THOMAS: 8-K.

SENATOR RADER: 8-K.

MR. THOMAS: Just the number of the government report to the Securities and Exchange Commission.

SENATOR RADER: Please would you just hand that to the reporter there and it will be exhibit number 9.

MR. THOMAS: All right, sir.

(Whereupon Exhibit 9 was duly marked)

SENATOR HUBER: Can we get copies of that for the members?

SENATOR RADER: Sir, how long is the report?

MR. THOMAS: Oh, it's about six pages with a bunch of signature pages and endorsements and authorizations and I guess about nine pages.

SENATOR RADER: I am certain that we can have copies of that made. I don't know whether we can have them immediately, Senator, but all of this information is going to be widely disseminated, I'm sure.

SENATOR HUBER: I'd like to have it sometime while we're meeting so -- have it if necessary for questions we might want to formulate.

SENATOR RADER: I'll ask the staff to see if they could make copies and have them here maybe by 1:30 when we convene. It might help in the questioning while the witnesses are there. I think your point is well taken, Senator Huber.

It is, by my watch, approximately 12:00 o'clock. I think this would be a good place to break. We will reconvene promptly at 1:30. Thank you very much.

(Whereupon the hearing was recessed at 12:00 noon and reconvened at 1:30 p.m.)

SENATOR RADER: The committee will come to order. I want to again invite all legislators, if you wish, to take a place at the table with the understanding that when a -- if a committee member shows up, that you will relinquish your seat without a hassle to them.

Dr. Carl Swanson of Jensen Associates was hired

by the committee to give us an independent advice on this matter. He has prepared two questions which he thinks should be asked of the purchasers. If there is no objection, I'll start off with those two questions. Do you purchasers agree that Section 6.5 which provides for annual redetermination of the price under deregulation applies to Section 6.3 when deregulation occurs, before first deliveries of gas, as well as to Section 6.4 which applies when deregulation occurs after first deliveries?

MR. THOMAS: Mr. Chairman, I believe that was the intent at the time that we negotiated contracts, so the answer is yes.

SENATOR RADER: Now, what is the significance of that question and your answer?

MR. THOMAS: The significance of the question is if under the terms of the contract the section that applies to deregulation occurring after the first delivery of gas also references the next clause which talks about re-determination. And, in writing the contract the previous clause which talks about deregulation occurring before the first delivery of gas, we did not reference that re-determination clause.

SENATOR RADER: As I understand it then, the redetermination -- there will be a redetermination regardless in a regulation. Is that what we are talking about?

MR. THOMAS: Well, in the event of deregulation whether it --

SENATOR RADER: Of deregulation, yes.

MR. THOMAS: Occurs either before first deliveries or after first deliveries.

SENATOR RADER: Or after. Any committee members have any questions, any further follow-up on that question? Dr. Swanson had one additional question. Do you agree that under Sections 6.2 that if the price is regulated, the price paid by you purchasers to the state shall include an amount equal to severance taxes if the regulation allows an amount equal to revenue taxes to be paid to working interest owners?

MR. THOMAS: It was our understanding at the time that the contract was negotiated that the Alaskan Statutes did not provide for a severance tax so that is probably why it was not referenced in the agreement. But, our view would be to the extent that the working interest owners are charged that and their purchasers are allowed to include it in their rates then of course we would be willing to pay the same amount, subject to inclusion in our rates.

SENATOR RADER: Dr. Swanson, it is a little bit unusual but are you satisfied with the answers or did you wish to pursue them further?

DR. SWANSON: My interpretation of the answer just given is

that Tenneco is stating that it is its interpretation of the intent in negotiated contracts and of the contract to pay an amount equal to severance taxes to the State of Alaska if it pays that amount to the working interest owner.

MR. THOMAS: That is correct.

DR. SWANSON: Which is a satisfactory answer to my question.

SENATOR RADER: Is that your answer?

MR. THOMAS: And it is subject to inclusion in the purchasers of the working interest gas for rate purposes and in ours also.

SENATOR RADER: Have we reached agreement on that, Dr. Swanson?

DR. SWANSON: I believe so. Its implication is that Alaska will not lose an amount equal to severance taxes on its royalty gas.

SENATOR RADER: Mr. Carter, I see you nodding your head affirmatively. Is that correct? We are in agreement on that then?

MR. CARTER: Yes. It's consistent with the general principle that as Dr. Swanson stated, that the State incur no disability from what it would otherwise have received because it elected to take its gas in-kind and sell it.

SENATOR RADER: Dr. Swanson, I forgot to ask you or neglected to ask you, were you satisfied with the answer on the first question?

DR. SWANSON: I was, yes.

SENATOR RADER: Any committee members -- Mr. Gruening, Representative Gruening?

REP. GRUENING: I want to see if I understand the question as well as the answer. Is it your answer in regard to the severance tax that if we change the law, you have no objection to paying a price which includes that severance tax?

MR. THOMAS: What we are saying is that that is also charged to the working interest owners and that is passed to their purchasers and included in their rate. What we are saying is that the State should get the same amount as does the working interest owners, which is consistent with the intent of the contract.

REP. GRUENING: But that is conditioned on the FPC allowing it to be charged?

MR. THOMAS: Yes. I think all of the rates are consistent with that inclusion.

REP. GRUENING: But it was your earlier statement that there was no -- as you read the Alaska law, that there is no charge.

MR. THOMAS: I believe there is no charge to the royalty owners, that is correct. That is the current situation with the statute, as I am told.

REP. GRUENING: Okay. But that doesn't affect your answer

to the question as to whether you would object to that if the working interest owners are allowed to back that out, that you have no objection?

MR. THOMAS: If that is the statute and it is applied to all of the purchasers of the gas, working interest and royalty, and is subject to inclusion in our rates, yes, we would be happy to pay it.

SENATOR RADER: Any further questions on that item? All right, we'll open up the questioning generally of the Tenneco representatives.

REP. McKINNON: Mr. Chairman?

SENATOR RADER: Mr. McKinnon.

REP. McKINNON: The Administration has indicated that one of their prime considerations in these contracts was the political support that it might generate, and while nobody is suggesting that Tenneco has so many Congressmen and Senators lined up to go with them, they did indicate that one of their objectives was to establish a national constituency. I think that is the phrase they used. Now, what I would like to know is what specifically your company intends to do to help establish that national constitutency. For instance, what are you going to do to convince the people of, say, Tennessee that it is in their best interest to get their Congressmen to go with the El Paso proposal?

MR. THOMAS: We see that once the contract is approved, that there are several areas of activity and where contacts need to be made, California, Washington, in Canada, and in our market area. Within our market area, which is the twenty-five states that we mentioned, we feel that contacts need to be made there at the customer level that we have, also at the state level which would include the energy agencies in the executive offices within the state. And, what we are interested in doing within the state offices is contacting the staff people who work up the positions for the agencies and for the state to let them know what we feel are the merits of this particular project and how we feel it will benefit us and benefit them. That's generally how we intend to attack it in the market area in Washington. We intend to talk again with the staff people of the various committes within the executive branch. Also with the staff people, the administrative aides for people in the various Congressional Delegations.

We want to contact as wide a range of people having input into the final decision as we possibly can. And, we feel it is important that the merits on these various issues will be readily understood by these people but it's just the task of getting to all of the people and making sure that this information is available to them.

REP. McKINNON: How do you intend to inform the public of the

merits of the El Paso proposal?

MR. THOMAS: Within the public itself, a lot of this we see can be done through our market area in the form of our customers dealing with the ultimate consumer which is their customers. We sell to the distributing companies who in turn sell to the direct users and they have contacts in that way.

REP. McKINNON: Getting away from the topic of political support for the El Paso proposal itself then. Political support for the contract in general, do you intend to do anything to influence Congress to say keep the take back provision in the existing law?

MR. THOMAS: Really hadn't considered that. From the standpoint -- my own view was I didn't think it likely that they'd repeal it, or if they did, it would not be retroactive. That's just my own view and I'll be honest, I haven't given that that much thought. Gared, did you want to respond?

MR. CARTER: Well, other than our commitment is to work with the state to accomplish their purposes and ours under this contract and that calls for working with all relevant agencies. And if that issue would come up and it became a matter of debate and attention in the Congress, I would anticipate that we would see our obligation. We would spend considerable effort in the direction of working

with the Alaskan Congressional Delegation to sustain the Alaskan tradition. We understand that is a major consideration to Alaska to be able to utilitze its gas in the state and that's our basic commitment, to make the gas available to be taken back and to get whatever kind of dealings are required to accomplish that purpose.

REP. McKINNON: Even though that may be detrimental to you, you see it as a contract obligation?

MR. CARTER: Yes, it is a contract obligation.

REP. McKINNON: Political support of the provision in the law isn't necessarily a contract obligation but --

MR. CARTER: No, but that's the essence of the -- what Alaska is trying to acquire and we recognize that.

REP. McKINNON: And that is almost true?

SENATOR RADER: Mr. Chatterton?

REP. CHATTERTON: Mr. Chairman, Sir, on that very subject, if you are fully wedded to the all-Alaska gas line, you would certainly be willing to do these things whether or not there was a royalty gas sales contract in existence?

MR. THOMAS: Let me respond to that. There are a lot of issues around the world that we think strongly about that our primary purpose to our customers -- our obligation is to get additional gas supply. And, regardless of the size of any company there is still a finite limit of resources. We try to direct those where the end result

is to get gas supply for our customers.

REP. CHATTERTON: I take it that you would continue to use -- shall we use the naughty word "lobbying effort" to get Alaska gas to the south 48 via the all-Alaska line?

MR. THOMAS: Our intent is to get some gas -- make sure that we have some gas when that line comes to the Lower 48 also.

REP. CHATTERTON: Thank you, sir.

MR. CARTER: And Mr. Chatterton, what that means is that the short answer is no. That if we don't buy gas, we don't get gas to Tenneco's customers simply because the all-Alaska route is designated. That does not in and of itself bring any gas to Tenneco's customers.

REP. CHATTERTON: Thank you.

SENATOR RADER: Any further questions? Senator Poland?

SENATOR POLAND: Mr. Chairman, I would like to ask Mr. Thomas. If our needs for liquid gas should exceed the twelve and one-half percent, just use an example, say fifteen percent, would we be allowed to trade off to a producer owner some of our methane for the additional two and one-half percent more liquid and then withdraw that liquid from the pipeline, thereby reducing the amount of methane available to the buyers under the contract?

MR. THOMAS: I'm not sure I understand you question. Were you talking about liquids?

SENATOR POLAND: Yes.

MR. THOMAS: Are you talking about once the methane is liquefied?

SENATOR POLAND: No, I am talking about the liquids, the butane, the propane, the pentane, the twelve and one-half percent of those that we receive. If the state had need for more than our twelve and one-half percent and I used the example of fifteen percent, would the buyers under this contract be willing to let us trade some of our royalty methane to the producer owners to get those additional liquids and would thereby reduce the methane that the buyers under the contract would receive?

MR. THOMAS: The contract, I think, specifies that the state can withdraw from our contract any gas that is to be used within the state to the extent that this gas traded would be used within the state. I think that would be entirely within the state's contractual rights.

SENATOR POLAND: Yes, but if it reduced the methane that you would receive for us to get additional liquids that we needed from the producer owners, would you be willing to allow the State of Alaska to do that?

MR. THOMAS: And you're saying then you are taking gas that is contracted to us --

SENATOR POLAND: Right.

MR. THOMAS: And trading it to others and they will put that

gas in a liquefied form and export it?

SENATOR POLAND: Yes.

MR. THOMAS: No, ma'am, it would not be favorable.

SENATOR RADER: Senator Croft?

SENATOR CROFT: I'd like to ask several questions. First of all it has to do with an Oil and Gas Journal article that came out in the July 21st, 1975 issue under the headline "The Big Scramble for North Slope Gas". I think probably a lot of people at the table have copies of that. It may have come from the House committee members. There is a section there -- they're talking about the way in which North Slope gas had been committed at that time and they say "The figures are based on the assumption that North Slope gas will flow through the proposed Alaska-Canada pipeline route," meaning the Arctic route, "which would move gas directly to both the Midwest and West Coast. However, both producers and purchasers say that if the rival El Paso project wins out", and then they describe the El Paso project, "similar amounts would be made available to midwestern and eastern markets either through physical movement of the gas or through exchanges." Now, isn't it true that whichever route is selected of the three, that basically the various sections of the United States will receive about the same proportion of Alaska gas through one type of arrange-

ment or another?

MR. THOMAS: The gas can be transported throughout the Lower 48, or essential throughout, regardless of the route that it takes coming from the North Slope. Where the gas is ultimately going to go will depend upon who contracts the gas and where their customers are located.

SENATOR CROFT: But are you going to tell your customers in the various areas that you serve that only if the El Paso route wins can they rely on getting any additional gas?

MR. THOMAS: I think that I'd have to tell them that unless the El Paso route, the Trans-Alaska route is certificated, I have no valid contract to get the gas.

SENATOR CROFT: You don't, but there are other people that could get gas to them, is that correct?

MR. THOMAS: There are other people that will be attempting to buy gas and if they sell in the same area, yes, they could get it there also.

SENATOR CROFT: But in the area that you cover, there are other people that sell gas in that area as well, isn't there?

MR. THOMAS: Yes.

SENATOR CROFT: So the real question is whether you sell the gas or another company sells the gas, not whether a portion of the gas is going to go into Alabama or not.

Isn't that basically correct?

MR. THOMAS: Well, I think to my customers it is more important that I get the gas than some competing route from whom they get no supply.

SENATOR CROFT: But there might be other people in the state in that very same area that you service that would prefer another company to have it?

MR. THOMAS: That would be possible, yes.

SENATOR CROFT: Mr. Chairman, are there limits to the political activity that Tenneco can engage in in pursuing this contract? Are there any written prohibitions that you have signed with the state?

MR. THOMAS: I'm not sure that I understand the question, the portion about the written prohibitions. I don't --

SENATOR CROFT: Are there any other agreements that you signed with the state besides this agreement here?

MR. THOMAS: No.

SENATOR CROFT: Under this contract, are you prohibited from doing anything of a political nature? Are there any limitations on your political activity that are contained in these contracts?

MR. CARTER: Yes, whatever legal limitations there are on political activities in state or federal law are incorporated of necessity into that contract. That is a general rule of contract law. It would apply to this one.

MR. THOMAS: And I don't recall the contract itself specifically mentioning political support.

SENATOR CROFT: All right. In furtherance of the contract you have formed a committee though, have you not, you and the other purchasers in the state to coordinate your political activity?

MR. THOMAS: We have met many times to discuss how we are going to coordinate our activities, yes.

SENATOR CROFT: And there is a formal political committee that was organized, was there not, to coordinate those activities?

MR. THOMAS: Not a formal organization, no.

SENATOR CROFT: All right. Have you kept records as to how much has been spent by you already in furtherance of the contract?

MR. THOMAS: No, sir, I have not. I haven't personally, no.

SENATOR CROFT: And has the state asked you to keep any records?

MR. THOMAS: No, sir.

SENATOR CROFT: Do you know offhand how much you have spent to lobby the Alaska Legislature to approve the contracts?

MR. THOMAS: No, sir.

SENATOR CROFT: Could you try and find that information out and supply that to this committee?

MR. THOMAS: Senator, let me address one part and that is

concerning the amounts of money that will be committed in support of the project. What we have undertaken to do is to give maximum support to the furtherance of the Trans-Alaska project. Since we don't know when this contract will be approved, at what stage that the federal decision will be in, I have no projection on what the expenditure might be. Insofar as what is spent to date since we have just gotten started and actually have no formal approval of the agreement yet, I have not been tabulating. It will be some time before I can get that but I'll see what has been collected.

MR. CARTER: Senator Croft, I believe I'm correct, I don't purport to really be fully apprised of your law, but I believe that under your law and under the federal law and under California's law and probably any other, whatever expenses that we would incur in the form of fees for people to assist or in the form of just out of pocket expenses or whatever other costs, we are required to keep and to make available to the relevant governmental body.

SENATOR CROFT: I assume then that it shouldn't take very long to furnish us that information.

MR. THOMAS: Well, because of the timing, I'm not so sure that we have received any statements from any services that might have been rendered to date.

MR. CARTER: But another answer, Senator Croft, is that so

far those expenses have largely consisted of hotel bills and things like that that have been the out of pocket expenses involved and coming up for this hearing, unless you want to include the airplane tickets and the hotel bills for past meetings with representatives of the Royalty Board and of the executive branch.

SENATOR CROFT: Mr. Chairman, could I ask on a different subject. On page twenty-four of the contract and I'm not sure which contract it is but my question relates to Section 11.4, the switching provision with regard to the route. Did Tenneco request the insertion of that provision in the contract?

MR. THOMAS: No, sir, we did not request that. That was a provision that was put into the negotiations by the state and we're in a position of course now that we have executed the contract, we support the contract and obviously we support all the provisions of it, but that was not put in at our request.

SENATOR CROFT: With regard to the question of LNG projects in other areas of the world, Tenneco is involved with an LNG project in Algeria and when you and I discussed a portion of this in my office, we discussed the fact that Tenneco, I think, got in at a later date after El Paso had already started. But that project is behind schedule and I wonder if you could describe the status

of that project?

MR. THOMAS: Our project with the Algerian was signed on October 4th, 1976. It's not related to either of the El Paso projects. The government of Algeria is attempting to contract a substantial portion of their surplus natural gas. Our project involves a billion a day of natural gas in the form of LNG to be delivered to a receiving firm at St. Johns, New Brunswick, about seventy miles north of the main New Brunswick border, to be regasified and to be transported down to our mainline system by a new five hundred mile pipeline from St. John's down to Albany, New York, and thereon into Pennsylvania.

We anticipate -- well, let me go back a step. The application before the Federal Power Commission was filed on the 20th of December of 1976, and before the National Energy Board on the same date. We would expect to have timely FPC approvals which would allow the first gas to flow at the end of 1981 under that project.

SENATOR CROFT: With regard to Sections 3.7 of the contract, those sections which relate to the state taking back a certain amount of gas that's committed to you and your right to obtain additional gas, some people have said that those sections apply -- Sections (a) and (b) of 3.7 apply only to gas at Prudhoe Bay. Is that your interpretation or is it your interpretation that it applies to

any gas that goes through the pipeline, whether it is Prudhoe Bay or the Beaufort Sea or wherever? Is it just Prudhoe Bay gas that you have the future claim on?

MR. THOMAS: Well, what we have contracted for now is certainly Prudhoe Bay gas.

SENATOR CROFT: Right.

MR. THOMAS: To the extent that the state removes it and uses it for intrastate needs, then to the extent that there is additional gas becoming available which is also surplus to the state's needs and comes to market through the same pipeline project then this gas would be made available according to the terms of 3.7(a) and (b).

SENATOR CROFT: Whether it is from Prudhoe Bay or new fields in the vicinity of Prudhoe Bay and that gas is shipped through the pipeline, is that correct?

MR. THOMAS: I believe that is correct, yes.

SENATOR CROFT: It would be the new gas as well?

MR. THOMAS: Yes.

SENATOR CROFT: All right. And one final question, the total amount of gas that you are purchasing from the state, do you know what percentage of the total gas that belongs to the state do you feel you are purchasing?

MR. THOMAS: Our contract specifies that we have up to 1.3 trillion that would be committed to us.

SENATOR CROFT: All right. But my point is the state has

twelve and one-half percent of the reserves there at Prudhoe Bay and obviously the total amount of gas at Prudhoe Bay is larger than the recoverable reserves at Prudhoe Bay.

MR. THOMAS: Yes, sir.

SENATOR CROFT: And my question is, what percentage of the total reserves at Prudhoe Bay and the recoverable reserves at Prudhoe Bay, what portion of the state's share of that figure do you feel that you are purchasing? One hundred percent of the state's recoverable reserve?

MR. THOMAS: No. It is estimated that the state's share of the recoverable reserves at Prudhoe Bay are approximately 3.2 trillion. The total of the contracts to ourselves, El Paso and Southern, total only 2.6 trillion.

SENATOR CROFT: All right. And your figure of 3.2 trillion recoverable, that is based on what percentage of the total the state reserves at Prudhoe Bay? What recovery rate are you using in arriving at that 3.2 trillion cubic feet?

MR. THOMAS: That is assuming a total of 26 trillion by the field which I understand may be a little conservative at this point.

SENATOR CROFT: Okay, but what recovery rate does that assume?

MR. THOMAS: Oh, what deliverability rate?

SENATOR CROFT: What percentage of the reserves at Prudhoe Bay are going to be produced, the gas reserves at Prudhoe

Bay? Forty percent, sixty percent or what? What do you think out of the total gas reserves at Prudhoe Bay, what percent is going to be produced? What is the recovery rate?

MR. THOMAS: Do you mean what percent will be recovered out of the total gas in place?

SENATOR CROFT: This is fine, we can start with that.

MR. THOMAS: I don't recall the percentage. I would defer that question to state oil and gas people. I'm sorry I don't recall all of the calculations of what the recovery factors are for the gas.

SENATOR CROFT: That is all.

SENATOR RADER: Senator Sumner?

SENATOR SUMNER: Mr. Chairman, I need some clarification. Sometimes attorneys place their position on the iceberg theory, ten percent on the questions they ask and nine percent on the questions they don't ask. Senator Croft recently asked you that if your constituents didn't get gas from you, they would get it from somebody else. If we believe or if we subscribe to the theory that legislators, be they on a state level or on a national level, listen to their constituents don't you think that maybe if they were assured by this contract that you would get some gas, they would be more inclined to support your position than they would on the theory that maybe some-

body else would get some gas, that maybe they would get some of it?

MR. THOMAS: I think they would, yes, sir.

MR. CARTER: Let me supplement that just a little and say Tenneco's customers, whether they are just getting gas from Tenneco or whether they might also get some from somebody else, should be influenced by the arguments in favor of the Trans-Alaska route even if they are going to buy from someone else because those arguments basically boil down to the time in which the gas would come to the Lower 48.

SENATOR SUMNER: How much time difference do you see that being?

MR. CARTER: Probably at least two years.

SENATOR SUMNER: You heard the testimony yesterday from the Commissioner. Do you feel that the state could get a higher price for its gas and if not, why not?

MR. THOMAS: Realistically no, I don't think they could. The questioning yesterday concerned whether or not the state had gone out to talk with industrial users in an effort to make a direct sale, which sale the exact price is not controlled by the FPC. When you look at the conditions that apply to such sales such as, first, there are not very many industries that would use the amount of volume or the volume that the state has available,

approximately two hundred fifty to three hundred million. All of these industries would have a relatively low priority in the nine priorities of usage in accordance with the Federal Power Commission table. The duration of the contract between a producer and a direct user is two years and regardless of whether or not the price is controlled by the FPC, the transportation is. So if the FPC feels that the price is out of line, then they wouldn't approve the transportation.

But in any event, the FPC has not allowed any of these that did not have a high priority which is getting in the range of priority two's, priority three's and all of those. We are serving right now only priority one's and when the weather gets warmer then we supply some priority two's. So I don't think the state could get a higher price.

SENATOR SUMNER: During the negotiations with the state, did you ever discuss the possibility of advanced payment sort of thing?

MR. THOMAS: Yes, sir. As a matter of fact our original offer included an advance payment. This advance payment of course was payable over a period of time, was to be recovered over another period of time and in the terms of the proposal were very much different than the terms of the agreements before us.

SENATOR SUMNER: This morning you stated that the Trans-Alaska -- if the Trans-Alaska pipeline is not approved that you stand to lose a lot in the amount of dollars and effort.

MR. THOMAS: Yes, sir.

SENATOR SUMNER: Do you still consider the Alcan route as a viable alternative?

MR. THOMAS: No, sir. I do not consider the Alcan route as a viable proposal. One of the main reasons being in looking at it from the Canadian point of view, as I see the Canadian interest they are the first to ensure that the Canadian users have sufficient future supply to supply their own demand and secondly, to protect the Canadian economy. In looking at the Alcan route, there is no Canadian supply being made available. But with the advent of a major construction project there would be the resulting effect on the Canadian economy. So they get no gas and they get the effects of the construction of a major project which might preclude a second project to get Canadian gas from the Arctic Islands, from the Mackenzie Delta from going forward when that demand was needed by the consuming public in Canada.

SENATOR SUMNER: Do you think that the Canadian routes, either one of them can provide sufficient financing support.

MR. THOMAS: I question this can be done without necessary governmental guarantees on both sides of the border.

SENATOR SUMNER: How do you think the El Paso or the Trans-Alaska line will be selected on its merits after the judge indicated this morning or yesterday -- this morning, maybe, that it was a selfish approach on the part of Alaska to endorse that line?

MR. THOMAS: I think from the standpoint of the FPC the administrative law judge hears a great deal of testimony and the rules of evidence are set out by the Natural Gas Act and there is a prescribed order and a prescribed type of information that is submitted and his decision is rendered in accordance with those rules. We have now gone into a new phase. We are now coming under the order or the prescribed information that is set out by the Alaska Natural Gas Transportation Act. We are now deviating from the characteristic or the normal FPC rules of evidence and procedure.

I think now that there are many other factors that come into play. I think the trial examiner's decision is but one bit of information that will go into the full commission and help them make their decision or their recommendation to the President.

SENATOR SUMNER: Mr. Chairman, my last question. Which of the lines that you are aware of of the three do you think would have the most positive benefit to Alaska, to the guy that isn't privy to the sort of discussions we hear

in here today and something that he wouldn't have to have be explained in detail that you have really got this benefit and you have really got that benefit, which one of the lines would without doubt convince most Alaskans that it is the line they ought to support?

MR. THOMAS: I think without any question it is the Trans-Alaska line. That makes the gas from the North Slope available at tidewater to the general industry and the consuming public in Alaska.

SENATOR SUMNER: Thank you, Mr. Chairman.

SENATOR RADER: Representative Parr?

REP. PARR: I have a number of questions. Mr. Thomas, I believe you said awhile ago that your company served twenty-five states, right?

MR. THOMAS: Yes, sir. I believe twenty-two directly and three indirectly through another company.

REP. PARR: We had some information, I think yesterday, which indicated that really you weren't serving very much of the market in but about seventeen of those states. Your percentage, I think, in one state was something like one percent of the total gas usage in that state and so forth. So is really very realistic to say that you have much of an interest shall we say in all twenty-five?

MR. THOMAS: Well, sir, our entire percentage of the market in each of those states varies from, I think, ninety --

REP. PARR: It was Maine and Vermont, I believe, or Maine and New Hampshire or some such place.

MR. THOMAS: Right. New Hampshire, ninety-eight percent; Maine, eighty-nine; and then we range down to some of the peripheral states to our market area where we supply a minor amount, that is correct.

REP. PARR: Remind you of that old phrase, that is, if Maine goes, so goes Vermont?

MR. THOMAS: Or something like that.

REP. PARR: The second question, Mr. Thomas, is that also according to the information we heard yesterday, that if you got the gas under this contract that amounts to about three and one-half percent of what you are now supplying in your twenty-five state market. Is that roughly accurate as you understand it?

MR. THOMAS: It is around four percent, I believe. A fraction over perhaps.

REP. PARR: I also, if I understood you correctly, you said that you did not at present have any commitment from the producers. You said in answer to a question awhile ago that if you didn't get this contract, you don't have any gas committed to you. In other words, I assume that at present Tenneco does not have a commitment from any of the producers who have the seven-eighths on the North Slope?

MR. THOMAS: That is correct. We have no commitment from any of the producers.

REP. PARR: Okay, then I guess we come to my next question. If I understood you correctly awhile ago, contrary to what most of us had understood, you were not going to go into grass roots constituent lobbying. You were not going to try to influence the average homeowner, who is maybe having trouble getting enough gas to keep his house warm, to write to his Congressman to attempt to influence his Congressman to vote for the El Paso or the Trans-Alaska line. You were going to instead deal with oil and gas people, people in energy offices, people in state government offices of some sort who might be more influential.

MR. THOMAS: I think my answer -- well, I have two parts in response to your question. The first is, on a previous question before I mentioned that we deal with the distributors, they deal with the ultimate consumers, the homeowner, so they have a direct relationship and so we feel that is the method to get to the grass roots.

The second part is that we have a limited amount of time remaining before these decisions are going to be made. I think that the time has come to determine how can we best spend our time, where can we best spend our efforts to get the maximum advantage from it and we feel

that that is the reason we will try this.

REP. PARR: In other words what you are saying is you think that your time is better spent now by dealing with people who would be more directly influential in determining which route is selected?

MR. THOMAS: We'd like to deal with people that have input into the final decision, yes.

REP. PARR: Almost my final question, Mr. Chairman. You said awhile ago that you have not really spent any money or organized really properly yet because the contract had not been ratified and I think we all know that the contract is very general in what it says you will do. Has there been a budget set even though the money is not yet spent or committed, a budgeted amount which will be used to hopefully influence the selection of the Trans-Alaska line?

MR. THOMAS: The problem with setting up a budget in our organization is we didn't know when we were going to start and our concern has been what is our starting date? We know what the ending dates are and a lot of this is a function of retaining people to assist us in the task of the utilization of our own people and the effort to contact the people. The amount of dollars is directly related to the number of days or the number of weeks or months you are involved. We have no prescribed budget

that says that we will spend only X dollars because we didn't know what the starting date was going to be. That has been our problem in anticipating what we would spend. The provisions in the contract specifies that we will support this route. Really the insurance that the state has that we are going to give maximum effort, which we intend to do, is that if we don't win, we don't get any gas from this contract. And also from the standpoint that we feel that we need to give a maximum effort and will, is because we intend to be in business in Alaska for the next twenty to thirty years because, as I mentioned, this is where we see the activity coming in the exploration for major new supplies of reserves. We also have a large multifaceted company that I feel should be more involved in Alaska and the opportunities that I see here. We also feel like, perhaps erroneously, that having a contract with the state will give us a better understanding of what is going on in the field and perhaps a better basis from which the contracts are working interest reserves. We don't know if that is a fact or not.

REP. PARR: Well, you know, Mr. Thomas, the contract simply says that you agree to actively support?

MR. THOMAS: Yes, I know.

REP. PARR: That could be anything from, I suppose, I am not an attorney but I suspect that attorneys will confirm it,

could be anything from writing one letter which costs you thirty-five cents or fifty cents worth of secretarial time plus a postage stamp, to spending a billion dollars. Now, of what you said awhile ago, you do five hundred million dollars of business a year, you have got a seven billion dollar capital business, right?

MR. THOMAS: Seven billion in assets and our capital expenditures are in the range of five hundred million.

REP. PARR: And yet what you are saying is that you have not really committed yourself even with a planning budget at this point because we haven't ratified the contract. It really --

MR. THOMAS: What you are asking me is if I had a dollar figure for the --

REP. PARR: I said how much have you budgeted. All right, do you have a planning budget of X number of dollars? Are you planning to spend a million dollars, one hundred thousand dollars or ten dollars?

MR. THOMAS: My budget is based upon activities and not on the dollars I will spend on the activities. I'm sorry but I can't quote you a number for that that would define that. I'm more concerned about the activities and the efforts that we are going to purport and whatever those costs are then we will underwrite those costs.

REP. PARR: Thank you.

SENATOR RADER: Mr. Hayes?

REP. HAYES: Thank you, Senator Rader. In addition to finding gas for your customers, I presume you have a profit motivation.

MR. THOMAS: Yes, sir.

REP. HAYES: And I'm wondering if you have projected what the profitability might be in dollars assuming you receive this 1.3 trillion cubic feet over some period of time? I'm sure that you must have projected some profitability. I'm just wondering if you could give me some idea of what that might be in dollars?

MR. THOMAS: In a regulated company we make no profit on buying and selling the gas. We sell it for the same price that we buy it. We get our expenses recovered from our own pipeline system. We depreciate our system and we earn a return on the amount of money we have invested in our system. In a regulated entity the amount you earn is strictly based on your rate base, the amount you have in facilities and you recover that regardless of the volume of gas that flows through it. So, to the extent that any amount of gas coming into our system we add no facilities. Our recovery is just the same as what it would have been with a greater or lower volume of gas.

REP. HAYES: So there really is no profit incentive in this

particular deal?

MR. THOMAS: What we are doing is ensuring that we are going to be in business over a longer period of time and we are continuing to supply our customers needs. And, there is a definite advantage in staying in business over the long term.

REP. HAYES: Just so I understand it, there is no anticipated profit though other than just --

MR. THOMAS: We do not mark up this gas, no. We sell it for exactly what we buy it for plus the transportation charge.

SENATOR RADER: I take it also though it might mean that you would not have to abandon facilities because of a shortage of gas and curtailment.

MR. THOMAS: Yes, sir, that could easily be the case. And, of course, we see in our system the same as you see in a national supply, a decline in availability from our traditional sources and there will come a time when not only ourselves, but other companies, if they can't get non-traditional supply from other areas, they will have to start abandoning parts of their system. That reduces rate base, will reduce the earnings that you had.

SENATOR RADER: It is sort of a reduction of losses theory instead of a maximization of profits, I suppose.

MR. THOMAS: Yes, sir. That is just the basis of regulated companies profitability.

SENATOR RADER: Representative Gruening?

REP. GRUENING: If the Governor switches the support of the state to the Alcan route and you agree to go along with that, what, if anything, have you lost in terms of profit?

MR. THOMAS: The amount of money that we would spend in support of a Trans-Alaska route, if that route were not certificated, we would not be able to recover those costs.

REP. GRUENING: Well, we haven't been able to determine what amount that is going to be. Do you have any idea?

MR. THOMAS: I don't know what amount that is going to be because I don't know number one, when the Governor would switch, if he would switch or when this agreement will be approved but it would take all of those items and then you could project.

REP. GRUENING: But other than that amount whatever that amount be, be it ten or a billion dollars, other than that on including in the rate base you don't see any difference in your profit if the Alcan route is chosen and you get the gas.

MR. THOMAS: Well, whatever that amount of money that you would spend in support of a Trans-Alaska route, that would not be recoverable. That would come out of our earnings and would be a net loss to us. If your question

is could we get the gas to our customers if it went through an Alcan route, yes, we could get the gas to our customers as could most anyone else.

REP. GRUENING: That wasn't my question.

MR. CARTER: Let me supplement that answer a little bit, Representative Gruening. Another thing lost is the time, effort, manpower, in trying to get gas supply. Tenneco is no different than any other person in that there is only so many things you can do with the people and the time that you have got available. And if you spend your time and effort trying to get a Trans-Alaska project certificated and that does not succeed then you have foregone other opportunities to be placing those bets and if you believe that a switch to the Alcan route along with the Governor, if he should do that, is not a very viable alternative for getting gas then you don't sit back and say "I can rest on my oars and later switch to Alcan" because that won't get you anything.

REP. GRUENING: Well, the point of my question was if you rest on your oars and Alcan is chosen and the state switches its support to Alcan and you choose to go with that, what you are telling me is you lose nothing in the profit that you make in transmitting the gas. Is that it? Wherever you make your profit you haven't lost anything, is that correct?

MR. THOMAS: Because unless you add facilities you are going to make that same amount anyway from the volume you were transmitting otherwise.

MR. CARTER: If Alcan is selected, that is another premise of your statement -- that Alcan has to be certificated and built or else, yes, you will lose even if you switched with the Governor.

REP. GRUENING: Now as I understand it -- may I follow up?

SENATOR RADER: Certainly.

REP. GRUENING: Your customers are distributors and not home-owners?

MR. THOMAS: This is correct. We do not sell to the ultimate consumer.

REP. GRUENING: Now, are these the people you are talking about bringing on to help you with the lobbying efforts?

MR. THOMAS: No, these are the people that we will be talking to in an effort to present the merits of the situation.

REP. GRUENING: Well why do you have to talk to them? In other words if they understand you don't get the gas, I mean isn't that self evident, what else do you have to say to them other than the facts, you don't get the gas if the El Paso route isn't chosen?

MR. THOMAS: Well, it is easy for those of us who have been working on the problem as we all have for eighteen months to two years to know all of the pros and cons of the

various competing routes. It is surprising when you talk to different areas in the Lower 48 that they seem generally unaware of what the merits are for the individual routes and it's not enough, I don't think, to go to our customers and say, "Look, this way I get the gas and that way I don't." That is not going to be sufficient. We are going to have to sit down and say here are all the reasons why, here is the reason why that we will get the gas. Not only will we get it but we will get it faster through the Trans-Alaska route. Here are the reasons we feel that is the case, here is the way that gas will move, here are approximate time schedules, here is how that will fit our availability of gas to you. All of these things need to be discussed, not just the fact that one way we get it and one way we don't.

MR. CARTER: And the time frame is that I think it is by July 1, the states are to comment to the President on what they favor for a delivery system for Prudhoe Bay gas and if we are not out in the field trying to inform the responsible state officials of what the ingredients of that decision should be, then you won't have any state input to the President.

My own view is that the President is going to make this decision on what he sees to be the merits. And if he receives no comments from states to the effect

that they believe the Trans-Alaska system will deliver gas to the Lower 48 faster than these others, and if he doesn't receive comments reflecting that the states know they will get the gas in their states regardless of which system is built, then the President is going to continue to be bombarded with views to the effect that the Midwest won't get gas unless the Trans-Alaska -- of I mean the Trans-Canada pipeline is built. And he just won't get the benefit of input from governors and states in our market area or in the market area of other companies unless somebody goes out and does the ground-work with those state officials.

REP. GRUENING: Okay, in that regard, what are you doing between now and July 1st then?

MR. THOMAS: It depends on when the contract is.

REP. GRUENING: I have a real problem. If it is signed today what would you do, and approved today?

MR. THOMAS: What we are doing is with the people that we have retained we are setting out who are the responsible people to contact, what type of people should we have from our staff to make the contacts or from the staff of others, and what is the best timing to do in in relation to their needs and our needs and theirs to have the information and ours to transmit it, not only to them but to other people. That is what we are in the

process of doing now.

MR. CARTER: An example would be the letter that has been attached as an exhibit that has been made available to all of the concerned California agencies and follow-up discussions with those agencies about the substance of the views expressed in that letter are anticipated. Now that kind of detailed work with about six or seven responsible agencies in several states is a major undertaking and it requires knowledgeable people spending a lot of time.

REP. GRUENING: You would prepare, for example, a document like this one and submit it to us by Tenneco?

MR. THOMAS: We intend to have fact sheets, data sheets, probably not like that. We need one that we can revise more easily as new time deadlines pass and new information becomes available. That was made for a specific purpose which was to supply the Royalty Board and members of the legislature of what advances could be available to Tenneco in supporting a Trans-Alaska route. They probably would not be exactly in that form.

MR. CARTER: That document doesn't even really address the merits of one of the routes versus the other ones.

MR. THOMAS: Because we knew we all believed in just one so that wasn't --

REP. GRUENING: This is part of the lobbying effort towards

the State of Alaska then?

MR. THOMAS: Well, I think that was a part of the effort of convincing the Royalty Board that we were one of the parties that they should contract to.

SENATOR RADER: Senator Colletta?

SENATOR COLLETTA: Good. Yes, Mr. Chairman. Mr. Thomas, there has been a great deal of discussion now on the magnitude of the effort that you are going to put forth on seeing that the Trans-Alaska route is selected. Would it be correct to assume that this transaction for Tenneco is no different than any other business proposal and that you will in fact commit up to what is reasonable to make certain that you do acquire this percentage of gas? What I really want you to say is that that effort will be whatever is required within reason, because certainly you must reach a point where a further expenditure would no longer be in your benefit to pursue something that you couldn't make anything for thereby eliminating the possibility that you will head your bet on the one line to hold back support for maybe an alternate route. I mean that just wouldn't be good business sense, would it?

MR. THOMAS: Why it certainly wouldn't be good business sense from us because we don't believe there is an alternate route to the Trans-Alaska route that serves the best interest of Canada, the Lower 48, the State of Alaska and

certainly as far as this agreement is concerned, to our own best interest. So, we feel that this is the route that is in the best interest of all so certainly we will expend whatever is required to give our support to the line within the reason that you mentioned. And, that is where we will get our benefit.

SENATOR RADER: Senator Huber was asking for the floor a moment ago.

SENATOR HUBER: I'll pass to somebody else for the moment but I want to talk to them before they are finished.

SENATOR RADER: We have difficulty here, the fellows on this side of the room are suffocating and the people on this side are freezing so I suppose we will alternately open the door until they freeze and then shut it until they suffocate and then we will be all happy.

SENATOR HUBER: Mr. Chairman, may I suggest that being I don't have a coat on when I shiver you close the door?

SENATOR RADER: We'll just try to work it out somewhat cooperatively so that we can all walk out of here -- we all die together or live together, one way or the other. Representative Meekins. I would like to so far as possible, recognize first those Senators who have not had an opportunity to examine particular witnesses, recognizing that when a line of questions is going it may be more convenient to keep that particular line going.

But to the extent that other Senators and Representatives are trying -- try to spread the questioning as reasonably as we can. So, it would be better if you didn't ask for recognition the second time as long as you know that other people are asking for recognition the first time and I'm not keeping track of it. Representative Meekins?

REP. MEEKINS: Thank you, Mr. Chairman. I'm sort of interested in the same line of attack -- well, not attack but sort of questions. It seems to me that contracts are all about promises or performance and sanctions, that if that performance isn't given. We have been told that one of the primary things that we are receiving in this contract is some sort of an advantage or some sort of a gain in the possibility that the El Paso line will finally be approved and yet we are all stumbling around, I think, in trying to find out exactly how we can quantify some regards what we are going to be receiving. That is what is stimulating the questions of what the budget is going to be and those type of things and I think that is probably fair. What I'm wondering is can you, is there some monetary incentive for you -- can you, for instance, pass through onto your rate base the costs that you might be incurring for this effort if the El Paso line is finally given approval. That would seem to me that that would be an incentive that if you can include those in your

rate base if El Paso got approval and you couldn't if Alcan did, that that would be some sort of an incentive and we could have something substantial to look to.

MR. THOMAS: Essentially that is the way it goes in securing new gas supply for a regulated company. If you are successful they say "fine", then you have secured additional supply for your customers so they can share in the cost. But if you are unsuccessful, then obviously you shouldn't have embarked on that course so your stockholders -- or you have to reduce your profit to that extent. That is your cost, it is not passed on to the customer. In general that is the way it goes. So what you say is correct, that is real incentive and it is an incentive to make sure that when you embark on a program you feel like that you can be successful. And of course, we looked very carefully at this when we started because we had a choice of all of the routes because we were uncommitted. So, before committing to the terms of this agreement we had to answer to ourselves, is there enough gas, can we win? And we analyzed and answered, we can.

REP. MEEKINS: Thank you. Thank you, Mr. Chairman.

SENATOR RADER: We have been at this approximately an hour. I think this would be a good time for a ten minute break and we will try to reconvene promptly in ten minutes.

(Whereupon the hearing was recessed at

2:30 p.m. and reconvened at 2:45 p.m.)

SENATOR RADER: Because of the fact that the capacity of this room is exceeded by the number of people in it, we adopted the no smoking rule and some persons who were not here yesterday when that was announced perhaps were not aware of that. We are asking you not to smoke in the committee room here during deliberations and probably even during the recesses if you would go into the lobby so that this area has a chance to clear.

There has been questions as to whether or not we are going to go into the night. You know we have hearings scheduled for tomorrow to again commence at 11:00 o'clock and we plan on operating this afternoon I would think until 5:30 or a convenient breaking time depending upon how it breaks the witnesses. I would prefer that we not schedule a meeting this evening and hope that we can do all of our work tomorrow, then make the decision tomorrow depending on how close we are to being through, as to whether or not we should go over another day or whether or not we should go into a night session tomorrow evening. So, I think that we will plan on no evening session today and tomorrow at around noon perhaps we will try to judge our time at that time and our witness schedule.

We have one other problem and that is Mr. Smith

of Southern has a commitment and will have to leave in the morning. We will interrupt Tenneco's testimony after the next break if you are still testifying at that time, with your permission and with the permission of the committee, to take Mr. Smith of Southern out of sequence so that he can leave tomorrow. That would leave us perhaps an hour to an hour and one-half for Mr. Smith. Is there any objection to following that procedure by any committee members? All right, that will be the plan then and we can adjust as we go along.

I understand that you are having difficulty in hearing. Perhaps one way that we could solve that and you can communicate that is if you are in the back of the room and you cannot hear, if you will hold up your hand or something, perhaps I will see it and I can advise the Senator or the witness to speak up, whoever is having difficulty. But as a general admonition, we don't have a system here other than the mechanical one of our vocal chords so everybody speak up as best they can.

I believe we are open for further questions on the Tenneco witnesses.

SENATOR CROFT: Mr. Chairman?

SENATOR RADER: Senator Croft?

SENATOR CROFT: I have one that relates to the question with regard to your building into your rate base the cost that

you might incur in developing public support for the El Paso proposal and as I understood your answer it was that if the El Paso proposal wins, you can put it in the rate base, if the El Paso proposal doesn't win, that you can't put it in a rate base. It's only if it is basically successful and you used that as an argument that you have a real incentive to go with the El Paso proposal. Isn't it really an incentive to go with the winner and that if the state shifts its position from El Paso to some other position, it is in your best interest to go with the system that is likely to win rather than to stick with the El Paso system at all cost?

MR. THOMAS: As I understand the cost figures and generally speaking you are able to put into your cost the successful securing of new supply. To the extent that you expended money on an unsuccessful route, then that would not be allowed regardless of whether you switched on to a new one later on. There would be a clear distinction, since these are competing routes there would be a clear distinction of these costs so I don't see that it would make all that much difference.

MR. CARTER: Let me supplement that a little too, Senator. Apart from the theoretical question, in planning what you are going to do you have to think hard about probability and our sincere view is for the reasons expressed in the

letter to the State of California, and for the reasons outlined in the administrative law judge's opinion, we don't see getting gas through switching to the Alcan route as a way that has any significant probability of getting gas for Tenneco. So there is no incentive to sit back and wait to switch to that route because it is not going to wind up accomplishing the purposes that bring us here.

SENATOR CROFT: The Alcan route or the Arctic route would not produce any gas for Tenneco if the state switched its position to support one or the other of those routes?

MR. CARTER: If it won, only if it winds up being designated by the President as the method for delivering gas and we don't think there is a significant possibility that the President is going to designate the Alcan route.

SENATOR CROFT: And you do think there is a significant possibility he will designate either Arctic or El Paso?

MR. CARTER: Yes.

SENATOR CROFT: Equal chance on both?

MR. THOMAS: Well, obviously we feel that if we can get out and get our work done, we have a better chance to get the Trans-Alaska route because we feel it is in the best interest of the contract.

SENATOR CROFT: Okay. Your major concern is to make sure that your purchasers have this additional gas, is that correct, that is the reason you are in this to extend,

as I think you answered Representative Hayes, to extend the life of your operations and your customers operation?

MR. THOMAS: That is right, that we transport it through our system to our customers.

SENATOR CROFT: There isn't any question but what if the state switched to another route that you thought might win, that you would go along with the state in order to get the gas for the customers, is there?

MR. THOMAS: Yes, there is a question because we spend a lot of time in the country in support of many different supplemental projects and all of these are important to us and we can't support, in this case as an example, the Trans-Alaska route up to day twenty and do our best to convey all of the issues and the merits of the cause and then on day twenty-one go in and tell the same people all that we have told you for the first twenty days, forget it, we are now off on a new route. I think we would destroy our credibility, which not only affects this project but many others that we are working on. So, I see a very definite problem to us switching the route simply because the state might elect to switch. I think there would be a very serious question of whether or not we would be able to.

SENATOR CROFT: You would rather go back and tell your purchasers you are not going to get anymore gas because we

decided not to switch, than to switch if you thought that it might produce the gas?

MR. THOMAS: I think I would have to tell my customers what all the fact situation was at the time the state switched and what our reasoning was at the time to not support, if in fact that were the case. It would be difficult for me to anticipate simply because I don't think the Alcan route is a viable route and I can't see the possibility of the state switching to that route. Neither do I see the state switching to support a gas Arctic route. So I don't see much likelihood of this ever occurring.

SENATOR CROFT: All right. In that regard you indicated July 1, 1977 was the date in which the states started making their comments to the President.

MR. THOMAS: It must be concluded by July 1.

SENATOR CROFT: All right. So that -- are you saying that any switching that occurs after July 1, 1977 probably you wouldn't play any role in what happens. If the state switches after that time, you are sort of out of the picture by then, is that correct?

MR. THOMAS: I say that we may be out of the picture just a very few days after this contract is executed. In fact, we may be out of the picture already because we have already made our views known in several different places as to our support of a Trans-Alaska route and the reasoning

behind it. It might even be difficult for us to switch today. We would have to look very carefully at doing it. Again, I think these are theoretical questions because I don't see any reason for the state to switch.

SENATOR CROFT: So that anybody that says if the state switches it is going to carry Tenneco with them is simply mistaken?

MR. THOMAS: I think that they could have a real serious problem on their hands.

SENATOR CROFT: Thank you.

SENATOR RADER: Senator Sumner?

SENATOR SUMNER: I have a dilemma. Yesterday in the testimony before the committee we talked about integrity, today we are talking about integrity. If the administration supporting this contract decide, dedicated to El Paso as they are, decides that it is the best interest for Alaskans to sometime in the future when they decide or it is determined that the El Paso line is no longer feasible, if the state then switched its support to the Alcan line, would you see that as any violation of the state's integrity? And, would you if you thought at that time, sometimes we get smarter a month later, if you found that the Alcan line had a possibility and in your view it served to benefit your clients and your customers more to support that line, would you then switch and not consider that a violation of your integrity?

MR. THOMAS: I find that difficult to answer. I guess I am looking at contractual terms where the state has the right to switch, they have reserved that right. I guess it is difficult for me to say that the state would be guilty of any violation of integrity if they did what they have allowed themselves to do under the terms of the contract and if they felt that that was indeed in the best interest of the population.

Now, from our point of view I guess because the state switches we don't have the contractual obligation to switch with them. At that time we get to look and say "all right, what are the facts, what is the situation at this time, what have we done, what are our feelings? Do we feel that that is a good switch, can we honestly support it?" This I can see as integrity, whether or not we would switch contrary to what we have said before.

SENATOR SUMNER: But you aren't at this time preempting the option of switching to a second line?

MR. THOMAS: The contract allows us to switch.

SENATOR SUMNER: Thank you, Mr. Chairman.

MR. CARTER: What we are doing is telling you that's not an option that means very much and that there would be a lot of real life problems for the company to exercise the option.

SENATOR SUMNER: And conversely you are stating at this time

that you are not committing to switch but that is essentially what your position is and that your options are open just like the state's options are open?

MR. CARTER: We don't think they are as open as the state's options may be because Tenneco has many things up before people that make decisions on these kind of energy questions and whether they get the results they want depends to a great deal on whether people believe their testimony. And so you can't really be in a position of telling them different things on different days about the same project and hope to maintain the kind of credibility that is necessary to be believed.

SENATOR SUMNER: If the Alcan project lost -- let me ask you this. I asked you this morning if it was a viable alternative and you don't think it is at this time?

MR. THOMAS: No.

SENATOR SUMNER: Is there any real evidence to support that basis or that fact?

MR. THOMAS: Well, I think the trial examiner, just in my brief reading of his press release, said there was no chance for a certificate.

SENATOR SUMNER: But, of course, in the same brief he stated that his support largely was for --

MR. THOMAS: Was for Gas Arctic. He also said the Trans-Alaska route was a viable route, he did not say the same

thing on Alcan.

REP. GRUENING: Mr. Chairman, I don't have a question but if I could get from the court reporter the log numbers there of this last dialogue, the last couple minutes so we could have that transcribed ahead of time if we want it. Just get an idea of where we are at. That is all I have.

SENATOR RADER: Fine. Representative Hayes?

REP. HAYES: Thank you, Senator Rader. I would like to pursue a line of questioning that I started yesterday and I lightly touched on today and that is whether in selling our royalcy gas for the FPC regulated price plus lobbying efforts, we have in doing so, given up the opportunity of getting some front-end money, better known as a premium. Yesterday we had a little bit of this in questioning Commissioner Martin. I believe he testified that it wasn't possible to get a premium because of a recent ruling that said the premium couldn't be included in the rate structure. Then I got on to a question about maybe it was possible to get the gas companies as an incentive to have the opportunity to purchase the gas to give up some of their profit in the form of a premium and I believe that the testimony was that it probably wouldn't have been very much money. Whatever very much money is, I don't know, but

anyway, as I understood from my questions a few minutes ago that the way the gas company recovers or makes a profit is through a recovery of cost plus profit for the transmission system. And during the recess I talked to Mr. Thomas about what kind of daily capacity they had in their system and I believe he gave me a figure of about 3.6 billion cubic feet per day and I divided that into the 1.3 trillion which gives you three hundred sixty-one days or about a year's operation. And I know that is not the way to figure the value but anyway it is a horseback way of saying that maybe it might allow them, if they are successful in other areas to stay in business, to recover -- Let's see, the negative way of making money, reduce their losses for a year longer so that we could put a dollar value on that. I mean there could be some sort of a quantity put on that.

And then the other question that I asked him was in view of that was there a possibility of the state collecting a premium and I believe he mentioned and I believe there was testimony on that earlier today that initially they had offered the state some premium but it was in the form of an advance payment which would be returned over a period of time so the net benefit would just be the money now instead of later. I did ask him what he thought about the possibility of a premium in

the form of deferred profit and the answer -- I'm bringing this out in testimony so I can just get your confirmation and get it on the record, that that was a possibility I suppose if you would agree to it, but it would require FPC approval inasmuch as they do have some concern about the profitability and viability of this type of corporation as it affects stockholders.

Now just so that I can put that aspect to rest, is that essentially what --

MR. THOMAS: If I might add one more thing. Any money paid to a producer is really in the form of a price for gas. The FPC now regulates the price so they would not allow whatever you might call it, an advance payment, a front-end bonus, anything that would in effect have you paying more gas than a price that they allow to be paid at the wellhead. So, they very definitely would have control and the contract would have to be approved and they would reject it.

SENATOR HAYES: They would reject you paying the state part of your profit?

MR. THOMAS: Yes, because that in effect is paying more for gas than what they say the wellhead price should be.

SENATOR HAYES: If you don't pass it on to the consumer though why you wouldn't think -- it wouldn't seem logical they would want to enter into a business transaction as long

as it didn't affect the consumer.

MR. THOMAS: Sometimes we think they do a lot of things that don't appear too logical.

MR. CARTER: Well one consideration there is that the company stay in business so that the consumers can continue to get service. The American public is not served if you get a bunch of dummies running the company that spent to make it go bankrupt and then the consumers no longer have gas. So that is the argument --

MR. THOMAS: That is the other argument that he was pointing out.

REP. HAYES: Okay, but if we are talking about whatever you recover in one year for the use of your facilities and the Commissioner yesterday said, "I don't have any idea what that is, maybe that's a billion dollars, maybe it's ten billion dollars and if the state could get a little bit of that", how much is a little bit, is that one hundred million or one million? We are just trying to get an idea of what we might be foregoing for the opportunity of having the lobby effort. We are just trying to put a price on it which I am not able to do apparently. If someone else can think of a different way to approach it --

SENATOR RADER: To the extent possible, I hope that we will all keep our comments in the nature of questions rather

than an exposition of our individual positions. I know I am tempted to do that at times but I appreciate the fact that you were trying to get a conversation that was not on the record on the record. But to the extent that we are discussing and convincing each other here, I hope we will keep that to a minimum because we will never, never conclude these hearings and we will also have that opportunity to do that on the floor of the House and on the floor of the Senate in other committee meetings. And so let's try to pick the brains of our witnesses here as far as we can and not each others to the extent that that is pretty slim pickings perhaps.

Senator Huber?

SENATOR HUBER: I waited a little bit here, most of the things I had in mind got asked, Mr. Chairman, which makes me happy for a change. There has been a couple other questions raised, however. The question that Mr. Hayes just put in regard to adding front-end payments --

SENATOR RADER: Would you speak up, Senator? We are having difficulty hearing you.

SENATOR HUBER: I sure will. The question that was asked by Mr. Hayes in regard to adding in front-end payments, would this be academic if the Congress does indeed de-regulate the gas? If they deregulate it, you would be able to add it in then wouldn't you?

MR. THOMAS: Senator, I think you have to come to the point that first when you say deregulation -- you and I might both say deregulation but we wouldn't really know what the other is talking about. It would depend upon what is the form of deregulation, is that only for new gas or old gas, what is Prudhoe Bay gas?

I guess what you are saying is in the event there was completely no regulation, there were no restrictions on what you could pay for gas, then would anyone be interested in making a front-end payment?

SENATOR HUBER: What you are telling us is that we're not likely to get an uncomplicated decision on deregulation?

MR. THOMAS: I do not believe it will be uncomplicated.

SENATOR HUBER: My next question is relatively simple. You went into yesterday's testimony and this is because of it. We were talking about your customers and yesterday we also talked about contracts to industrial users and you tried to clarify that awhile ago. And I think the question that needs to be asked is, these distributors that you sell to, is there cases where those distributors have you or somebody else transport the gas for them where they buy directly from producers?

MR. THOMAS: Not the distributors. The distributors cannot do it, an individual industry or corporation can, that is the ultimate user. Then they would contract directly

with the producer for whatever volume they have but for a maximum of two years. Then they would make arrangements with us and with the distributor to transport the gas to them.

SENATOR HUBER: But a distributor is precluded in the interstate market from becoming a customer of a producer?

MR. THOMAS: Yes.

SENATOR HUBER: Okay, that helped me there. Mr. Chairman, my next question if you will bear with me on it, goes back to -- I interpreted something that you said earlier this morning, Mr. Thomas, if I can steal a term from an old friend who will recognize it. But originally if the state had chosen any one of the three proposed routes, they would be can do routes as far as you were concerned in being able to get the gas to you. That was the note I made.

MR. THOMAS: Insofar as physically being able to get gas through any of the three systems to our customers in our market place, we could have done so, yes.

SENATOR HUBER: Okay. And then I also understood you to say that there was not a deal currently -- there was not a deal right now between you and any producer from the Prudhoe Bay area to have the gas.

MR. THOMAS: We have no contract with any of the producers.

SENATOR HUBER: Do you have anything on the back burner with

any of the Prudhoe Bay people set aside?

MR. THOMAS: Well, we are in the gas buying business and we try to maintain contact with everybody that has gas available that is not already committed. We have no commitment from them, from any of the producers that says wait another thirty days and we will contract with you.

SENATOR HUBER: Here is how I framed the question a little bit earlier. I realize that I'm getting into a legal area and I might be getting into an area that you may not want to answer. But have you, Tenneco, any negotiations underway or on the back burner from any of the producers either in the Prudhoe Bay or the Mackenzie Delta area or alo ; the proposed route of the Arctic Gas proposals?

MR. THOMAS: Senator, that is a pretty broad question. I guess I could answer it this way, somewhat like I did before. We are in the gas buying business and we make it our business to contact and maintain conversations with anyone that has gas available. Now we have, I'm sure, talked to every working interest owner in Prudhoe Bay about the possibility of contracting their gas. I don't think that we have talked to any of the people in Mackenzie Delta but I can't be sure about that. I guess my answer is that we try to make it our business to talk to everyone and I have no contracts in hand, I have no

promises that I am going to have a contract and I guess that is about the extent that I could go into that. As a policy we don't discuss who we are negotiating with or what the terms of the negotiations are at the time.

SENATOR HUBER: Mr. Chairman, I certainly thank Mr. Thomas for being so candid and I would like to ask one more thing. If you get the information that Mr. Croft asked about costs up to now in getting a state contract that you would certainly include that in that, at least I would want you to include in it your costs from the time when about two years ago when I first noted you coming to our meetings with the idea of selling the gas. I would want to see that.

MR. THOMAS: That may take more time to dig up.

SENATOR RADER: Any further questions?

SENATOR HUBER: Thank you very much.

REP. GRUENING: Mr. Carpenter had his hand up.

SENATOR RADER: Mr. Carpenter?

REP. CARPENTER: Mr. Thomas, if eventually the El Paso route is certificated, does Tenneco have any plans to acquire an equity position in that pipeline?

MR. THOMAS: We have not committed ourselves to taking an equity position in the pipeline. My own personal views are that it is going to probably take all the people who buy any of the gas on the North Slope to make the

project go. Everybody is going to have to participate. It's too big of a project for any one company or any three companies. It is going to take many more but that is the next stage once we determine what the job is. But, we have made no commitments at this time.

REP. CARPENTER: Earlier in your testimony this afternoon in response to --

SENATOR RADER: A little bit louder, Mr. Carpenter.

REP. CARPENTER: Earlier in your testimony this afternoon in response to questions from Senator Sumner you said -- you were enumerating the reasons why the all-Alaskan route is superior and paraphrasing you perhaps weakly here, you said the all-Alaskan route makes it possible for state royalty gas to be available to Alaskans at tidewater. What is the significance of the phrase "at tidewater"?

MR. THOMAS: I guess the significant phrase is that to compete with a product that is made from natural gas, whether it be petrochemicals or whether it is LNG in a direct form, any other product using that as a feed stock, transportation is probably the biggest single element of competition from that point on. The first point would be the price of the feed stock and the second is what does it cost to transport it from that point to wherever your market is. Being at tidewater gives you access to the lowest cost transportation to then transport the product to wherever you might want

to sell it and I think that most anywhere in the world that is one of the essential items -- is low cost transportation and among the lowest is transport by ship by sea.

MR. CARTER: But that does not exclude the gas being available anywhere along the Trans-Alaska line for any in-state use.

MR. THOMAS: Oh, no, not at all.

REP. CARPENTER: This is my point, nothing that we are looking at excludes a camp at Fairbanks.

MR. THOMAS: No, sir.

SENATOR RADER: Would that conclude your questions, Mr. Carpenter? Mr. Chatterton, I believe you had --

REP. CHATTERTON: Yes, Mr. Chairman, I will have a series of questions in the arena of daily deliverability, gas reserves, things like that. I would be happy to yield to anyone that has questions before we get into this new arena.

SENATOR RADER: Senator Poland?

SENATOR POLAND: Mr. Chairman, I just have one very brief question I would like to ask Mr. Thomas.

SENATOR RADER: Fine.

SENATOR POLAND: I understand that you sell to distributors. Do you have any idea of the percentage of customers of your distributors that are homeowners and those that are

industrial?

MR. THOMAS: I believe that the approximate break out we have is between the FPC priority one and priority two. And priority one is residential and small commercial, so that would be the nearest number we would have and forty-four percent of our gas on the average day goes to that priority. Forty-two percent goes to priority two and the remainder goes to the higher priority. I should point out that right now, in the wintertime, all of our gas is going into priority one because their demand has increased and if their demand increases you automatically shut off the next higher priorities.

So we are supplying, to my knowledge at least as of a few days ago, we were supplying only priorty one. We did not have sufficient gas for any of the higher priorities.

SENATOR POLAND: Thank you.

SENATOR RADER: Any other questions before we go to Mr. Chatterton's line of inquiry? Senator Huber?

SENATOR HUBER: We might clarify one thing from which I'm pretty sure I have got the answer but from some of the questions around here I am not sure that it is common. The pipeline gas which you purchase and transport is only the two top factions, C-1 and C-2, ethane and methane or methane and ethane, isn't that correct?

MR. THOMAS: It is essentially methane because most of the liquids have been extracted or are extracted at different points.

SENATOR HUBER: And the ethane also can be used, it can be transported?

MR. THOMAS: Yes, in with the methane, right.

SENATOR HUBER: But the other factions -- I mean we seem to have some confusion a roundabout where they can take out the liquefactions and so forth. They can't be transported in the type of gas lines that are proposed, isn't that correct?

MR. THOMAS: Well, propanes and butanes can be injected into the system and transported in with the methane and extracted at other points.

SENATOR HUBER: In a high pressured gas line?

MR. THOMAS: I can't define what the carrying capacity is of the different pressures in the line. Frankly I am not conversant with that, I don't know. But I know that in many areas where there is no market for propane and butane you merely reinject in back into the methane supply and it enriches the gas, it makes for a higher BTU count, you just don't sell the liquids. And since you are above one thousand you are paid for -- or in most contracts you are paid for the BTU content, that's the value that is received.

SENATOR HUBER: Well, I had understood that in a high pressure line you can't transmit them because they become liquids and the line is made to handle gaseous material rather than liquid material.

MR. THOMAS: Senator, I can't answer that. I can't address that. I just don't know the answer.

SENATOR HUBER: Okay, I'll get the answer from someone else.

SENATOR RADER: Representative Gruening?

REP. GRUENING: Mr. Thomas, can you tell us what advantage would you have as a part owner of our royalty gas and as a sponsor of the successful pipeline route in obtaining other Prudhoe Bay gas or North Slope gas?

MR. THOMAS: I think as I have mentioned before we hoped that that might give us an advantage. I don't know if it would or not. I guess from my own view that when you are involved in a project and you have an active interest, you have an ownership or you have a contract, you tend to stay up with it more. You stay up-to-date on what are the new developments, what are the new discoveries, what is the activity level, what is going on with the other people within the project. You don't have that where you are on the outside and you have no involvement in it, contractual involvement, financial involvement. And I think from that standpoint alone we would be more aware, and we would be more active perhaps. That would be my

only view. Certainly there is nothing tangible, that is purely a subjective one, perhaps that is a wish on my part that it would give us a better competitive aid.

REP. GRUENING: Is there a financing aspect to that that works in your benefit as well?

MR. THOMAS: A financing aspect?

REP. GRUENING: Financing the pipeline. In other words by having that one portion the tendency in order to put the project together would be to -- and the producers, of course, would want the project to be put together in the best manner possible and the tendency to have other commitments of gas could accrue to your benefit.

MR. THOMAS: I think you could probably argue that either way. The working interest owners -- as I understand your question, your question is, as people are contracted gas then they would be more likely to take an equity position in the pipeline and therefore is it more advantageous to contract more gas to a company or to spread the gas out in smaller packages to a bunch of companies. I think that it is going to take a lot of companies with financial strength and credibility in the financial market to ensure that any of the systems are financed and built.

Certainly we think it can be done but not by any one company or two companies. It is going to take several. So from the standpoint that we feel with our financial

strength that we should be contracted more and the working interest owners should contract us more, I don't know if they would view that the same way or not. I think they could look at it either way.

SENATOR RADER: Any more questions along this line before we go to Representative Chatterton's line of questioning. Representative, why don't you pursue your line?

REP. CHATTERTON: Thank you very much, Mr. Chairman. Mr. Thomas, earlier today you made a comment about entering into an agreement involving LNG in October of '76 and I think you referred to Algeria. I think there was a little more dialogue on it. Who did you enter into the contract with, Sonatrach?

MR. THOMAS: Yes, sir, Sonatrach.

REP. CHATTERTON: Okay. Now for the liquefaction will Algeria be doing the processing of this?

MR. THOMAS: No, that is a completely separate process.

REP. CHATTERTON: Completely separate, thank you very much. You also earlier this morning said something about -- or today anyway, said something about you had done quite a bit of study and so forth and so on before you entered in this contract with the State of Alaska on royalty gas and part of your consideration was the terms -- I think, using your very term, sufficient reserves available. Am I to gather that you feel the 1.3 trillion cubic feet or

the 2.6 trillion cubic feet is sufficient reserves available to make a viable project?

MR. THOMAS: Well, I think the total project will depend upon all of the reserves in the North Slope. What we were looking at were essentially two things, one is -- well, three I guess, to consider more. What are the presently proven reserves total that are recoverable in Prudhoe Bay, what is the potential for all of that area for the reserves that might come to market through the same pipeline, the same system and then we looked at it from the standpoint of how much of that might we be able to contract, because again we must compare that with other projects where we might get X quantity of gas and we compare what is the cost, what is the amount of time, money and people that you put into each one. And if you are going to get a little amount of gas and the probability of success is low, then you may opt for something else, but we look at them from all the points of view.

REP. CHATTERTON: In other words, I hear you say that eight-eighths of the gas reserves at Prudhoe Bay is necessary to make a pipeline project viable, is that correct?

MR. THOMAS: Well, I think you are looking at the total reserves --

REP. CHATTERTON: Eight-eighths is total.

MR. THOMAS: As far as the question of could the state do

something with one-eighth, I think there has been discussion about that before but from our standpoint we looked at the total reserves, the eight-eighths.

REP. CHATTERTON: Thank you very much. Now, what do you visualiize as the minimum daily throughput in cubic feet that would be required for a viable economic pipeline?

MR. THOMAS: We have not run the sophisticated models that either the state has or any of the other direct advocates in the cases. I can't answer that. I don't have the reservoir models that they have used and I don't know --

REP. CHATTERTON: I'm sorry, Mr. Thompson, I'll rephrase my question or restate it. What daily throughput in cubic feet of gas do you consider necessary for a viable economic pipeline project?

MR. THOMAS: Do you mean regardless --

REP. CHATTERTON: It has nothing to do with the reservoir. You are going to put out a bunch of money and build a pipeline. What do you need for a throughput per day, daily rate?

MR. THOMAS: In any of the ranges that we have seen mentioned, from two billion to some three and one-half. We think it could be economic within that range, within the total range.

REP. CHATTERTON: Let's take your two billion as a minimum and anything on top of that, of course, is advantageous

to you I realize. Now, over how long a calendar time period do you need to be assured of that rate?

MR. THOMAS: I think that the lenders of money will be the ones that would have to be assured and depending upon what terms they have, whether this is a twenty year or what type of a loan or mortgage that you would have, you would have to have sufficient supply to maintain that throughput for that period of time, normally for two years.

REP. CHATTERTON: Lenders of money, thank you, Mr. Thomas. I will use that term in my next question. In view of the Royalty Gas Sales Contract, as I am told and as I have read in my layman knowledge, the State of Alaska has a two year figure off date, or upon notice can terminate their share of the gas sales and shuck that off. Or for that matter let's go beyond the contract, supposing that our State Conservation Department says that we will not be able to give you your two billion cubic foot per day throughput. Do you believe with that staring you in the face that you could get any money lenders to come forth?

MR. THOMAS: I think what the money lenders and the equity contributors are going to have to have before them when their decision is made is what is the deliverability rate that is currently projected for this system, for what duration is that projected to be available and what are the ultimate reserves in this area and what is the promise

of additional reserves in the area. I can't answer how they are going to view whatever those numbers are but I can assure you they will look at them very closely and if there is not enough deliverability and if there is not enough assurance over the term then there will be a problem raising the money for any project.

REP. CHATTERTON: Coming back from what the money lenders might do, you as a prudent businessman would want to be assured of a deliverability rate for over a period of time beyond any reasonable doubt excepting an act of God that it would continue. Is that correct?

MR. THOMAS: I think we would want to have an assurance that the supply would be available, yes, sir.

REP. CHATTERTON: All right, sir, thank you very much. Do you as a transmission company have any great feeling or care about either the wellhead -- and under present legal and regulatory situations of the FPC, do you as a gas transmission company have any particular concern about either wellhead price or city gate price?

MR. THOMAS: Absolutely.

REP. CHATTERTON: In what way, sir?

MR. THOMAS: A main competitor for natural gas is fuel oil and we market primarily -- the biggest share of our market along the eastern seaboard where fuel oil is readily accessible. When we project into the future the rise of

natural gas prices, we make sure that we do not get non-competitive with fuel oil. We very definitely have a concern there. Our customers very definitely have the ability to switch, a lot of them, and there they have alternate fuel capacity in some cases and they will switch to an alternate form if it is available and if it presents an economic savings. So we very definitely have an interest in it. The Federal Power Commission also has a very definite interest in us looking after it also.

REP. CHATTERTON: Then if you do have an interest and I gather that the competitor in this is based on the price per British therm or something like that. All right, so we are into energy. If you do have an interest in the city gate picture then you are certainly most interested in any system that will get the lowest city gate cost to the South 48, aren't you?

MR. THOMAS: I think at this point in time you look at many requirements and I come back to the primary requirement, and it is even more accentuated right now, its availability. If the people in Ohio right now had a choice of not having enough to eat or paying a nickel more, I think they would be willing to pay the nickel more.

REP. CHATTERTON: Five bucks more, I think.

MR. THOMAS: Yes, that is correct.

REP. CHATTERTON: One last question unless it engenders some more. As a transmission company you certainly are, you may not be personally but your company is always involved contractually and I know what our contract says. Could you give me a rough cut as to the quality gas that you will accept for the entrance into your pipeline and I'm thinking of one, the normal H_2O dew point to the hydrocarbon dew point, three percentage CO_2, nitrogen and for, of course, percentage sulfur.

MR. THOMAS: Let me be just a bit facetious with what one of our pipeline people told me. He said it used to -- we told people we would buy their gas if they would take the crud out of it. Now he says we tell them we will take the crud if there is some gas in it. That is about the situation that our quality requirements have gone. We used to have very stringent ones and then we exacted just very meticulous care that everybody met it. That is not as possible as it once was. We now take it so long as it just doesn't completely tear our system up and that we can get it in. We have a long list of quality requirements which I would be happy to provide you.

REP. CHATTERTON: You certainly would not take gas that in any way would give you a two phase flow, is that correct?

MR. THOMAS: We have taken some offshore Louisiana that was two phase flow. We didn't want to but we came back to

that same situation. We took the crud because it had gas in it.

REP. CHATTERTON: Thank you, sir. Thank you, Mr. Chairman.

SENATOR RADER: Representative Meekins?

REP. MEEKINS: Could you explain what that is, two phase flow? Is that when you have some --

MR. THOMAS: Liquid and gas.

SENATOR RADER: Any further questions? Senator Butrovich?

SENATOR BUTROVICH: Mr. Chairman, maybe this doesn't have too much bearing on the matter before us but I was reading here in this little book that --

SENATOR RADER: Could you speak up, Senator, they are having difficulty hearing you in the back of the room.

SENATOR BUTROVICH: In the back of the room?

SENATOR RADER: That is what they indicate.

SENATOR BUTROVICH: I was reading in this book here, it says, "Tenneco is a widely and carefully diversified company which employs 78,300 people and has major operations in manufacturing integrated oil, chemicals, package and land management, and agriculture in addition to natural gas pipelines." And I notice in another one of your booklets here you have "Package Incorporation of America" and it says here they do business in every state except Alaska.

MR. THOMAS: We hope to correct that one of these days.

SENATOR BUTROVICH: Well, that is the point I was getting

around to. I'm sure that I not only speak for myself but I speak for a lot of legislators, our concern is not primarily with getting the revenues from the gas that goes down below to the consumers in the south 48. The concern of a lot of Alaskans is the development of industry in Alaska. And if I were, I'm not, I'm just peanuts but if I were a corporation interested in acquiring Alaska gas and I were a conglomerate and I were in a position where I could utilize some of that gas for Alaska in some type of manufacturing -- on tidewater we do have a lot of timber, accessibility to a lot of timber, we have a couple of pulp mills, a lot of the pulp goes to Japan and I just wonder if anywhere along in your line of thinking and before you came to dickering with the State of Alaska for the gas, there was any possibility anywhere along the line that any of your subsidiaries might be able to do something in Alaska along that line, and whether or not those subsidiaries buy any appreciable amounts of gas from Tenneco. It is a long question.

MR. THOMAS: Yes, I'll answer the last part first. Tenneco Chemical Company buys some gas from an intrastate -- small intrastate pipeline that we have in the State of Texas for processing fuel for some of their plants. I don't think they buy any intrastate market from us. I don't recall that any of our other divisions do buy from

us in any of the other areas.

But now to your question of a large integrated conglomerate having an interest in Alaska. My personal interest and I emphasize this as my personal interest, I think that there are many opportunities for Tenneco in Alaska. I see many opportunities here and I see this as a by-product for us to get this large multifaceted organization we have with a closer relationship to the opportunities in Alaska. I would hope very much that there would be something come of that. That is my personal view.

SENATOR BUTROVICH: We are interested in providing a market for Alaska labor and there are some of us who are naive enough to think that if we do not get an Alaska line, we do not provide that market but there are some of us who want to go beyond that. We would like to think that we would be developing industry up here for by-products.

MR. THOMAS: I would encourage you because you look at the model of the Texas Gulf Coast and industry is there because there was energy available and because there was labor available and because they were close to a ready transportation system where they could move it. I see some of the same promise here.

SENATOR BUTROVICH: It does seem to me that if I were out there seriously trying to make a deal with the State of

Alaska that that would be one of the considerations that I would have taken into consideration because I think it is quite important to the Alaska Legislature. We know that bang, when this stuff goes through a pipeline and hits the south 48 why it is fine temporarily but we'd like to see a little industry develop from it.

SENATOR RADER: Senator Croft?

SENATOR CROFT: Why wasn't there some commitment made in these contracts by Tenneco to do what Senator Butrovich is talking about? Why didn't Tenneco through one of its subsidiaries agree to construct or to use some of that gas in the state here?

MR. THOMAS: Well, there are probably many reasons why something like that does not tie to a gas sales agreement. The first is, the divisions of Tenneco operate independently. They are independent profit centers, they have their own areas of activity and their own financial resources allocated to them. In many cases we work with them in different areas where they evaluate from their own point of view what is the potential of doing business in Alaska and in California and in other areas. From the standpoint of the natural gas coming to the line, since we couldn't project what the wellhead price was going to be and therefore what price feed stock would be available, this becomes very difficult for a chemical company to look and determine,

all right, what is available. The primary petrochemical type of business is not one that we are in. We are more in the secondary type from the chemical standpoint, thinking primarily of petrochemicals. Our chemical company deals in polyvinyl chloride, polyurethane foams, definitely in the secondary. We are not in the large ethylene complexes and that sort of thing which is the first stage of the development of a petrochemical project. So it did not fit exactly our type of business in chemical. We did not go beyond that point of looking into our other areas.

SENATOR CROFT: So you refused to do that when requested to negotiate on that subject by the state?

MR. THOMAS: Senator, we were never asked. We didn't refuse at any time. We reviewed the potentials of a chemical company involved. Petrochemicals we are not in from that definition of the word, from the ethylene.

SENATOR CROFT: You were never asked by the state to make any commitment for use of any of that gas in the state during the course of the negotiations?

MR. THOMAS: That was not a --

MR. CARTER: I think we asked to look at that possibility --

MR. THOMAS: Which we did.

MR. CARTER: And everybody else was too, as I recall. It was determined that the state would be better able to review

that record.

MR. THOMAS: But it was never a condition of negotiations that you had to do that.

SENATOR CROFT: With regard to some of the questions that Representative Chatterton asked and a comment that Commissioner Martin made towards the end of the hearings yesterday, the state has the right to withdraw, under certain conditions and with certain notice to you, up to all of the gas that they have committed to you. And Commissioner Martin said that it was his feeling that you expected that the state would never ever really withdraw a substantial amount and it was his feeling that the state would. Is that correct, that you feel that the state won't be withdrawing a substantial amount under those contracts?

MR. THOMAS: Our projection in what work we did which is primarily based upon what some of the state agencies have done on projecting population increase, that sort of thing, our views were that the state would not require nearly as much gas for the intrastate market as did the Royalty Board or the Department of Natural Resources. Obviously we felt there would be more gas flowing to us than they did.

SENATOR CROFT: So I take it you feel reasonably confident in telling your buyers in the lower 48 states that over

the course of this contract you will be able to deliver to them 1.3 trillion cubic feet.

MR. THOMAS: I think that as far as the 1.3 trillion, I don't know that I would tell them exactly that but I would tell them that based upon what we have in the contract and what we project withdrawing, together with the state's replenishment of that from future supplies that we were securing the range of 1.3 trillion.

SENATOR CROFT: What are your projections as to what the state will withdraw?

MR. THOMAS: I don't recall all the numbers. This is very much a sliding scale because there is no demand that exists in a vacuum. First there has to be a supply, then a demand is created, then a system has to be built to accommodate that new demand. All of this takes time. So the day the gas starts to flow, most likely there will not be any immediate demand for that gas. Over a period of years this will build, both for residential market along the pipeline and with industry that will build up once they see the supply is there, once they know what the price is going to be and once they have assurance that it is going to be there all the time. And all of this builds up over a period of time, not instantaneously and normally, not very rapidly.

So, we see a slower building than does the state

and coming to the latter part of the contract life, we feel from our studies, that there will be sufficient new discoveries that there will be additional gas available so that if the state takes part of this gas back for utilization in the industry, there will be new gas available to make it up, or they could just utilize the new gas that is available. We see that there will be more than enough gas to supply the needs for the industrial intrastate demands.

SENATOR CROFT: What is your estimate of the amount that the state will withdraw?

MR. THOMAS: Senator, I don't remember the exact numbers because they do vary so much with the time.

SENATOR CROFT: Well, what about the percentage? I'm sure you could give us a ball park figure.

MR. THOMAS: Oh I think at one time we projected that the state would probably not require more than in the range of twenty-five to thirty-five percent of the flow. That is very much an average number, it would vary with time.

SENATOR CROFT: Thank you.

SENATOR RADER: Any further questions? Because of our commitment to Southern, are we about through with this witness? If we keep our questions short then perhaps we can get through with this and then go to Southern. And also,

gentlemen, so far as we are able to, let's try to stick as close as we can to our problem here and that is the ratification of this sale. I know that there are a lot of interesting things going on here but let's try to stick to that point as closely as possible.

Senator Huber?

SENATOR HUBER: Yes, Mr. Thomas, as I recall, correct me if I'm not because my question will change. I recognize that you are one of the early supporters, maybe almost a couple years ago, of an all-Alaska Trans-Alaska gas line by El Paso, is that correct? Were you one of the early supporters of such a route? Tenneco, I mean.

MR. THOMAS: We have been negotiating with the state now for about two years. If that is what you mean, that is correct.

SENATOR HUBER: And I have in the past at some meeting asked you questions based upon that?

MR. THOMAS: Yes.

SENATOR HUBER: All right, in that case what route would Tenneco support if you failed to gain legislative approval of the present sale?

MR. THOMAS: Do you mean if another route were certificated?

SENATOR HUBER: No, sir. I mean if -- you have at present a document from the state to purchase fifty percent of our royalty gas for Tenneco?

MR. THOMAS: Yes, sir.

SENATOR HUBER: If that achieves legislative approval after these hearings and the proper legislative process. If it doesn't get approved, what route will you support?

MR. THOMAS: I doubt seriously if I would support any route.

SENATOR HUBER: That is a good fair answer, thank you.

SENATOR RADER: Representative Meekins?

REP. MEEKINS: Thank you, Mr. Chairman. I am making a list here as we are going through these hearings and trying to summarize anyway on sort of a cost benefit analysis of what we are giving up and what we are getting. I was wondering if you could just summarize for me, as briefly as possible, because I have been listening to you, I don't need the explanations, what you think we are getting from your company.

MR. THOMAS: Well, I think I would have to say what the state is getting from the contract. There are many provisions in the contract but basically it looks to me like the state is committing less than all of their gas. They have an almost unprecedented right to take back what they have contracted. I have not seen that in any other contracts in existence. They are getting assurance of the maximum price that is going to be paid for any of the gas from that area that goes in interstate commerce. They have the right to all of the liquids that come out.

The term of the contract is for twenty years and that is normally a term that is common in an area that has many pipelines available and certainly it would be the minimum term here where we are talking about a major new project. I think the state is getting the support of two companies that have not previously been involved in the active support of the project on the national scene. Quickly and briefly I see those. Do you have something to add?

MR. CARTER: And I think that that support that those two companies bring is not only kind of argumentative kind of support and manpower but that it also will over time improve the very viability of the project because the two companies are major participants in LNG projects and they do bring not only personnel and expertise, but the financial backing that is going to make this project a more credible and viable project just on the merits. It is quite apart from the fact that the guys are going to get out and support it.

SENATOR RADER: Representative Meekins?

REP. MEEKINS: I understand what you are saying. I am more interested and perhaps you would repeat yourself but the question I am getting to is not exactly all the things that are included in the contract, some of which are sort of reinforcements or guarantees of our rights that we currently think we have and I certainly wouldn't want

a contract where we were abrogating those rights. But what are we achieving in the contract that we wouldn't otherwise have? In other words, 13(b) in existence right now gives us -- sort of indicates that we have the ability to take our royalty oil, I mean royalty gas and use it for in-state purposes, at least to transport it and things. It seems to me that this contract is consistent with that but does it reinforce that, does it change it to any degree? I want to know what is the marginal benefit just from this contract.

MR. THOMAS: It looks to me like the overriding benefit that the state gets from this contract, their very primary purpose is to secure a route and a pipeline across the state. That must be the primary purpose and that is the benefit that this contract makes if you want to put it all in one thing. And in detail it does those other items that I mentioned, but hopefully it will secure that route.

MR. CARTER: But on 13(b) too, Representative Meekins, unless you enter a contract and unless that contract is approved by the FPC, 13(b) as I understand it at least, doesn't give you anything. In other words, if you don't sell your royalty gas before the producers start producing and selling this royalty gas then it isn't clear under the combination of the leases and 13(b) that you have

that option beyond that date. That is my interpretation and something you may want to ask the state to verify.

REP. MEEKINS: That would be exactly what my question speaks to, that kind of a thing. I mean, if we can in the future contract and get the same provisions in it, then we are really not gaining those because we are not losing them. We have them and we can have them in this contract and we can have them in the future. But, what we need to know is what opportunities are we foregoing, what are we losing in the contract and what are we gaining that we can't get in the future?

MR. THOMAS: I think the one thing that you must consider is whether or not in the future you are going to have a Trans-Alaska route. Will that decision be made in favor of Gas Arctic, in which case then you don't have the same set of circumstances.

REP. MEEKINS: Thank you.

SENATOR RADER: Any further questions? Thank you, gentlemen, very, very much. We will take a ten minute break and then we will have Southern.

(Whereupon the hearing was recessed at 3:50 p.m. and reconvened at 4:05 p.m.)

SENATOR RADER: As the day goes on we may lose Representatives and Senators and other interested parties but we do have the representatives here of Southern with us who want

very badly to finish their testimony this evening. I, of course, have no idea what their testimony is going to be nor the extent of questioning that we all have. To the extent though that we can make our questions brief and try to limit to the precise subject matter before us, I think it will appreciated. Certainly I'll appreciate it and I know that the witnesses will. Although Mr. Smith has assured me that this is an important matter and that their schedule -- they will stay over tomorrow if it is necessary or whatever the committee seems to think in that regard.

Mr. Chatterton?

REP. CHATTERTON: Mr. Chairman, in the interest of expediency would you be willing to ask these gentlemen if they were present during the entire testimony by the preceding company and if so, my thoughts are running along the line of rather than going through all the details of the multiple questions that we the committee did before, maybe we can ask if they also support us.

SENATOR RADER: Mr. Chatterton, I had planned on doing expressly that, particularly on Dr. Swanson's questions because I think that he wanted to have the interpretation of all contractors as to what their interpretation of those provisions were. I think it would be fair to let the record reflect that Mr. Smith and your associates

were here during the complete testimony, starting this morning, of Tenneco, and we will expect you to point out any differences in interpretation at least as to the contract. I don't want to be too general with you.

First of all, as to those questions propounded by Dr. Carl Swanson. Do you disagree with the answers that were given by the Tenneco representatives?

MR. SMITH: No, sir, we concur in those answers. We agree.

SENATOR RADER: Is there any feeling here that we need to pursue those questions any further?

Now, Mr. Smith, how would you like to proceed? Would you like to make a presentation first and then questions?

MR. SMITH: Would you permit me, I hope I can do it in about five minutes, to introduce myself and my associates to you and then subject myself to the mercy of the court, okay? I am --

SENATOR RADER: Excuse me, Mr. Smith, you have, I think, a very extensive prepared statement to be entered into evidence, is that correct? You would like to have it be made a part of the hearing?

MR. SMITH: I hate to burden your record with it, sir, but we did provide it to you and I guess it is probably appropriate that it be made a part of the record and I trust that every member of the joint committee has received

a copy of it.

SENATOR RADER: Unless there is objection, we will make the Statement of Southern Natural Gas before the Special Committee of the Alaska Legislature, hearings held January 31 to February 2nd, exhibit number 10, although we may or may not reprint the -- if you particularly want us reprint particular portions, we will, but probably may not reprint the whole statement unless you think it is necessary.

MR. SMITH: I don't think it is necessary. I will leave it to your discretion, Senator. Certainly the attachments were put in there for the information of the committee and I don't really think they go to the substantive issue involved.

SENATOR RADER: All right, probably then, so it is reflected in the hearing in the minutes of this meeting, if Exhibit 10 is not reproduced in full, that copies will be held on file in the office of the Secretary of the Senate and the Clerk of the House of Representatives for any interested party to examine. Is there any objection to that procedure?

(Whereupon Exhibit 10 was duly marked)

SENATOR RADER: Mr. Smith, you have the floor, sir.

MR. SMITH: Thank you, sir. Senator Rader, Representative Gruening, ladies and gentlemen, my name is Peter Smith. I am President and also Chief Executive Officer of

Southern Natural Gas Company. Sitting on my immediate left and I guess your right is Mr. John M. Van Dyke, who is a vice president of our company in charge of gas supply for us. Mr. Van Dyke has been in Alaska, in Juneau, essentially since the opening of your legislative session and he will stay here for some period of time, I would hope until there is a resolution of the matter relating to our contract with the state to purchase some of the royalty gas. He is an executive of our company and will be here to speak and talk with you informally, answer questions of fact or questions of policy with respect to our company.

Mr. Henry Pratt is sitting somewhere and he is working with us on this matter. And the gentleman immediately behind me is Mr. David Hendrickson, who is an attorney with our company.

I will try to condense, in the interest of time, what remarks I wanted to say but I did want to identify our company for you as the major supplier of natural gas in the southeastern part of the United States. Our markets cover the territories of Louisiana, Mississippi, Alabama, Georgia, South Carolina, we serve a small portion of Tennessee, we serve a small portion of northern Florida.

Southern Natural Gas Company is a diversified energy natural resources company. Its stock is publicly

held. We have stockholders in all fifty states. I might say that our yellow statement which was introduced to you indicated -- correction, failed to indicate that our stock is listed on the New York Stock Exchange which is a fact and I think we have made that correction in everybody's booklet. If not, that correction, I hope, will get into the record.

Southern Natural Gas Company constitutes more than half of the total assets and accounted in 1976 for more than half of the net income of its parent, Southern Natural Resources. What is our interest in the Alaskan gas and what do we bring to the state? Our interest essentially, gentlemen and ladies, is that we need the gas supply. For the last several years Southern Natural has consumed more gas than we have been able to purchase under new gas purchase contracts.

Our average purchases in the last seven or eight years have averaged about two hundred billion cubic feet per year. Our average sales requirements during that same period have been about six hundred billion cubic feet per year so that we have been not able to place under new gas purchase contracts as much gas as we have been consuming in our area. And the question was raised yesterday about this being a relatively minuscule quantity of gas. Well, gentlemen, six hundred and fifty billion

cubic feet of gas, which is what the state has contracted to sell us, subject of course to the contractual withdrawal rights and so on, is approximately three times the amount of gas we have bought in any other year for about seven years. So, this is a very significant purchase to us and that is the reason that I have come to talk to you about it.

I think it might just be worth mentioning very quickly a significant thing about our gas supply, that we are involved in a project to bring Algerian natural gas to the United States. That project will go on stream sometime late in 1977 or early 1978. We are in the final stages of completion of a huge LNG receiving terminal near Savannah, Georgia. And I mention that to indicate to you that we have a great deal of familiarity and I think expertise in the general area of LNG and the particular context of the construction of an LNG receiving terminal.

In the situation of the Alaskan gas, let me say that we think the state has worked out with us a contract which we think is rather tough but it has been bargained our fairly, it has mutuality, it is a contract, gentlemen, that we are comfortable living with and supporting and we have discussed it with our customers which are distribution companies scattered across the southeastern part of the

United States. I am confident that they understand its terms and provisions and that they too are interested in our having -- having us consummate the contract and they will support us in our efforts to get the Trans-Alaskan project approved.

What do we offer to the state? Well, Southern Natural Gas and Southern Natural Resources are both financially sound and extremely stable companies. As I said before you have an assured market for this gas, we need it and we are going to give it wide geographic distribution across the southeast. On a more technical basis perhaps, we think we have, as any natural gas company does, significant engineering capabilities which will be of assistance in the project and we certainly have great expertise, we think, in the construction of an LNG receiving terminal. We have sound environmental capability and an outstanding track record, I submit. And our concerns for and our approaches to and our solution to environmental and ecological problems. We have a deep familiarity and a large comfort factor with LNG, this is not something new to us so that we are comfortable with it and all its aspects.

And finally I think I should say that a major thing that we feel that we bring to the state in connection with this contract is support of the all-American Trans-

Alaskan pipeline project.

The Governor's speech or comments to you yesterday referred to the endeavor to create a national constituency and we think that we can contribute to this with respect to the commitment of the southeast towards the project which the State of Alaska favors. In fact, that effort is really underway already and we are involved in efforts at various levels, including what I would refer to really the grass roots level.

Now, gentlemen, we sell gas to distribution companies in the southeast so essentially we don't have contact with the ultimate consumer of the gas but we have already started going around giving speeches to Kiwanis Clubs, Rotary Clubs, civic clubs of that kind, about this situation and about our interest in the Alaskan gas.

We have discussed the matter, as I said before, with our distribution company customers who do ultimately have the contact with the person at the burner tip and they are involved in helping in this area. We have the Chambers of Commerce in our area involved and familiar with it. We have been talking to significant state legislators in the various legislatures in our market area. We have been talking with the public service or public utility commissions which regulate the local

utliities in the various states which we serve, they are familiar with it. We have talked with virtually all of the southern governors, we have a couple more on our list but local governors or lieutenant governors either are or shortly will be familiar with it. Last but not least, we have talked with our Congressional delegations throughout the southeast in Washington and that effort certainly will continue.

I submit to you, gentlemen, that we have plenty of credibility in all of these areas. These people know us, I think they believe us and they like us. And, I might emphasize too, that this cold weather that we have had, particularly in the southeast, has made believers of some of the heathens and they really understand, more than they ever did before, the imperative necessity of our getting additional gas supplies and getting them as soon and as quickly as we can.

You gentlemen know, I am sure without my saying it, we have strong and effective delegations in Congress from the southeastern part of the United States in both the Senate and the House and we have good relationships and good communications with those people and we have already talked with them as I said. And naturally we are supporting the El Paso project, so-called, before the Federal Power Commission.

So, gentlemen, in summary we are delighted that we are a party to a contract with the state for a share of its royalty gas. We are proud to have been chosen as a partner of the state in this effort. We think it will be mutually helpful, to us obviously -- essentially it means more gas supply, to you we think that obviously we will provide the benefits from the sale of the gas and other benefits in terms of the kind of support that we can give your state for the project which you would like to have. We hope you are going to approve the contract and I respectfully urge you do so.

I will answer your questions or try to.

SENATOR RADER: Any questions? Senator Huber?

SENATOR HUBER: Thank you, Mr. Chairman.

SENATOR RADER: Senator, would you please speak up?

SENATOR HUBER: I only thanked you so far, Mr. Chairman.

SENATOR RADER: I know but everybody wants to hear what you have to say.

SENATOR HUBER: The provision in the contract about the change of route should the El Paso not be approved. You have heard them ask the other ones whether that was -- Tenneco if that was one of the provisions they wanted in the contract and they said they support the contract but it was not something they asked or had put in the contract. I place the same question to you. Did you

want it or have it -- request it placed in the contract, or was it put in by others?

MR. SMITH: We did not request it, Senator Huber. I think it was (Mr. Van Dyke was involved in the negotiation of the contract) really put in at the suggestion of the State.

SENATOR HUBER: I understand that is correct.

MR. SMITH: Yes, we didn't request it.

SENATOR HUBER: Some of us question that particular one and we want to know the stand of the companies. I realize you support the contract. Thank you, Mr. Chairman.

SENATOR RADER: Any further questions? Representative Parr?

REP. PARR: Yes, sir. Mr. Smith, since you heard the previous colloquies with Tenneco, as you remember, there was a little problem that Tenneco had with that switch. What would your reaction be if you were going along and all of a sudden between day 25 and day 26 you are supposed to switch to this alternate route?

MR. SMITH: Representative, I think I would have something of a problem with it but, frankly, and without any drogation at all of what my friends from Tenneco have said, I don't think I would have the same problem with it that they did. Our objective, sir, is truly and simply and candidly to acquire the gas supply. And if the State should make a decision that a different route than the

so-called all-Alaskan route is a preferable one from the state's point of view and they invoke that provision of the contract and say will you support this other thing, I think we would. I think we would in fairness and candor we would have some problem explaining that switch of postion to the various constituencies, if you will, to whom we have been explaining our support of the El Paso-Alaska project. But at the risk of an inconsistency and without, sir, any feeling that I would be jeopardizing my personal or my company's integrity, I would have no great problem, I believe, if the state said this is the way you should go, in explaining this to the people with whom we have been talking and say, "gentlemen, the signals have switched and this is the way we should go."

REP. PARR: May I continue, Mr. Chairman?

SENATOR RADER: Certainly.

REP. PARR: This is a question on a different subject but it is again one you heard me asking the Tenneco people, and that is the contract provides no standard of performance by your company in terms of obtaining support for the Trans-Alaska line.

MR. SMITH: Yes, sir.

REP. PARR: And you heard, I think, the Tenneco representatives say they didn't even have a planned budget. They would do whatever they felt was necessary and they would pay

the costs. Now, what is your company's position on that same issue?

MR. SMITH: Well, I tried, sir, to indicate first that we are already making an effort, which I consider part of the ongoing effort that we always have in terms of public affairs and public relations. In that sense we are not planning to add staff within the company to accomplish the support of the Trans-Alaska project, but we are expecting to divert greater efforts on the part of our existing staff towards support of that -- of the Trans-Alaska project.

We do not have, sir, a specific -- I'm sorry to say I am like Tenneco in this respect, a specific dollar budget which says we will spend this much or some other amount of money. Just sort of a rule -- not really a rule of thumb, sort of a little hypothetical to myself, and I think I came out that it probably would not be unreasonable to expect that within the next year or so we very well might spend, not counting the efforts of the internal staff, something in excess of one hundred thousand dollars. I am unable to say how much more it would exceed that amount and we haven't specifically allocated that amount for this project at this point.

REP. PARR: If I might continue, Mr. Chairman, with one more question, I think.

SENATOR RADER: Certainly.

REP. PARR: You also heard the questions asked of Tenneco as to what has already been spent in this whole attempt with the contract. Do you have a figure for that by any chance?

MR. SMITH: On the whole attempt for the contract, this would include the trips we have made to Alaska in negotiating sessions and so on?

REP. PARR: Whatever is involved at this point.

MR. SMITH: Well, the answer is no, sir, I really do not have that number and I guess it could be generated with some difficulty. We would be glad to do it for you if you would like.

REP. PARR: Thank you.

SENATOR RADER: Well, following that same line, I assume for you to develop such a figure you would have to take a proportion of your own salary and the salary that is attributable to your office and the days you are out of it, plus those of your associates, plus those of your legal staff. It would be quite a cost accounting problem, wouldn't it?

MR. SMITH: It really would, Senator, because we don't charge, for example, Mr. Van Dyke's time in that kind of way. He is our vice president in charge of gas supply and all of his efforts are devoted to gas supply and I think I would

have a dickens of a time saying that ten or twenty or fifty percent of his time in the last year had been devoted to this. We can say and it is true that we have had people back and forth in Alaska, as I like to say in our offices, almost on a shuttle basis for the last year and one-half and we can isolate without too much trouble those expenses but that wouldn't get to the individual salaries, the proportions attributable to this particular project or the overhead related to those. It would be a monumental accounting job which I am not volunteering to perform but will do if it will help your committee.

SENATOR RADER: Representative Gruening?

REP. GRUENING: Would you have that same problem of accounting if you were trying to include it in your rate base? In other words, you might have heard Tenneco's comments that if El Paso is successful to charge all that off. So, I imagine you could also come up with the figures.

MR. SMITH: It could ultimately be done. I imagine, Representative Gruening, I would do my best very honestly, sir, to say that this is part of Mr. Van Dyke's ongoing activities and the whole thing can be charged to our customers, likewise the legal expenses and so on.

REP. GRUENING: You would take a percentage -- for purposes of establishing what is includable in a tariff then you would figure out some percentage that was allowed by the

FPC then?

MR. SMITH: I would state it a little differently. The next time we file a rate base I would have Mr. Van Dyke's salary for three hundred and sixty-five days in that rate base. I would have his travel expenses to Alaska, similarly for the other people on the staff. If somebody challenged that and put Mr. Van Dyke or me on the stand and said "how much time did you really spend on the Alaskan project", we would have to make an estimate, I guess.

REP. GRUENING: Okay.

SENATOR RADER: Any other questions? Mr. Carpenter?

REP. CARPENTER: Mr. Smith, I am sitting right down here with him, it always makes it sound like I am shouting at him. I don't mean to be shouting at you.

MR. SMITH: You wouldn't be the first one.

REP. CARPENTER: Three questions. One, I am beginning to think that Mr. Parr has a point here and my background is in public relations in advertising and promotion and you don't go into something like that seriously unless you in fact do have a budget. I am certain you are perfectly aware of that. And to tell us that you are going out and do a promotional job on this route and tell us you are just going to spend whatever it takes I don't think it is really a fair response to it.

MR. SMITH: Well, I can only say that we are in the early stages of this situation, Representative Carpenter, and I think at some point we clearly will have to determine how much money we will spend over and above our normal salaries for public affairs and public relations people. But we haven't reached that point yet, sir. The contract is not -- I hate to keep rubbing this in, but the contract hasn't yet been approved by the Legislature so that we do not have such a budget at the moment, and that is just a fair statement of the facts.

REP. CARPENTER: Apparently though what we are selling here, the primary purpose is the support that we are going to get from you so we don't know -- we can't place any qualitative or quantitative measure on that support, can we?

MR. SMITH: I don't know how you can in terms of dollars and cents, Representative Carpenter, at this particular point. As I said to you, I think it is conceivable that we might spend as much as One Hundred Thousand Dollars this year in addition to the normal expenses that we have.

What for? Let's stop and think about that for a moment. As I said before, we are not in touch with the ultimate consumer at the burner tip, we are in touch with distribution companies and I think what we might do is try, for example, to prepare fliers for our distribution companies to send out with their billings. I think we

might consider, although we have trouble with our customers in doing this, some kind of advertising campaign. I have seen an awfully good brochure which I know that the El Paso Company has prepared relating to this project which it is using for P.R. purposes and I don't know how much that thing costs, Representative Carpenter, but something like that appealed to me greatly and I think we could use it in many ways.

It really seems to me though, sir, that a major effort and the thing that we are going to be most effective with in fact is our contacts with our customers, with our governors, with our legislators, with our Congressional delegations and Congress. And this, as I said before, is really part of an ongoing process that we have with the staff that we have at the moment. We are simply going to direct the emphasis in essence in this direction, in my view. I don't know that it will be helpful, gentlemen, but it might be of interest to you to know that we had a management meeting, I guess most companies do, with about thirty-five of our top people a couple of weeks ago that do our strategic planning for the next year and five years. We gave these people a list of about twenty-five issues and said pick the four or five that you think we should be spending the most time on in the next year and these

related to things like deregulation of gas and investment tax credits and all kinds of things. The Alaskan gas matter was on the list and in every case it came out number one. So I think this says we have a commitment, sir, on the part of our company and on our management to move this project forward the best we possibly can because the gas supply is so important and so significant to us.

REP. CARPENTER: I have to follow this with one more question. I think what you are telling me and what I believed all along in which I don't really see anything wrong with, is that what we are buying or what we are getting in exchange isn't in fact a typical promotional campaign or advertising campaign or public relations campaign. We aren't in fact going to send you out there to build a constituency, a phrase that has been used all along. We aren't doing that at all, we are buying your ability to influence people in places that count. That is what we used to call building an influence with and that doesn't require a brochure, that involves contacts that you as a business have established over a number of years and that in fact is what you are going to do because this is a political matter and it will be decided in Congress.

MR. SMITH: I would say that that is certainly an effort that we will be making, yes, sir. I don't disagree with your statement.

REP. CARPENTER: Okay. I just want to set aside that building of a constituency in talking about the consumers in the southeast or throughout. That isn't really what we are talking about.

MR. SMITH: Well, I guess I would say I would hope, gentlemen and ladies, that the results would be the same whichever way it went.

REP. CARPENTER: The other question was, to borrow your words, Mr. Smith, what do you find tough for you in this contract?

MR. SMITH: Well, I think there is really one, from our point of view, awfully tough provision. The major provision which is tough very honestly is the -- I would call it and refer to it as the call-back provision under which the state can withdraw its gas. We need the gas supply and this is, as Mr. Thomas said, a most unusual provision. I have never seen anything like it in any contract I've ever seen our company enter into before. Then when you need gas supply and you run into a contract where somebody says "here's the gas supply but I can take it back." That is pretty difficult but okay, that is the deal and we have accepted it willingly and we'll support it; that is what the state wants and we accept that. I made this argument before the Royalty Board and I'll repeat it to you. I feel this very sincerely. If we get this gas for one day, just one day, and I hope we get it for a lot longer than that,

we'll be better off than if we never got it at all because we are short of gas supply and it will be helpful. But, that's a tough, really a tough, tough provision for people who are short of gas.

REP. CARPENTER: Is that the only tough provision, really tough provision?

MR. SMITH: There is one that is a little more cryptic and I think hard to come to grips with which I think is also kind of tough, which is the provision relating to the situation where the state might have to pay to the working interest owner some costs for gathering or maybe processing its gas and we are obligated to reimburse the state for those amounts. I'm not stating that very artistically but that in essence is what the provision is. And that again is not essentially so tough except the provision says that we have got to pay the state those costs even if we are not able to recover them in our rates. So to the extent that that provision might apply, we are subjected to some risk as far as our stockholders are concerned and I think that is a tough provision, Mr. Carpenter.

REP. CARPENTER: You don't know the section, do you?

MR. SMITH: Well, I don't know it out of my head but maybe Mr. Van Dyke does.

REP. CARPENTER: Maybe I could get that from Mr. Van Dyke.

MR. SMITH: If you can find it, I have read it a lot of times,

I'll tell you that.

SENATOR RADER: You still have the floor, Representative Carpenter.

REP. CARPENTER: The final question is, some people have said that we are selling you awfully cheap ethane because as Senator Butrovich was talking about awhile ago and Representative Meekins and so forth have brought up from time to time, there has really been nothing in here to kind of sweeten the kitty for Alaska in terms of industry. And that ethane you are picking up at Prudhoe at methane prices, aren't you?

MR. SMITH: If there is ethane in the gas stream which could be removed and it is not removed, I guess the answer to the question is yes.

REP. CARPENTER: You don't place a value on that ethane for petrochemicals in the lower 48?

MR. SMITH: We do not have any -- that is not correct, what I just said -- started to say. We sell gas to our customers and it is my understanding, sir, that they sell gas to their customers on the basis of the number of BTU's in the gas stream. If ethane in the gas stream should contribute to the BTU's, I guess essentially we get the benefit of it if the BTU exceeds a certain number per cubic foot, which is one thousand and fifty, if my recollection is correct. I don't know of anywhere and I

hope I'm being helpful, I'm not trying to be evasive when I say this, I don't know of anyplace once the gas enters our pipeline where somebody is taking ethane out and selling it as a product.

REP. CARPENTER: You won't have any valuable liquids transported to the lower 48 out of this purchase of the gas?

MR. SMITH: If the ethane is an effective part of the gas stream, sir, I just think it is part of the stream. I'm not a chemist or really an engineer and I'm not sure I'm being responsive to your question. John, do you know the answer to that?

MR. VAN DYKE: No, there will not be, especially from the process up here to take those products out.

REP. CARPENTER: Everything that you are taking out of the state on these cryogenic tankers, your intent is to have somebody burn it off someplace?

MR. SMITH: Yes, sir, that would certainly be my expectation and understanding and intent and I will tell you that is what is going to happen with that Algerian LNG, there is nobody going to take anything out of it after it lands in Savannah, Georgia.

REP. CARPENTER: Or any other means of transportation out of the state of any --

MR. SMITH: Okay.

REP. CARPENTER: Thank you.

SENATOR RADER: Representative Meekins?

REP. MEEKINS: I have got a couple questions, one just on that last point. I don't know where I read it, maybe it wasn't in the contract but I was under the impression that if the BTU content is increased because of inclusion of ethane and other types of gas in the flow, if it is over a certain amount that the state is compensated for that. That is what my understanding was, is that correct?

MR. SMITH: The price is adjusted upwards, yes, sir.

REP. MEEKINS: Over a thousand or something like that BTU?

MR. SMITH: I don't know whether it is a thousand or a thousand and fifty but that is a fairly typical provision, yes, sir.

REP. MEEKINS: Okay, I must have misunderstood. Somebody said that wasn't true, I just want to remember that. The other thing, you said one of the provisions that is tough on you is the take back provision. I understand what you are getting at there but just to be completely clear on that, it seems to me that only in the situation that the state starts taking one hundred percent of its royalty gas at some point, not just the Prudhoe Bay gas but the other gas, will that limit the total amount that you receive because you'll of course be able to -- if there is another field that opens up and we don't take one hundred percent of it, if there is some surplus that

is not used for in-state, that you have the right to have that gas, isn't that correct?

MR. VAN DYKE: Only if it comes into this line.

MR. SMITH: If it comes into this line, says John.

REP. MEEKINS: If it comes into that line, right.

MR. SMITH: And we are like Mr. Thomas, we are very bullish on the prospects of your finding more gas in Alaska but in a sense in dealing with gas supply I have to deal with present day realities and all I am looking at is Prudhoe Bay.

REP. MEEKINS: Right. And that comes back to what Commissioner Martin was saying, people are betting on different contingencies arising. You are sort of betting on that happening so that you would -- and he might be betting that it doesn't but in any case there is a possibility of your achieving the full 1.3 --

MR. SMITH: Six hundred and fifty billion in our case.

REP. MEEKINS: Six hundred, oh, yes. All right.

MR. SMITH: We are the little boy, I understand.

REP. MEEKINS: And the last question now. If, as it might appear, if you extend the logic of today's decision by the FPC judge and some of the other things we have heard, if you extend that sort of tendency out, and I'm not sure you should, but if you did, it would look like -- there is a possibility at some point of the Alcan route

not being a real factor and that perhaps the decision in Congress and with the President comes down to a real fight between El Paso versus the Arctic route, if that were the case and if the state went to the wire with the El Paso route, which it might very well do in that situation and if Arctic then won, unfortunate for us, this contract would not be in effect. Isn't that correct? That you would not have any --

MR. SMITH: That is the way I read the contract, yes, sir.

REP. MEEKINS: So in that contingency you would then have an incentive to fight very hard for this?

MR. SMITH: Yes, sir.

REP. MEEKINS: I am getting at the qestions of would you jump off onto another line or do you really have an incentive. When Alcan is there and it looks like a good second best, I think there is a suspicion in some people's minds that at some point the state might jump or you might jump with the state and this may change things. But, if Alcan sort of drops out of the question then it is an all or nothing proposition for you, is that correct?

MR. SMITH: Well, I would hope I could somehow dispel within the minds of this group or your legislature the notion that we might jump the track on a contract that we have made in good faith. I really am proud of the fact that we live up to our contracts. I don't feel I need a

contract to make me live up to a representation that I make to somebody. And, we have committed to support the El Paso project and I'm going to support it until the state tells me I should do something else or cancels my contract.

REP. MEEKINS: What I am getting at is that -- not that I don't believe you but I'm sort of into what your calculations are as to what kind of sanctions happen to you, what do you lose and what you gain under certain circumstances. We were talking about the city gate price being cheaper in different lines and those types of things so why do you really need these -- the availability of gas in that case was said by Tenneco to be very important, more important than the price delivered at the city gate and those types of things. I'm just sort of following that up to try and see that if Alcan does fall out, then you have a direct business incentive regardless of your commitment to push this line, seeing as you have no other choice. You don't have another option.

MR. SMITH: We do have, that is correct, we do not have any other option and as I said before, I think we'd stay with what the state asked us to do, told us to do.

REP. MEEKINS: Thank you.

SENATOR RADER: Any further questions? Senator Huber?

SENATOR HUBER: I wasn't trying to push one away but I can

ask this one. You caused this question so I have got to clear it up. Would you be willing to purchase our royalty gas further down the line, even without the prior commitment that you have, if it is offered to you at a later date, if it isn't approved now?

MR. SMITH: Further down the line in time?

SENATOR HUBER: If we end up not approving the contracts and we have uncommitted natural gas, that is state royalty gas, will you be interested in purchasing it further down the line in time?

MR. SMITH: Yes, sir.

SENATOR HUBER: Okay. And this is a question also that I asked of Tenneco. What route would Southern Natural Gas Company support if your present contract with the State of Alaska is not approved by the legislature?

MR. SMITH: If our present contract is not approved, Senator Huber, by the legislature, we had no contract for Alaskan gas of any kind, character or source, under those circumstances we have no incentive to support any project at all. We can go back into our burrow and stay there until we get some Alaskan gas.

SENATOR HUBER: I suppose that then answers -- probably answers -- my third question is, do you have any deals either made with producers or cooking on the back burner or simmering on the back burner for purchase of a portion

from producers, say, if it goes the Arctic Gas route?

MR. SMITH: The quick answer is "no." I kick my friend, Mr. Van Dyke, frequently in the rear end and tell him he has got to buy some gas from the producers, and he has not been successful in doing so yet. We do not have any deal on the back burner, express, implied, anywhere. I wish we did. But I will say this, and somebody asked this question yesterday -- if, for example, we could go to Producer X and Producer X said, "I'll sell you twenty-five percent of my working interest (or something, you know), a significant quantity of gas, but the condition is that you support some other line," I would like to assure you, sir, that we have got a prior commitment to the State of Alaska with which we are going to comply, and I am not going to walk away from a pre-existing contract and an obligation I have with somebody.

SENATOR HUBER: I like your answer. Thank you, Mr. Chairman.

SENATOR RADER: Any further questions? Mr. Chatterton?

REP. CHATTERTON: Mr. Chairman, I will have a series of questions but this one is so opportune, sir, I have to ask it. Mr. Smith, you actively have pursued trying to get contracts for gas with producers. Are they somehow being smarter than we, the State, they are not willing to sell yet for some purpose? Why do they not want to sell to you?

MR. SMITH: I don't want to be evasive. John says we can't fathom the producer mind. In the days of advance payments which as you have learned by now have been outlawed by the FPC, we thought we had a chance of getting some producer gas. When the advance payments dropped by the wayside, the opportunity to buy producer gas seemed to drop also for the moment and they all just seem to be lying behind a log.

REP. CHATTERTON: Producers are apparently keeping all options open then, is that a fair statement?

MR. SMITH: I would think that is a fair statement, yes. I think that is right. I would say, you know, I think they may not have, perhaps, the same incentives that the state administration had to make a commitment of their gas at this time.

SENATOR RADER: Any further questions? Continue.

REP. CHATTERTON: Getting back to another track.-- but I'll yield to anyone that --

SENATOR RADER: Fine, why don't you go ahead, Representative.

REP. CHATTERTON: Mr. Smith, I would ask you to refer to your Exhibit 10 if my number keeps -- you don't have to refer to it because I will in effect be referring to it, if I fib why set it straight. But I understand that in 1970 Southern entered into a contract, from what I read here, with El Paso-Algeria for LNG.

MR. SMITH: Yes, sir. Right.

REP. CHATTERTON: I think I further heard you testify to the fact that -- Oh, first of all, why I think it says that you were buying that LNG from El Paso, is that correct?

MR. SMITH: That is correct, sir, yes.

REP. CHATTERTON: I think I then heard you give in your direct here that you expect this from 1970 -- now you expect this plant in Algeria to be on stream in late 1977 or 1978?

MR. SMITH: I so testified, yes, sir.

REP. CHATTERTON: Right. Do you have any concept or recollection as to the size of that plant as far as throughput?

MR. SMITH: Yes, sir. It is a one billion cubic foot per day plant.

REP. CHATTERTON: And the plant proposed at Gravina Point is roughly three times as large?

MR. SMITH: Yes, sir. That is correct. I think there is a 2.4 billion per day case and a 3.2 billion per day case.

REP. CHATTERTON: Do you happen to know when actual physical construction started on El Paso-Algeria's LNG plant? The breaking of ground, let's say.

MR. SMITH: Yes, right. We made the contract in 1970 -- permit me to ruminate if you will for a minute.

REP. CHATTERTON: Yes, yes.

MR. SMITH: We made the contract in 1970 and we and the other companies involved made an application to the Federal Power Commission for authority to import this LNG and my recollection, sir, is that that import certificate or authorization was not finally issued until sometime in 1973 is the recollection that I have. And I am pretty certain, I am completely confident that no work started on the liquefaction facilities in Algeria until 1973, because people were not going to be spending a bunch of money until they knew they had a market for their gas and until the import authorization was granted. Obviously they didn't know that that would occur. And my sort of recollection is that it started sometime in the Spring to Midsummer of 1973.

REP. CHATTERTON: So we are looking at something on the order of four and one-half years for the construction of a plant one-third the size of the one proposed by El Paso at Gravina Point at the end of a long logistics line.

MR. SMITH: That is correct. That is correct. Can I just expand on that a little bit, however? I am not the world's greatest expert on LNG technology but the plant in Algeria and I am confident at Gravina Point will be built with a series of so-called trains, which if you will, are simply big machines for making LNG and it will take in Algeria's case six of those to make one billion cubic feet per day.

I think that Gravina Point on the large case will take something like eight, but work can go forward on all of those things simultaneously rather than sequentially. There are things like foundations and power generation facilities and so on which also have to be built but those two essentially go on -- the power generation stuff, for example, goes on simultaneously rather than sequentially so that I don't think it would be fair to infer that it would take three times as long to build the Gravina Point plant as it took to build the Algerian plant. I didn't think, sir, you did infer that but --

REP. CHATTERTON: Thank you, Mr. Smith. But why -- to connect up that line of questioning is that it was because basically Mr. Carter was so concerned about time in his testimony and I had to bring that out.

MR. SMITH: Right. I think El Paso says that they can have their plant on stream in sixteen months and I think that is probably the first train, so-called, sixteen months from the day they start the construction and they will be using, I'm sure -- I'll be using American contractors and American workmen and you know. I am not an expert on LNG technology. I would have no real problem in believing that they can comply with that kind of a timetable.

REP. CHATTERTON: All right. Mr. Smith, you were buying your LNG from El Paso-Algeria. Now, knowing that something

like that is possible, why did you not wait for the Gravina Point plant and buy LNG rather than going through the horrible thing that you are going through right now and try and buy gas in place?

MR. SMITH: Well, I guess the answer to that really is that we knew the state had the gas available for sale, or at least theoretically wanted to negotiate a contract with people, and we thought it best to go to the guy who had the gas this time. In 1970 when we made the contract with El Paso they had the gas. El Paso doesn't have this gas, the state's, so that is why we came to the state.

REP. CHATTERTON: Thank you. Do you plan to be a participant in the pipeline?

MR. SMITH: We have made no decision on that, sir.

REP. CHATTERTON: I'm sure that was an unfair question, I'm sorry.

MR. SMITH: No, it is a perfectly legitimate question. We have not been asked to make that decision. Again, frankly we would have some problem, and we have said this publicly in Alaska before. We would have some problem participating in that line with one-quarter of one-eighth which is to say one thirty-second of the gas under circumstances in which the state, as I have said before, could snatch the gas away from us -- might be able to do so.

REP. CHATTERTON: I'm about wound up, Mr. Chairman, if you

will stay with me. You did say that the take back provision of the contract, which is contractually in there, did give you a little bit of concern, a little pain, and so I am going to ask you this, in considering that, were you aware that there is an overriding -- potential overriding situation that is not within the contract that not only the one-eighth but all of the remaining seven-eighths our Oil and Gas Conservation Commission might just turn the valve and shut it down.

MR. SMITH: Yes, I am aware of that as a possibility. I heard some testimony, I guess, to that effect as a possibility at the Royalty Board hearing in mid-November. That is also a concern but again we have to deal with what the situation seems to be at the moment. And, as I understand the situation at the moment, there is an expectation that the gas may be sold and even if the state should do that, Representative Chatterton, I do not think that the contract will automatically be cancelled. That is not my understanding. I think at some date they are going to have gas to sell and I hope I am still in business to buy it.

REP. CHATTERTON: Thank you. One final question, Mr. Chairman, please? I'm sorry, but it just rolled away from me so I'll yield.

SENATOR RADER: Any further questions? Going once, going twice, going three times.

SENATOR HUBER: You can't pull it off yet. Chatterton still has another one and I think I have one or two.

SENATOR RADER: Oh, I am sorry. I am sorry.

REP. CHATTERTON: I remembered the one I forgot for a second, but go ahead.

SENATOR HUBER: I will let you continue and I will come back.

SENATOR RADER: Well, just somebody ask the question and let's go.

REP. CHATTERTON: Sir, if you were here yesterday you heard the Commissioner of Natural Resources testify that it would be several years, now that is more than a few and maybe not as much as many, I realize that, but several years whatever you quantify that as, beyond any reasonable doubt he would be sure that he could guarantee any pipeline continuing delivery. And then we put on top of that what you just testified to, five years, sixty months, five years for construction of an LNG plant. That is several -- that begins with an S so I will seven, so we are twelve years out into space before we really start selling gas, aren't we?

MR. SMITH: I don't know that I follow that, sir.

REP. CHATTERTON: Well by several -- I am trying to just quantify the Commissioner of Natural Resources' several.

MR. SMITH: Yes, I agree with that. I am not sure again those two times would run sequentially. They might, I'm not

sure, they might run concurrently. Is that a possibility?

REP. CHATTERTON: I think I heard you earlier say that you would not be willing to commit funds, say to roll pipe or something, until you were assured that you would have a continuing supply of gas to amortize the pipeline.

MR. SMITH: Well, I think my statement was a little bit different. It was in response to a question that we committed to participate in the pipeline. I said we hadn't made that decision.

REP. CHATTERTON: Okay, I am sorry. It was a question I asked of your predecessor. I apologize, I'm sorry.

SENATOR RADER: Any further questions? Senator Huber?

SENATOR HUBER: Thank you, Mr. Chairman. Mr. Smith, you brought this question out. You said the producers don't seem interested in selling that gas at this time or in making commitments on it. Would you speculate maybe why the state's interest would be different, in your opinion, than the producer's interest in this case? If producer's aren't interested, they are pretty smart in this business, why should we commit if they don't?

MR. SMITH: Senator Huber, I reserve the right to dissent from the proposition of the producers are pretty smart. They are pretty big but they are not always very smart. Put that comment aside and understand, please, sir, that I really have no way of understanding what is going on

in the minds of the state administration or the state legislature, but the speculation in which I would engage, and it is only a subjective reaction to your question, is that the state felt it had an interest in achieving the construction of the Trans-Alaska pipeline, the all-American project, and the state felt that it could best move towards that objective. Those who were in that particular capacity, making that kind of decision, sir, -- obviously the legislature has got to either ratify or not ratify the contract. But, the people who made the decision to enter into the contracts, I surmise, felt that they could -- I'm loath to use the phrase national constituency again when I was challenged on it, but that they could procure significant support from a large number of states in the lower 48 by committing the state's royalty gas at this time.

Now, I don't think that is the same objective that a producer of gas has at all. My view is, sir, that the producers, it is only again subjective, I don't really know this for a fact, don't really care, to my knowledge, what route is chosen for the sale of their gas. I think really, sir, what they are interested in is simply the revenue to be derived from the sale of the gas.

SENATOR HUBER: Well, Mr. Chairman, Mr. Smith. It would

seem to me that the state administration believes that the state would profit by an Alaska route and then it would seem that the route chosen would affect the profitability to the producers certainly as much as it would to the state. They have seven-eighths of the gas, we have one-eighth. I would think that the question isn't answered yet because the same kind overriding interest would be there for the producers as it would for state. It may not different, it may be opposite, but there certainly would be a profit motive, as there is a profit motive here for the state.

MR. SMITH: Well, it is a question of timing though I think, sir, because really the producers' sale as will be the state's sale is a wellhead sale of the gas but the distinction I was trying to draw was that, in my judgment, the producers don't have a particular commitment to a particular project at this time which I think is somewhat different from the state administration which does have such a commitment. And seeking to maximize the chances of realizing the commitment to obtain the project which the state wanted, the state said "we ought to do something with our gas which will help to develop support in the lower 48 for the project that we want." And I don't think the producers have that motivation.

SENATOR HUBER: Well, it would seem -- I don't want to be

argumentative, Mr. Chairman. Mr. Smith, it would seem like the producers when they were able to get head end money, were the first ones out to commit it but now that there isn't any head in money and this contract calls for specifically no head in money, even if it should later be an allowable thing, that now the state is willing to do it but the producers aren't. And I -- it may not be an answerable question but I didn't mean it to be unfair.

MR. SMITH: No, it was a perfectly fair question. I honestly don't know what is in their mind so, you know, we have just speculated about something that frankly I don't have the judgment on, sir.

SENATOR HUBER: It couldn't possibly be that the state isn't as sophisticated as the producers are?

MR. SMITH: Well, I think the state had a different objective is my view and were trying to achieve that objective. I don't think it is a question of being sophisticated, it is a question of who does what at what time.

SENATOR HUBER: I have one final question, Mr. Chairman. What, if any, corporate interest exists between Southern Natural Gas Company and El Paso?

MR. SMITH: There is absolutely no corporate interest of any kind, which is to say there is no interlocking stock ownership, there is no interlocking directorate, the two companies are completely and absolutely unaffiliated from

one another.

SENATOR HUBER: This includes an ownership of subsidiaries?

MR. SMITH: Yes, sir. There is no joint ownership of any subsidiaries between our two companies. Absolutely none.

SENATOR HUBER: Thank you, Mr. Smith. Thank you, Mr. Chairman.

SENATOR RADER: Any further questions of Mr. Smith? Well --

MR. SMITH: I would like to thank the committee for its indulgence in letting me stay on here and I am afraid I have held you all a little bit longer than you planned or wanted to stay and I am very grateful to you for permitting me to get back home. We have got something of a gas crisis in southeast and we need your gas to help solve it but I am going to go back tomorrow to do what I can to put the bandaid on the wound for the immediate future.

SENATOR RADER: Very well. We will adjourn here then. I hope that we will be able to reconvene tomorrow at 11:00 o'clock again picking up our agenda approximately where we left off with the understanding that there may be some witnesses that we will take out of order because of other commitments. I want to remind you also that contrary to the early announcements, the meeting tomorrow will also be here and not in the Baranof. At one time we thought we did not have this room reserved but the meeting will be here and hopefully convene at 11:00 o'clock. We stand adjourned.

Feb 2, 1977

SENATOR RADER: The Joint Committee hearing of the House-Senate Royalty Gas Sales committees will come to order. Our next witness will be El Paso Natural. We have El Paso down on our tentative agenda twice, once as a

purchaser and once as a route contestant. I'd ask you to wind up all of your testimony at one presentation, if you could. Is that all right with you? You didn't expect to testify twice, did you?

MR. HOLLAND: I did expect so, sir, but whatever is most convenient for you.

SENATOR RADER: I think because that is the next subject to which we move, I think we might as well, unless it is of serious disadvantage to you, take all of your testimony at one time. Is that appropriate with you, Mr. Holland?

MR. HOLLAND: That is certainly fine with me, yes, sir.

SENATOR RADER: Is there any objection with the committee, by the committee, any members, of following that procedure? Okay, would you -- Mr. Holland, please identify yourself for the record and your associate.

MR. HOLLAND: Mr. Chairman, members of the Joint Legislative Gas Contract Review Committee, my name is Michael C. Holland. I am the assistant to the vice president for El Paso-Alaska Company. I am the manager of my company's Alaskan office. With me today is Mr. Joseph Henri, who represents El Paso-Alaska Company in Juneau.

We are grateful for this opportunity to meet with you today and to discuss both the purpose and the effects of the state's commitment of surplus royalty gas.

I want to say at the outset that the arrangements

which are the subject of these deliberations represent one of the most significant actions by any participant in the lengthy decisional process for the North Slope gas pipeline route. I can assure you that the support of the State of Alaska, as expressed by this commitment of royalty gas, is having a profound positive influence on the ultimate success of our proposal. Conversely, we can just as confidently predict that defeat of these contracts by the legislature will have an equally profound negative effect. Any inordinate delay in their approval would produce identical negative results.

So, our hope today, ladies and gentlemen, is to prove to you that these contracts should be ratified by the legislature in their present form, at the earliest possible date.

I'd like to take a few moments to emphasize some of the reasons for our belief that these contracts are the best attainable for both the state and the purchasers.

Firstly, they are the product of intensive, arms-length negotiations. Neither the state nor the buyers are completely happy with all of the provisions of the contracts, but, for our part, we are satisfied that we can neither give up anything more than we already have, nor can we ask anything further from state. As a result, the contracts represent a true bargained arrangement,

arrived at in good-faith negotiations.

We are obviously pleased with the provision calling for active support of the Trans-Alaska route for the gas pipeline by both the state and the buyers. From the state's standpoint, there has never been a Governor, a Legislature or any state agency, task force, or committee which has studied the alternative proposals and reached any conclusion other than that the Trans-Alaska route is best for the state. The citizens and institutions of Alaska are overwhelmingly in favor of our line. A number of state entities, from political subdivisions to special interest groups, have joined the Hammond Administration in intervening in behalf of our project before the Federal Power Commission. Indeed, Alaska's commitment to a Trans-Alaska line is perhaps best expressed by a statement in the November 1976 Gas Pipeline Task Force Report, which said, and I quote, ". . . the Alaska public is more united on this question than on any other present major public issue."

As to the buyers' support for the Trans-Alaska route, you needn't have any apprehension about my company's sincere dedication to its own proposal. Since 1970, when we first looked at this proposition,(I might add at the request of a group of Alaska businessmen), we have expended approximately Twenty Million Dollars in the

design and promotion of the Trans-Alaska route. This is more than four times the amount spent by any individual company sponsoring a competing proposal, and it is all one hundred percent risk money.

Tenneco and Southern are the other two purchasers of the state's surplus royalty gas. In spite of the fact that the contracts are not yet final, both companies have played large parts in the progress we have made recently on the Hill and elsewhere in the lower 48 states. They have done far more than any of us have had a right to expect, and we are extremely pleased with the results of their efforts. They have shown us that they can and will produce, and I believe that the best is yet to come.

Both Tenneco and Southern bring to this project considerable talent and experience. While we jealously guard our own company's reputation as the leader in the field of large scale, base-load LNG technology, Tenneco and Southern Natural Gas are also recognized experts.

Southern is part of El Paso's initial Algerian LNG project and is currently constructing LNG receiving facilities at Savannah, Georgia. Tenneco has recently filed for its own base-load LNG project to supply Algerian gas to the United States. The addition of these two respected companies to the Trans-Alaska proposal will strengthen the available resource base to ensure the

development of the most efficient and environmentally sound project possible.

From the state's standpoint, these contracts provide for the highest possible price for its surplus gas; rights to the LPG's in the gas stream are reserved; flexibility in recalling gas to meet in-state requirements is total; and resources surplus to Alaska's needs are used as a lever to help obtain approval of a project which will undoubtedly provide the greatest possible benefits for Alaska's citizens.

During the three months that this commitment of surplus gas has been public, we have heard and read of several concerns about these contracts which have been expressed by responsible citizens who, we have no doubt, have the best interests of the state in mind.

Some have suggested that the Trans-Alaska route might not be best for the state. We ask only that those people look at the record of support for our project by the citizens of Alaska. We challenge either of our competitors to show that they will provide more jobs, more taxes, lower transportation cost or more spin-off development opportunities than our project can.

We have heard some suggest that the timing of this sale is bad. From the standpoint of its support for the Trans-Alaska route, this is probably

true. It would have produced far greater positive results had it been made a year ago. To those who feel it is too soon, we point out that the contract contains every conceivable flexibility for the state to recall its gas for use in in-state markets -- even to the point where virtually all of the gas could be recalled on the first day the pipeline begins operation. In fact, under the lease agreements with Prudhoe Bay producers, the state does not acquire title to its royalty gas until the gas arrives at the wellhead. So it must be produced in order to exist as royalty gas per se. As a physical matter, the state's royalty gas could be gathered up and then reinjected back into the Prudhoe Bay reservoir. But as a practical matter, who can explain to the citizens of Alaska that they have a valuable, marketable resource which they are paying to have withheld from market, and which is diminishing by between five and eight percent for each production/reinjection cycle. We have firm assurances from the Prudhoe Bay producers that between two and 2.4 billion cubic feet of gas per day can be produced without adversely affecting oil production. So protection of oil production is no reason for reinjection, nor is economics, nor is conservation. In our view, reinjecting the gas gains nothing for the state, and therefore it makes no sense at all.

We have heard some ask for guarantees that the state's right to recall its royalty gas from our pipeline for in-state use will be fully protected. This is a guarantee that we as a private company simply cannot provide. The United States Congress, however, can and has. Under the Alaska Natural Gas Transportation Act of 1976, the State of Alaska has been given the unique authority to take its gas back from interstate transportation to satisfy its own intrastate needs. Additionally, these contracts were submitted to the Federal Power Commission -- on the last afternoon of the hearings -- and once their approval is granted, another layer of protection of the recall right will be obtained. Finally, under the provisions of the contract itself, if the state's access to its royalty gas is not guaranteed, the contracts self-destruct. There simply is no other way that we can think of to protect this right.

A final point that we hear made in detraction of this surplus royalty gas sale is that the state should not commit its resources to gain political leverage. Obviously, this is a philosophical question, but as a practical matter, natural gas is no different a resource than is money from the state's treasury. Those who suggest that the legislature should appropriate several million dollars of state funds for lobbying and promotional

activities ignore the fact that the royalty gas contracts achieve this same objective without the expenditure of a single dollar. In fact, the influence gained in behalf of the Trans-Alaska route from the contrac is far more substantial than that which could be gained from almost any of money spent for lobbying or for similar efforts. When we visit our market areas and point out that more gas will be available if and only if the Trans-Alaska route is approved, we expect that considerable support for our project will result, particularly in the face of the critical gas situation in the lower 48 states this winter.

Now, ladies and gentlemen, that concludes my prepared remarks. I'd be happy to respond to questions. Mr. Chairman, with your leave, sir, I would like to make additional extemporaneous comments on several issues which have come up during the course of these hearings thus far. Perhaps it will shorten the questioning period.

SENATOR RADER: Since there is no objection, go ahead, Mr. Holland.

MR. HOLLAND: Okay. We talk a lot, ladies and gentlemen, about this matter of taking the gas back. It probably has not been said yet that Alaska can work in behalf of providing a greater guarantee to take its gas back by pointing out the fact that if any of Alaska's royalty gas

flows in the Trans-Alaska gas project, the fact that the gas volume flowing through that pipeline is increased is going to decrease the cost of service for the gas being delivered to the lower 48. In that regard, we can say to the Federal Power Commission that by allowing Alaska's gas to flow through the Trans-Alaska line, as opposed to not allowing it to flow through any of the pipelines whatsoever, considering reinjection there is some other alternative.

We can show the Federal Power Commission and the citizens of the lower 48 states that their gas can be delivered cheaper for the fact that some of Alaska's surplus royalty gas is going to the pipeline.

Secondly, on advance payments. The advance payments procedures in the past have only been allowed to producers and for the purpose of exploration and drilling costs. Advance payments in the past, to our knowledge and as a result of our research, however limited it has been over the last two days, we have not been able to find one case in history where advance payments have been provided to royalty gas owners, because royalty gas owners, by the very virtue of the definition of what they are, don't go out and explore and drill for gas so they don't need these advance funds for those purposes. The Federal Power Commission flow through authority for these advance

payments as was discussed here during the last two days was terminated on December 31st, 1975.

Now, under these contracts only surplus gas is sold. If the guaranteed volume of gas were provided -- if a guaranteed volume of gas were provided, and if it were legal to provide advance payments and if advance payments were allowed to be made to royalty gas owners, then perhaps you would find a company somewhere willing to provide a bonus to acquire this case. But we can't flow advance payments through, they are illegal by the Federal Power Commission and, please remember that all we are getting out of these contracts is whatever is left over after the State of Alaska satisfies its owns needs. So we do not have, in this case, an assured gas supply. If it was a guaranteed supply perhaps again, if it was legal, you could attract some sort of a bonus payment.

As to deregulation, there has been left here during the course of these hearings an implication that the state might get a higher wellhead price or higher royalties if a project having the lowest transportation costs were approved by the Federal Power Commission. The only bills which have been introduced thus far under the U. S. Congress cover producers at the wellhead. That is to say, the wellhead price itself in the only matter, the only part of a natural gas transportation industry which

has been suggested to be the subject of deregulation. Nobody has suggested that the transportation of natural gas be deregulated, nor has anyone suggested that the sale of natural gas in the market area itself be deregulated. We are only looking at the wellhead price. The sales price by the pipeline and the distributor will continue to be regulated therefore.

Now some of these studies, one of which I saw an excerpt about in the newspaper last night, presumed that incremental sale of gas in the market place. They presume an incremental sale of gas in the market place and with that assumption the inference is drawn that when you sell this gas incrementally, you then back off the transportation costs and then what is left is what the wellhead price is going to be. Forgive me for not explaining this very well. I am not that articulate but the fact of the matter is, and I would ask you to please remember that without exception, all of the companies who participated in the Federal Power Commission proceedings on this North Slope natural gas pipeline controversy have asked for authority to roll in the price of natural gas delivered from Alaska. Therefore, you have absolutely no basis against which to compare costs when you are looking at the costs of alternative fuels. If gas from Alaska were sold on an incremental basis, that is if gas

from Alaska were sold down there for, say, Four Dollars all by itself, then you could compare Four Dollars to the cost of fuel oil on an equivalent BTU basis. The way it is actually going to happen, if gas is delivered to the lower 48 for Four Dollars and all other gas in the lower 48 is being purchased for, say, an average price of One Dollar and one-half, because of the fact that Alaskan gas makes up only between five and ten percent of the total gas supply down there, you roll all this gas together and you divide it out and you come up with, say, an average price in the lower 48 then of all your gas of One Dollar Sixty, One Dollar Sixty-Five. Nobody will be paying the full Four Dollar price for gas from Alaska, if that is what it is going to be.

In fact, the Federal Power Commission judge in his recent opinion recommended rolled-in pricing. He feels that this is the way that gas from Alaska should be sold.

Now, the conclusion that we draw from these analyses is that whether or not gas is regulated, let's assume it is going to be regulated initially. The price for the gas paid at the wellhead in Prudhoe Bay will be precisely the same no matter which transportation proposal is ultimately approved. Therefore, the state's royalties will be precisely the same, the state's severance tax is

precisely the same.

Now let's look at the case for deregulation because deregulation will only occur at the wellhead. Again, we have to say that the deregulated price at the wellhead in Prudhoe Bay is going to be precisely the same once again, regardless of which of the transportation projects is ultimately approved. There will simply be no opportunity to start in the market place, back off transportation costs and what is remaining, therefore, would be the wellhead price.

Thank you, Mr. Chairman.

SENATOR RADER: Mr. Holland, Dr. Carl Swanson, one of our experts that the committee has retained to assist them has asked that we ask this question of all purchasers. Were you here yesterday? To make certain though that we are not -- that this is into the record, let me read again the two questions that Dr. Swanson wants to make certain are in the record. Number one, do you, as a purchaser, agree that Section 6.5, which provides for annual redetermination of the price under deregulation applies to Section 6.3, when deregulation occurs before first deliveries of gas, as well as to Section 6.4, which applies when deregulation occurs after the first deliveries?

MR. HOLLAND: Mr. Chairman, the answer of my company to that question is yes.

SENATOR RADER: And the second question, do you, as a purchaser, agree that under Section 6.2 that if the price is regulated, the price paid by you as a purchaser to the state shall include an amount equal to severance taxes if the regulation allows an amount equal to revenue taxes to be paid to working interest owners?

MR. HOLLAND: Mr. Chairman, the answer of my company to that question is also yes.

SENATOR RADER: Now, Dr. Swanson, I assume that that satisfies your inquiry here.

DR. SWANSON: Yes, it does.

SENATOR RADER: Are there any further questions from committee members? Representative Meekins?

REP. MEEKINS: Mr. Holland, your last statement -- extemporaneous statement was that under deregulation the wellhead price would also be the same, Would you explain that to me?

MR. HOLLAND: Yes, I'm sorry. I probably didn't explain it well the first time. Representative Meekins, what I mean by that is that the wellhead price in a deregulated atmosphere will not be calculated on the basis of what the transportation cost to the market for that gas might be. And if Arctic Gas claims that theirs is lower and we heard a gentleman here this morning from Michigan Wisconsin who made that claim. He concluded, therefore, that if you back down from the market, back the transportation cost

off from the market place, what is left for the wellhead price at Prudhoe Bay might be higher if the Arctic Gas project is approved and, therefore, the state's royalties might be higher. We vehemently disagree with that. The only thing that is being considered by the U.S. Congress at this time, or in the foreseeable future, is the deregulation of the wellhead price and the transportation and the sale of gas on the other end will continue to be regulated by the Federal Power Commission. It is not like the oil industry.

REP. MEEKINS: I think that is what is confusing me. How would the wellhead price be established under deregulation of the wellhead price?

MR. HOLLAND: Well, under deregulation you would probably have an open bidding situation and the producer at Prudhoe Bay would take the most attractive offer to him, regardless of what the ceiling prices might be as provided by the Federal Power Commission under present circumstances, except for the fact that the Federal Power Commission has established no area rate for Alaskan gas at this time.

REP. MEEKINS: Thank you.

REP. GRUENING: Well, Mr. Chairman?

SENATOR RADER: Mr. Gruening?

REP. GRUENING: Did I understand you correctly to say that

under deregulation the cost of service is not relevant to the wellhead price?

MR. HOLLAND: That is correct, sir.

REP. GRUENING: I must be mistaken. I have always assumed that it would be. In other words, the reason cost of service isn't so important at this time is because you have a regulated price and the return to the state based on wellhead isn't going to change any because the wellhead is regulated. But under deregulation the differences in cost of service between the three lines then becomes relevant.

MR. HOLLAND: No, sir.

REP. GRUENING: I guess I don't understand why then it is not relevant to the cost of service under a deregulated pipeline.

MR. HOLLAND: Well, Representative Gruening, I suppose that -- well, let me start this way, during the three or four years we have been in Alaska, we find that the natural gas industry is very commonly confused with the oil industry. Now in the oil industry you start at the market place and at the present time we are looking at something like Thirteen Dollar oil being the established price on the west coast. You then back off the transportation costs, take the Alyeska project, presume it might be what, Five and one-half Dollars or so and you

arrive at a net dollar figure which would apply to the wellhead price for the oil.

In the case of the natural gas industry, because we are now fully regulated, first, of course, the wellhead price is regulated, the transportation end of it is regulated, more importantly the price that we pay in the market place is also regulated. Not only the price that a wholesale natural gas transmission company, like myself, would sell to its distributors for but also the price that the distributor would sell to the homeowner and the commercial institutions within the state market areas themselves, that is also regulated.

Now, when we start taking this gas from Prudhoe Bay and we roll it in with all the rest of our gas supply, we simply lose any basis whatsoever for a firm market price from which we can back transportation cost from and, therefore, leaving the net balance as indicated in the wellhead price available.

REP. GRUENING: Okay, but you are talking about some rolled in value. I don't know if I understand that fully but it isn't the fact of deregulation that makes the wellhead value constant. In other words, if deregulation means anything, isn't it true that wellhead then is not regulated by the FPC?

MR. HOLLAND: Correct.

REP. GRUENING: Okay. But you are saying despite deregulation you will be able to get the FPC to approve, if they are the approving body, somebody has got to approve this charging other customers for gas they are not getting.

MR. HOLLAND: Well, sir, you could take natural gas nowadays and you could sell it for almost any price in the market place, particularly in some areas east of the Rocky Mountains this winter. It could be suggested that you could sell natural gas in the market place for Ten Dollars a million BTU's because when you start rolling that gas price in with dollar and one-half gas, if you are only talking about five or ten percent of the total gas supply being represented at that Ten Dollar cost, the net effect to the homeowner or the ultimate consumer -- the point being, he will never see Ten Dollar gas. He will see a slightly increased cost of gas across the board but he won't be buying this gas for Ten Dollars because they roll it in with all the rest of the cheaper gas. The trend in the industry has been that gas prices are growing by leaps and bounds almost because every new source that we find is much more expensive than the preceding source.

REP. GRUENING: Okay, "they" is the FPC? You said that "they" roll it in; who is going to do this?

MR. HOLLAND: Well, in the case of the Alaskan project it

will be the -- the transporter will send his gas south and at the point where the gas is finally sold to the distributor, at that point it will be rolled in in the distributor's system which ultimately feeds the commercial institutions and the homeowners.

REP. GRUENING: And under that situation you are saying that the cost of service is irrelevant.

MR. HOLLAND: The cost of service is irrelevant with respect to what the wellhead price is going to be or the state's returns on royalties and severance taxes, yes, sir.

SENATOR RADER: I am going to ask a question myself here because it is along the same line. You stated that in the event of deregulation that the wellhead value would be determined by sort of a competitive bidding by purchasers from producers?

MR. HOLLAND: Yes, sir.

SENATOR RADER: Well, now, wouldn't the amount that was bid be based in part upon the cost of transporting that product from wellhead to their purchaser?

MR. HOLLAND: In the lower 48, sir?

SENATOR RADER: In the lower 48.

MR. HOLLAND: No, sir, I don't think so.

SENATOR RADER: Wouldn't they be able to pay more for it if they could get it there free, for example, than if they have to pay someone and, therefore, if they have to pay

someone more or less, wouldn't that affect the amount they would be willing to bid at the wellhead price?

MR. HOLLAND: Well, I suppose, Mr. Chairman, you reach a point where there may be some influence but what we are faced with here with several studies and testimony by other witnesses appearing before this board is that the transportation cost has everything to do with the price that would be seen at the wellhead. We don't accept that proposition.

Now, if we are talking about paying Twenty Dollars at the wellhead -- I can see I am not going to be able to answer your question that way. I really don't know at what point the transportation cost might influence what might be paid at the wellhead. But the whole idea behind deregulation is to increase the price of gas at the wellhead so as to provide more funds to the producers to get out and explore and find some more gas because they are so critically short of it. Whereas in years past the Federal Power Commission, we all feel, has artificially held the prices to wellhead to be too low, at least too low to encourage exploration.

SENATOR RADER: Thank you. Mr. Chatterton?

REP. CHATTERTON: The same line of questioning, thank you, Mr. Chairman. Exactly the same -- Mr. Holland, let me ask you a very straight forward question. Actually you

are in the business of transporting energy, let's just keep it that way, and someplace along the line that energy has to be sold. All right, now if wellhead price is deregulated, are you trying to tell me that you would be willing and only willing to bid the same amount for a wellhead price if route A only cost one dollar per thousand cubic feet and route B cost two dollars per thousand cubic feet? You would not be able to bid any greater on the wellhead price for route A than if it came through route B?

MR. HOLLAND: Representative Chatterton, it is our position that regardless of what the transportation cost would be to market there will be no influence on the wellhead price to be paid to the producer at the wellhead.

REP. CHATTERTON: Thank you, sir. Thank you, Mr. Chairman.

SENATOR RADER: Representative Hayes?

REP. HAYES: Mr.Holland, I am getting an implication, possibly erroneously, that if there is deregulation at the wellhead which would provide an incentive for producers to go out and develop more wells, that industry would be willing -- industry, I'm talking about the pipeline companies such as yourself, would be willing to pay those producing companies a premium. I also got the implication that you didn't feel the state, since they were not producers, were entitled to a premium. Are you

saying that you would on the one hand pay the producers a premium but not the state if there was deregulation at the wellhead?

MR. HOLLAND: Representative Hayes, I don't recall suggesting that a premium might be possible in the case of deregulation. It would certainly open up options which may not now be opened to the bidders for the gas. The point I was making is that we could find no instance where a premium or bonus had been paid to a royalty gas owner in times past.

SENATOR RADER: Did that conclude your questions, sir?

REP. HAYES: Yes, thank you.

SENATOR RADER: Senator Sumner?

SENATOR SUMNER: If we could assume for a moment that it did have some influence, the price at the wellhead, would you agree that the benefit to Alaska through positive economic impact, that the El Paso project would benefit Alaskans even if there was some incremental increase in the amount of money we could get for the royalty gas? I suppose I am not stating it clearly enough, but wouldn't the economic impact from having an all-Alaska line more than offset that amount of money which we might get from a higher price at the wellhead if transportation costs were back charged, as was indicated this morning, to give some incremental change to the wellhead

price?

MR. HOLLAND: Well, my answer to that question, Senator, has to be yes, and I will add that we simply do not accept the proposition that either of the other two projects will have a lower transportation cost than the El Paso project would.

SENATOR SUMNER: What do you see, in layman's terms, as the positive benefit to Alaska for the El Paso project?

MR. HOLLAND: Okay, firstly, when we make these comparisons, the advantages to Alaska as a result of the El Paso project are approximately twice those for Alcan and approximately six or seven times those for Arctic Gas.

Now, we talk about tax dollars. In the case of the El Paso project we'll pay about 2.8 Billion Dollars in property and income taxes over the life of the project. This compares to 1.4 Billion Dollars for Alcan and some substantially lesser amount for Arctic Gas.

In the case of employment, during construction we are looking at twenty one thousand workers peak, Alcan is fourteen to fifteen thousand, Arctic Gas is six or seven thousand. After construction, we will provide six hundred and fifty jobs approximately, full-time, highly paid skilled jobs. Alcan's number show one hundred and eight. Arctic Gas' number show thirty-nine.

I think the most important advantage of El Paso's

project though to the state would be in the spin-off development opportunities that it provides. Now, there has been a lot of conversation here about where the petrochemical plant ought to be, whether it ought to be in Fairbanks or Delta or tidewater. It doesn't really matter. If you want to build a petrochemical plant in Fairbanks, and that is a decision to be made by the State of Alaska and the citizens of Fairbanks, but I can guarantee you that El Paso will deliver the feed stock in the Fairbanks area less expensively than Alcan could. And when you get to tidewater, of course, that is an opportunity that Alcan doesn't even have. So, briefly, I would suppose those are the major advantages.

SENATOR SUMNER: Thank you very much.

SENATOR RADER: Representative Meekins?

REP. MEEKINS: Thank you, Mr. Chairman. I just want to ask you again on the point of deregulation at the wellhead. What I have gotten out of this discussion is that you say if the wellhead price is deregulated, that there are other factors besides the costs of service that would go into the wellhead price. That, as I understand it, is similar to other prices, that there is a certain amount of demand and people are willing to bid according to what their need or their demand is for that. And obviously there are upper constraints beyond which the

market won't bear or the cost of service is a factor in there, but basically it is similar to other prices which is a competitive situation. Some people may be willing to internalize or to lose a part of their profit in order to obtain that gas and other people would want to make more on it or something like that. So, there is lots of factors in there and that means that it isn't a direct functional relationship between the cost of service and the wellhead price. Is that what you are saying?

MR. HOLLAND: Well, I am saying that there is no relationship between the cost of transportation and what might ultimately be paid from the buyer to the producer or the gas at the wellhead. And I'm saying that the State of Alaska should not concern itself with the differences in the alleged transportation cost between the three projects by way of worrying about whether revenues will be larger from one project or another. Because we maintain a postion, and I think we can support it, that in the case of deregulation the cost of transportation will have no bearing on the price of gas at the wellhead.

REP. MEEKINS: Thank you.

SENATOR RADER: Representative Miles?

REP. MILES: Earlier today, Mr. Holland, we heard testimony which indicated the cost of the Arctic route would be able to be kept down due to the limited amount of permafrost

in which the line would be constructed. Can you give us your ideas on how the El Paso line and the Arctic line compare insofar as construction and permafrost go?

MR. HOLLAND: Well, I would suggest that just the opposite is true. Arctic Gas would seem to me to pass through at leas: twice as much permafrost there as the El Paso line would pass through. The cost overrun potential for the Arctic Gas project, as judged by the Department of the Interior in an independent study, was twice that of El Paso's. Interior said that they are looking at eighteen to thirty-six month's time overrrun because of all these construction difficulties, because of their dependence on the weather, and the amount of snowfall for the snow paths, and that sort of thing. Whereas, El Paso is building right off the haul road in one case and right off the work path, and in the other cases that is already in place for the Alyeska project. The potential for time delays and cost overruns for the El Paso project is significantly less than for either of the two Trans-Canadian projects.

REP. MILES: Thank you, Senator. Thank you, Mr. Holland.

SENATOR RADER: Senator Croft has indicated that he had some questions other than pricing. I think we might as well stay on the pricing. That doesn't mean that we can't come back to it at any time, but -- Senator Hacknew?

SENATOR HACKNEY: No, go ahead with ---

SENATOR RADER: Senator Croft, he wants you to proceed if you have a different line of questioning.

SENATOR CROFT: I was curious what various projects El Paso has underway in various parts of the world with regard to LNG and what the status of those projects are. The Algerian project has been referred to but I know that you have others too and I am curious what the status of all of them are in terms of their initial cost estimates, their size estimates and whether they are on schedule or not.

MR. HOLLAND: Now, Senator Croft, of course the initial one as you suggested is the Algeria I LNG project with a capacity of one billion cubic feet a day from Azrou, Algeria, to be landed at two sites on the West Coast, one at Savannah and one at Cove Point, Maryland.

SENATOR CROFT: East Coast.

MR. HOLLAND: East Coast, I am sorry. Savannah is still on the East Coast, I suppose. That project is essentially on schedule. We made our initial application in 1970 with the Federal Power Commission. Optimistically, we also ordered three ships at the same time from Dunkirk, France. When the ship construction started the Federal Power Commission authority did not issue until 1973. So actually Sonatrach, the national oil and gas corporation for Algeria, did not start on the LNG plant in Algeria

until 1974. We happen to have two, and very soon three, ships at an anchorage point in Norway just waiting for that project to come to fruition. Start up is scheduled for December of this year. We have also ordered three ships from Newport News in Virginia and three ships from Avondale Shipyards in New Orleans. That will be a nine ship fleet for that project. Now, we will file on March 1st of this year an amended application for what we call the Algeria II project. That will also involve transportation of approximately a billion cubic feet a day, equivalent of LNG from Azrou, Algeria. It will be landed at a point near Corpus Christi on the Gulf Coast and United Gas will get approximately three hundred and fifty million cubic feet of that gas, El Paso will receive six hundred and fifty million cubic feet of gas.

We are looking into opportunities for LNG projects from Iran, Venezuela and Russia. In addition we are looking into coal gasification. We are the first company to get on board with the idea of coal gasification. We filed the first application with the Federal Power Commission, We participated in at least three underground nuclear explosions which are intended to find a way to loosen up very tight gas bearing reservoirs. I suppose that is a fair summary.

SENATOR CROFT: Mr. Chairman, I understood that the Iranian

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project that you mentioned was roughly comparable in size to the Alaska project that you have applied for. It was about two billion cubic feet a day that you were going to liquefy, is that correct?

MR. HOLLAND: I don't know, I honestly can't answer that question. I had it in my mind that it was about a billion but you could be right.

SENATOR CROFT: I was referring to the Oil and Gas Journal article of November 1st, '76, page 27, entitled "Watching the World" by Bart Collins. He indicates in there that that project has been abandoned by Iran because cost of the project, the latest estimate before it got underway has exceeded Six Billion Dollars. Do you know whether that is correct or not?

MR. HOLLAND: I do not, no, sir. I'm simply not involved in that aspect of our company's operation.

SENATOR CROFT: But El Paso was involved in that project?

MR. HOLLAND: Yes. We at one time had -- I thought we still had underway consideration of a project from Iran.

SENATOR CROFT: Could you check and let the committee know if Iran has notified El Paso that it intends to abandon that project because of the cost overrun?

MR. HOLLAND: I would be happy to.

SENATOR CROFT: The article also goes on to mention that one of the reasons that Iran is also abandoning the project

is because they have determined that at least at present prices that it is better off for them to maintain high levels of oil production rather than to jeopardize oil production by going into a large gas production at this point. Do you have any knowledge of that?

MR. HOLLAND: I do not, no, sir.

SENATOR CROFT: Could you, because we are obviously going into tomorrow, try to contact El Paso and see if they have any information in that regard?

MR. HOLLAND: Yes, I will be happy to.

SENATOR RADER: Any further questions, Senator? Senator Hackney?

SENATOR HACKNEY: Thank you, Mr. Chairman. Mr. Holland, you are an engineer?

MR. HOLLAND: Well, I graduated as a civil engineer, yes, Senator.

SENATOR HACKNEY: Maybe you wouldn't want to tackle this or perhaps you would. It is a quote from an article that was published by the Candian Arctic Resources Committee and it states that "At best it appears that both projects" and they are referring to Arctic and El Paso, "as proposed by their sponsors are so risky that it may not be possible to finance them privately, even if their other problems can be overcome." Would you care to comment on that?

MR. HOLLAND: Well, I think I would. I have not seen that article, sir, but we're assured by our financial advisors, who are White, Weld and Company and the Chase Manhatten Bank of New York, that financing can be arranged for our project and it can be arranged from private sources, using, of course, the existing Maritime Administration Title Eleven provisions which will assist in the financing of the LNG carrier fleet. Now, in the case of Arctic Gas, I suppose Bob Ward could better speak to that, but we feel that the financing of either Canadian project may well be the Achilles heel of those two projects. They have to tap different, much more varied sources; they face different kinds of risks. The question could be asked -- for example, Arctic Gas has the policy of wanting to proceed with construction of their pipeline in spite of Native land claims. Some Natives up there are saying, "I'll lay down my life to stop that pipeline." Now, I wonder if a prudent financial institution would invest money in a project when they have the threat of that sort of involvement in the Arctic Gas project. Now, again, I would suggest Bob Ward might have different comments on that.

SENATOR RADER: Representative Gruening?

REP. GRUENING: Mr. Holland, in El Paso's contract with the state, Section 11.3 says that after approval of the

Agreement by the Legislature, the Buyer, El Paso, "shall proceed with diligence in the preparation, filing" of applications before the Federal Power Commission. What, if anything, hasn't already been accomplished under that provision? In other words, hasn't everything that that provision calls for already been accomplished by you?

MR. HOLLAND: Representative Gruening, the way the Federal Power Commission proceedings have been organized, we have actually just finished Phase I. Phase I will result in the recommendations which go to the President upon which, with other input, he will make his decision as to which route is built. Once the route is selected, we then proceed into Phase II of the Federal Power Commission proceedings because again we are a fully regulated company. Several of the things that will be done in Phase II will be the Federal Power Commission will look at the gas sales contracts, whether they be for royalty gas or working interest gas at Prudhoe Bay. They will look at the financing package, the organization of the consortium, the final tariff arrangements for transporting the gas and perhaps other things I am overlooking.

Now, we understand that as part of our obligations under that contract, we are to request from the Federal

Power Commission during Phase II of the proceedings, authority to actually send back to the State of Alaska the gas that it wants to recall for its own in-state purposes. In other words, we have to seek approval of this contract from the Federal Power Commission.

REP. GRUENING: Phase II comes after the selection by the President and Congress of the route?

MR. HOLLAND: Yes, sir.

REP. GRUENING: Is Phase II critical, do you think, in terms of the state exercising its right to take back gas under this contract?

MR. HOLLAND: Well, from the standpoint of the purchaser -- it is more critical from the standpoint of the purchaser, I believe. We have to get authority to execute our obligations under that contract, the things we are obliged to do under the contract have to be approved by the Federal Power Commission because we are fully regulated. We think it is important that the state has submitted these contracts to the Federal Power Commission as part of Phase I. It has, at least, a psychological force with the judge, although I really don't know what the FPC might include in its opinion to the President with respect to what is in these contracts. We will have to wait and see.

REP. GRUENING: I think most of us in this room understand

the arguments for the El Paso route. I think they are very persuasive. Now, wouldn't the rest of the United States and Congress and the President also see the merit in those proposals without the added threat, and it is a threat, correct me if you don't think it is that, of telling them that if they don't approve our route that we want that we are going to take our gas back. Now, does that add anything to the merits of the argument or do you think it detracts perhaps from the merits?

MR. HOLLAND: Representative Gruening, for three years here in the State of Alaska we have maintained -- my company has maintained that the most important thing the state could do to support our project, to help gain its approval is to commit its surplus royalty gas in such a way as it could be used to create a national constituency. Now I have heard representatives from Tenneco and Southern sort of back off from that term, however, in the case of El Paso, we fully intend to apply the influence of this contract in that matter. We intend, for example, to launch a statewide campaign in California. We feel in the case of California we must take our case to the people. We have tried to talk to Quinn, to Maullin, to the Governor, et cetera, et cetera, and I really shouldn't mention names but we haven't gotten very far

down there, we do have some problems down there. So, when we point out the fact that we have acquired title up to six hundred and fifty billion cubic feet a day in a situation where the consumers of California are facing curtailments in 1981, moving fifteen percent into the households of California, fifty-two percent into the commercial institutions and all industry are being cut off. And by virtue of the fact that we furnish, as I said, eighty percent of our gas to California, we think that it has got to have some influence down there with respect to which project California ought to ultimately support.

REP. GRUENING: Do you think California or the delegation of California and some of the other national delegations will take the threat as credible. In other words, will they believe that the State of Alaska will sit on its gas until some indefinite time if these two routes, or especially the El Paso route is not chosen? Do you think they will take that threat, I mean interpret it as a credible threat?

MR. HOLLAND: Representative Gruening, I would suggest, sir, that that is dependent on what the State of Alaska itself says with respect to its purposes for this contract. As far as the buyers go, we can only say that "Ladies and gentlemen of our market areas, there is a good chance you

will get more gas if the Trans-Alaska route is approved, so please tell your Congressmen and your Senators and your Governors to help us."

REP. GRUENING: Will that level of decision makers, do you think, believe that unless -- despite the merits of the case, they don't approve the El Paso line, that that gas will never get to market despite whatever in-state uses we may have?

MR. HOLLAND: I suppose that, again, it is up to what the State of Alaska says it is going to do with its resource in the event the Trans-Alaska project isn't approved.

REP. GRUENING: But what we are saying with this contract, if I understand it correctly, is that if it is not approved, we are not letting the gas leave the state.

MR. HOLLAND: Well, I think what you are saying in these contracts, sir, is that if the Trans-Alaska route is not approved, then El Paso, Tenneco and Southern have not bought the gas. Now what you decide to do with it beyond that point, of course, we don't know.

REP. GRUENING: Well, I am trying to -- because the essence of this contract, the effort is to try to persuade people to our point of view. At least the idea of committing is to build -- I have heard it expressed a number of ways, either to build a constituency or to influence the people that represent that constituency. The only problem I have

had so far, the major problem with these hearings is I haven't established just how that is going to be done. Will the fact that we say we are not going to commit it to you, influence Congress when you believe honestly beyond the merits of your argument of the El Paso line -- for the El Paso line?

MR. HOLLAND: I think more importantly, Representative Gruening, what these contracts do is to bring two substantial partners to the effort for gaining support and, therefore, two substantial voices in spreading the word about the merits of our project. Now, we have been in this thing all alone ever since the beginning and we had an example of how well we have been able to do alone against a consortium of variously fifteen to twenty-nine members in the Arctic Gas group, first in the staff's opinion and more recently in the judge's opinion. I would suggest that if we had Tenneco and Southern or two other companies or whatever involved a year or two earlier, the judge's opinion issued yesterday might have been a little bit different.

REP. GRUENING: If I understand your efforts so far, they have been based on the merits of your argument and if what you have done so far is successful then we should be bringing in people that will be doing the same thing, in terms of arguing their case, the merits. Is that a

correct assumption?

MR. HOLLAND: I really don't understand, sir, what you are trying to get to.

REP. GRUENING: Well, I am just trying to get to how the national constituency, the decision makers are going to react to this contract. Are they going to react favorably to the El Paso proposal, are we going to gain votes in Congress? In other words, by saying they will get the gas through these three companies only if the El Paso route is chosen. I'm just asking you whether it will have a counter-productive effect of saying that we are going to deny you this gas and regardless of the merits.

MR. HOLLAND: Representative Gruening. We think it will have a profound positive influence in generating support in the lower 48 states if these contracts are approved.

SENATOR RADER: Senator Croft?

SENATOR CROFT: In that regard I am curious how you are going to be able to tell people in the State of California that the approval of the El Paso route will result in more gas to California when there is a provision in the contract that the state can withdraw all of the gas that you have bought, basically at any time it desires. And secondly, there is a provision in the contract which says that the state may switch its support to some other

route.

MR. HOLLAND: Well, sir, the way we will present the contract with respect to the second part of your question is that as long as we are doing our job and as long as Tenneco and Southern are doing their job, there is not a likelihood that the state is going to want to switch its support, which we understand will occur only if it appears the El Paso project is doomed to failure. We think we are in this thing big yet; in fact, we intend to win the thing in the end. And would you please repeat the first part of your question?

SENATOR CROFT: Yes, the take back provision. How can you tell somebody in California this is going to be more gas to you, when the state has the right to take all of the gas back?

MR. HOLLAND: Because if any cubic foot at all of gas flows out from the provisions of this contract into California, that is a cubic foot they wouldn't have otherwise gotten. And when we are looking out into '81 with fifteen percent curtailment, I say again in the priority one, homeowner, gas consumers, each little bit of gas that we can send to California, which is contingent upon approval of the Trans-Alaska route, we think will be very persuasive in getting the people in California to support our project. Nobody can quantify how much gas will actually ever flow

out from this contract. We think there will be some and that is enough of an argument to make in California.

SENATOR CROFT: You feel then that the switching provision in these contracts doesn't undermine your position at all?

MR. HOLLAND: No, sir.

SENATOR CROFT: With regard to the amount of gas that is necessary to make your project feasible, are there reserves at Prudhoe Bay now of a sufficient magnitude that your project is not dependent on the discovery of additional reserves?

MR. HOLLAND: Yes, sir, there are. There are enough reserves in Prudhoe Bay to make our project viable.

SENATOR CROFT: What recovery rate do you use in saying that those reserves are sufficient?

MR. HOLLAND: Well, we have a total of twenty-six trillion proven by various geologists who have looked at it. We think the amount needed to flow in one of these projects is in the range of twenty-one to twenty-two trillion. We think that in order to build our project and deliver gas to the lower 48 -- now it is up to the finance houses in the end, if you are just asking our opinion, probably right at two billion cubic feet a day would be the threshold at which we would wonder if we had an economically viable project or not.

SENATOR CROFT: And what percentage of twenty-six trillion cubic feet is that? What do you estimate that you are going to recover out of the twenty-six trillion cubic feet, what percentage?

MR. HOLLAND: At two billion a day?

SENATOR CROFT: Yes.

MR. HOLLAND: Well, I don't know the number, Senator, but it is two billion times three hundred sixty-five times twenty years.

SENATOR CROFT: You are assuming that throughout, that it would be an economically viable project?

MR. HOLLAND: If we could continue producing two billion a day for twenty years, we would probably have an economically viable project. We think we will get more out of there though.

SENATOR CROFT: That would be in the neighborhood of sixty percent then?

MR. HOLLAND: I don't know the numbers, perhaps so. It sounds about right.

SENATOR CROFT: You have done some analysis to come up with that, haven't you?

MR. HOLLAND: Well, we haven't done a very sophisticated analysis, Senator Croft. You know our project is sort of built on the train idea where with the installation of six trains at the LNG plant, we would liquefy 2.4

and with the addition of five trains we can liquefy 2.0 billion cubic feet a day. I haven't been involved in the economic analysis myself but I understand that something below two billion cubic feet a day would give us problems. Now we are also talking about competitive aspects of these projects too.

SENATOR CROFT: I am still talking about the impact on the reservoir at Prudhoe Bay and I am curious what your analysis indicates. Is your necessary percentage of recovery rate -- and you think it is somewhere in the neighborhood of sixty percent?

MR. HOLLAND: We think it is whatever percentage about two billion plus a day results in, yes, sir.

SENATOR CROFT: All right. Have you done a reservoir analysis at Prudhoe Bay?

MR. HOLLAND: Yes, sir, we have.

SENATOR CROFT: And who did that for El Paso?

MR. HOLLAND: We used our own staff. We have a staff of reservoir engineers.

SENATOR CROFT: And could we get a copy of that?

MR. HOLLAND: Yes, sir, you could.

SENATOR CROFT: All right. And what does that show at the minimum level necessary to make your project economically viable, what does it show to be the impact on oil production out of Prudhoe Bay?

MR. HOLLAND: Well, the reservoir analysis which I am referring to did not look at the economic viability of the project aspect. It only looked at what we could expect to see recovered out of Prudhoe Bay over time and it actually went up to four point something billion cubic feet a day for a few years.

SENATOR CROFT: What did your study show the impact on oil production would be at Prudhoe Bay?

MR. HOLLAND: Senator, I wish I could answer that but let me furnish the study to you and then we can both look it and decide what it shows. I don't think it showed any interference with oil production at all.

SENATOR CROFT: Do you know what assumptions were made with regard to reinjection of gas or aquifer or water flood or levels of oil production?

MR. HOLLAND: Well, there were no assumptions made in our study as to reinjection of gas, that I'm fairly certain of. There were very likely some assumptions made as to water flooding.

SENATOR CROFT: And what about levels of oil production?

MR. HOLLAND: Well, with given levels of water flooding, oil production would not be hampered.

SENATOR CROFT: Did your study differ substantially from the Van Poollen study or the Corps Lab study?

MR. HOLLAND: Senator Croft, I haven't compared them. I

don't know.

SENATOR RADER: Any further questions? We'll go the first round here still. Senator Poland, I don't think you have spoken yet.

SENATOR POLAND: Thank you, Mr. Chairman. Mr. Holland, I have a question in my mind that I can't quite figure out. Inasmuch as your company will be the one that has the pipeline, we have heard a great deal about political clout. It would seem to me that you have more to gain than anyone else and I am a little bit curious as to why you also became a purchaser of gas?

MR. HOLLAND: Well, I thought about this last evening. I knew I would be asked the question, what additional influence does the sale of royalty gas give to El Paso and what would we be doing differently if we get the gas as opposed to if we didn't get it and I almost have to say we are doing the best we can now, we have been for three years and I doubt that we can do anymore whether or not we have the gas. But, I do have to tell you that having access to some of Alaska's surplus royalty gas will help us make a case in a different way in our market area and I refer back to the discussion we just had on the California situation. That also applies to Arizona, in which state we furnish one hundred percent of the gas consumed, New Mexico, Texas, Nevada, Colorado, other states

in the southwest. So, it will have a beneficial effect on the prosecution of our effort in gaining support for the project but we are still doing the best we can in the other arenas.

SENATOR POLAND: I'm sure that you are. I thought maybe we could have gotten a fourth partner to build this national constituency instead of giving gas to El Paso since they had the pipeline at stake. Mr. Chairman, I have one other question I would like to --

SENATOR RADER: A little bit louder, Senator, I see people having difficulty hearing you.

SENATOR POLAND: I have one other question that I would like to ask Mr. Holland. He referred to the fact that the El Paso route does go to tidewater, which I think almost all Alaskans fully appreciate, but my question is, why Gravina Point? Why not a spot like Cook Inlet, I am referring to the possibility of the coal generating to prepare the gas for shipment. I understand that we will be burning seven percent of that -- I have heard that figure, I don't know whether it is accurate, to liquefy -- was Cook Inlet considered and if it was considered and turned down, could you give me the reasoning behind it?

MR. HOLLAND: Yes, ma'am. Senator Poland, we looked at Cook Inlet, we looked at Resurrection Bay, we looked all across Prince William Sound and in fact, we looked at Nome

in the beginning. Some of the alternatives were very quickly and easily eliminated as far as a practical location for an LNG plant site. You see, with our project we not only have to find a viable pipeline route, but we have to find a port site where we can send a ship in and a ship out of there every day and one-half for the rest of the project's life, without fail, without interference.

When we got over to the Cook Inlet area, the first thing we did which was unpleasant to us, was that we departed from the Alyeska corridor because we came down the rail belt and that would not then let us maximize use of Alyeska's existing facilities, camps, equipment, work pad, et cetera, gravel sources and data. The second thing we found difficult with Cook Inlet was the ice problem there, the tides, the current. Operating an LNG carrier costing Two Hundred Million Dollars each on the basis of one in and one out every day and one-half, we didn't think that we could do it on a reliable basis when we had to fight all those oceanographic conditions that occur in Cook Inlet which do not occur in Prince William Sound. So in the end, when we rolled all this alternative analyses together, and we looked for a plant site on competent bedrock, et cetera, et cetera, the best combination was Gravina, and the pipeline route

maximized the use of Alyeska's facilities.

SENATOR RADER: Any further questions? Mr. Chatterton?

REP. CHATTERTON: Before you let him go.

SENATOR RADER: Oh, yes. Well, I would like to go around once to everybody and then we can start the second time around. Representative Chatterton?

REP. CHATTERTON: Thank you, Mr. Chairman. What is your understanding, Mr. Holland, as to the terms of the contract regarding who stands for the cost of converting wellhead gas and the quality that it comes from the wellhead to quality gas necessary to one, be injected into the pipeline or two, at least be in a condition for liquefaction? Whose stand is that, the State of Alaska's or do you?

MR. HOLLAND: Representative Chatterton, are you talking about the cost of gathering and processing the gas occurring at Prudhoe Bay?

REP. CHATTERTON: I am talking about the cost of converting the wellhead gas to a suitable quality for transmission by the pipeline as part A or if it is different, for quality for liquefaction. Are you with me?

MR. HOLLAND: I am with you. I understand the question. I would expect that we would pick up those costs. If the point of purchase is at the wellhead or at the inlet side of the separator or wherever it is ultimately

established, it has not yet been established. We pick up the share of costs which go to processing the gas to pipeline quality which then goes into our market area. Now in the instance where the State of Alaska is using that gas for its own needs within the state's borders, the potential purchaser of gas, say in Fairbanks or wherever, would then stand their proportionate share of those processing and gathering charges.

REP. CHATTERTON: If you purchase gas from a working interest owner, do you also pay their costs to convert it from wellhead quality to pipeline quality?

MR. HOLLAND: One way or another we would pay it. It would either be rolled into the wellhead price or it would be rolled into the transportation cost. One way or another we would pay it.

REP. CHATTERTON: On that subject that is all I have, Mr. Chairman. Thank you, Mr. Holland.

SENATOR RADER: Representative Swanson?

REP. SWANSON: Yes, sir. Mr. Holland, you remarked several times with Senator Poland and with Representative Gruening and yesterday with Representative Parr about your political clout and a few minutes ago you remarked about using the people in California as a persuasive measure to using our gas as one of the measures for persuasion to build something and supply them in

California. You made that remark a couple of times. Well, now, what kind of persuasion are we going to use when we want our gas back? Where is your political clout there? Is it still going to be with California with all of their Senators and Representatives back in Washington or is it going to be with our one lone Representative and two Senators?

MR. HOLLAND: Representative Swanson, we certainly don't intend to mislead the people of California into believing that this is an assured gas supply. We have to reveal the fact, obviously, that the gas is subject to recall but nonetheless if they get a cubic foot, it is a cubic foot they wouldn't have otherwise gotten without the Trans-Alaska route.

Now, if you are talking about -- we heard some discussion yesterday about a potential program underway to repeal this 13(b) provision of the Alaska Natural Gas Transportation Act. We supported the State of Alaska in its attempt to get that thing into that bill and we will support the State of Alaska in its attempt to keep in in there too.

REP. SWANSON: Then you say that you are going to use your political clout in California and Washington to give our gas back when we want it?

MR. HOLLAND: Well, sir, if --

REP. SWANSON: Well, I could just take a yes or no answer.

MR. HOLLAND: Yes.

REP. SWANSON: Thank you.

SENATOR RADER: Does that conclude your question, sir?

REP. SWANSON: Yes, sir.

SENATOR RADER: Senator Huber?

SENATOR HUBER: Mr. Holland, you have anticipated most of my questions to date but you may have heard the dissertation back and forth yesterday about natural gas liquids and being you are proposing the pipeline, I'll ask the question to you. What would El Paso do with or what will happen to the natural gas liquids, that is those factions higher than C_2 present in the gas as it is produced on the North Slope, if the state elects not to take those liquefactions on the North Slope?

MR. HOLLAND: Senator Huber, the state has full rights to those liquids. I think we agree on that.

SENATOR HUBER: They do. But if they elect not to take them on the Slope, what will happen to them or what will you do with them? That is the factions above C_2 in number.

MR. HOLLAND: All right, sir. We will haul them wherever the State of Alaska wants us to haul them to and if that is to Fairbanks or Gravina or California, that is what we will do. But we will never lose sight of the fact that the liquids belong to the State of Alaska.

SENATOR HUBER: All right, Mr. Chairman, there is one more question. Do you have the capability in the line that you propose to haul those factions to other points for the state to take them off? That is what I am trying to get to.

MR. HOLLAND: Because of the operating characteristics of our pipeline, temperature ranging from five degrees Fahrenheit to say twenty-eight degrees Fahrenheit, pressure at sixteen hundred and seventy pounds, we can operate -- we can accommodate approximately eighty percent of the liquids which will be available in the gas stream on the North Slope.

Now there is a question as to what is going to be done with the remaining twenty percent and we understand there is several alternative ways of disposing of those liquids under consideration. They could be burned as fuel on the Slope, they could be sent into a separate small land or liquid pipeline, they could be trucked off the Slope and I have even heard someone say they are studying a railroad proposition.

SENATOR HUBER: Mr. Chairman. Could you let us know in writing to the committee just what the situation is in regard to the liquids, what would be available because of the technological ability of your pipeline and so forth and where what won't be available? In other words,

you say all but twenty percent of them can be moved. I want to know what twenty percent, what factions these are and so forth and I don't want to hold up your time now but if you could supply that technical information to the committee, I'd like to have it.

MR. HOLLAND: I'd be happy to supply it, sir.

SENATOR HUBER: Thank you.

SENATOR RADER: Senator Sumner, I believe. You will be in order next.

SENATOR SUMNER: Just one question. Some inference was made largely with your capacity to timely build this project and finance it. Have you to date been questioned in any active sort of way or by any officials in any official capacity as relates to your capacity to timely complete the El Paso project and to timely finance it?

MR. HOLLAND: Well, Senator Sumner, those are two of the major subjects we stood substantial cross-examination on before the Federal Power Commission and even Arctic Gas' witness looked at our capital costs and said okay, within nine or ten percent. The witness then said and the judge said too, any two estimators who agree on the costs of a project of these magnitudes within nine or ten percent, the estimates must be pretty good. There was also no disagreement -- there was no substantial disagreement with our construction schedule, that is by the

time we get into the field, we can actually have those facilities in operation in the time that we have suggested we can in our application.

SENATOR SUMNER: Do you have any reservations on those two items?

MR. HOLLAND: None at all, sir.

SENATOR RADER: Senator Hackney?

SENATOR HACKNEY: Thank you, Mr. Chairman. The question was suggested, Mr. Holland, if the state passed legislation charging the producer for twelve and one-half percent of all gas reinjected, would this have a significant problem with El Paso?

MR. HOLLAND: Senator, I am sorry. I don't understand the question. Would you please restate it?

SENATOR HACKNEY: If the state passed legislation charging the producer for twelve and one-half percent of all the gas reinjected, would this have a significant problem with El Paso?

MR. HOLLAND: I am sorry. I just don't understand what that question is.

SENATOR RADER: It is approximately time for our recess. I would like to finish with these witnesses though if it is the sense of the committee that we are close to finishing up with them and it is my sense that we are with perhaps -- Representative Chatterton?

REP. CHATTERTON: One question. Thank you, Mr. Chairman. Mr. Holland, we were discussing a little bit ago that you would pay, as I heard you say, the cost of converting wellhead quality gas to pipeline quality gas. I think that is admirable. I am worrying like heck -- and you said you would do the same thing for the working interest owner. I am a little worried where the kicker is. Would it be that you would do that and under a specific condition such that the cost of so doing would be rolled into your price by the FPC?

MR. HOLLAND: Absolutely, sir. Yes, sir.

REP. CHATTERTON: If the FPC did not include that as a cost in establishing your selling rate structure, you would not be interested in doing it, is that correct?

MR. HOLLAND: Not only that, sir, but there would be no flow of gas. We can't haul that gas out of Prudhoe Bay unless it is cleaned up. Nobody can, Arctic Gas, Alcan, nobody.

REP. CHATTERTON: You lead me then to another question. I'm sorry. Are you saying that if you cannot roll the cost of the conversion to a pipeline quality gas into your rates then we, the state, would have to pay our cost of processing?

MR. HOLLAND: Representative Chatterton, we'll pay that cost and we will get authority to roll it into our rates, so there is no problem there. It is a normal cost. There

is nothing unusual about it at all.

REP. CHATTERTON: Thank you, sir.

SENATOR RADER: Representative Carpenter?

REP. CARPENTER: Mr. Holland, if the state doesn't or can't take possession of the liquids, say at Prudhoe, what becomes of them?

MR. HOLLAND: Well, as Senator Huber and I were talking, about eighty percent of them stay in that gas stream until such point that the state determines it wants its share removed.

REP. CARPENTER: But if the state doesn't determine that, the state has no use for them, what happens to them?

MR. HOLLAND: Well, if the state decides it doesn't want to use natural gas liquids that are in the gas stream at Prudhoe Bay, in the first place it would be, I think, an inexcusable oversight on the part of the state. These are very valuable feed stocks but if you want to let us take them down and sell them to Arizona and California and Nevada as BTU's, then we will do that. But I don't think that is what you want us to do, sir.

REP. CARPENTER: You would move them out of the state at that point?

MR. HOLLAND: Yes, sir, if there was no use for them in the state, they would move out of the state, yes.

REP. CARPENTER: Has there been any talk of moving the

liquids that can't go in our main line, through the Alyeska pipeline?

MR. HOLLAND: Yes, that is one of the options I neglected to mention. The heavier hydrocarbons, I think the natural gasoline and perhaps the butanes, parts of those fractions could be included in the Alyeska line; at least that is being studied. Now they have to come out of Valdez though.

SENATOR RADER: Representative Meekins?

REP. MEEKINS: Mr. Chairman, how is it that California would have more gas if the contracts are approved?

MR. HOLLAND: Well, sir, our business is delivering gas throughout the Southwest. All of that gas is delivered pursuant to terms of existing contracts. If we are unable to meet the obligations we have incurred out of those contracts by way of making the volume deliveries we are supposed to make, any gas that we acquire from any source, whether it be Alaska, Algeria or Timbuktu, must first go to satisfy the unsatisfied demands of those contracts. Eighty percent of the contracts we hold in the natural gas company are for service to California. So they get eighty percent of whatever gas is surplus to Alaska's needs that we would acquire under this contract.

SENATOR RADER: Are there any further questions? If not, we thank you gentlemen very much and we will take Dr. Tussing

Thompson

WARD

HOLLAND

AGO 800246

JOINT PUBLIC HEARINGS

of the

ALASKA STATE LEGISLATURE

on

SCR 3, 4, 5 and HCR 11, 12, 13

"THE PROPOSED SALE OF ROYALTY GAS"

January 31, 1977 - February 7, 1977

Juneau, Alaska

VOLUME IV

PRESENTATIONS BY THE THREE COMPETING ROUTES

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by: Mike Holland, Assistant to V.P. John Bennett

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SENATOR RADER: The hearings by the joint committees relative to the sale of State royalty gas will come to order. We have had distributed by El Paso a document indicating natural gas consumption for those states served monthly in whole or in part for 1975. They have asked that it be made an exhibit. Unless there is objection, we will mark it Exhibit 13, and I believe the reporter has a copy of that, do you not?

(Whereupon Exhibit 13 was duly marked.)

SENATOR RADER: I believe copies of that have been distributed to all members of the committee. We have also a request by Alcan that a pamphlet that they have prepared called "The Alcan Pipeline Project, A Realistic Solution to the Transportation of Alaskan Gas", consisting of twenty numbered pages, be entered as an exhibit. Unless there is objection this will be put in as Exhibit 14.

(Whereupon Exhibit 14 was duly marked.)

SENATOR RADER: One of the most difficult problems we've had here is that the hearings have continued beyond what any of us had anticipated, the interest has been greater than we had anticipated, and also the thoroughness of examination and the testimony has gone beyond what we had expected. If the hearings do go on tomorrow they will be on the first floor of the Court Building. We will

move from here to there. I don't know that they will go on tomorrow, but if they do, before anybody that's here today leaves, I want you to be advised that that's where we will reconvene, and we will also try to reconvene promptly at 11:00 o'clock again tomorrow subject, of course, to the floor action of the House and the Senate.

I understand that some of the House members, I see and I was informed that they might be a little bit late. The problem here of taking witnesses out of order is that I've been requested by so many people now to be taken out of order that every time I do I make it worse for someone else, and I don't really know how to honestly be fair and judge who should be favored and who should not.

The witnesses are listed, our general interested witnesses are listed in approximate priority, in approximate order, that we received a response from them to our letters, or a request from them that they be permitted to testify. I am reluctant to pick between equally competing witnesses here as to who should get priority.

I would like suggest to any witness who has a problem, that if you could talk to some other witness who is in front of you and get them to agree to swap places, then neither you nor he could be offended, nor could those behind be offended, because they're still

in the same relative position. I'm reluctant on my own behalf though to try to judge the relative needs and merits of the witnesses' requests.

I did take a witness out of order yesterday, Michigan/Wisconson Pipeline Company. I frankly did not think the testimony would go on so long; I did not realize it would be so critical. I recognize that now as having been a mistake because once you take one person out of order every other person is equally entitled to be taken out of order, and suddenly there is no longer a semblance to order in the proceedings.

I know that some of the committee members have particular witnesses that they want taken out of order. If any committee member wishes to make a motion to that effect, to take some witness out of order, that motion will, of course, be determined. The voting on it will be limited to the select committee, the five from the House and the five from the Senate, and at that time we will bring up and discuss in detail the very problem that I've discussed so far.

I am advised that our consultants -- I believe, I'm not certain of this, but I believe they can hold themselves over until tomorrow, an additional day, which would speed up to some extent the general industry and general public interest witness possibilities.

The Department of Natural Resources has agreed to come back and give us a summary of Judge Litt's opinion that we still have not received. Part of that will be read into the record. They also intended to make themselves available to answer questions which may have been raised by conflicting testimony of the witnesses that we've had. I intend to hold them to the last and, if necessary, perhaps they will not even testify until next week, and they may very well testify in front of the committees separately, the Finance Committees and other separately, if necessary. I'd like to have them testify in front of everyone so that we have a record and we all have the opportunity to hear what they have to say, and so the proponents and opponents of the resolution before us could also hear and respond.

I hope that we do have that time. But, of course, the key to this is the amount of time that the witnesses take at testifying and the amount of time that members feel necessary to question.

If we follow our agenda as prepared, and I will follow that until there is some motion to take someone out of order because, as I say, I don't know how to explain to the rest of the people why they've been put back one space.

Incidentally, Mr. Hoyle Hamilton is here.

Commissioner Martin said his observer had told him that there was considerable question raised as to reserves, rate of production, and related matters in the testimony addressed to various witnesses, and various witnesses indicated they did not have that first-hand information. Mr. Hamilton is here. Does the committee wish to take Mr. Hamilton out of order at this time or not? Otherwise, his testimony would be included in part of the wrap-up by the Department of Natural Resources.

Do I hear any particular desire on that? If there is no expression, then I will leave his testimony until the wrap-up. He will be available to us and we will try to take care of our out-of-town witnesses here first.

Mr. Chatterton.

REP. CHATTERTON: Mr. Chairman, in the interest of Mr. Hamilton, he is also an out-of-town witness and I do know that he has had some home problems lately, and maybe if he has any great need to get back to Anchorage. Only he can speak to this, and we might reconsider.

SENATOR RADER: It has been suggested to me that at least State witnesses are here on government per diem from out-of-town, whereas a number of our interested party witnesses are not on per diem, are paying their own way. So I hope that unless you really feel it critical,

Mr. Hamilton, that you will be able to stay over and present your testimony with the Department of Natural Resources or return, if necessary. What is your situation in that regard?

MR. HAMILTON: Like everyone else, I would like to be home, of course, but I can stay over at your pleasure.

SENATOR RADER: In deference to the citizens who are here and because we're already in our second day beyond their allotted time, I would ask you to stay over.

Because of the fact that I told El Paso yesterday--they were actually scheduled to testify twice -- I asked them to testify once. I think that was misunderstood. There has been a subsequent request now by El Paso for, as I understand it, a ten-minute statement, five or ten-minute statement as to alternate routes which you did not make yesterday which you'd like to make at this time. Is that correct?

MR. HOLLAND: Mr. Chairman, we never did quite get into the merits of the pipeline yesterday during my presentation, and I would like to follow the presentations of Alcan and Arctic Gas with a very brief statement this morning, at your pleasure.

SENATOR RADER: That is the natural schedule, that is the schedule which we have on our agenda. Is there any objection then to El Paso appearing in the order that

we had previously indicated on our tentative schedule. Very well, we'll handle that in that manner. On our tentative agenda, going ahead as we had planned, this is the time for the Alcan representatives.

For those who have not been here previously, we have a "no smoking" rule. We're just overloaded in here. If you'll please bear with us, it's only thirty-five minutes until we recess for noon anyway, so we should be able to hold out.

Mr. Thompson, would you please identify yourself and your colleagues for the record, sir?

MR. THOMPSON: Senator Rader, Members of the Committee, I am Morris Thompson, Vice President of Alcan Pipeline Company. With me today on my right is Cliff Groh of Groh, Benkert and Walter, attorney for Alcan. On my left is Joe Becraft, Director of Gas Procurement for Northwest Pipeline.

We'd like to offer testimony today on several points very briefly, our project and the proposed contracts. Our project envisions a forty-two inch seven hundred and thirty-one mile pipeline within the State of Alaska, commencing at Prudhoe, following the TAPS line down to Big Delta, down the highway to the Yukon border, from the border over to Fort Nelson following the Alcan Highway, whence we split with an existing pipeline built by West Coast Transmission, then on over to Alberta, again down south to Muenster, Saskatchewan, in essence, with another Canadian partner, utilizing an existing pipeline, from Muenster, Saskatchewan both Arctic and our project envision the same pipeline into Illinois, the Northern Border Pipeline.

Tuesday Federal Power Commission Administrative Law Judge Nahum Litt handed down his recommendation. We've seen an eleven page FPC news release covering, highlighting the points of his recommendation. Several issues were raised concerning the Alcan pipeline project that we'd like to respond to at this time.

Judge Litt asserted that, "Alcan's design is neither efficient nor economic since its proposed pipeline is undersized; that Alcan's three-year phased-in construction schedule is not credible; and that Alcan's proposed summer construction cannot be accomplished without unacceptable environmental impact."

I think we should all bear in mind that the Administrative Law Judge's recommendations is but one step in the certification of the route to deliver Prudhoe Bay gas to marketplace. Northwest Pipeline Corporation and its wholly-owned subsidiary, Alcan Pipeline Company, believing their proposed route to be a viable alternative, entered the FPC proceedings in July of 1976. We feel Judge Litt did not thoroughly review all of our evidence and new material. We feel that we have adequately addressed the issue of the size of our proposed pipeline in filings before the NEB in Canada, where we agreed to look at varying pipeline sizes and pressures. We would only point out that currently there are no gas pipelines in the United States or Canada which operate at a pressure in excess of one thousand pounds per square inch. We propose a line which operates at one thousand two hundred and fifty pounds per square inch, feeling that this is the next logical step in a practical advance in pipeline construction and technology. El Paso proposes a line

which operates at one thousand four hundred and forty psi, for example, and Arctic operates one at one thousand six hundred and eighty pounds per square inch, or about a sixty-eight percent increase over known and proven technology.

We believe our construction schedule is reasonable; however, in light of the Judge's findings, this will be reviewed. As to the proposed summer schedule, we feel that the experience of Alyeska Pipeline Service Company and with State and Federal surveillance, that there will be minimal environmental problems.

We would like to raise and discuss the issues we feel the Legislature should consider in considering the proposed royalty gas sales. Using the minimum and maximum values set forth in the Jensen Associates Report prepared for the Legislature, the value of this resource ranges from Six Hundred and Sixty Million Dollars to an excess of 6.6 Billion Dollars. The contracts presently before the Legislature sell Alaska's royalty gas to three companies in exchange for an unspecified amount of political support for the El Paso project.

We feel the realities of the situation are as follows: the Commission Staff of the Federal Power Commission has recommended the Arctic Gas Pipeline route, an all land route. The FPC Administrative Law Judge just

Tuesday recommended the Arctic Gas route. The people of the State of California and the Public Utilities Commission of the State of California in their brief filed with the Federal Power Commission have come out in favor of the Arctic Gas route, an all-land route, thereby, we might add, rejecting an LNG project.

The Sierra Club, the Wilderness Society, the National Audobon Society, and the Alaska Conservation Society, in their brief filed with the Federal Power Commission, have come out in favor of the Alcan route. We feel it is absolutely clear that the final decision is going to be an all-land route. We would also like to call to the attention of the committee the fact that the routing of this gas line probably dictates the routing of the next oil line. If you will recall, in the last Session of Congress amendments were made to the 1920 Mineral Leasing Act which require use of existing corridors to transport oil and gas from Alaska to markets in the Lower 48. With the problems envisioned and with the current problems the Alyeska is having in getting oil east from delivery on the West Coast, we submit that Congress will put the next oil line, as well, down the gas corridor, whether it is Arctic or Alcan.

So in consideration of these conflicts, we should also bear in mind that the next oil line is also a

consideration, and that's about an Eight to Ten Billion Dollar effort in today's money.

A significant problem facing the Arctic proposal, we feel, is the Native Claims and environmental issues they face in Canada. The resolution of the Native Claims problems in the Alcan project is less difficult.

Turning to the contracts, they commit the State's royalty gas to three buyers. As a general rule in the gas industry, an owner of natural gas will not make a commitment to sell its gas until the price is known; the point of delivery, costs of delivery and conditions of delivery are known; and in any event, when you are a minority owner, as the State is in this instance, at the latest possible date in order to maximize your contract income by being able to capitalize on the terms given others, and to minimize your losses due to changes in the political and regulatory environs.

The State has committed its gas without knowing the price, associated costs, or point of delivery, nor what the other sellers will achieve. The price, we maintain, is critical. If the price is too low, the producers will not sell their gas, but will re-inject it to gain additional oil recovery. In view of the above, we feel it would not be prudent for the State of Alaska to sell its royalty gas at this time.

Approval of the contracts will substantially reduce royalty revenues to the State because the transportation system the State has selected to support costs more to build, and the markets of Tenneco and Southern Natural Gas are more remote than that of Northwest Pipeline Corporation, which increases transportation costs by having the Tenneco and Southern market farther away. There is a substantial possibility of deregulation, which will create substantially different marketing opportunities than we face today. If the average cost of transportation to the Lower 48 is Twenty-Four Cents less with Alcan than with El Paso, as found by Judge Litt, then Twenty-Four Cents more per mcf would be received at the wellhead, or almost Eight Hundred Million Dollars more for the State's royalty share. Therefore, the net economic benefit for the Alcan project to the people of the State of Alaska must be taken into consideration, and under those conditions. In testimony filed before the FPC, the Alcan project would have a greater net econonic benefit to the State of Alaska.

Article Twelve of the "General Terms and Conditions" of the contracts attempts to provide that, "Any more favorable terms negotiated in the producer sale contracts will be included in the State's contract," but, it is narrowly limited to Sections 3, 5 and 6 of the

"General Terms and Conditions", which in and of themselves are narrow and limited to matters relating to measurement practices and billing procedures. We suggest this provision should be extended to the entire contract; in other words, on any portion of the contract that any other seller gets a better deal, that portion of the contract would also be up for the State.

An additional problem with the contracts is the fact that there is no set plan, budget, or performance criteria from which to measure the support provided by the purchasers of the El Paso project. The addition to the contracts of a defined plan, a budget and performance criteria will insure compliance with the State's major objective for the sale. Further, to insure all-out support, the contracts should be automatically terminated if El Paso is not certified or if the State switches its support to another contract. If you read 11.4 very, very carefully, there is no automatic cancellation provision.

It can be expected that the Federal Power Commission will attempt to charge Alaska for any carrying charges associated with excess capacity in the Prudhoe Bay gas transportation system which is occasioned by the withdrawal of the royalty gas. The FPC, we feel, is simply not going to let the Lower 48 consumer pay for

capacity required to serve the varying needs of the State. The State is not protected from bearing these charges under the proposed contracts. The contract should be amended so the State has this protection.

The proposed contracts are not necessarily deficient in what they provide, but rather in what they fail to provide.

The contract does mortgage future discoveries that can be transported through the pipeline by giving the purchasers a right of first refusal to buy future discoveries up to one and a one-half times the amount of Prudhoe Bay royalty gas that the State has taken under the reservation features of the contract. Northwest's preliminary offer included no such mortgaging provision.

Under Paragraph 3.7(a) of the contract, Alaska grants the buyers the right to buy additional surplus gas, "at the highest price available to seller for such gas from any other interstate bona fide purchaser." With the buyers having a right of first refusal, it will be extremely difficult to get serious bids from other buyers because they recognize that they will be simply setting a price which the other buyers will match, the three other buyers will match. Other, more beneficial terms which may be forthcoming from other purchasers, such as advance payments, are not even considered in this

right of first refusal.

At the time the State takes a portion of its reserved gas, it is obligated to purchase from the buyers a proportionate percentage of the field facilities; that is, the gathering, compression, treating and dehydration facilities which the buyers have paid to handle the State's gas. We believe it would have been far better for the State, as an option, for the buyers to retain ownership of these facilities and only charge the State a cost-of-service for their use. The State would thus avoid a capital expenditure in utilizing its gas.

The limitation on processing in Paragraph 9.1 of the contract to a residue gas quality of one thousand BTU per cubic foot may effectively limit the State's ability to extract a significant portion of the liquids, particularly if any volume of inerts such as CO_2 and/or nitrogen remain in the stream. In the Lower 48 it is common to accept gas having a heating value of nine hundred and fifty BTU per cubic foot, thereby increasing the State's opportunity of recovering more liquids.

In an effort to gain political support for a pipeline system the State, we feel, has failed in its charge to fully survey the market opportunities. The following issues should be considered:

(1) What are the possibilities of direct sales

to high priority, industrial end users?

(2) Can the State obtain advance payments from markets unregulated by the FPC? Depending upon the regulations of a particular state, a pipeline or distributor may have an opportunity to include advance payments in its rate base, and it is not at all probable that the FPC will preclude transportation of such gas because of the advance payment feature. Certain payments of this type are currently being offered by interstate pipelines and their unregulated customers.

(3) What are the possibilities that gas will be deregulated in the near future? It is fine to say that your contract protects you in the regulated environment, but we are on the threshold of deregulation, and the possibilities of that are many and varied.

(4) What has been done to insure that the gas will be delivered by the pipeline system on a basis consistent with the widely ranging daily needs of small distribution systems and limited industrial markets?

(5) What provisions could have been negotiated with the buyers and/or transporters to provide gas liquids extraction, storage and distribution networks?

Representative Gruening, in his opening remarks, set forth two critical issues: what will the State give up and what will it gain in return. We feel the

State will give up its opportunity to gain maximum benefits from the future sale of its royalty gas and will gain an unspecified amount of "political clout". Also, I think, in fairness to the committee and the Legislature, we ought to separate the consideration of royalty gas contracts from what's already going on in the State.

As a competitor, we recognize and appreciate the fact that a large percentage of the people of the State support El Paso, that the Legislature is on record as supporting El Paso, that the Governor supports El Paso; that's their prerogative, that's their privilege, and we respect and honor that. However, it's another matter when we offer a depletable resource of the State of Alaska non-competitively to push that support. We think that's a separate issue that ought to be given very serious consideration by the State.

We thank the Members of the Committee for allowing us to testify, and we will respond to any questions.

SENATOR RADER: Do you have any questions? Senator Colletta.

SENATOR COLLETTA: Mr. President. Mr. Thompson, how do you feel on the contracts, do you think that with the sale of gas to those that that's an assist in getting the line built?

MR. THOMPSON: Senator, let me try to respond to that. I think

prior to the passage of the Procedural Bill, which changed the conditions dramatically, that the sale of the royalty gas could have had a greater impact before the Procedural Bill was passed. Let me try to explain that.

As in the oil pipeline, if the decision was to be made in Congress, then you need a maximum lobbying effort because Congress, as a body, reacts to that type of push. But what we have here in the Procedural Bill is the Executive Branch making this decision. For example, the Federal Power Commission recommends a route to the President, the President selects the route and gives Congress a very limited time, sixty days, to vote it up or down.

We submit that whatever route the President recommends to Congress will undoubtedly, because of the shortness of time and because it's a major policy consideration for a new President, be approved by the Congress. The likelihood of overturning that, we think, is very small.

So, we question -- or I think a logical question could be raised, what impact then will political clout have on a regulatory agency in a quasi-judicial, or quasi-governmental judicial agency and a new President. I think, had it been a major Congressional decision, I

would think the State's impact, or the political clout brought by the three would have been greater, in my opinion. But the situation has changed dramatically with the passage of the Procedural Bill.

SENATOR COLLETTA: Mr. Chairman, I'd just ask one more. Morry, with that in view then, since in fact we haven't really sold to anyone, are you still interested in purchasing and, if so, why?

MR. THOMPSON: I think, as every gas company that has been up here so far has testified, we would like to have an opportunity to bid competitively on the State's royalty gas. That is correct.

SENATOR COLLETTA: Do you feel it would assist you in getting support for your line if, in fact, you had an opportunity to buy the State's share?

MR. THOMPSON: We would want to negotiate with the State for the purchase of its royalty gas so the consumers that we have in our market area, as does all others, have a continued assurance of gas supplies downstream. We would welcome the support of the Legislature in the State of Alaska, but it's not necessarily tied to the sale of the royalty gas. We think those can be two separate entities.

SENATOR COLLETTA: Thank you.

SENATOR RADER: Senator Poland.

SENATOR POLAND: Mr. Chairman. Morry, did your company

attempt to purchase royalty gas?

SENATOR RADER: I'm sorry, Senator, I don't think people heard you.

SENATOR POLAND: Mr. Chairman, I was inquiring as to whether or not Alcan had put in a proposal for royalty gas and been turned down by the State.

MR. THOMPSON: At the time that the State was considering the sale of its royalty gas, we were going to make an offer, but as you know, one of the conditions of the sale was that we would agree politically to support El Paso. At that time we had a competing application before the Federal Power Commission and didn't think it was appropriate, and we made a counter-offer to the State, that we would take the royalty gas for what we thought to be a viable alternative. So the conditions of the sale, we felt, precluded us from submitting a bid.

MR. BECRAFT: We did make formal letter offers to the State, to Commissioner Martin, in at least as great detail as was made by the other prospective purchasers. But, as Morry pointed out, it was impossible for us to agree to the stipulation of the Trans-Alaska line or nothing. But in all other respects we responded to it and in writing to the State, and make an offer.

SENATOR POLAND: In other words, if that string hadn't been

attached you would have been a fully serious competitor for the State's gas?

MR. BECRAFT: Yes.

SENATOR RADER: Senator Sumner.

SENATOR SUMNER: If you were allowed to bid on the gas today what could you offer the State in terms of price, or whatever, that it is not getting under the current contract, or the proposed contract for sale?

MR. THOMPSON: Two things. We would, of course, be a competitive bidder with other people. Secondly, we feel because of the proximity of the Northwest market area, which is seven Western States, the State of Washington where we supply one hundred percent of their natural gas that's consumed there, Oregon, Nevada, somewhat in Arizona, that proximity of market means that the transportation costs are thereby less, protecting the wellhead and thereby insuring greater royalty revenue to the State of Alaska. We think we're in a slightly more competitive position position than the others.

SENATOR SUMNER: What would a competitive bid mean in the terms of price to Alaska, how much more money? Could it mean more money under the present regulated---

MR. THOMPSON: Senator, those are, of course, difficult to predict. We can't say that we'll give Ten Cents over the Dollar, we're all currently regulated. But I think

simply because of the proximity of our market that we better protect the wellhead.

SENATOR SUMNER: Would that result in any increase over what the present contract calls for?

MR. THOMPSON: I believe, as I indicated in the testimony, that the transportation of Prudhoe Bay gas to whatever markets are a factor for the State to seriously consider, and that if transportation costs can be lowered, the revenue to the State of Alaska is higher, yes.

SENATOR SUMNER: We heard yesterday in testimony that the transportation costs had little or no effect in the amount of money the State would get from its sale of the gas. Do you agree with that?

MR. THOMPSON: No. I think that the scenario that was being proposed or offered to the State was that if you rolled in prices that the transportation costs would not be significant. But that's a scenario that really can't hold up forever because if you keep rolling in higher and higher gas, your transportation costs are eventually going to be impacted, so it's our position that transportation costs are a factor in the wellhead price.

SENATOR SUMNER: The question I have is, do you think that the rolled in technique is going to be employed in the sale of the royalty gas?

MR. THOMPSON: I'm not sure.

MR. BECRAFT: The Commission will, in all probability, use the rolled in technique. However, the FPC staff, as I understand it, is still very strongly in favor of incremental pricing for the supplemental supply, and perhaps Mr. Moody or others here can correct me, but I don't think the Commission has abdicated their responsibility to provide gas at the lowest possible cost to consumers, which they have pursued vigorously over the years, and mostly in recent years by reducing wellhead prices to the point where we know that the gas supply has now become inadequate. I think they intend to translate -- they do look at an increment. The rolled in pricing will be used simply to make a salable product out of it. But they are going to look at each project incrementally, and the notion that transportation will have no impact on wellhead price is preposterous. They'll look at the entire scheme.

SENATOR SUMNER: Mr. Chairman, just to emphasize one point. You're saying without any question or any doubt that the cost of transportation will result in a significant price difference in the sale of the gas, to the State of Alaska; we'll get more money if the cost of transportation is less? You're absolutely sure of that?

MR. THOMPSON: That's our testimony. We say that the transportation costs can have an impact on the wellhead

cost.

SENATOR SUMNER: That isn't what I asked you.

MR. THOMPSON: When you said "significant," what's significant?

SENATOR SUMNER: I said will it have? You said it can have. There's a difference.

MR. THOMPSON: I'm sorry. It will have, in our opinion, an impact on the wellhead.

SENATOR RADER: Senator Kerttula is seeking the floor.

SENATOR KERTTULA: Just one follow-up, and perhaps it's been answered earlier. The ultimate price, your price per product in the Western States, is it higher or less than that for the same amount of product in the Midwest?

MR. THOMPSON: Gas is a regulated commodity and you could price it in several different mechanisms. The FPC staff could set it moderately priced, and that could vary from region in the country, or in this instance they could set a flat rate across the country for the gas. The significant difference for the State, however, is the transportation, Senator, that we're maintaining; the closer to market, the less transportation, the more royalty return, the greater opportunity of protecting the wellhead, therefore, the more royalty return for the State.

SENATOR KERTTULA: I understand that, and you're saying

that it will be a uniform price, that you won't have a greater or lesser price than, say, Arizona for this gas than you might have in Southern Illinois?

MR. THOMPSON: I'm saying that the FPC has not made that decision yet and they have the authority to set a price for Alaska's royalty gas, and the possibility of a unit price is there.

MR. BECRAFT: Certainly after deregulation scenario, where we're starting to look at alternative fuels, we can presume that our market will stand a similar pricing structure to other markets, and then the transportation, the distance to market, and the cost of the system does translate directly back to the wellhead in that situation. Fuel oil in our market is roughly comparable to fuel oil in Southeast. It's an alternate fuel, and that's what we're competing with.

SENATOR KERTTULA: Thank you, Mr. Chairman.

SENATOR RADER: Representative Chatterton.

REP. CHATTERTON: Thank you, Mr. Rader. Mr. Thompson, let's take a hypothetical case that, for some time into the calendar future an option is available to you to purchase a portion or all of the Alaska royalty gas and this option, you know that it's available to you for five, ten, fifteen years into the future. With that premise, would you be in any haste to sign a sales contract with the

State of Alaska?

MR. THOMPSON: I guess it would depend on the conditions for the sale. If it was a pure, as we testified -- let me try to come back somewhat around to the question. As we testified, we don't really feel it's in the State's best interest to sell its gas now, for some of the reasons we listed. However, if the State made that decision and said, "The gas is for sale today," we would want to have an opportunity to be a competitive purchaser.

REP. CHATTERTON: All right, you're right on target, Morry. I'm saying your option will remain to purchase all or part of it will remain open for ten, fifteen years; are you in a haste to sign the contract now?

MR. THOMPSON: That's a difficult question. I think that, as I've said, if the State decided to sell, we would be an active purchaser. But we don't feel the State should sell now because we think that by waiting, as the other seven-eighths are, that the opportunities are greater for the State to increase the financial return to Alaska. At the same time, as purchasers of gas, we would be clamoring for that opportunity.

MR. BECRAFT: It would be good practice for us to buy the gas at the earliest possible date, I think. We're on the other side of the coin. I'd rather buy it today when I know the conditions, make the deal, and not take a

chance on wide variation in regulatory, environment and what have you. This is the reason the producers don't want to sell their gas right now. They've been caught many times over the last ten years in widely varying regulatory situations, contract dates that govern what your price is. They don't at the moment, but they did until a few months ago, and they may again under the deregulation bill.

They don't have a price, but it is good practice to commit when you have a modicum of certainty as to what you're going to do. And producers want to wait until they know what ball game they're playing. I think they will, in the next six months to a year, begin to designate their markets, and by that I mean the largest uncommitted interests, Exxon and Arco -- because I think under the Arctic Gas Transportation Act the destination of that gas has to be determined, and they will want to get a transportation system approved. They will try to do it in the form of an agreement to a degree, if they don't have a price, to leave options open while designating the market -- if that helps your understanding of it.

REP. CHATTERTON: I think so, if what I heard you say is really what you said, that the only purpose for rapidly signing this contract on your part would be to lock the State into a contract under today's conditions that might

be to your advantage and the State's disadvantage if you waited five, ten, fifteen years.

MR. BECRAFT: Well, that plus the fact that we could pursue -- if the reserves are firmly committed to us we could pursue corporate objective. They underpin our financial structure and what have you, and there are financial reasons for getting the reserves and getting them into our picture so it would be part of the financial system and we can arrange financing and what have you for expansion of our Lower 48 system. We can go ahead, and these reserves do help; that's the practical reason.

SENATOR RADER: Representative Hayes.

REP. HAYES: Senator Rader. Mr. Thompson, during your testimony you mentioned that if the Alcan system was built instead of the El Paso route that the State of Alaska would be the beneficiary of approximately Eight Hundred Million Dollars more income. Is that statement based on a deregulation situation or it has nothing to do with deregulation?

MR. THOMPSON: No, that information, Representative Hayes, came out of the FPC filings and was in Judge Litt's recommendation to the Federal Power Commission when he was comparing transportation costs of all three systems. He gave the Twenty-Four Cent differential between El Paso and Alcan, and we projected that out of the commodity of the

gas, and that's the difference.

REP. HAYES: Just to follow up on that -- then, when you're speaking of a competitiveness in carrying the State's royalty gas, that would be the competitiveness of it, not that you're willing to pay more for it or pay a premium, but simply that because your projected costs, or Judge Litt's opinion says that there would be Eight Hundred Million Dollars difference, that would be the competitiveness of your proposal over El Paso's or Arctic's?

MR. THOMPSON: That's correct, from the State's point of view. We maintain thereby that the State would get that additional revenue.

SENATOR RADER: Representative Meekins.

REP. MEEKINS: Thank you, Mr. Chairman. I would like to have you summarize one of the things you touched on in your testimony. I've been trying to look at this whole thing as you've stated and as Representative Gruening has also stated, in terms of the costs and the benefits to the State in approving this contract. We've heard some people say that the benefits to the State are great and that it might be a determinate factor in getting the El Paso line. We heard Mr. Tussing yesterday say very flatly that there would be no benefit. But I think, given that testimony, it sort of comes down to my mind

what the costs are, because if the costs are zero then we're really not losing anything to go ahead and approve this contract on whatever probability that it might have some benefit. So I'd like you to summarize what you think are the costs to the State, what we'd lose in approving this contract.

MR. THOMPSON: I think, as you can see, where you could lose several things, lose a guarantee or better guarantee. Now, let me try to answer. All three projects are gigantic, massive, and all three projects throw a lot of financial figures around. We think that to the best of all our abilities, and I'm speaking for the competitors as well, that we try to fine line these figures. But moving gas from Prudhoe to Chicago has never been done, so the probability -- you've got to also look at the probability of cost over-run.

We submit that because of the design of our system, because we use existing pipelines in Canada, we use proven technology, and we follow a corridor, that the probability of construction completion is greater with us, thereby insuring a quicker royalty return to the State, thereby insuring no cost over-runs which drive your wellhead down. We think you'd lose that opportunity.

Also, there has been a lot of questions about the gas productivity at Prudhoe. As we all know, that

production rate has not been set. Our system envisions for the first three years a slow buildup from 1.2 to 2.4 billion cubic feet a day. El Paso, at one time, envisioned 3.4, dropped down now to 2.4 billion cubic feet, and Arctic says 2.25. We submit that Prudhoe is an oil field, and that's where the State is really going to maximize their return. At all costs they must protect the production of oil there.

So, in our lower incremental buildup case, we contend and say that we better protect that until a little bit more is known about that reserve. We don't pump two billion cubic feet out a day to start. We think that's an advantage for the State. The lower transportation costs that we have is another advantage to the State.

Both Arctic and El Paso use technology that does not currently exist, the high pressure for Arctic and the LNG size at Gravina for El Paso and the cryogenic tankers for El Paso; the technology to build that size of operation is not there so your probability of over-runs are increased. I think those are some of the things.

MR. GROH: Representative Meekins, it's difficult to quantify. Assuming a deregulation scenario, it may be a very substantial amount. Certainly that is difficult to quantify.

REP. MEEKINS: Mr. Groh, we have two questions here, and I

don't want to confuse them. One is which line we should be supporting. If we make the assumption, just for simplification, that -- I'll make the assumption that I'm supporting the El Paso route, then the question really becomes, what do we lose in approving this contract? That's really what I'm interested in, because that's the subject of these hearings.

MR. THOMPSON: If you don't sign the contracts now, you have the opportunity later of gauging the market. When the producers start selling their gas you can look at conditions that they're getting, and the State could follow those. Under deregulation you also lose the opportunity, perhaps, of selling to an unregulated purchaser, as we indicated here. You also lose, we feel, the possibility of getting advance payments, the possibility, and I underscore that. I think those are the major considerations.

MR. BECRAFT: You're basically making the assumption, I think, that these are as good a contract as you can get. We're making the case that it is not the case.

A statement was made yesterday by one of the witnesses that I might disagree with a little, and that is that once the producers sell their gas everybody will be getting the same price in Prudhoe. Many of the producers, and part of their marketing strategy will be to

put it into areas, allocate the gas themselves before the FPC does it. But they will also try to do business with people who can do other things for them that aren't in the four corners of that contract. There may be oil swaps for gas, for instance, which the majors need oil. There may be price upgrades in other contracts or swaps of liquids from the regulated company plants in these major companies. There are other things, and there are deals that are made outside the straight four corners of the gas purchase contract itself. What we're saying is that these opportunities haven't been fully surveyed by the State.

REP. MEEKINS: Thank you.

SENATOR RADER: I think Representative Carpenter was trying to get the floor a while ago.

REP. CARPENTER: Mr. Becraft, this was exactly the point that I wanted to ask you about. You're telling us that the provision of the contract that ties our royalty gas to the best price that the producers are getting at some later date isn't a valid provision; is that what you're telling us?

MR. BECRAFT: No, that's a valid provision. Your pricing provision is essentially passive in this contract. If the other guy's prices go up, yours go up, but I don't see much initiation opportunity in there. I don't really see

your ability to go out and put your gas in the best market and set the price yourself.

REP. CARPENTER: If I may, a moment ago you were telling us, Mr. Becraft, that one of the reasons the producers aren't committing their gas at this time is because we're in a period of deregulation atmosphere and they want to get the best price they can get. Well, if we're linked to them in this provision in this agreement, that's fine, we're safe, aren't we?

MR. BECRAFT: I don't think so, because again their price may be established in a market -- I'm making the assumption there is a finite value, top, upper bound, limit to the value of this gas in the Lower 48, broadly, and there will be some variations by market. You are putting your gas -- they may put their gas into less attractive markets. They may be remote markets, they may be in the East, further away in terms of transportation, or they may be put into markets that can't stand higher rolled in costs, or they may be up against the ultimate cost of fuel at that time, so they might not be able to pay this higher price, conceivably, and, therefore, you're tied to their price and that again is not necessarily indicative, particularly in a non-regulated scenario, of what your price might be if you establish it yourself.

REP. CARPENTER: Again, you're calling that provision passive, and that is not a good posture for the State, in your opinion.

MR. BECRAFT: Yes, sir.

SENATOR RADER: We have time for one more question before noon recess. Senator Huber.

SENATOR HUBER: Thank you, Mr. Chairman. I think mine might be able to be answered with a "yes" or "no", I hope. Morry, do you consider that the approval of the present sales agreement would be decisive in choosing the final route of the gas line?

MR. THOMPSON: No.

SENATOR HUBER: And the other one I have for you, do you believe you would be able to offer the State the best possible deal on its royalty gas if we wait until your facility is ready to transport the gas?

MR. THOMPSON: I'd like to say yes, but I will say this: that we will come in, we'd like to have the opportunity to bid competitively along with everyone else and give the State an opportunity to review all of the proposals that are received under competitive sale and select the best deal for the State.

SENATOR HUBER: Mr. Chairman, the point I'm trying to find out is, if you believe by waiting until that point in time that the State will receive the best possible deal

for its gas, or is it better to do it now?

MR. THOMPSON: As we've testified, Senator, we feel it would be in the State's best interest to wait.

SENATOR HUBER: Thank you, Mr. Chairman.

SENATOR RADER: I have about eight minutes after 12:00. We will recess until 1:30 sharp.

(Whereupon the hearing recessed at 12:10 p.m. and reconvened at 1:30 p.m.)

SENATOR RADER: The committee will come to order. We will resume with the Alcan presentation. Do you have any questions of Alcan? Representative Parr.

REP. PARR: In the statement by Mr. Thompson, the prepared text that we have here, the State is obligated to purchase from the buyers a percentage of the field facilities and so forth. What part of the contracts specify that? I don't really understand where that is in the contract.

MR. THOMPSON: Representative Parr, if we can look to the exact language -- if we may have a minute to find that exactly in the contract.

REP. PARR: I wouldn't ask you to do something I can do for myself, but I've read that contract several times and I guess I didn't pick it up. If I may continue, Mr. Chairman.

SENATOR RADER: Certainly.

REP. PARR: In these field facilities, would that include

the gas treatment plant, the Billion Dollar gas treatment plant; is that under the term of field facilities?

MR. THOMPSON: I don't believe so, Representative. But let's double check right in the contract.

REP. PARR: The last, and another question, Mr. Chairman, and it's on another thing that was stated. I believe I understood you to say, Mr. Thompson, that the FPC could charge the State for the unused capacity in the line due to the fact that the State is taking its royalty gas out and that the contract should provide that the buyer would reimburse the State for that amount of money. Did I misunderstand that?

MR. THOMPSON: We raised the issue that the FPC may charge someone for the excess capacity in the line caused by a pull-back, and our concern is that in contract negotiations that this be tightened up in the contract (that's our suggestion) to insure that that does not happen.

REP. PARR: But you are saying that the FPC has the power to do that, to charge the State of Alaska for pulling out its royalty gas and, therefore, in having the pipeline not operating to full capacity?

MR. THOMPSON: That's our understanding.

MR. BECRAFT: Excuse me, Mr. Parr. I'm not that intimately familiar with the Arctic Gas Transportation Act, but I believe that's an open issue relative to the State's

withdrawal of the gas. The FPC will have the power under that act to determine that "adjust and make reasonable rates for the transmission to the point of withdrawal."

All we're trying to say is that the original gas, the three hundred million or so, that goes into the pipeline, the facility will be predicated upon the volume, the tankers if it's an LNG route, the liquefaction facilities and what have you. It is not conceivable to me that if you pull out that same three hundred million that that cost of that excess capacity would be transferred a hundred percent or borne, I should say, by the Lower 48 consumers. I'm not sure I can tell you how to cure your contract, but it looks like those costs are an open issue.

REP. PARR: The key issue, I was asking you, was, if I understood Mr. Thompson this morning, is that the FPC has the authority and can do that to us.

MR. THOMPSON: Yes, sir.

MR. BECRAFT: Sir, I think it's Paragraph 3.11, I believe, the one to which we refer in that, and I believe that does include field processing and treating facilities are added, if that was the question a minute ago.

REP. PARR: I have one final question, Mr. Chairman. That is, you mentioned something about a standard of nine hundred and fifty btu per, I guess it's a thousand cubic feet

or something (I don't know) in the Lower 48, and I believe that other people who have talked have always spoken of a thousand as sort of being standard.

MR. BECRAFT: The thousand btu, sir, is a normal point from which to determine a premium for the gas or determining an adjustment to price for heating value above and below a thousand. Now, as to the quality of gas the pipeline will accept, very normally, and certainly in all the standard contracts that Northwest employs in the Lower 48, I believe that minimum is nine fifty to nine seventy-five in most cases. In other words, so long as the gas is sweet gas (as we call it) mercantible gas, the btu content of nine fifty or greater is satisfactory to us.

REP. PARR: I don't quite understand the point then. A thousand is simply an artitrary figure used for determining the sale price for the gas more or less, is that correct; but nine hundred and fifty is a figure you're using for shipment purposes? Is that more or less ---

MR. BECRAFT: Yes, what we class as mercantible gas. The btu content of a gas stream, and I'm not a chemist or an engineer even, but it is comprised of the components in the gas, which are the methane, ethane, propane and so forth. In most gas streams you will leave in some of the things that won't bother your transmission such as nitrogen and a minor amount of CO_2, all of which

reduce the btu content. That, coupled with a high quality requirement in terms of btu per cubic foot, does effectively limit the producer's option to extract a deep cut of liquid products. Methane, itself, if it was pure methane is something under a thousand in btu content.

REP. PARR: Thank you.

SENATOR RADER: Representative Gruening.

REP. GRUENING: I'm curious as to how we would write the contract to get around the problem that you point out with the FPC charging the State for the excess capacity. How do we write that out into the contract? We're telling the FPC what they can rule in the contract? In other words, how do we get around that point?

MR. BECRAFT: The main point is, Representative Gruening, we don't know what that cost is going to be. You set up your procedure here and you have the right under the act to take the gas out, but I think it's more of a caveat than anything else. You've got it there, it's wide open, and as I see the contract you could be certificated to get the gas out and the contract would be effective, and the Commission, at a later time, would determine what those costs are, and I don't think you'd have any control over it. I don't have a recommendation for you and I think you have a problem that will just have to wait.

REP. GRUENING: Well, is the inference from your statement that we should write into the contract that the gas companies, purchasing companies, bear the costs related in any way to removing our royalty gas for in-State use? I mean, not the costs, the mechanical costs, but the costs of the excess capacities, as you put it?

MR. BECRAFT: You could certainly write it in your contract. I wouldn't be particularly optimistic about the chances of that being approved by the FPC. I think your contracts might be modified to the extent that an acceptable certificate to the State granting this withdrawal would also set forth exactly under the condition what your costs would be, so you'd know. Again, I can see you getting a certificate perhaps, with the price issue still permitting withdrawal but the price issue to be determined at the actual time you take the gas, or somewhat later.

REP. GRUENING: We can ask the consultants this, but isn't the problem pretty much the same with the conservation committee saying you're going to take several hundred million cubic feet less because of the conservation problem?

MR. BECRAFT: It's the same problem, sir, but in that case there isn't much doubt about who is going to pay the bills involving the gas, a lower amount or a higher amount,

of moving it to the Lower 48. The Lower 48 customers are going to pay that tariff. They won't be borne by the Alaskans.

SENATOR RADER: Senator Colletta.

SENATOR COLLETTA: Morry, you know, it seems to me I recall in other hearings that we've had, the Alcan route, not only for oil but for gas and, unfortunately I never asked the question why that route was not acceptable to these other people that looked at it. Of course, I had the reasons why you say it's the best way to go, but I'm curious as to if you knew why the others have turned it down.

MR. THOMPSON: Oh, I don't know that it was "turned down". I think the Arctic consortium, and this might be a better question to Arctic Gas, Senator Colletta -- let me try. I think the Arctic consortium is composed of oil and gas companies that have interests both in Prudhoe and Mackenzie Delta, and they would like to go from Prudhoe over to Delta to perhaps pick up that gas should additional reserves be found in Mackenzie, and then come down. I mean, that's their principal objective in going across the Wildlife Refuge to Mackenzie Delta.

As you know, our route was recommended by the FPC staff environmental staff, was considered by a committee of the Department of the Interior and Justice Berger

himself, a staff report, or the Berger Report, indicated that if there was to be a Canadian line, a highly desirable place would be the Alcan route.

SENATOR COLLETTA: Mr. Chairman, I just have one more. Morry, reading the brochure, you know, Alcan Pipeline is wholly owned by Northwest Gas out of Utah, and has Northwest Gas made an attempt to purchase any of our gas or is your operation so intermingled that you want primarily to construct the line and be a purchaser of gas as just an added benefit, or do you separate the two?

MR. THOMPSON: I think, like all companies, Senator Colletta, we're interested in doing both; we're interested in constructing the line and interested in purchasing gas for the customers we serve in our service area.

To answer the other part of the question, we were an interested purchaser at the time the State announced that they were going to sell their royalty gas, but one of the requirements that the State put down was that the potential purchasers had to agree to endorse El Paso, and we were contemplating and later filed before the FPC and we, therefore, could not agree with the stipulation.

SENATOR COLLETTA: Mr. Chairman, that's exactly the question that I had. You're placing it better than I can. But if, in fact, the pipeline company is a totally divorced entity from the gas company, then why didn't the gas

company -- you know, it would just seem to me that the line would be adopted on its merits, and I don't know if this was valid at the time that the State was asking for solicitations on purchases, if it was valid to assume as you're stating now, these contracts mean nothing towards enhancing which line is accepted, why they didn't -- you know, why Northwest didn't buy some gas, care less what line was used.

MR. THOMPSON: At the time -- Senator, let me come back. I answered directly yes to a question from Senator Huber when I was aksed whether I felt these contracts would have no impact, and to try to be as short as possible I said I didn't think that they would. I don't think they'll have any measurable, appreciable impact. I'm not saying they will have none (period).

Secondly, like all gas companies, this is true for all three of us, we purchase gas and sell it to our customers for the purchase price. That's the reason we're all in business. Gas companies make money off the transmission of the commodity as opposed to sell and resell. So, we all have an obligation to the customers that we serve, to attempt to secure as much gas as we can for our market areas. So we're both interested, Senator, in purchasing gas and in constructing the system.

MR. BECRAFT: Senator Colletta, our offers to the State were

made under the name of Northwest Pipeline, understanding which way you're pointing here, and we are interested in buying it. It is a separate issue with us, and our offers were made for the pipeline customer, written offer.

SENATOR COLLETTA: Mr. Chairman, what I'm driving at, and you know, maybe unjustly so -- I can't help but form an opinion that, in fact, you participated in exactly what you're saying the State should not participate in, and that was that that sale of the State's gas to you was contingent upon your line; you don't want the gas unless it's through your line.

MR. THOMPSON: No, Senator. No, there must be a misunderstanding, and I hope we're not confusing the issue. At the time the State announced its royalty gas sale we were going to submit a bid, and one of the conditions of the sale precluded us from submitting a bid. That was that you must endorse El Paso. We are interested in purchasing gas and we're interested in constructing the line. We will stay active in constructing the line even if we're unsuccessful in getting a percentage of the royalty gas, and I hope that clears it up, Senator.

SENATOR COLLETTA: Okay, thank you.

SENATOR RADER: Any further questions of the Alcan representa-

tives? If not, gentlemen, we thank you very much.

MR. THOMPSON: Thank you, Senator.

MR. GROH: It's interesting to be on the other side of the table.

SENATOR RADER: The next scheduled witness is Arctic Gas. I want to urge the witnesses, as well as the Representatives and Senators, to be as brief as possible. I suspect at this point brevity may have more impact than anything else. It's too bad, Mr. Ward, to hit you with that particular point, but you have testified before us enough times, I'm sure you understand what I mean. But I don't mean to foreclose in any manner any presentation you wish to make or in any manner any question that any member of this committee has to make.

MR. WARD: Thank you, Senator Rader, Representative Gruening, and Members of the Committee. My name is Robert W. Ward, I am President of Alaska Arctic Gas. I had a few notes to start with a few days ago, and as the hearing has progressed I've added, and deleted and scratched, and I've concluded though in all of it it's not of much point for me to make a long statement, and I am not intending to run over the Administrative Law Judge's decision again. When it came out a couple days ago one person told me that that was responsible for the power outage that we had. I don't think I'll comment much about it anyway unless there are questions.

I would like to set a couple points as straight as I can from our perspective, and recognizing that a lot of times the more we clarify things the more confused they become. But I think there has been some confusion about how the effect of royalty gas not moving through the Arctic Gas system would affect the viability of our line and the ability to finance it. I think I said before a committee of the Legislature last year that having royalty gas in the line or not having it in the line would not affect the viability of our pipeline, and predicated it on the basis of the fact that our line is designed, and it's anticipated that our volumes will

be from two billion cubic feet per day initial volumes to two and a quarter billion feet after the third year of operation, having built up over the three years. That range is about what the royalty gas is, and the amount of the royalty gas is, and it would not affect the viability of the line.

Incidentally, there have been comments about reasonable assumptions on the amount of deliverability, and there probably will be others to talk about it with more expertise than I. But from all the assumptions on deliverability that have been made from Prudhoe Bay for natural gas, the reasonable assumption is from two to two and a half billion cubic feet per day. Lower volumes is not a reasonable assumption. It's an assumption, but it's not a reasonable one and should not be characterized as such.

One thing about the royalty gas in the pipeline system, and there have been discussions here, discussing how or if the State would have to subsidize that portion of planned capacity if royalty gas were withdrawn. It's been my assumption, on talking to our attorneys, and admittedly it hasn't been an in-depth search by the attorneys -- if such is required, we will do so -- but it is their opinion, without giving it detailed study, that the FPC would probably not recognize that royalty

gas portion as a viable portion financing the line if is is subject to withdrawal, and even though a tariff would probably extend, and would extend to shipment of that gas if it is shipped, it would not necessarily count to financers for through-put to provide the captial to finance the line because it could be withdrawn.

If it is counted, that's where the FPC has the problem of allowing withdrawal, if it's committed to interstate commerce. I would also like to clear up one point on Section 13-B of the Act. It's knowledge, maybe not common knowledge, but at any rate when that amendment was first proposed we opposed it, much to the, not chagrin, but it made Congressman Young extremely upset. I'd like to clarify that slightly.

As you can all recall, there was hardly anybody that gave that legislation more than about a twenty percent chance of passage. We were advised, when it was introduced in the House, by the Senate Committees working on it, who would have to ratify it after the House was finished, that they just wouldn't buy that Section 13-B. As soon as we were aware that they would and it would not jeopardize the legislation itself, we did not oppose it and do not now.

In all candor, and in my opinion, the contracts that you are considering in this hearing are really

pretty good for what you're trying to do, or what the State is trying to do. I don't particularly see that they jeopardize the State that much. I'm not sure that they help that much, but I think the State has gotten about as good a deal as they could possibly get. As a matter of fact, I was amazed that they got as good a contracts as are drafted.

I've heard, last year, the people urging the use of royalty gas as a weapon to kill Arctic Gas and somehow authorize the all Alaska route. It's hard to have much of a weapon if you parcel it up among a lot of people and then tell them that you might not be able to get it at all.

El Paso has been heavy on political support, and I'm not knocking it. I made a first appearance before the Legislature in regard to this project in 1974. At that time there was a big push to adopt the resolution of support by the Legislature so that El Paso could go to their board and get Thirty Million Dollars to help with environmental studies and engineering work to put a better application together.

So, under great pressure they got the resolution passed, and then went to the board meeting and didn't approve the Thirty Million anyway. They said they didn't need it because of the work that Alyeska had done in the

same corridor.

This royalty gas thing is perhaps somewhat similar in terms of trying to get companies to do as much as they can to help them get political support. I think it was Attorney General Gross who suggested that really it wasn't for political support, it was on the merits, because the merits would speak for themselves; so it really wasn't for political support, and if it were just for political support it would be readily exposed. And it is readily exposed and it is for political support, and it probably will help.

Without trying to suggest anything one way or another, I'll just give you one example. Midwest Gas Association, of course, is in the service area of several of our owner companies, Arctic Gas Line Company, and a resolution for support of Arctic Gas was considered at their fall board meeting in December. I think there is just in excess of sixty members, sixty-five, sixty-seven members in Midwest Gas Association. Because of Tenneco's involvement in this contract, where we probably would have had unanimous support, there were two abstentions and one voted against it. Even though that didn't affect that much, it does have some impact, and El Paso and Southern route had some impact also.

But the contracts themselves do not improve the

pretty good for what you're trying to do, or what the State is trying to do. I don't particularly see that they jeopardize the State that much. I'm not sure that they help that much, but I think the State has gotten about as good a deal as they could possibly get. As a matter of fact, I was amazed that they got as good a contracts as are drafted.

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system at all. And recognizing that I may be speaking some in my own interest when I say it, I would hope that even though you do approve the contracts, as I expect that you probably will -- even though you do, I would hope that you could do it and acknowledge the reasons you're doing it. I think the arguments that are based on conjecture that are not supported by fact in the record shouldn't be part of the situation. I do not see any reason why you should have to, or try to fabricate merits that aren't there.

With that, I would be happy to answer your questions.

SENATOR RADER: Any questions? Representative Parr.

REP. PARR: Mr. Ward, is it your belief that the State will get more money in wellhead sales through the Arctic proposal than through any other?

MR. WARD: Our position has consistently been that the opportunity is there, and we have never said that it automatically would because of the Arctic Gas system, and the reason that we have not said that they automatically would (even though people suggested we have said it, we haven't)-- the reason for it being there are some other factors involved, and traditionally one cannot argue successfully against what the FPC has done historically in the past. But, since the FPC is moving more toward commodity pricing, there is the opportunity

for more wellhead price if they go that route and approve it that way.

That view, incidentally, is supported by testimony on the record by others than Arctic Gas.

I'd like to point out, and I meant to mention it earlier, Mr. Chairman, if you'll allow me -- rolled in prices, to suggest that rolling in prices is going to so confuse the transportation costs that they can't be identified is ridiculous. The shippers are going to pay a tariff to the pipeline company based upon the total cost of service of that line, and that's not going to be rolled in. Arctic Gas is not a buy and sell pipeline, they will not be buying gas and selling it to customers. We develop the tariff that's going to provide the financing of the system, and it's going to pay it. It's not going to be rolled into our costs. We can't roll it into anything. The total cost may be rolled in to consumers down the line, and I think it will be; but to say that the transportation costs cannot be readily identified -- no way!

SENATOR RADER: Representative Gruening.

REP. GRUENING: I'm reminded, Mr. Ward, of a statement that somebody said about oil and gas men, he said, "They're like cats, you can't tell from the sound of them if they're making love or fighting." After your

statement saying that the approval of this contract would help the route decision for El Paso, are you fighting or making love with El Paso?

MR. WARD: Well, I did share a room with Mike Holland up in Prudhoe Bay once.

REP. GRUENING: You disagree with Arlon's assessment, Arlon Tussing's assessment yesterday that it will have no political effect on the national level at all?

MR. WARD: Well, I don't know whether his pronouncement was that it would have no effect on the ultimate decision or if it would not have any effect at all or if it would not help at all. We've had a reasonable effort for two years now with the U. S. Congress and the Administration, and from originally information to dissemination on issues like the Pipeline Act that was passed last fall, we worked very hard, and we have a new Administration now and there are a lot of new facts that are going quite deep. There are new Congressmen, there are new committee assignments. So we have to do a lot of that effort over again and start it over again. For the most part we haven't been stumbling over El Paso too much in those efforts. That doesn't mean that they haven't been active, because they have. If there are more people in the action when it comes down to Congressional decision, it's got to have some impact. To say that it won't is not being

honest.

It will have some impact. Whether it will prevail or not, I don't know. Whether it's necessary or not, I don't know. But it is obvious, as you people here have already concluded, because it is obvious that the royalty gas is more valuable than money. Otherwise you could go buy it to do the job. It is not that the system is any better, it's not that the merits are any better; what they're going for is to get a chunk of gas. That's what they're willing to put some political clout for, and what they have, is to get some gas. It's not that one system is better than the other.

SENATOR RADER: Any further questions? Mr. Hayes.

REP. HAYES: Mr. Ward, do you think in view of what the State of Alaska might be getting in the way of of political influence is worth the opportunity they might miss later on to get a higher price from their sales of their royalty gas or possibly to exercise some of the other options that they might have? Do you have an opinion on that?

MR. WARD: Mr. Chairman, I'm sorry that I am not capable of answering questions like this in short manner. As a matter of fact, I might have confused that so much that I missed the question. The royalty gas, as it has developed, royalty gas use and the thought by the State to use our royalty has, has been rather interesting itself, because

there is a liquefaction plant on the south coast of Alaska now. It has been in existence for quite a while. The State of Alaska has yet to take its first cubic foot of royalty gas in kind.

It's a timing problem. They want to use the royalty gas now to help force a decision without a use for it. So they want in this essence to be betting on the cow. The people who are participating in the contracts, the purchasers, are also betting on the cow. They really don't think, in my opinion, is going to be pulling back that gas right away or they wouldn't sign the contracts. If they're going to put up something they have to have some expectation. It's a reasonable assumption, there isn't a market for the royalty gas now.

Now, is that fact and all this development going to provide for higher prices for State royalty gas if the State held back and kept all their options open? I'm not necessarily sure that's the case. I think that the State is pretty well protected under the provisions of the contract that's drawn. Now, there's some disagreement with it, and that's appropriate, and maybe some things should be tightened up. I don't think the State is hurt that much in terms of price.

I was disappointed at one point in time because of the switching provisions in the contract. It seemed

to me that even though Arctic Gas were certified, if the State did decide to go with Arctic Gas then, these shippers would be locked in again on royalty gas, and I didn't think that quite appropriate. I didn't mention it earlier because it doesn't seem to bother me now because there were so many definite statements that the State would go over the cliff like the lemmings rather than support Arctic Gas and so the contract would be void.

SENATOR RADER: Senator Huber.

SENATOR HUBER: Thank you, Mr. Chairman. Bob, I'll be brief. Do I understand you correct, that Arctic Gas would support the State keeping all or part of its royalty gas for use within the State, you wouldn't oppose us doing that, with the FPC or anyone?

MR. WARD: No, Senator, and I've said so before, that they would not. Again I would like to point out, there was some discussion here yesterday, as I recall, that if Arctic Gas were certified, if the State took its royalty gas in kind and did not sell it that that twelve and a half percent share would have to be produced and reinjected while the rest of the gas was going out. Unless something is changed since I've been involved in it, more recently, that is not the only option. I think there is an option, a viable option, to leave it in the ground and not produce it at all. Obviously, there are

time limits on that because it's going to have some effect further down the road. But I don't think it's absolutely necessary that they have to produce and reinject it if they want to hold on to it.

SENATOR HUBER: I have one other question of Mr. Ward, Mr. Chairman. Could you give me a percentage, off the cuff figure, Bob, if we approve or if we disapprove the contracts that are before us now what chance do you believe, in the one case or the other case, the difference in the chance would be of El Paso persevering over your route and getting it instead of you? I'm looking for comparative figures.

MR. WARD: Mr. Chairman, I'm not sure I can give a comparative figure because I am inclined to agree with the learned Dr. Tussing, that the big problem or the key, if you will, to the certification of Arctic Gas is indeed Canada. I think, with or without, if Canada was not a factor, in other words, if they weren't in it at all, I don't think there's any question, with or without the royalty gas, and again I could be wrong -- as you know, my political judgments have been wrong before -- but I don't see any other way but that Congress would approve the Arctic Gas route.

SENATOR HUBER: Mr. Chairman, could you bear with me just a little bit more? Then you aren't able to give me a

figure, Mr. Ward, but from what you just said I would judge that you would say there would be no significant difference in the percentage, if you were able to give me a figure.

MR. WARD: Maybe that's kind of academic because I can't give you a figure, but I do think, as I said before, the contracts will have some impact.

SENATOR HUBER: Thank you, Mr. Chairman.

SENATOR RADER: Senator Croft, did you have a question?

SENATOR CROFT: No.

SENATOR RADER: Senator Sumner.

SENATOR SUMNER: Do you believe that a Native Land Claim settlement in Canada is going to be a problem with approval of your line?

MR. WARD: I believe, Senator, that the Native Land Claims in Canada is a very sensitive issue and it has a lot of tension in Canada. That's part, that's only one part of the whole Canadian decision that has to be made. The Canadian Government, in my opinion, and subject to legal opinions that I've had from Canadian counsel, in my opinion the Canadian Government has the option to resolve the claims without prejudice to the Natives so that it would not hinder this project time-wise, if they so desire, and it would be part of the whole Canadian issue.

SENATOR SUMNER: Settle the costs later?

MR. WARD: Yes.

SENATOR SUMNER: Have you or any part of your company ever agreed to share any part of those costs?

SENATOR RADER: Senator Sumner, you're not being heard. Would you speak louder?

SENATOR SUMNER: Thank you, Mr. Chairman. Have you or any members of your company testified in the past that any part of the Native Land Claim settlement in Canada would be borne by your company?

MR. WARD: To my knowledge, Senator, we have not testified to that. I have not personally reviewed the record of what our people in our Canadian company have said before the Berger Commission hearings, but to my knowledge, they have not. However, it is quite obvious to me that should a corridor be established and the claims extinguished without prejudice to the Natives, subject to compensation at a later date, I'm pretty well assured that Arctic Gas will be paying a substantial portion, if not all, of those claim settlements that pertain and attend to their right-of-way.

SENATOR SUMNER: Does your costs before the FPC reflect any figures for that?

MR. WARD: We have right-of-way cost figures, yes.

SENATOR SUMNER: Do you know what they are offhand?

MR. WARD: No, sir, I don't.

SENATOR SUMNER: Thank you, Mr. Chairman.

SENATOR RADER: Senator Butrovich.

SENATOR BUTROVICH: Mr. Chairman. Bob, you've enjoyed Commissioner status in the State of Alaska, and this may be hypothetical also, but do you think that the State has made a wise decision to hold back on the twelve and a half percent or a poor decision?

MR. WARD: Senator and Mr. Chairman, I think that the State is making a wise decision in holding back the twelve and a half percent and not making commitments on it now. I think that's the wisest decision the State could make. I recognize that there may be reasons, very cogent ones, to the State for trying to do something different, but I think their wisest move is to hold back.

SENATOR BUTROVICH: Thank you.

SENATOR RADER: Any further questions? Representative Chatterton.

REP. CHATTERTON: Mr. Chairman. Mr. Ward, I think I heard you say that you have over past time used influence or attempted to use influence on the national scenes so far as gaining support for your route, the Arctic route, and I would imagine that you would still continue to plan to seek help and support for your route on the national scene; is that correct?

MR. WARD: Yes, it is.

REP. CHATTERTON: Now may I ask you this question: do you feel that your ability to gain support on a national scene would in any way be enhanced if in the process of obtaining this support you could also wave a little certificate that said you owned one-eighth of the gas at Prudhoe Bay?

MR. WARD: No question about it.

REP. CHATTERTON: It would help?

MR. WARD: No question about it.

REP. CHATTERTON: Thank you.

SENATOR RADER: Any further questions? Representative Gruening.

REP. GRUENING: Most of the members of the Arctic consortium are also either the producers or closely related to the producers who have the other seven-eighths. Why haven't you used that as part of your political battle to win the route decision?

MR. WARD: Representative Gruening, Mr. Chairman, the producers are no longer members of our consortium, the Prudhoe Bay producers.

REP. GRUENING: They will be at some point.

MR. WARD: No, I suspect that they won't. Arco, Exxon and SOHIO were members until after we filed the application. They assisted us in perfecting the application, and then

some time after the application was filed they withdrew, which was their stated intention when they joined the consortium to start with.

They weren't interested in acquiring equity ownership in the gas transmission line. They weren't in that particular business and they don't intend to do so. That's not necessarily true on the Canadian side. We do have major producers in the Mackenzie Delta who are still in the consortium and who plan to take equity ownership in it.

I should point out, however, in terms of my response to Chat, I spend a lot of my time traveling around the country, talking to various people here and there, about the project. Some of our participants do have a commitment on gas. As was mentioned here, Columbia and Northern Natural have pretty good commitments on about seven trillion. Texas Eastern still has a contract hanging by a thread. The rest of them, while they all had contracts, they were cancelled because of this New Years Eve Massacre or whatever it was.

When I'm in areas in the East, east of Chicago, but in areas, and some of them service areas of the participants to this contract, people there are wondering, "Well, yeah, it's a good system, it's going to get the gas here cheaper, more efficiently, and more directly,

it will be more dependable and we like it, but we don't have any gas. You can't get us any gas." I say, "Well, you know, the contracts are still under negotiation, the producers at this point in time are not in a position where they feel that they can execute the contracts. Our shippers had it once but they don't have it anymore. But in addition to the Prudhoe reserve there's a lot of potential. If people in your area go out and acquire gas by negotiations with producers we'll ship it for them easier and better than anybody else." That is a fact.

REP. GRUENING: Is Columbia telling the fact that it has a thirty percent contract, or whatever amount they have? Are they telling their customers they should support the Arctic line, "because we've got a contract with them"? Are they making any use of that contract?

MR. WARD: Columbia is very, very active in their service area. They're a very active member of our consortium. Incidentally, their major usages, there are several states, but Ohio and Pennsylvania.

REP. GRUENING: You mean the ones that are now under severe ---

MR. WARD: Yes, and they're having an extremely difficult time satisfying their requirements.

REP. GRUENING: So they are lobbying, in fact, for your line then, with this percentage.

MR. WARD: They've been very, very helpful.

SENATOR RADER: Senator.

SENATOR CROFT: Imperial Oil is a member of your study group, is it not?

MR. WARD: Yes, it is.

SENATOR CROFT: And it has most of the Mackenzie Delta reserves, doesn't it, gas reserves?

MR. WARD: Yes, and I don't know, Senator, how they break down, but Imperial, Gulf and Shell are the three members who are members of our consortium that by far have the major interests.

SENATOR CROFT: But Imperial has the largest percentage of anybody of the Mackenzie Delta reserves?

MR. WARD: I believe so, but I can't say.

SENATOR CROFT: Has Imperial made any commitment of its Mackenzie Delta reserve?

MR. WARD: Yes, they have.

SENATOR CROFT: Was that to Columbia?

MR. WARD: I'm sorry, again, Senator, I don't have that breakdown. There were commitments made on a lot of the Mackenzie Delta reserves, and at one time they were all made to U. S. shippers. Now, some of those agreements have been cancelled, Senator, and advance payments refunded because of the supply and demand situation in Canada, and also the likelihood that in the first

instance anyway the National Energy Board would not declare a surplus and allow any of it to be exported. Some of them have been changed. Some of them, as American National testified here yesterday, are still in effect. Whether they'll ever be able to be proved up on is hard to say; probably not.

SENATOR CROFT: And you don't know whether Imperial's commitment is still in existence or not?

MR. WARD: I really don't.

SENATOR CROFT: Thank you.

SENATOR RADER: Any further questions? Mr. Carpenter.

REP. CARPENTER: Mr. Ward, do you think that a State royalty gas line has any merit?

MR. WARD: Mr. Chairman, yes, I do. It has to be in the context of a lot of different things. My personal opinion is that at this point in time it does not have merit because there is not the market, and it just doesn't seem appropriate at this time. There is no denying the fact that if either Alcan or El Paso were certified they would have a better option to deliver State royalty gas in State than Arctic Gas would. That doesn't mean that they're going to deliver it for free, and there is going to be a cost associated with it.

A line that would strictly take State royalty gas, whether it's to interior Alaska -- and, frankly,

again from my own perspective and my own intelligence, whatever that is -- I do not think it makes a lot of sense to bring Prudhoe Bay royalty gas to tidewater. If there is too much potential in tidewater, why have State gas and resources at tidewater competing with resources to develop the same kind of thing that the State wants to develop and having to amortize an eight hundred mile pipeline to get it there? I just think that the long-range future of the Alaskans, the development options, are too broad and too varied at this time to be insisting that the State royalty gas has to go to tidewater. To answer your question, I'm sorry it took so long -- if there was a market for the gas in interior Alaska and south of the Brooks Range where it all could be used, the line would support the tariff, there's volumes there enough to support the tariff, then it would make it a reasonable deal. It would cost more than El Paso or Alcan, but it could still be viable.

SENATOR RADER: Any further questions? Representative Parr.

REP. PARR: Mr. Ward, I hate to ask you this question, I'm sure I'm already supposed to know. I've heard conflicting stories. Does Canadian law require that your pipelines that run through Canada be fifty-one percent Canadian owned?

MR. WARD: Representative Parr and Senator, there is a regulation and requirement as part of the body of Canadian law that requires that, yes. It has been waived from time to time. Frankly, we hope that it's not. It's a capital intensive project, and we'd like them to take sixty percent of that.

REP. PARR: While I'm asking this question, obviously ---

MR. WARD: There is a requirement now.

REP. PARR: What has flown from that, of course, is the contention that the Canadian Government obviously could in some way or other see that the gas was delivered in Canada rather than the United States.

MR. WARD: I am aware of the argument.

REP. PARR: Thank you.

SENATOR RADER: Representative Chatterton.

REP. CHATTERTON: That led to one question, thank you, Mr. Chairman. Imperial Oil, is it considered a Canadian company?

MR. WARD: In terms of Canada's Canadian content, I don't think so.

REP. CHATTERTON: Thank you.

SENATOR RADER: Any further questions? Thank you very much, Mr. Ward. The schedule calls for El Paso. Yesterday I thought I had explained to El Paso I wanted them to put on their complete case and not come back twice.

Because we have so many out-of-town people we were going to try to move immediately to out-of-town general public interest witnesses. I'd like to ask El Paso if you would forego your re-appearance until we have heard from out-of-town witnesses, or do you think that it's necessary or imperative that the remainder of your case be put on at this time?

MR. HOLLAND: Mr. Chairman, El Paso's position, I think, is clear enough on the record at this point. I would have anticipated appearance of Alcan and Arctic Gas this afternoon would have instituted a debate on the merits of the pipelines. This has not actually occurred, so I really don't have anything to say at this time, unless the committee has questions of me.

SENATOR RADER: Do we have any questions of El Paso? I don't believe we do, do we? Very well, we'll take a ten-minute recess and then go into general public.

other

Testimony

JOINT PUBLIC HEARINGS

of the

ALASKA STATE LEGISLATURE

on

SCR 3, 4, 5 and HCR 11, 12, 13

"THE PROPOSED SALE OF ROYALTY GAS"

January 31, 1977 - February 7, 1977

Juneau, Alaska

VOLUME V

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by: Bob Penney, President
Paula Easley, Executive Director

SENATOR RADER: The Joint Hearings of the Sale of Royalty Gas will come to order. We have two representatives here today from Michigan Wisconsin Pipe Line Company who have some interest in this matter and who have commitments to leave town on the 2:00 o'clock plane. Therefore I have conferred with Representative Gruening as co-chairman and we have agreed to take them out of the regular sequence of witnesses. They are normally listed under general public but unless there is some objection with the committee, why we will take them out of sequence and listen to them now. Is there any objection?

Very well. Would the gentlemen representing Michigan Wisconsin please come forward and introduce yourselves for the record.

MR. COTA: Mr. Chairman and members of the committee, my name is John F. Cota. I am employed by American Natural Service Company in the capacity of Vice President, Special Projects. With me is Mr. Tejinder Bindra, who is an attorney with our company, and has among other duties, the responsibility of our Arctic Gas projects.

In my capacity I have the principal executive responsibility for American Natural Resources System and its efforts to acquire Alaskan gas supplies and participate in sponsoring a transportation system which would make

these supplies available to our market areas in the most direct and economical manner. I am also responsible for our Canadian gas supply matters and liquefied natural gas projects which are currently in the planning stage.

American Natural Service Company is an affiliate of Michigan Wisconsin Pipe Line Company which is one of the largest natural gas distribution systems engaged in the business of purchasing, transporting and selling natural gas to fifty-two distribution customers in the states of Missouri, Iowa, Illinois, Tennessee, Indiana, Ohio, Wisconsin and Michigan. Both of these companies and Michigan Consolidated Gas Company, the largest distribution company in the State of Michigan, are wholly owned by American Natural Resources Company, which also owns several other companies engaged in the natural gas business or other related activities.

I appreciate the opportunity afforded by your committee to submit comments on the proposals concerning the disposition of the Alaska royalty gas. Of course, we are fully cognizant that this is a matter of great importance to the State and its citizens and that their best interests should be a major consideration in evaluating any such proposal.

I am here to reaffirm to this committee our System's desire to acquire State of Alaska royalty gas.

In response to the initial solicitation of bids for the sale of royalty gas, we wrote Commissioner Guy R. Martin in October of 1975 in which Michigan Wisconsin Pipe Line Company expressed its desire to contract for the purchase of any or all of the twelve and one-half percent royalty share of natural gas which is estimated at approximately 3.2 trillion cubic feet to be produced in Prudhoe Bay on the North Slope. Again, we reaffirmed on April 27th, 1976 in a letter to Commissioner Smith to acquire the royalty gas.

So far, as you know, our system has been unsuccessful in acquiring any royalty gas of the State of Alaska presumably because our system has been actively involved in sponsoring the Arctic Gas project known as the Trans-Canadian route. Apparently, our lack of success in acquiring Alaska's royalty gas has been because of a general feeling in Alaska that a Trans-Alaska pipeline route would best serve the interests of the State of Alaska. We respectfully submit that the Arctic Gas project is in the best interests of the State of Alaska and the nation as a whole and, therefore, the State of Alaska should direct its efforts towards supporting this project. Nevertheless, and regardless of which route is ultimately selected, it is in the state's best interest to sell its royalty gas to the companies, such as ours,

which have expended enormous amounts of time and money in the planning of Alaskan gas delivery systems and which have evidenced a willingness to invest in such systems. Only in this way can the state provide the necessary incentives to finance and construct such a massive project.

Our system is one of the pioneers in the formation and organization of the Arctic Gas project. In September, 1967, in our offices in Detroit, our system initiated the first discussions to consider the possibility of the formation and construction of an Arctic pipeline to transport the newly discovered Arctic natural gas supplies. Since then our system has continued to participate and made a major contribution in the development of one of the most extensively studied and carefully planned pipeline projects in the history of the natural gas industry. To date, more that one hundred and twenty million dollars has been expended by Arctic Gas project consortium in conducting environmental, engineering, construction and planning and other work. Of this, about eight million has been expended by our system alone. In addition to the capital expenditures, senior personnel of our system have been actively participating in all of the committees and task groups formed to study and manage the different aspects of the project, such as engineering, environment, financial, tariff, marketing, legal and other matters.

The deliberations and recommendations of these committees and task groups and the regulatory filings, construction plans and schedules, procurement and logistics, tariffs, financing plans and other activities, are regularly reviewed by the management of our system.

Needless to say, our system is absolutely convinced that Arctic Gas project represents the most sound and expeditious method of marketing and transporting the Alaskan gas supplies. As the most economical, that is the lowest cost system, Arctic Gas project holds the greatest promise for the producers and the state, as the royalty owner, receiving the highest return on the sale of their gas. As the project which has engaged in the most comprehensive pre-certification planning, Arctic Gas project assures the state the earliest possible flow of its royalty gas. And, as the project which can be readily expanded, it is the only project that assures the maximum total flow of royalty gas.

We believe that the Arctic Gas project could be financed and implemented much earlier than the Trans-Alaska routes and thereby generate early royalty revenues for Alaska. As most of us know, the Arctic Gas project enjoys a broad based support and confidence of our system and several other major United States oil and gas firms. Our system and most of the other firms in the consortium

have already executed commitment letters and have testified before United States and Canadian regulatory authorities with respect to their willingness to make equity investments in the project. Furthermore, the Arctic Gas project's organization structure of the different elements thereof, the basis of equity investments by the prospective shippers and the financing plans are being continuously and extensively reviewed by the prospective shippers of the Arctic Gas project and these matters would probably be resolved in substance prior to certification of the Arctic Gas project so as to permit final financing plans to be developed and construction commenced promptly after certification.

In contrast, the Trans-Alaska routes enjoy very little support from the oil and gas industry. Of course, it is a truism that most of the sponsoring companies of the Arctic Gas project would also, of necessity, have to participate in the financing and implementation of a Trans-Alaska route if such a route is found to be in the public interest. Needless to say, in such an eventuality, equity investments could not be expected to be made unless all elements of such a route have been reviewed and resolved to the satisfaction of the prospective equity investors. Most of these matters would have to be resolved after certification of such a route because

virtually all of the prospective shippers are currently sponsoring the Arctic Gas project. Negotiations concerning participation in the organization and financing of such a route would necessarily be very complex and protracted. Obviously, financing and construction of such a route could not commence while the shippers are negotiating the ownership, organization, management, tariffs and allocation of costs with respect to such a route.

Another important advantage the Arctic Gas project enjoys in comparison to the Trans-Alaska route is that its system can be readily expanded to transport additional increments of gas. The Arctic Gas project's system can be expanded by increments designed to meet the volumes of additional gas, by adding compressor units, or parallel pipeline known as looping, or a combination of both. This can be expeditiously and economically accomplished for virtually any reasonable increment of additional gas supply. This should be of special interest to the State of Alaska because the Arctic Gas project is the only system which can be readily expanded and provide a means of marketing the royalty gas attributable to the state from the vast amounts of potential reserves currently estimated at more than one hundred trillion cubic feet.

In conclusion, I would like to reiterate our desire to acquire State of Alaska royalty gas and our hope that you would give it fair consideration. We sincerely hope that our system's sustained efforts in the development of the best possible transportation system for marketing the Alaskan gas supplies would contribute towards the long-term interests of the State of Alaska and the nation.

Thank you, Mr. Chairman.

SENATOR RADER: Do we have any questions, any committee members? Senator Croft?

SENATOR CROFT: Have you attempted to purchase gas from any of the other owners at Prudhoe Bay?

MR. COTA: Yes, we have. We had an advance payment agreement with Exxon at one time until the Federal Power Commission declared that void.

SENATOR CROFT: And since that was declared void, have you attempted to purchase any more gas?

MR. COTA: Constantly. We have talked with every company that has gas.

SENATOR CROFT: Do you have any agreement to purchase any more gas?

MR. COTA: No, we do not.

SENATOR CROFT: What is the problem with purchasing?

MR. COTA: The producers have just not been interested in

talking to us. They do talk to us but they told me that they are awaiting unitization is one of the reasons why they are not interested at this time in signing up. The other one is that they want to be assured by the Federal Power Commission that all agreements made at this time as contracts will be honored for the duration of the contract period and several other regulatory problems. But, for the most part that is what they have told me, that they did not desire to sign up at this time.

SENATOR CROFT: Your proposal requires or anticipates that sometime after 1985 that you will be obtaining -- or the Arctic Gas proposal, you will be obtaining more than three billion cubic feet a day from the North Slope alone, without regard to the Mackenzie Delta. Is that correct?

MR. COTA: That is the designed criteria for the line, yes. Four and one-half billion total with the Mackenzie Delta.

SENATOR CROFT: Under the most likely production sales schedule that you have, what do you anticipate will be the loss of oil production from Prudhoe Bay as a result of that high a rate of gas sales in Prudhoe Bay?

MR. COTA: I can only go by what I have read in the testimony. I am not qualified to answer that question from a technical standpoint. All I have read there is that

there would be no loss up to roughly three billion feet a day. Above that I can't answer that.

SENATOR CROFT: What point of the testimony was it that there would be no loss at three billion cubic feet a day?

MR. COTA: I can't tell you who testified to that specifically. It was in the testimony by -- I'm not sure if it was your people, the State of Alaska, which was testifying. I can kind of go back to the wording. The testimony went somewhat like at two million there would be no problem, at two and one-half to 2.8 to three it would be their considered opinion that there will be no loss of production above that in the present Prudhoe Bay field.

SENATOR CROFT: All right. You haven't conducted your own studies on that?

MR. COTA: Absolutely I haven't, no.

SENATOR CROFT: And if somebody like the Van Poollen study or the Corps analysis showed that anything above two billion cubic feet a day there would be an oil loss, you wouldn't have any information of your own to contradict that, would you?

MR. COTA: Absolutely not.

SENATOR RADER: Any further questions? Representative Parr.

REP. PARR: Would you mind, Mr. Cota, repeating something

you said about one hundred trillion cubic feet. Is that your estimate of the reserves in Prudhoe, or what?

MR. COTA: Those are not my estimates. Those are the estimates that I read from the different authorities. The testimony of DeGoyer & McNaughton was one. I am not sure if the State of Alaska has testified to that. The most recent one I saw was estimated at one hundred and thirty-five trillion cubic feet per day.

SENATOR RADER: Representative Hayes?

REP. HAYES: Yesterday there was some indication from the testimony that one of the reasons the owners of some of the other gas on the North Slope -- some of the reasons they might not be interested in selling at this time was because of the possibility of deregulation at some time in the near future which, in that event, would allow a premium to be paid in addition to that allowed presently by the FPC. Do you think that is a valid reason why at this time some of those companies are not interested in talking?

MR. COTA: Of course, that is not a reason that anyone has ever given me when I have talked to them. I would personally say that that would undoubtedly be on their mind, but they haven't given that as a reason for not wanting to negotiate at this particular time.

REP. HAYES: But it is your opinion though that that very

likely could be a reason?

MR. COTA: They are all good businessmen.

SENATOR CROFT: Mr. Chairman?

SENATOR RADER: Senator Croft.

SENATOR CROFT: Following up on our question, did you have a chance to read the news release from the Federal Power Commission concerning Judge Litt's decision that we had available yesterday?

MR. COTA: I have read it.

SENATOR CROFT: At page ten of that summary at the last portion of the second full paragraph on page ten where he is talking about everybody having their hand out, he says, "the producers' failure to sign sales contracts indicates where their concern lies." Do you know what he is referring to in that regard?

MR. BINDRA: I'm sorry, could you tell us what --

SENATOR CROFT: That last phrase at the end of the second full paragraph on page ten. The paragraph begins, "All the major participants in this mammoth undertaking." And the last phrase is, "the producers' failure to to sign sales contracts indicates where their concern lies."

MR. COTA: No, I wouldn't want to give an opinion on what I think they might be talking about or what he might be talking about. I would assume that their concern lies in getting the most they can for their gas.

MR. CROFT: I have no further questions, thank you.

SENATOR RADER: Let me ask you, have you made a firm offer to the state for the purchase of gas?

MR. COTA: Yes, twice. On October of 1975, Mr. Ray Lynch who is the president of Michigan Wisconsin Pipe Line, wrote to Guy -- Commissioner Martin expressing our interest and we offered to purchase any or all of the state's royalty gas. Then during the Spring of 1976, which was a year ago, when the Royalty Board again expressed the terms under which this contract is being discussed now, which meant you had to actively support the Trans-Alaska pipeline. We again, on April 27th, I, at that time, over my signature, we reaffirmed Mr. Lynch's previous offer and stated to them at that time that that one provision, because of our active support of the Arctic Gas project since 1967, and our firm conviction of having studied the Trans-Alaska, the Fairbanks corridor, or all of the other projects that had been proposed, it was finally in our estimation that the most economical route to transport the gas was the Arctic Gas route. That because of that we couldn't support or offer onto the conditions expressed by Commissioner Martin's letter but we would like to reaffirm again our original offer of buying it under the same conditions that we had offered in 1975.

SENATOR RADER: What price did you offer to pay?

MR. COTA: We did not do it on a price. We actually in effect -- I can't remember the exact wording of it now but we told him that we would pay whatever the regulated price would be at that time or such other price that was the going rate for gas at the time of signing of the contract.

SENATOR RADER: You were here during the testimony of yesterday and the day before, were you not?

MR. COTA: Not the day before, just yesterday.

SENATOR RADER: Yesterday. Well, have you read the contracts that have been proposed?

MR. COTA: I have read them, it has been a few weeks ago.

SENATOR RADER: And was your price offer substantially the same as those contained in those contracts?

MR. COTA: Again, I --

SENATOR RADER: Field price or a regulated price, whichever was the highest?

MR. COTA: Right. That is correct, sir.

SENATOR RADER: Did it have any other advantages to the state in it that are not contained in those contracts?

MR. COTA: No, it did not. They were rather simple letters.

SENATOR RADER: Representative Chatterton?

REP. CHATTERTON: Thank you, Mr. Chairman. Sir, would obtaining Alaska gas be of an economic benefit to your company?

MR. COTA: Absolutely.

REP. CHATTERTON: Realizing that you have no control over wellhead price or city gate price why would you be willing to entertain some type of a equivalency competitive bid nature of a service in-kind to the State of Alaska or something of that nature in order to avail yourself of this economic benefit?

MR. COTA: I'm not quite sure I understand exactly what type of an offer you are talking about. I would say at this particular stage, we feel that there is just a certain price, probably, on the commodity market that could be offered for the gas. Whatever that price is at the time that we could still sell it in our market place and under whatever conditions the state would entertain, we would be willing to enter into any negotiations for the gas. We need the gas, we need it badly, but we don't need the gas if we can't sell it so as you work back to the well-head price that is, in effect, it is going to be a commodity price, and because of the advantages in both the economics of transporting the gas and in the cost of the Arctic Gas system, the price to the state will be higher under that than it would be under any other system that you may build.

REP. CHATTERTON: Should the Arctic Gas route be finally selected do you plan to participate in that actual cost of the pipeline?

MR. COTA: We have already given a letter of equity commitment

to the NEB. It has been filed before the National Energy Board and before the Federal Power Commission and we have committed ourself to it, our equity payments.

REP. CHATTERTON: Thank you, sir.

REP. PARR: May I ask one more question, Mr. Chairman?

SENATOR RADER: First, I'll take persons who have not yet asked a question. Senator Sumner?

SENATOR SUMNER: Thank you, Mr. Chairman. You indicated that the Arctic Gas line would be in the best interest of Alaska. How do you find that?

MR. COTA: That they in the end will get the highest price for their gas because of the economics of transporting the gas on the Arctic Gas system. As I just mentioned to the Representative here, eventually it has got to be sold in the market place and competition with oil or electric or whatever the other fuel is. It is going to back up to the wellhead on a commodity value so that that project which results in the lowest net cost to move that gas from Prudhoe Bay to the market area of the 48 states is going to end up with the highest wellhead price to the state.

SENATOR SUMNER: Since Alaska, though, is interested in some jobs and some economic development, do you agree that the Arctic Gas line is the least favorable to the citizens of the State of Alaska under those terms?

MR. COTA: Well, first of all, I think one of the other big

advantages that is of benefit to the State of Alaska is the thing that I mentioned in my statement -- was the time element of getting ours under way almost immediately upon certification and financing. We are ready, we do have the organization, we have been working on it, we have been in the design work, we are developing the equipment. So first of all there is a great economic benefit to the State of Alaska, not only on the initial gas of getting it marketed at the earliest possible time, but a line that can move all the rest of the gas you will have available. That will be the benefit to the citizens of Alaska and the people involved.

Now, as far as the jobs are concerned, which was I think really the question you were asking, I wasn't trying to avoid it. I was trying to come back first and give the economic advantages. I would have to say that you are comparing a one hundred ninety five mile line against an eight hundred mile line, jobs during construction. I think you are absolutely right, there would probably be economic benefit to the other project, the Trans-Alaska project. But in the long run, I think the benefits to Alaska will be much greater with the Trans-Canadian line.

SENATOR SUMNER: How about the job ratio after their construction?

MR. COTA: I don't think there will be a lot of jobs with either line.

SENATOR SUMNER: Which would have more jobs?

MR. COTA: Probably your Trans-Alaska line because again it is a longer line. Again I think your benefits will come from the dollars you can derive from the sale of your royalty gas more than the jobs you may develop.

SENATOR SUMNER: One other statement that you made that seems to be inconsistent with some previous testimony is that the Arctic Gas line would be the earliest, would give the earliest flow of gas. How do you account for that inconsistency?

MR. COTA: Because of being in a position now with the equity investors and with the staff already assembled, to be into operation at the earliest possible date. Now you go back, let's say the Trans-Alaska, who are their investors? At the present time they do not have equity investors. I don't think anyone has committed to put in an equity investment in it. The people that would invest in the Trans-Alaska line would be the same people that will invest -- the same shippers in the Trans-Canada line. Theywould have to then start from ground zero towards designing the Trans-Alaska line and towards forming an organization, being convinced after certification that it would be a feasible project. This will take time.

SENATOR SUMNER: How much time difference do you see, Arctic Gas to the El Paso approach?

MR. COTA: Well, I would estimate two years. I can't --

SENATOR SUMNER: That is unique. That is about the same time they estimated that theirs --

MR. COTA: I heard the testimony yesterday. You may have read Judge Litt's release too. He agrees that one of his reasons for favoring the Trans-Alaska line is for the time element -- or the Trans-Canada line, I'm sorry.

SENATOR SUMNER: Is the financing any easier for the Arctic Gas line in your view than it will be for the El Paso line? Is that what you were saying?

MR. COTA: I sure do, mainly because it is a conventional type of construction. We have been constructing lines of that type for many, many years.

SENATOR SUMNER: Do you believe that the El Paso project couldn't get financing?

MR. COTA: No, I think it could get financing.

SENATOR SUMNER: Okay. Thank you, Mr. Chairman.

SENATOR RADER: Senator Huber?

SENATOR HUBER: I have several questions, Mr. Chairman and Mr. Cota. Are you an engineer, Mr. Cota?

MR. COTA: Yes, sir.

SENATOR HUBER: I was rather surprised because I noted from your testimony that all the things you indicated that you

are ahead on are all of the paper work things toward getting the pipeline built. I would expect an engineer would have been ahead on all of the technical things. I'd like to go into why you think it is in Alaska's best interest for the gas to go via Arctic Gas and it would be an expansion, I guess, on another question that was already asked. But, can you tell me any other state to where the intrastate use of the gas is not more important to their economics than is the interstate shipment of the gas from their wells? Is there other states, could you tell me?

MR. COTA: I don't think so.

SENATOR HUBER: You understand what I mean in the question?

MR. COTA: Well, yes I do. I think what you are referring to is are there other states where it would be of more benefit to the state to ship it in interstate as opposed to keeping it intrastate and using it within their own state.

SENATOR HUBER: Considering that your system, by the very nature of the route, precludes any use of the gas within Alaska. Do you know of any other state that it is more economically valuable to him to export than it is their intrastate use?

MR. COTA: At this no, I would say not.

SENATOR HUBER: Have you -- I noticed also in your testimony that you mentioned environment. Have you considered that the

line that you build across Northeastern Alaska opens a whole new area, including the Arctic Wildlife Refuge, to development when it hasn't been opened before? Have you considered that effect upon Alaska?

MR. COTA: Our environmental people have considered that, yes. I think too that you are going to find that it is going to be opened no matter which line is built. It is just that we will build ours across there. It will be open once, and there will be other exploration of sea along the whole North Slope. We will have a convenient line for them to tie into. The main line will be built at this time under the most ideal engineering and size construction rather than waiting until you build and do the environmental damage of coming all the way down through the State of Alaska, and then you will still end up putting in a series of small lines out to your Wildlife Refuge, eventually constructing in the same area.

SENATOR HUBER: Well, I guess it's a ---

MR. COTA: Plus, I truthfully don't think there is going to be any damage, which has been testified to. Judge Litt touched on the same question. But, the studies that have been made, and I have attended, and I am a member of the technical committee -- however, I have been for a short period of time. But I have attended the so-called construction panel that has testified at both the FPC and

the NEB. I am quite satisfied with the work they have done in their engineering research and the tests they are now making on the North Slope, that they can build the line across there without any permanent damage to the environment.

SENATOR HUBER: Well, I guess that is a subjective thing. There are many of us that are interested in the environment of Alaska, that maybe the Arctic Wildlife Refuge --

SENATOR RADER: Senator, I am going to ask you to restrain your remarks to questions of the witness, sir, if you would.

SENATOR HUBER: Yes, Mr. Chairman. I think you are being a little tight there in consideration with what the other is but I will comply.

SENATOR RADER: Well, we are going to run out of time here and we have an opportunity here to hear from people out of town. I don't want these hearings to close without hearing from those people and your expressions of your views or my expressions of my views are not nearly as important at this stage in the proceeding as the expression of the views which will not be available to us next week.

SENATOR HUBER: I agree with you.

SENATOR RADER: I want you to restrict your questioning to questions of these witnesses that they are prepared to answer.

SENATOR HUBER: Yes, Mr. Chairman. I could have had my next question by now.

SENATOR RADER: I am thinking about the one after that, sir.

SENATOR HUBER: Well, if you are going to tighten up considerably --

SENATOR RADER: I do intend to tighten up because I think that we are going to be here indeterminately if we don't.

SENATOR HUBER: Well, you have tightened up before on me. Mr. Chairman, my next question is you said the State of Alaska would be better off, the State itself. Can you explain to me how we will be better off in regard to the fact that one line is four times as long as the other one in Alaska, in other words, three-quarters of the length of it that would be in Alaska is in Canada, and our difference in our ability to tax that line? The State of Alaska has an oil pipeline transportation tax which is a considerable amount and it looks like three-quarters of that would go to Canada. Now, can you explain that, how that would be to our best advantage?

MR. COTA: What I testified to on your best advantage, I would admit first that ours is one hundred and ninety five miles as compared to roughly eight hundred miles, four times as long and that the tax will be of benefit to Alaska. But, I think your greatest benefit is having available to you a line which will result in the highest

wellhead price of your gas, at present three trillion, plus an easily expandable line that will provide for readily transporting all the gas that may be found on the North Slope and in the sea. Therefore, your benefits derived will be much greater from being able to market and move all the royalty gas that is found as opposed to your tax benefits.

SENATOR HUBER: I'll let it go at that. I am not satisfied with the answer, Mr. Chairman, but your restrictive rule was such that I can't ask the question.

SENATOR RADER: Representative Gruening?

REP. GRUENING: I take it from your testimony you have a deep concern with the cost to the customer of the gas because at some point the customer won't pay it. Is that it?

MR. COTA: Well, I have a deep concern that we would buy the gas and not be able to market it which is really the same thing. Yes, I guess I have a deep concern for the customer also because it affects the economy of the country.

REP. GRUENING: Well, your concern though is at some price the gas will be unmarketable, is that it?

MR. COTA: That is correct.

REP. GRUENING: And your belief the Arctic proposal is better is that it will produce a lower price to the customer.

MR. COTA: Correct.

REP. GRUENING: Have you calculated what price the customer, beyond what price he will no longer choose to use the gas. Have you calculated that? This is, of course, on the delivery schedules that you have stated.

MR. COTA: These are our own company's internal studies. We have a very comprehensive three year and ten year planning group within our company. We have projected what we feel the cost of domestic gas, meaning the lower 48 state gas, will be in 1985, actually through 1987. We have an application with the Federal Power Commission for coal gas, coal gas gasification plant. We have also studied LNG.

In this study we have also predicted what the price of fuel oil would be and electricity in 1982 up through 1987. Internally we have used a figure starting out in 1982, which would be -- the original estimate of when this line would go into service, of One Dollar and Forty-Seven Cents wellhead price. We have escalated it roughly seven percent per year, that is a weighted escalation over that period of years. I believe that our 1987 figure for the wellhead price is Two Dollars and Thirty-Seven Cents and then you add the cost of transportation. We came out about Four Dollars and Eighty-Two Cents by the time it got to our pipeline, somewhere in

that neighborhood. At that price, we feel at the cost of oil and electricity at that time, it is still marketable.

REP. GRUENING: Anything beyond that, the customers are likely to go to another fuel source?

MR. COTA: Yes.

REP. GRUENING: And the result of that is that the line is unfinancable, is that the result?

MR. COTA: Well, if you can't sell the gas, yes.

REP. GRUENING: Okay.

MR. COTA: We have to be assured we can sell it and if it gets to some price that we feel that we can't move it in our system and receive it in our market area at a cost within our planning, we would not go into the project. But at this time, at the costs we have seen, we have not only determined that it is an economically feasible price that we can sell the gas, but we have committed to our equity investment in the Trans-Canadian pipeline and the Arctic Gas project.

SENATOR RADER: Senator Butrovich and then Representative Meekins.

SENATOR BUTROVICH: Mr. Chairman, when Senator Huber asked Mr. Cota a question, I understood Mr. Cota to say that there was a distinctive advantage to the Arctic route if future discoveries were made and I just wonder how he arrived at that conclusion when the heavy exploration, as

I understand it is to the west of Prudhoe Bay, rather than to the east. And, also, there is much exploration planned between Prudhoe Bay and the Brooks Range, which would be south of Pet Four and right now Pet Four is receiving a lot of attention. It would seem to me that the Trans-Alaska line would be just as accessible, if not more accessible, by feeder lines from those regions than with the Arctic line.

MR. COTA: What I was referring to, and it also fits into what you are saying, is the expandability of the line itself. In other words, the Trans-Alaska line would have to be increased in size, you would have to increase the size of your liquefaction facilities on the south coast, which is difficult, you would have to add additional ships. The big thing, where you would run into a big problem, is being evidenced right now in California of finding a place to land the additional supplies for your regasification.

As I said, our project requires, for the most part, some additional compression which will be easily installed either within the present compressor stations or additional stations in between the compressor stations. It is a relatively simple process, it has been done every day in the conventional lines in the lower 48 states.

SENATOR BUTROVICH: However, you do recognize the fact that one proposal does not propose to do that? It proposes

to transport it in the same area which you would, or in which Arctic would.

MR. COTA: Are you talking about the Alcan proposal?

SENATOR BUTROVICH: Yes, sir.

MR. COTA: Well, according to the testimony I have read and Judge Litt's opinion, the staff opinion, that line -- and I do not want to talk for them on this, I will let them talk for themselves on that, but I am only reading the opinion of the Federal Power Commission is that that line is not expansible.

And, of course, you have got another thing there. You have got to move that through third parties in Canada after the Alcan line and it is whether they want to expand their system or not. They have never indicated that they will expand their system to take additional gas. They will do it when they want, under what conditions they desire to do it, and they have also expressed that preferential treatment will be given to Canadian gas supplies, which will be the Mackenzie Delta. It would have to be moved through those lines. We have complete control on the Arctic Gas system of doing our own expanding, which the basic line itself being a forty-eight inch high pressure line would not need to be expanded. If anything, there may be some slight looping but, for the most part, it is adding compression and power.

SENATOR BUTROVICH: Mr. Cota, would it be a fair assumption to make that whether or not you acquire our twelve and one-half percent or a portion of our twelve and one-half percent that you would anticipate sharing to some substantial degree in the gas which the producers in Prudhoe Bay are producing?

MR. COTA: Yes.

SENATOR RADER: I am getting signals that the people in the back of the room are unable to hear so I want to urge all parties to speak up loudly because they are anxious to know what you are saying. Excuse me, I didn't mean to interrupt you, Senator.

SENATOR BUTROVICH: No, you didn't interrupt me.

SENATOR RADER: Did I interrupt you, Mr. Cota?

MR. COTA: No, I just -- yes.

SENATOR RADER: I did interrupt you, would you proceed?

MR. COTA: No, I meant the answer to the question was yes, we do hope to participate in gas from the producers in addition to royalty gas.

SENATOR RADER: Any further questions, Senator Butrovich?

SENATOR BUTROVICH: No, I am afraid I would be making a statement, sir. Thank you.

SENATOR RADER: Representative Meekins and then Senator Poland.

REP. MEEKINS: Thank you, Mr. Chairman. I have got a question in regards to the contract. The real issue here is

whether or not to approve the contract that the administration has tentatively engaged in. Do you have any general statements about that contract? What I am interested in is from your experience, do you see anything that we are giving up that we won't be able to gain in the future or opportunities foregone by engaging in this contract? Any concerns that you have or anything you could tell us that we should be concerned with?

MR. COTA: I don't believe so, Representative. I don't think I am fully enough informed or advised of the content of the contract. I have read the contract, I haven't studied the contract and I don't think I would like to comment on it.

SENATOR RADER: Senator Poland?

SENATOR POLAND: Mr. Chairman, Mr. Cota, we were discussing the time element and it was my understanding that you felt that your line could be completed more rapidly than the Trans-Alaska line. But, one of the things that has come up from time to time as we discuss this is your Canadian land claims. Do you feel that you could even predict what delay that might bring your line?

MR. COTA: We don't feel that it is going to delay it at all. We think that when the NEB comes out with their order and as you heard here yesterday, I believe it was, the treaty has been signed between the two countries that the

land claim issue will be settled but it will not necessarily, and we don't feel it will, hold up the start of construction of our line. There will be some commitments made to continue to settle the land claims issue but the line will rot be held up as a result of it.

SENATOR RADER: Representative Chatterton?

REP. CHATTERTON: Thank you, Mr. Chairman. Sir, have you estimated what your initial economic uninterruptable throughput of your gas line would have to be, sir? In cubic feet or mcf?

MR. COTA: That question I think was asked of somebody here yesterday in regard to the other line.

REP. CHATTERTON: Yes, it was.

MR. COTA: I couldn't give you an exact figure on that. I think possibly Mr. Ward, who is going to appear here later, might be able to give you that figure.

REP. CHATTERTON: Thank you.

MR. COTA: I have heard some figures but I am not sure of them.

REP. CHATTERTON: Well, let me ask you a follow-up question. Whatever that number is, you would not be willing to invest in a transmission line until you were assured you could meet that economic threshold daily volume and it would not be interrupted for at least a fifteen or twenty year period?

MR. COTA: I could answer your question yes. You stated it very well but I'll start out first by saying we couldn't finance it without at least a twenty year plus contract. We could not finance it unless we could show that there was sufficient gas moving through the line to service the debt on the line and also service our equity.

REP. CHATTERTON: Thank you very much, sir.

SENATOR RADER: Representative Gruening, did you have a question?

REP. GRUENING: Yes. Have you read that portion of the synopsis of the Litt decision on page ten that says "A field price of $1.00 per thousand cubic feet is the upper limit, he said: a field price established by contract or otherwise at a level much higher will sink the project". Do you agree with that statement?

MR. COTA: No, I don't. Maybe what he is referring to, a field price which has been used now in the -- that is a price they have used in the economics of moving the gas. In other words, the fuel, El Paso's or Trans-Canada, and I know he is referring there to the dollar per thousand cubic feet. However, he is talking about 1974 -- 1975 dollars which is all based on that which is kind of in line with when I said, I believe, One Dollar Forty-Nine in 1982 is the dollar field price escalated to 1982 and then on up to 1987. In our own shop these are the

figures we have come up with and I have said it under that basis on those prices it would be economical to us at this particular time, based upon escalating the fuel oil prices at the same factors.

REP. GRUENING: Given the fact that apparently the Arctic line needs a lot higher capacity to make it financible, as I understand it, could the reverse be true, that the Alcan line, which has a lower volume, at least on conventionable terms, be much more financible? Does that make sense to you?

MR. COTA: Well, first of all, I don't think it is as financible to start with. It is not going to move the amount of gas.

REP. GRUENING: Well, let me ask, will the private markets, the bonding companies, finance, betting on what the reserves, this hundred trillion cubic feet or whatever the projected reserves are; aren't they going to look very much to what is ninety-nine percent sure?

MR. COTA: That is correct.

REP. GRUENING: Well, then a line which has a more reasonable estimate of actually what is producible is maybe more financible.

MR. COTA: That might be true. I'm not sure I get your question entirely.

REP. GRUENING: Well, I got your answer. Thank you. If you

want to expand on that, go ahead.

MR. COTA: Well, would you repeat the last part of your question?

REP. GRUENING: Your answer to the first part of the question that the conventional markets would not rely on the -- conventional financing markets would not rely on the projected or estimated reserves, gas reserves. They were going to look at pretty much the sure producible amount and on that basis, a line whose economics were based upon that more reasonable or sure amount, would be more easily financed through conventional methods. Is that a correct assumption?

MR. COTA: Well, I think if that was true that would be a correct assumption. What you are saying is the Alcan is based upon the twenty-five to twenty-nine trillion cubic feet that is there or whatever that -- solely upon that amount, and that, therefore, our line is based upon the same amount, if that is what the financial people are looking at, therefore, you indicate a lower cost on the Alcan project as compared to ours, therefore, it should be more easily financed. Is that what you are asking?

REP. GRUENING: That and the fact that your line depends on discoveries that are not yet certain.

MR. COTA: That is not true. Our line is based on the twenty-five trillion, what is there today, and no financial

people are going to give us the money to build it based upon the hundred trillion or the hundred and thirty-five or whatever it might be in the future. And we are not going to invest in anything that couldn't be financed and that would not be feasible, needing gas that is not proven. So ours is based on the twenty-five trillion.

REP. GRUENING: Well, if it were a fact -- I'm slightly switching the question but if the rate of daily production could not exceed two billion barrels a day, if that were a fact --

MR. COTA: Two billion?

REP. GRUENING: Yes. A conservation fact, would not the Northwest line be more financible on that basis?

MR. COTA: I don't feel it would be. To start with, and again I said Mr. Ward might be able to answer the question about the amount a little better than I am, but I know that two billion, if that is the figure you are going to take, is within the ball park of an economic feasibility for our line.

REP. GRUENING: Anything above that would reduce in loss of oil production?

MR. COTA: Let's say anything above that did reduce, we would still have a feasible project based on your two billion. You want to remember too, that we do have one thing -- two other points is the Mackenzie Delta gas which could

be transported on our system, plus we have a Canadian investment community along with the United States investment community. We have two sources of investors in our pipeline.

MR. BINDRA: I might make one observation here. I think one of the factors that the investment community is going to look at is the cost at the market. And to the extent that the Arctic Gas project is going to result in the lowest cost in the market, I think it has a much stronger financiability factor.

SENATOR RADER: Did you have any further questions?

REP. GRUENING: Well, I am not convinced that it will result in the lowest cost among the three lines but I'll leave it at that.

SENATOR RADER: Representative Miles?

REP. MILES: Thank you, Mr. Chairman. Going back to Senator Poland's original discussion on native land claims. If the Arctic position, Mr. Cota, gains support in the east, would it be to your benefit, the benefit of the other supporters of the Arctic line to become involved in land claims settlement in Canada?

MR. COTA: What do you mean in the east, Eastern Canada?

REP. MILES: No, no, no. In Washington. In Washington, it is obviously a Presidential/Congressional decision. So if the position does gain momentum back there, when the President

is studying it, when Congress is studying it, would it be to your benefit to become involved in the Canadian land claims?

MR. COTA: I don't think the federal government of the United States is involved in the land claims. I didn't know they were.

REP. MILES: Not the federal government, no, sir. The industry I am talking about.

MR. COTA: The industry, no, I don't think we would become involved.

REP. MILES: Not at all.

SENATOR RADER: Mr. Carpenter?

REP. CARPENTER: Mr. Cota, earlier -- again this will seem like I am shouting at you, but earlier Senator Croft was exploring this question of whether the state is going to lose something by committing its gas now, it will either be the producers not committing their gas, and you said that among the reasons that you felt the producers weren't committing their gas was that they were awaiting unitization. How would that affect them compared to how it would affect the state as a reason for committing or not committing our gas?

MR. COTA: Well, I don't think the state has committed a specific amount. They have committed a percentage of the gas that will be produced. You do not have a contract with

these three companies that I understand commits you to any specific volume of gas, it is only a percentage of all gas produced by all producers on the North Slope.

What I was referring to is, say, Mobil, which is a small producer in the whole scheme of things. If they would sign a contract with us for, say, a trillion cubic feet of gas, and this was presented to the Federal Power Commission. Under some of the contracts that have been presented in the past they may only be able to produce, say, six hundred billion instead of the trillion. What they want to be assured of is that after unitization they will be in a position that they do have that amount of gas, somewhere in the neighborhood of a trillion, and that they will not then have to make that gas up from another source in some other location. That is the differential in your problem.

REP. CARPENTER: Therefore, their reason for not committing is not a valid reason for the state to not commit?

MR. COTA: That is correct, Representative.

SENATOR RADER: Are there any members who have not yet had the opportunity to ask their first question? We will start taking the second line around. Mr. Swanson?

REP. SWANSON: Mr. Chairman, noting the existence in the miles, El Paso at one hundred and nine and Alcan at three thousand, I don't have a mileage figure here for the

Arctic Gas route, but the thing that bothers me is that they are all at the six billion dollar mark. How many miles is the Arctic route?

MR. COTA: Total miles is about thirty-eight hundred.

REP. SWANSON: Thirty-eight hundred. Another question, if I may. These figures are based on what it costs us to build the Prudhoe Bay line?

MR. COTA: The Prudhoe Bay line?

REP. SWANSON: Well, our oil line, the cost of getting the pipeline --

MR. COTA: Oh, you mean the cost of construction?

REP. SWANSON: Right.

MR. COTA: No, they are based upon -- after you get out of the permafrost area in Canada, they are based upon conventional pipeline construction that we do every day.

REP. SWANSON: All right. Next question, Mr. Chairman. Is this line going to be similar to the Prudhoe Bay line as a cost plus, plus, plus pipeline in which we are going to have to pay for -- the transportation of our oil is going to be the same way across Canada, or is this just going to be a regular legitimate line in a bona fide contract years and so it is not a cost plus, plus, plus thing like the Prudhoe Bay line?

MR. COTA: Our staff of the Canadian Arctic Gas Study Limited Group, which is based in Calgary, advised at the last

technical committee meeting I attended that the project would be let on firm bids in the same manner as any other gas line. There may be some problems in the permafrost area where there will have to be some, possibly, stipulations in there to cover unforeseen -- for the most part it is a conventional contract.

REP. SWANSON: My next question then. The return to the State of Alaska on the transportation cost of this would be less in an Arctic route than would it be the type we have got here in Alaska?

MR. COTA: I don't want to get turned around on your question. I want to be sure I say it right because I'm not quite sure how you said it. The cost of moving the gas from Prudhoe Bay to the lower 48 market area on the Arctic Gas system will be less transportation cost of fuel and as a result the price that can go back to the wellhead will be higher to the State of Alaska on the Arctic Gas because of the reduced cost on the line, and, therefore, those benefits will be at the wellhead.

REP. SWANSON: Even at the difference, Mr. Chairman -- even at the difference in the length of the lines?

MR. COTA: Yes, sir.

REP. SWANSON: That is all I have, Mr. Chairman.

SENATOR RADER: Any other first round of questions by members? We will take a second round of questions if anybody has

any. Senator Poland?

SENATOR POLAND: Mr. President, Mr. Cota, this is probably an extremely provincial question, but as I look at that map up there and I look at your route, I see no way that the State of Alaska --

SENATOR RADER: Senator, they are unable to hear you at the back of the room. Would you speak louder?

SENATOR POLAND: I am sorry. In looking at the route up on the map for the Arctic line, I see no way for the State of Alaska to be able to take off any gas in a place that it would do the state any good. If we use the Arctic route do you believe that we are going to be in the same old position we are in with our salmon, where we ship it out and ship it back up again, or is there some way that we can take off the line?

MR. COTA: I think there may be some ways. I might be premature to talk about the Gulf of Alaska and some of your areas at this time but someone here mentioned about return of gas in-kind, a company that might be active in the Gulf of Alaska on gas supplies or any of your other coastal areas could in effect return gas to you in-kind if they were the people that were exploring off the Gulf of Alaska or one of these areas. That would be about the only way I can see unless -- you have got a threshold of twenty-five trillion which is

supporting this line to the 48 states, it depends on how much gas is eventually found up there. Just because you don't build the second line now, the gas line to the south of Alaska or to the Anchorage/Valdez area, doesn't mean you can't support a line in the future, the same as your polar gas line there in Canada.

I can see their alternative up there, they talk in terms of a threshold of about thirty trillion needed to build that line. They have reduced it now to something under that. It is somewhere between twenty-two and twenty five. They fully expect at some future date that both lines will be built, the polar line and the line that is now being proposed. I don't think your foregoes go in a second line in Alaska -- I think the market is going to be there in the future--just because that isn't the line that might be built today. I think your need for gas in the future date is probably more than it is today, anyway.

SENATOR RADER: It is five after twelve. These gentlemen have a two o'clock flight to catch. Do we have anymore questions? Senator Huber?

SENATOR HUBER: I had one but I wanted an expansion off Senator Poland's question. Your answer to Senator Poland just now about future lines being able to handle it, how do you take this into account with your original

statement that the Arctic Gas line can be expanded to four times more economically? Do you mean to tell me that we are going to go against the economics if you put in the first line and not expand it like you recommend in the future? The two statements confuse me.

MR. COTA: Well, what I'm saying is that you have the means to move the gas to market on the Arctic Gas but then also, if you have surplus gas which would support a second line and you have the need in Alaska and you have demonstrated the need, you do have the petrochemical plants or the industrial, whatever else you need. If the gas is there we are justifying the construction of our line on the present twenty-five trillion. There are twenty-nine trillion of reserves available but that doesn't foreclose a threshold amount of gas to build another line across Alaska at some future date.

SENATOR HUBER: And, Mr. Chairman, that means that it is not out of line with your original statement. It is just that your original statement, once you build the first line then you can expand it to one hundred million, as you said. It will always be more economically feasible to take it out by Arctic Gas, according to you, but we could do it the other way if we wanted to. Is that what you are saying?

MR. COTA: This is correct and you will have the income at

an earlier date from the Arctic Gas line to apply to the construction of another line which would come down through Alaska.

SENATOR HUBER: I needed to find out another thing, Mr. Chairman, on a different subject, if I may, while I am at it. Do I understand that you still have some agreements with producers on the North Slope to furnish you gas?

MR. COTA: We do not. Not since the advance payment agreement was eliminated.

SENATOR HUBER: But you are still supporting their line. Do you have some kind of agreements on the back burner?

MR. COTA: We have no agreements. In fact it is not their line, it is our line at the present time. We are the project supporters, not the producers.

SENATOR HUBER: All right, one more related question to that. You did mention that you were broad based with associates, so I will ask for you and your associates, is there any kind of commitments that may be legal from the Mackenzie River Candadian reserves that go with any of your affiliates that you still have agreements to take?

MR. COTA: Well, they are not back burner. They are very straight forward and they have been filed in the NEB. We do have a contract with Imperial Oil for four trillion of the first sixteen trillion of gas in the Mackenzie Delta, however, unless there is quite a surplus of gas

found there, we see very little chance that we will move any of that gas out of Canada, but that contract is still in effect.

SENATOR HUBER: That contract is in effect so the making the Mackenzie Delta gas more economically feasible is definitely to your best interest by the Alaska gas going the same route?

MR. COTA: Oh, sure. Even if we don't get any of the Mackenzie Delta gas, the four trillion of which we have a contract for and we can't move it to the states, we feel that if Mackenzie Delta gas line is built and that the gas is moved to the Canadian market and on over to Eastern Canada, that will relieve the load right now on the Alberta producers and on other producers in Canada, that the surplus gas that we hope in our contracts which we now have, and the first one expires in 1980, that they will be able to continue at least on a year to year basis, gas to us which is very important to us that the Mackenzie Delta gas arrives in the Canadian pipeline system.

SENATOR HUBER: So that then answers that your economic interests are definitely best served by Alaska gas -- your Canadian economic interests are best served by Alaska gas going through Trans-Arctic so that it will help you with your Mackenzie River holdings?

MR. COTA: I think the economic interests of everyone concerned, including Canada, the United States, the 48 customers, all the pipelines involved in the State of Alaska, are best served through the Trans-Alaska project -- Trans-Canada, excuse me.

SENATOR HUBER: Mr. Chairman, I did have a question on balance and trade but it has been asked before in other meetings, and so that we can get on with it I'll let it go.

SENATOR RADER: I appreciate it, thank you. Representative Parr?

REP. PARR: Mr. Chairman, my question is very brief and something Mr. Cota said a few minutes ago. Mr. Cota, looking just purely from a business viewpoint, I get the impression that if you were making the decisions for the State of Alaska you wouldn't sell this gas at all to anybody now, to Michigan Wisconsin, to Tenneco and the other people there, that we would hang on to that gas.

MR. COTA: Personally, I wouldn't see any reason for hurrying into anything. I would see what kind of support you do get out of those who are seeking the gas. But, if I did contract to sell the gas to them, it would be on a Trans-Alaska route, and I wouldn't make any commitments to go through another line with it; otherwise, you are not going to get the support you are seeking.

REP. PARR: Now I am talking from a purely business standpoint without regard to the support of the Trans-Alaska line or any of those things. I get the impression that what you have implied is that we would be better to hang on to our gas if it takes ten years, as a business venture?

MR. COTA: I don't think I said that.

REP. PARR: Not in so many words but that is the thrust of your testimony.

MR. COTA: No, I don't think I even indicated that. I don't know what statement you are referring to but I still think the commitment of your gas to the market through the most economical pipeline that can be built at the earliest possible date is in the best interests of Alaska.

REP. PARR: Thank you.

SENATOR RADER: Any further questions? We appreciate very much you gentlemen attending. We will stand in recess until 1:30 promptly.

(Whereupon the hearing was recessed at 12:10 p.m. and reconvened at 1:30 p.m.)

SENATOR RADER: The committee will please come to order. We have as our first general public interest witness Mr. Boucher, H. A. Boucher. Identify yourself for the record, Mr. Boucher.

MR. BOUCHER: Thank you, Senator. My name is H. A. "Red" Boucher. I'm from Anchorage, Alaska, I serve as a consultant to people in the construction, also in the architectural and engineering. I serve in a consulting capacity to Energy Company of Alaska, which is a refinery under the North Pole area, also to Pacific Alaska LNG, who is attempting to put a facility together right in the Kenai Peninsula. In the case of Pacific LNG, I have no responsibility other than to assist them with community affairs in the Kenai area, and I think both Mr. Ward and Mr. Holland will acknowledge that that particular company is involved in both of their projects, the parent company of that. I think it is necessary, and I will be glad to answer any questions on that particular subject.

I am here as a private citizen and paying my own way and expenses. The sale of royalty gas is a subject I was concerned with during my period of service to the people of the State as Lt. Governor, and I think the Administration and the people who have followed this issue know that I'm pretty much voicing the same thoughts now that I have voiced consistently over the past two or three years.

I think what I would most like to do, and be assured I'm going to attempt to sum this up because

there are other witnesses who are technicians in the field and I think they will have things of interest to you and to the people of the State of Alaska.

For a moment, if I may, and I think it's always wisdom to look to a higher power when we tend to get caught up in the day-to-day things of life -- maybe Ecclesiastes the First or the Second, the Tenth Verse, might kind of place things in focus. Indeed, everything that is happening now has gone before us and really, are we discussing anything new? By that I mean we're talking about removing a resource from the State of Alaska, and this has been discussed with our fish, our timber and other things. It's not whether we should, when we will, but is it in good order and is it in the people's best interest.

So I hope here to go back to the basics, the law that you are dealing with. You've had the pipeline issue discussed, which is the best pipeline, and frankly I think to a large degree you resolved that, as a body, before. If you have had a change in mind, I think you might discuss that, whether it is before you to support El Paso, Alcan or the Arctic.

I would like to maybe give a larger view as it relates to the petroleum industry. I found them to be gentlemen of good faith. Of course, there are always

people who may not deal with you in good order; but by and large, as both Lt. Governor and Mayor of the City of Fairbanks, I have found that if you dealt squarely with them they dealt with you, that they were working for their corporate interests and you, in turn, should be working for your corporate intersts.

So I'm going to solve the pipeline issue by saying this, and it's happened in the past -- the very people (as Clark pointed out) who are battling each other today may be working together tomorrow in the common interest of solving what is the most important issue before us, the national energy problem that faces our country.

So, maybe Senator Stevens was kind of wise when he said, "Don't throw the baby out with the water." I think it's been debated enough, I don't intend to get into that particular area because, as I understand, you're talking about the sale of the royalty gas, and that is what I would like to address myself to.

I think the bottom line is what Senator Croft said earlier, how much do we have in the reservoir, how much can we commit, because it is an oil reservoir and withdrawal of the gas has an effect on that oil, and you need to concern yourselves with it, and you have some of the finest men in the industry in Hoyle Hamilton

and Easy Gilbreth, who can give you the answers to that. You do have the control, you have the conservation of that reservoir and its resource, and that's your first responsibility.

Secondly, I would like to address myself to Representative Gruening's remarks, "What are you getting for what you are offering," and I would like to add one dimension, "What does your law which you are bound to operate by state?"

I'm going to, in the interest of good time, skip over my formal remarks. There are some flourishes in there that I feel at this particular time may not really have any bearing. I think we all know that the energy crisis that we're seeing is just the tip of the iceberg. This nation is ninety percent dependent upon fossil fuel, and it is imperative upon the Nation and the State who soon be its largest producer, who is going to be looking to us to supply this life-giving energy, to get their act together and develop an energy policy, and I think it's as important for Alaska to establish a leadership role in this.

Really, that is the overriding consideration that will affect any decision in the next twelve months. It's one which I've been concerned with, as many of you here in the room are; but I think we need to back off and

take a look at the larger picture.

I feel that Governor Hammond, based on what I can read here, has in good conscience brought a proposal before the people that he thought that the Legislature wanted and they wanted. I would like to say that. I had a talk with him before giving my comments here, and he knows my general feeling in this area. But I would like to emphasize that. I don't think there's any room for what this Administration did, or that Administration did -- let's get down to the basics. We are dealing with something that's not only going to affect every man and woman in this State, but also sister states to the south.

I'm going to go through here to the point where I got down to page four at the top. We're talking about the Legislature when it enacted AS 38.05.183. There were gentlemen and ladies who were in the House when that was enacted that are sitting here now. There was one reason for it, to make sure that we set a portion of our fossil fuels, oil and gas, aside for our own energy self-sufficiency and to build an economic base for this State. I don't think one-eighth of it is considered to be selfish, especially when much of the responsibility of developing an energy base for our nation is going to fall upon this State, and we're going

to require additional energy to be able to power these pipelines far in greater proportion than, let's say, Iowa, Kansas, or what have you.

I think this, when we go before the Congress of the United States, and if this provision of withdrawal is threatened, I think that should be our case. We are up front, we are the steam engine for America in the next decade, and we must have energy beyond our own needs. I think it's fair to state that we should, as a people, and this is what the Statehood Act was all about, have the opportunity to develop a domestic economy that lifts the burden of the Federal taxpayer off his back; in other words, that we become self-sufficient to the maximum degree that we can.

I think overall the purpose of this law was rather simple and I, as one who has served with you, I would like to deal with our legal responsibility, my views of why we did it. Now, this is something that concerns me very much, and I'd like to address myself to it, and maybe the answer is here and maybe I've missed it.

When the Legislature enacted AS 31.05.183 it specifically attempted to protect the birthright of Alaskans yet to be born. In fulfilling this obligation the Legislature demanded that prior to the exportation (and I emphasis "exportation") of any of Alaska's royalty

gas that detailed studies be made, not only as to the immediate needs of our State, but as to its present and projected intrastate domestic and industrial needs. The mandate is simple.

When you use "shall" in there, you don't mean maybe, if, and or but. It also demanded that the Alaska Royalty Oil and Gas Development Board determine that the royalty in-kind oil or gas is surplus to the present and projected intrastate domestic and industrial needs. And it didn't provide, and I'm not trying to be facetious here or intimate that there was any back room dealing -- it provided that it be done right out in public, not just a matter of negotiations as to whose interests, and I am not intimating that it be done, but it's mandatory that it be done. And that you report these findings of how you arrived at surplus and you report them in writing in detailed studies to the Legislature within ten days of the convening of that Legislature.

I have talked to a number of Senators and Representatives, and I can find nothing that would indicate a detailed in-depth analysis of in-State use of this resource. We're paying money to find out if a contract is all right and fine, we need to do that, but I would like to see a detailed in-depth analysis as is required

by the law. I have tried to gather everything, the comparative study of the gas pipeline proposals; that talks about the route situation, and you should deal with that there. A comparative economic study of three competing routes, that's not talking about royalty gas. Net economic benefits; fine, that's one of your charges in there, and maybe you might be dealing with that, but if you look further back in the laws as to the various things that the Advisory Board is supposed to study before it authorizes the Commissioner to proceed, I don't think it says, "If, and or maybe," it tells you exactly what to do.

Then you have Dr. Knudsen's letter to Mr. Owens of Northwest of December 16. It says, "Well, maybe that economic study isn't just exactly what we said," under what appears to be the catch phrase now, scenario, which, as we all know, means, "Let's try another computer run to see if we can make it work."

I'd like to get to the bottom line and keep the rhetoric as much out of here as possible. Here you have a letter which followed your various laws, as I understand, and Representative Gruening was kind enough to supply me it. You appropriated Fifty Thousand Dollars. In fact, it might be noted here, for those who might think political, Governor Hammond just let this pass

without his signature. So, there's room for views on both sides. He had his reservation at that time.

I have the minutes of your Gas Pipeline Impact Committee of February 24. You expressed your wishes there, so if you've changed your mind since then I think the public ought to know it. You had the laws that passed. This triggered, I think, the Royalty Board to go into action, (I haven't seen any of their minutes or studies in their deliberations) which in turn triggered Commissioner Martin's action, which is a letter, and as was pointed out here, one of the clauses clearly stated in here, you must support a particular route. Whether that's in good taste or whether that's a proper way to dispense of the people's resources, I don't know. Whether or not it's legal, that's not for me to determine.

I think it is for you to determine whether or not it's wise to do that, and whether that's a decision that you want to live with if this thing, let's say, doesn't go this way or that way. I think we're going to find out that the pipeline decision between now and whenever it was made is going to be like a ping pong ball, it's going to be back and forth; Canada makes a decision, press reaction, counter decision in Alaska. So let's keep our cool and let's act responsible before our nation

because we have a responsible position.

I would ask only that you do this: go back to the basics, (you know what you did when you deliberated) look at your law, and see if you are functioning within the framework of that law. For example, I'll read all of 38.05.183(d): "Oil or gas taken in kind by the State as its royalty share may not be sold or otherwise disposed of for export from the State until the Commissioner with the approval of the Alaska Royalty Oil and Gas Development Advisory Board determines that the royalty-in-kind oil or gas is surplus to the present and projected intrastate domestic and industrial needs." And further back in your chapter, I won't bother to go into that, it clearly states to arrive at that thing before they make their recommendation there is clear-cut things, social impact, desirability of localized capital investments, should we refine it inside the State; that's where their area of responsibility is.

Back a moment, "... Gas Development Advisory Board determines that the royalty-in-kind oil or gas is surplus to the present and projected intrastate domestic and industrial needs. The Commissioner shall make public, in writing, the specific findings and reasons on which his determination is based and shall, within ten days of the convening of a regular session of the

Legislature, submit a report showing the immediate and long-range domestic and industrial needs of the State for oil and gas and an analysis of how these needs are to be met."

I think you're aware of the law as well as I am. In fact, that's what we who have served or do serve took our oath on, and I'm not here to say you haven't, but sometimes when you pressure things through and rush it in the name of whatever project -- I'm sure there were men who sat here before when our salmon started to go out and said, "We've got to have them out! We've got to have them out!"

All I say is, I know and I can appreciate the industry's needs for an immediate decision, and I can understand and respect their needs, but our needs, specifically the people of the State's needs, may be different than theirs, and if they have their responsibility to their corporate board, I think that you well know that. I'm not saying you don't. This was my only purpose; could you please get it back to the law that we're dealing with.

Mr. Chairman, that concludes what I have to say.

SENATOR RADER: Thank you, Mr. Boucher. Questions? Senator Huber.

SENATOR HUBER: Thank you, Mr. Chairman. I have a short one.

Red, when the Oil and Gas Royalty Board last fall considered this, do you know how long it took them to come to their conclusions?

MR. BOUCHER: Are you talking about the meeting that approved the contract, itself?

SENATOR HUBER: Well, if you have knowledge of other meetings that took place, I wish you'd include them too.

MR. BOUCHER: The Governor gave his speech on the 12th which, to my knowledge, was the first announcement that the royalty gas was locked into a pipeline. Then on November 22 I attended the Royalty Board hearing. I raised objections to that use of the people's resource at that time, and I am on record as doing it then.

To the best of my knowledge, the hearing on the contract which the Governor announced was done in one day. It convened in the morning and, in fact, I caught the same plane that Mr. Holland, and Mr. Penney and the others. It was done at 5:30 that evening on a five to nothing vote, approving the contract.

SENATOR HUBER: This then, sir, would be part of your doubt that 30.05.183(d) had really been complied with?

MR. BOUCHER: No, I think really what I'm saying, to arrive at a decision, any decision to commit the royalty gas or sell it in any way, shape, form or manner should have been preceded by a series of studies, not Economic

Development doing one study, and Revenue doing another study, or what have you. This again points out that in energy matters, they're not separate, whether it's the economy, heating fuel, studying of village needs -- we must pull it together and develop one program from which energy matters are dealt with. It is essential, it has such a vast effect on our economy.

SENATOR RADER: Any further questions? Representative Chatterton.

REP. CHATTERTON: Thank you, Mr. Chairman. For a moment I'm trying to frame a question for you, Red. As I heard you read paragraph (d) of 183, it was a matter that -- bear with me as I go here -- apparently it was a matter that the Legislature delegated to the Commissioner the right of determining oil and gas as surplus to the State's needs; is that what it says?

MR. BOUCHER: No. He determines whether you go competitive with it or not, and that's another ball game I didn't get into. I'm just talking about dealing with it. He can make the determination of whether it is best to solicit bids or the interests of the State are non-competitive bidding. He must do that with the Royalty Board. That triggers the action of developing the sales. Then you must, after they have done that, go through all of this.

REP. CHATTERTON: I guess what I'm looking for, Red, is what is your interpretation of the existing statute as to where the final responsibility rests to determine what hydro-carbons, oil or gas, are excess to the State's ---

MR. BOUCHER: Right here. It comes down -- because none of this can happen until the Legislature, by concurrent resolution approves all of these, and you know who you're here representing. So this is where the buck stops in this instance.

REP. CHATTERTON: Thank you.

SENATOR RADER: Any further questions of Mr. Boucher? Representative Parr.

REP. PARR: Mr. Boucher, you mentioned your prepared text, and you didn't say very much about it, but you're concerned with this provision of letting buyers switch if the State decides to switch. If I understand you correctly, your thinking is that in such case the companies don't really have to put anything in the pot, they put in so little that if they lose out on El Paso and the Governor switches they can't lose on getting the gas anyway.

MR. BOUCHER: I stated that, but I feel at the moment what I ought to really do is stick to the law. I'm wondering whether, by going through the switching provision, you're not in violation of the competitive provision.

Does the law not require -- can you make two contracts in one, a contract that is an "if" contract? Is that in the best interest? Northwest just got through and said that if it switched over to them they might bid on it, Arctic said. And you haven't said which route you're going to switch to. So go back to your competitive things and see if that is within, once again, the framework of the law.

I did refer to somebody might get in for nothing, and I would tend to agree that anybody that thinks that given an option on a resource that's worth Four Billion Dollars and its liquid is worth Eighty-Two Million, you know, that's a lot of beans in anybody's language. I think Southern, Tenneco and everybody would agree that if we said that it was for sale tomorrow to whoever gets it, they'd be lined up from here to Anchorage, and don't kid yourself they wouldn't. I mean, that's the most valuable commodity in the United States today and one of the last fields that's discovered and known of its type, and I think Mr. Chatterton, who has a history of long-time service to the industry, would agree with that. There are not too many gas fields like that one; is that not correct?

SENATOR RADER: Any further questions of Mr. Boucher? Senator Sumner.

SENATOR SUMNER: Mr. Chairman, you're far more qualified to clear up an area that concerns me that he's raised. I get the impression that he's saying we may not be legally in a position to act, that the Legislature might not have done its ---

SENATOR RADER: Mr. Sumner, he certainly raises that point. I do recall receiving in some packet of goods from -- I thought it was from the Governor and distributed to all Legislators, a number of resolutions that were presented to the Royalty Board and passed by the Royalty Board and transmitted to the Legislature, at least to me as a Legislator. But I don't know whether or not they meet the law that Mr. Boucher cites or not. I have no -- I didn't look at them from that point of view.

MR. BOUCHER: It says, "public and the Legislature in writing."

SENATOR RADER: I don't know. These were in writing, and I don't know if they comply with the law or not.

SENATOR SUMNER: Mr. Chairman.

SENATOR RADER: It's a good point though.

SENATOR SUMNER: Would you allow me maybe two or three minutes of flexibility to ask him some questions?

SENATOR RADER: Well, I suspect that we might ask the Attorney General those questions for his interpretation of the law. Go ahead.

SENATOR SUMNER: Mr. Boucher, is there any specific areas

under which exist -- you think violations exist with regard to the statutes you mentioned?

MR. BOUCHER: I have searched through here, and in fairness, I didn't say the studies weren't done. I can't find them. I asked Senator Kerttula, I asked Senator Gruening, I looked through the ten days of the journal. Normally it's supposed to be laid on the record, and anything that is this important, I hope there's one study here, and if anybody -- there's a study done on April 16 from in-house by the State, and it just consists of, "Can we or can't we use the gas?"

SENATOR SUMNER: Mr. Boucher, you're not -- it's not your nature to be subtle, and I get the impression that you distinctly believe that we have not lived, somebody has not lived up to the letter of the law.

MR. BOUCHER: Okay, I'm not trying to be subtle or cute in this one.

SENATOR SUMNER: I understand.

MR. BOUCHER: I would rather raise this question and have everybody here say, "Well, here are your studies," and then be a fool than to keep my mouth shut and see it pass and blow up in your face later on. I'm not to say -- I'm not down here now, but sometimes all of us tend to get so eager and so intense in the emotionalism of an issue we forget to do our homework. Has the homework been done,

that's my question, and I think that this whole hearing depends upon the answer to that question. Then, is that homework satisfactory enough for you to commit the resource? You know, you need to get this pipeline away from the royalty gas and make it -- I'll be facetious and say it's like getting a donkey out of an elephant's ear -- but you've got to extract the two issues and deal with them. But I don't have to tell you that.

SENATOR SUMNER: But in your research through the journals and whatever, you're under the impression that nothing has come before the Legislature which satisfies that requirement?

MR. BOUCHER: It isn't important whether it satisfies that requirement or me; does it satisfy the law?

SENATOR SUMNER: That's what I'm saying, the requirement of the statutes.

MR. BOUCHER: I can't find it.

SENATOR SUMNER: Thank you, Mr. Chairman.

SENATOR RADER: Any further questions of Mr. Boucher?

Mr. Boucher, we thank you very much for your testimony.

MR. BOUCHER: Thank you, sir.

SENATOR RADER: The next is Mr. D. Dallas, and I understand, Mr. Dallas, that Mr. Robert Dempsey is an associate of yours and you wish to testify together. Is that correct?

MR. DALLAS: He's part of my testimony.

SENATOR RADER: That's what I understand. All right, if you would do that.

MR. DALLAS: Senator, we do have a couple exhibits to pass out. We'd like to do that at the beginning of the testimony.

SENATOR RADER: All right, fine.

(Whereupon above-described exhibits were distributed to the committee members.)

SENATOR RADER: Would you gentlemen please identify yourselves for the record and who you represent and what your expertise is?

MR. DALLAS: Thank you, Senator Rader and Representative Gruening. My name is Dois D. Dallas, I reside in Fairbanks, Alaska, and I am employed by Tanana Valley Community College. I am here today representing myself. I am paying my own expenses and have taken leave time away from my job. A copy of my resume has been furnished to you along with a copy of a revised contract that I and an associate, Mr. Robert Dempsey, have prepared.

Just as a summary on the resume that you haven't had a chance to read, I am a petroleum engineer, I have had some twenty-four years' experience in the petroleum industry in the Royalston Basin of North Dakota, South Dakota, Montana and the Canadian Provinces for the Royalston Basin involved, and I've been in Alaska now for a few years.

My remarks will support the theme that it isn't

the line, it's not the route that matters. But rather, what happens most to a resident of the State of Alaska, is what is going to happen to the State's one-eighth share of those LPG's, the liquefiable petroleum gases, which are in the raw gas stream which will be produced from Prudhoe Bay. It is true that interior Alaska can use a small portion of the dry gas, the methane, but if a gas line goes by Fairbanks the excess methane is going to those Lower 48 States, regardless of which route is selected by the Federal Power Administration.

So the important question is: what is going to happen to the State's share of the ethane, the propane, the butane and any of the pentanes that are still remaining in the raw gas stream when it arrives at Fairbanks.

Paragraph IX of the gas contract, as advanced by the Commissioner of Natural Resources to the Oil and Gas Royalty Board, does reserve the right of the State to remove the liquefiable hydrocarbons, but under our recommended revision this paragraph would not be necessary since a gas processing plant would be located near Fairbanks and all the ethane, the propane, the butane and any remaining higher hydrocarbons would be removed at that time, and only the methane would be remaining in the gas stream that the State owns.

We have prepared a large chart which lists some of these physical constants with their composition and quality and quantity of the Prudhoe Bay gas as it is expected to be when it is delivered to whichever line finally receives the certificate from the Federal Power Commission.

I'd like to go to that chart now.

SENATOR RADER: I want to ask the reporter, are you certain that you can get his comments without the mike and the rest of it?

MRS. SANDERS: Yes.

SENATOR RADER: Fine.

MR. DALLAS: Please note that the methane is the one that has the least btu, a thousand and ten btu per cubic foot. But it is the largest in percent of that gas stream. The btu increases as we go on down and we get to the pentane, and that one has four times as many btu's per cubic foot, roughly, as methane. But they all increase progressively as we go down the column. But the percentage is much less. It's the highest in the ethane, which comes next, but it's only 7.7 percent by comparison with the 85.11 percent that is methane, and finally on down to the pentane-plus, it's only twenty-two hundredths of a percent of those heavier hydrocarbons.

You will also note that I've got 1.75 percent

down here at the bottom. That's nitrogen and CO_2. This composition that we have was given to the Federal Power Commission by an engineer testifying for Exxxon, and he gave this in three stages. He gave it, as it came out, I think, of their first separation stage, and then he gave the composition in between, and finally this composition, which he said was capable of being delivered in the line that Arctic Gas has prepared. In the study that they have prepared this composition of the gas would exist in their system, and he felt that it would probably exist equally as well in the other two systems, or whoever finally were certificated by the Federal Power Commission.

In that reservoir there is something like twelve percent of the carbon dioxide, and that has been removed at this step.

In my opinion, herein lies the greatest loss to the State of Alaska. A recent article in the Daily News Miner of Fairbanks indicated that a man sitting in his house in Cleveland, Ohio, suffering from a gas shortage would not be happy to learn that the State of Alaska was withholding natural gas to make plastics.

This mistake is this: the excess methane will still go to the man in Cleveland, Ohio, but if we don't revise this contract now, this man in Cleveland, Ohio,

will go to work the next day in a petrochemical plant and make synthetic automobile tires or plastic pipe, like these samples that I've passed out to you, or hundreds of other petrochemical products. And he will make these products primarily from the ethane and the propane which will be shipped along with the methane from Alaska. These products would then be shipped back to Alaska from Cleveland, Ohio.

It is obvious who is going to pick up the tab for transporting the ethane to Cleveland, Ohio, and the return to Fairbanks, Anchorage or Juneau of that same ethane after it has been transformed into a product essential to our daily existence. It's the Alaskan consumer who would have to pick up the two-way transportation charge.

We certainly agree that we should provide the man in Cleveland, Ohio, with any methane that is excess to the heating needs of the State of Alaska, but under no stretch of the imagination is the State of Alaska obligated to provide him with a job.

The Province of Alberta, Canada, deals with this problem in the following manner, and I quote: "The Provincial Government has a stated policy that resources be processed and upgraded as much as possible in Alberta, so that jobs are not exported with resources. Petrochemicals are one example of this policy, and the Province

is determined to use the feed stock to provide basic plastic and other derivative industries in Alberta," end of quote.

I would strongly recommend that this policy be adopted by the State of Alaska.

There are those who will say that this is not economically feasible in the State of Alaska. I maintain that it is, and now that the opportunity is here this is the time to do something about it.

I obtained these samples of black polyethylene pipe that you have in front of you, and here's a couple of large samples in which you can see the nomenclature on the pipe. It is Polyethylene Gas Pipe, and it was picked up by me last Saturday from the Alaska Gas and Service Company in Anchorage. This pipe was once ethane, and it was probably produced from some oil field in Texas. At least it passed through a plant in Houston, Texas, and received one of three or more processing and up-grading treatments. It was then shipped to Watsonville, California, where it was extruded into this form and shipped to Anchorage. Just as in the case of Alberta, there is no reason to ship the State's share of the ethane to any of those 48 States and have it go through three or four up-grading processes and be returned to Alaska with a price tag that does not benefit Alaska.

The next two examples that I will show you demonstrate that the State of Alaska already has a miniature petrochemical industry and it needs only the encouragement from people like you, ladies and gentlemen, acting in your capacity as State Legislators, for it to blossom into a full petrochemical industry.

In this bag are tiny styrene balls. They were made from benzene. You will find it on this other exhibit up here in the light green near the bottom. That's benzene, a derivative of crude oil. They were shipped by Sealand Transport to Western Insulfoam Corporation at 628 Ocean Dock Road in Anchorage, Alaska. At this location these tiny styrene beads were expanded up to forty times their diameter, and here are the white balls that are those tiny little beads that have been blown up some forty times in diameter. This was done at 628 Ocean Dock Road in Anchorage.

This would not be a particularly interesting story except for the fact that these final two stages of processing were done in Alaska, under severe weather conditions, and so-called high cost Alaskan labor. This finished product is sold at a price which is twenty percent less than the competitive product which was processed in the Lower 48 and shipped to Anchorage in finished form. The secret in this case is this: the

shipping of these tiny beads instead of styrene balls, which are forty times as large as the beads. We shipped a small product. Sure, it weighed essentially the same, but we shipped a small, compact product to Alaska instead of a big product that was ready to be sold at a cost twenty percent higher.

This last example that we have (not the last, next to the last one), it's the last of the two examples that illustrate that we already have a miniature petrochemical industry in Alaska. This is a sample of foam insulated pipe which was upgraded and processed at 3605 Peger Road, Fairbanks, Alaska. Again, the raw product was shipped after it had received two or three of those processings and finally the last process was done at Fairbanks, and it was only done because he could do it there cheaper than he could ship it up.

The last sample that we have in our magic briefcase today was not processed in Alaska, but in eight years from now it very well could be. The label on these ten plastic freezer containers indicates that they were manufactured for Mobil Chemical Company, Consumer Plastics Department, Macedon, New York. I purchased this at Pay and Save in Fairbanks.

Thus, the action that I am suggesting you take, is simply to recommend to the Administration that they make

a few revisions in the existing contract and locate a gas processing plant (commonly known as a gasoline plant) near Fairbanks, and that all the remaining ethane, propane and any heavier hydrocarbons be removed from the State's one-eighth share of Prudhoe Bay gas. This could amount to as much as twenty-three thousand barrels of liquids per day, depending upon how much of the heavier liquids might be removed at Prudhoe Bay.

Enough methane would be withdrawn to satisfy the heating requirements of interior Alaska. Some of the propane would also be available for heat in the outlying and bush areas where it is not economically feasible to extend the distribution system. The balance of the liquids would then be available for sale to a large number of corporations engaged in up-grading and processing these liquids into usable products. It would not be logical to locate all of these plants near Fairbanks. Perhaps half of them would be located (and maybe more than half of them) in the Anchorage vicinity.

An article several weeks ago in the Oil and Gas Journal stated that, "Construction has begun on phase one of a 1.4 Billion Dollar petrochemical development in Canada's Alberta Province." If you change the date to 1980, the place could be Alaska, and the amount could stay the same, 1.4 Billion Dollars.

The Board of Directors of Dow Chemical Company are meeting this week in Michigan. According to their West Coast general manager, they will have under consideration a proposal to look again at Alaska.

Yesterday morning I called Coy Hood, Director of Hydrocarbons, in New York City for the Celanese Corporation. He stated to me that his firm would be interested in purchasing approximately one-fourth of the State's methane for use in the State of Alaska under a firm ten to fifteen-year contract.

The revisions we have made in the proposed royalty gas contract are essential if the State of Alaska is going to realize the greatest possible value from this gas. Briefly these revisions are as follows, and I think at least the committee members all have copies of these suggested revisions. I'd like to just review the highlights on these.

To begin with, when you go into the document about six pages, or the seventh -- it isn't numbered seventh page, but it is the one that I've headed up the top "Proposed Excess Royalty Residues Sales Agreement." The one that's been presented to you was just Royalty Gas Sales Agreement. This, I would suggest be entitled Excess Royalty Residue Gas Sales Agreement.

The reason that I make that statement is if a

plant is located at Fairbanks, a gasoline plant is located at Fairbanks, and you are able to strip out the liquids and sell only the methane, that methane is not gas as defined in the contract you now have. It is residue gas, it will be what's left over after these other products be removed. So the residue gas is what you'd be selling, and throughout this contract then where I saw the word "gas" meaning the wet gas that you were going to sell, I changed that to "residue." You know I may not have caught them all, but I think in most of the cases where gas, meaning the gas that you were going to sell, I changed that to residue gas. Under my proposed revision you wouldn't be selling any of the ethane, the propane, the butane and the pentanes plus.

The companies all admitted, they weren't here for that purpose anyway; they were here wanting to buy from you methane, and we are selling them the whole works.

About two pages later I underlined where the gasoline plant access at a point no closer than ten miles or more than twenty-five miles from Fairbanks, Alaska. We added two sections, which we've indicated, they're new paragraphs. They're there primarily for the purpose of setting out early in the contract what the State is selling is just going to be this residue gas,

the methane that these gas companies indicated they wanted to buy. The liquefiable hydrocarbons and non-excess gas is what we would then be selling.

I guess there's a later place where we emphasize the petrochemical aspect of this. That page should be page three, then four, five, and on page five there are several deletions. The deletions are primarily because under our suggested revision there is no reason to ever refer to taking back the liquids or taking back the methane. We are only going to sell what is excess at that plant at Fairbanks.

So on page five we've made some deletions that had reference to that; and page six, there's some more excess royalty residue gas rather than just royalty gas. On page seven we did make one, what I feel wouldn't be drastic if it stayed the same. We changed from twenty-four months to twelve months the time that the State could call back a portion of their gas, and I feel that that's a more reasonable time. If you didn't reserve any of it and you let it all go and then all of a sudden you needed to take back a large chunk of it, maybe they do need twenty-four months in order to make their necessary plans. But if we're already removing the liquids and they're only getting the methane that's residue, then I think twelve months should be a sufficient

time for them to be noticed that we're going to use a little more of it.

Paragraph 3.5, this says that we're going to sell only that residue gas that's excess after it is processed there at Fairbanks.

Paragraph 3.7(a) and (b) I have deleted completely. I simply cannot understand -- if Representative Gruening, one of the questions he asked, what are we giving up and what are we getting in return -- I simply can't understand how officials looking after the interest of the State of Alaska would commit gas that might be discovered some day in the Copper River Basin which is a short distance from Point Gravina, the hauling charge should be much less at a point like that than from Prudhoe Bay. Yet we're stuck with any excess gas that we call back, in repaying that to them at Prudhoe Bay prices, which may be a lot lower than the price of gas would be, for example, in the Copper River Basin. I see no reason to give that kind of a plus to them. So I delete paragraphs 3.7(a) and (b), 3.10 and 3.11. Those four paragraphs, we don't need those at all.

I think we deleted part of paragraph 4.2. As I recall, that had to do with the reserve gas. Under my suggested revision there wouldn't be any reserve gas. You're only going to sell what you're not then using,

and you would still have the right to call it back.

The one paragraph that I suppose the three companies will scream the loudest, and I wouldn't blame them for screaming the loudest, but when I heard all three of them the last three days at this desk, they told you, "We want that gas and we want it bad." If they do, then I think paragraph 4 is not going to be the paragraph that will kill them. They may say it will, but I think, especially in Tenneco's case -- he said, "We weren't even asked."

I checked the letters up in the Commissioner's office and it's true, they were not asked if they were interested in establishing any industry in the State of Alaska. So he told you the truth when he said he was not asked if he were interested in establishing some industry in the State of Alaska.

Paragraph 4.4 states, "Buyer will construct and operate a gasoline plant at a point not closer than ten miles or more than twenty-five miles from Fairbanks, Alaska. Such gasoline plant will be capable of processing at least three-tenths of a billion cubic feet of gas per day. All liquefiable hydrocarbons obtained by processing gas through the gasoline plant shall be placed in storage to be erected by buyer at a plant site and shall be sufficient capacity to contain a ten day supply.

Ownership of all liquefiable hydrocarbons shall remain with seller, however, nothing in this agreement will prevent the buyer from bidding for the purchase of the liquefiable hydrocarbons and non-excess methane for use interstate domestic/industrial and/or petrochemical industry in the State of Alaska." You may ask why I single out the petrochemical industry. I did it for this reason: if there is any legal mistake about the difference between industry and the petrochemical industry, then this change at least is in favor of the State of Alaska. There is some question about whether you say using this gas in industry means for heat purposes. The petrochemical part of it converts that ethane to something else that's no longer heat. It's not any longer energy. So if there was any mistake about what industry we could really use this in Alaska under this revision, there would no longer be any question but that petrochemical would be a use that would be acceptable under the contract.

Further down in that paragraph, "Any excess residue gas shall be sold to buyers in accordance with Section 6.1. Seller will allow buyer to deduct a transportation charge of (and I have Thirteen Cents, but I have a question mark after that) per gallon for all liquefiable hydrocarbons removed and 46.2 (and I have a

question mark after that) Cents per mcf for all non-excess residue gas retained by seller, or if there is a net deficiency owed by the buyer to the seller, then the seller will remit to the buyer the deficiency."

Those two question marks simply mean that I didn't have the time and the resources to go out and come to you and say that these are firm costs that are reasonable for transporting and processing that gas at Fairbanks. I think they are reasonable, but I certainly wouldn't quarrel with a few cents up or a few cents down. If the State can convince the buyers that those prices that I've used here are too high, fine. If the buyers can convince the State that they're too low, fine. But I think they're reasonable based upon what preliminary work that I did on those prices.

Section 5.1 ties the heating content to one thousand btu, exclusive of any acid gas. I don't think there is any reason that the State of Alaska should be forced to consider that carbon dioxide, that twelve percent or whatever it was, still in there at Prudhoe Bay. If it's not removed we should merely, you know, be paying what is reasonable on a btu basis, and that revised paragraph 5.1 makes that fairly clear. I think it's been indicated here that the contract probably protected us in that regard already.

Section 6.2 deals with the price set by the FPC. We made a change there, and this change makes it certain that if of all those producers at Prudhoe Bay, if they sell their gas in the Lower 48 and the person that ends up with the highest price, we can determine that he has some connection, such as was mentioned here yesterday, with a sister company or a good friend down there that has been exchanging gas with him somewhere else and he really doesn't get the highest price that the State of Alaska could get. It is our opinion that we need to be able to determine that through arbitration and not through pre-set price. So under my provision it would be possible for the State to even get a higher price than is being paid to the highest priced producer in Prudhoe Bay.

I think this covers most of the revisions that we have made. Throughout there you'll see that we changed gas to residue gas, and finally back at the end under "Definitions" we've added three definitions that weren't in this contract, and those three definitions -- the first one was "residue gas".

Yes, I'm sorry, it's about the third or the fourth from the last page, it's an unnumbered page, but it would be the fourth from the last one. The term "residue gas" shall mean that portion of the gas entering

the plant which remains after the extraction of plant products and which is not used for fuel and treating in the said plant.

Then the term "excess royalty residue gas" shall mean any of the seller's royalty revenue gas remaining after seller completes contracts for intrastate domestic, industrial and/or petrochemical uses within the State of Alaska.

Then the last one, the term "acid gas" shall mean carbon dioxide, nitrogen and hydrogen sulfide, and I'm sure that any other impurities that might happen to remain in there that could or should be taken out at the plant.

That, I think, covers the revisions. You may have some questions about those.

I'd like to conclude then, since it is now possible that the Arctic Gas route will ultimately receive the certificate from the Federal Government, the State of Alaska should firm up alternate plans to have its share of Prudhoe Bay gas delivered at least to Fairbanks. During the spring semester of 1976 at the University of Alaska, Mr. Robert Dempsey, working under my supervision, undertook an independent study in a class in Petroleum Economics to determine just the cost to transport the State's one-eighth share of the gas, that stream of gas that's up on that chart, to Fairbanks. Since Mr.

Dempsey is here today, I would like for him to discuss that report with you.

MR. DEMPSEY: Thank you, Mr. Dallas. Senator Rader and Representative Gruening, you all have copies of this. I have given it to the secretary for the record. So rather than reading at length from it, I think if you have any questions I can address myself to that. Just a little background, the study of transmission of gas ---

SENATOR RADER: Just for the record, I don't have the exhibit number on that. Would the secretary assign it Exhibit Number 15, have you?

MRS. SANDERS: 15.

(Whereupon Exhibit 15 was duly marked.)

SENATOR RADER: Just so we know what you're referring to there would you get all through and try to go through this? I don't know whether we've received copies of what you're talking about or not. Representative Gruening was saying all he really needed was more paper. If this is going to be an exhibit then you need not read it, it will be attached to and made a part of the record, and you can just summarize or depart, as you wish.

MR. DEMPSEY: Thank you, sir. As I said, the studies of the transmission of gas to the interior are not new. As far back as 1952 the Alaska Planning Commission

undertook similar type studies and generated data on them. However, most of it, and most of the studies that we've done, came up with an extremely high price for delivery of gas to the interior. Mr. Bob Ward referred to that today when we heard him say that he thought a royalty gas line at some time was feasible. And we concur, that it will be feasible.

What I found to be the failing of those studies is that they usually dealt just with sufficient gas to heat the interior and, therefore, denying the scale of economics that would normally go along with it. So what we have done is base this study on the delivery of almost the total amount of the State royalty gas to the interior for work there.

What we've come up with is a figure that reflects itself in last year's dollars at about a Dollar and a Quarter per mcf for delivery of gas to the interior. This would reflect -- I think the major pipelines, Trans-Alaska and El Paso, usually are in the range of about Thirty Cents. So this reflects the difference in a smaller pipeline. But it does deal with the larger amount of gas. We covered the State's royalty at Fifty-Two Cents per mcf. The transportation cost is about Seventy-Five Cents.

SENATOR RADER: Very good. That will be distinctly helpful,

particularly that does open up some other options to us that had not been presented to us earlier, I think. I don't know, I'm not sure about the relevancy of this except your suggestions as to the contract, the legalities of course, will be referred to Mr. Rush Moody, of our independent staff, and the Legislative Counsel staff, and the Attorney General, I assume, will have something to say about this too as to your suggestions there. The committee, I don't think, will try to write the contract in its legal form, or even -- we may go into that. But we do appreciate your remarks. Are there any questions of the gentlemen?

Mr. Parr.

REP. PARR: Mr. Dallas, when you were talking about, you used the figure of maybe twenty-three thousand barrels a day of liquids, what was the gas figure? What gas figure were you talking about, two billion feet a day or what?

MR. DALLAS: I think we were using these figures, and I believe two billion cubic feet per day. It might have been a little more than two billion, I'm not sure.

REP. PARR: The reason I asked the question was not just idle curiosity. Mr. Boucher had given us something for liquids, and for the two billion cubic feet a day he would have gotten about thirty thousand barrels, and the

unit plan developed for Prudhoe says, strangely enough, ten to fifteen barrels per million cubic feet, which only comes out to twenty-five hundred to thirty-seven hundred fifty barrels. We've got an awfully big wide range of estimates and I was just wondering, isn't there a firm figure pretty much as to how many barrels a day you would have of this stuff?

MR. DALLAS: Well, I think it's been presented to the Federal Power Commission, and I think that something like thirty thousand barrels a day of liquids, the equivalent of liquids would be there if you still had the CO_2 in it. I think this is a reasonable figure, the sales gas.

REP. PARR: But ten to fifteen barrels per million cubic feet doesn't sound right.

MR. DALLAS: I don't have that rule of thumb before me, I'd have to stop and do some checking on that one.

REP. PARR: Thank you.

SENATOR RADER: Any other questions? Senator Huber?

SENATOR HUBER: Thank you, Mr. Chairman. What I would like to ask, you said you had the charts showing the percentages of everything that was available in the raw gas. I think you said there was three charts. I wonder if you would supply the committee with those extras, because that answers some of the questions I have asked of other people.

MR. DALLAS: Yes, that's an Exxon exhibit before the Federal Power Commission, and I'll be happy to make a copy of that available for the committee.

SENATOR HUBER: Thank you.

SENATOR RADER: Any further questions? Representative Gruening.

REP. GRUENING: If the total amount of liquids from our royalty gas were delivered to either Fairbanks or Anchorage, or a combination, what kind of magnitude of processing, petrochemical processing plants are we talking about? This 1.4 billion plant that you mentioned in Alberta, how many barrels did that process?

MR. DALLAS: You see, that wasn't one plant; that was a large number of plants doing a lot of things, and that's exactly what I'm talking about for the State of Alaska. We can't do it all with one plant located at Fairbanks. I'm sorry, it could be done but it wouldn't be logical, economically feasible to do it. At Anchorage is where a lot of this, if we manufacture, take out the ethane at Fairbanks, and then it is converted -- I have an ethane products tree there, and if you will see, the center of that tree is ethylene. That's one step removed from ethane. And out around from the center of that ethylene products tree is about four rings of processing that we need to go through before we get any

of those finished products, and those stages can be anywhere along the way after the ethane is turned to ethylene, a liquid that can be shipped. We could also ship ethane as ethane, but we've got to keep it cold to do that.

REP. GRUENING: Well, I'm trying to understand what the magnitude of all these liquids are in our total royalty gas stream.

MR. DALLAS: It's roughly a billion pounds a year, and that's the amount that you hear -- I'm sure you've heard it before, that the petrochemical industry says that we need roughly a billion pounds a year a product to make a petrochemical complex feasible.

REP. GRUENING: Of the total complex?

MR. DALLAS: Total complex.

REP. GRUENING: So in a State like Texas, which uses about the size of our total royalty gas every year, consumes that much gas internally, it would use probably more than a billion pounds in its industry?

MR. DALLAS: Yes, several billion I would say.

REP. GRUENING: One other question. In the opening statement in your presentation here, which was very thorough and, I think, well done, you mentioned in the second paragraph that while there is no intent to criticize the State's motives, only the methods used, you point out that you

thought that an uncomplicated well thought-out political document could have accomplished the State's end. What did you mean by that?

MR. DALLAS: My associate will help me with this. Why don't we let him answer that question?

MR. DEMPSEY: What I had in mind, Representative Gruening, was that -- I think exactly what we're reflecting here, the complexities that come up with a contract when its stated end is a political document. I think that's been made quite clear that that's what we're trying to do, is use it as a political document, and I just throw that out as an option for what it might be worth, that we might have been able to execute a document that optioned the right to negotiate for our gas based upon political support and the result that we gain from that. I don't know if it was possible or if it ever could have been negotiated, but I do say that it might have been a possibility. I don't know even whether it was explored or not.

REP. GRUENING: Thank you.

SENATOR RADER: Any further questions of these witnesses? We thank you both very, very much for your distinct help this afternoon. We'll take a ten-minute break and be back promptly in ten minutes.

(Whereupon the hearing recessed at 3:45 p.m.

MS. VIRGINIA DAL PIAZ: Mr. Chairman, Committee Members, my name is Virginia dal Piaz and I am representing the Alaska Conservation Society, and I'd like to make a brief aside and just commend the committee members that are left here for great perseverance and patience in getting to the bottom of this issue. I, personally, having sat here for four days, have learned quite a lot and I know a lot of the other people have too. I do appreciate the opportunity.

The Alaska Conservation Society is the oldest conservation organization in Alaska, being founded in 1960. We have over eleven hundred members in the State and nine chapters Statewide. Our purpose is to secure the wise use, protection, and preservation of the scenic, scientific, recreational, wildlife and wilderness of Alaska.

As it pertains to this hearing and as Mr. Thompson from Alcan mentioned earlier, we are an intervenor in the FPC decision, along with three other environmental groups. As a matter of fact, ACS was founded to help fight for the creation of the Arctic National Wildlife Range and to protect it after its enactment. So, therefore, the results of the Litt decision are being looked at very carefully by our organi- tion, and a decision on the possible alternatives

to be pursued are being evaluated.

The Alaska Conservation Society has also been following closely the oil and gas development in the State. We are on record publicly, numerous times, speaking out against ill-conceived, unplanned-for development of these types of industry in Alaska before a comprehensive look has been taken and a public consensus reached as to what kind of Alaska we want to have; that is, what values Alaskans want reflected in their economic, social and environmental spheres of activity.

The purpose of these hearings is to determine approval or disapproval by the Legislature of the proposed royalty gas contracts between the State and three companies, Tenneco, El Paso and Southern Natural Gas. Yet, a much greater problem than this exists, which reflects the current indecision.

In the late 1960's events were put into motion that are culminating now in 1977; that is the construction of the Trans-Alaska oil pipeline and the subsequent problem of also having to deal with the natural gas that accompanies such a field. At that time and to present, this country (it has also been pointed out earlier, and to what extent this testimony is repetitious, I apologize) -- at that time and to present, this country has had no national energy policy (witness the

current tragedy on the East Coast and in the Midwest for which crisis decisions are having to be made) and the State of Alaska has no State energy policy that we are aware of. The point is, that without a firm direction with criteria established by which to base such a decision as to what to do with our oil and gas, Alaska is then placed in a position of having to respond to pressures to sell her oil and gas in a context that is premature and possibly uneconomic. Decisions such as this should be based on long-term energy requirements and fully identify the environmental consequences.

Producers, pipeliners, taxers, consumers, ethnic groups, social and natural scientists, developers and conservationists, all alike, should be able to agree upon several basic points.

First, the most natural gas in the Arctic will, given time, become economic and will be extracted. However, the when and the how are controllable.

Second, as a resource, natural gas should provide the maximum benefit at the least cost to everyone involved.

Third, the net energy production should be maximized, commensurate with other views.

Fourth, the fossil fuel should last for the maximum time possible under the political realities of our time.

And fifth, other values which could be harmed by this project should be identified so that inventive minds can be directed toward minimizing any damage.

The correct routing of a large pipeline is a very complex matter, but the project should serve the largest possible number of present and future gas fields; it should be built and operated so as to use a minimum of resources and cause a minimum of disruption to the earth and its life; the pipe should have the longest possible lifetime; and the petroleum resources should be delivered to the markets where the greatest benefit to all people will result.

With these criteria in mind, and from our considerable study of the matter, Alaska Conservation Society does not support any company, but of the three routes considered by the FPC, the Alcan route looks the best. However, the present state of the art ability to plan Arctic petroleum development, extraction and transportation to market does not match the ideal nor the possible. Most likely, none of the proposals made so far are close to optimum. None considers the entire petroleum province development.

Under no circumstances would the Alaska Conservation Society support a line crossing the Arctic National Wildlife Range and we will fight actively against it.

As we think the Alcan route looks the best of the so far proposed routes, as we would not support a line going through the Wildlife Range, and as we have very serious questions about the El Paso proposal, specifically the LNG tanker marine leg of the route, we, therefore, conclude that we must urge the Legislature not to approve these contracts. We do not doubt that the State got the best price under the circumstances or that they do not have good reasons for their position. The problem is in further locking in the State, both through the Administration and the Legislature, into a route (in this case El Paso) that we believe is not in the best interests of the State and its environment.

In other words, maybe you are asking the right pragmatic question concerning the contracts while the real question goes begging -- not how should we sell the gas, but why. Promoting the El Paso line through the State, as the results of these contracts will do through the lobbying clause, will produce economic activity in the State, which seems to be the real excuse for all of this; possibly even promote a petrochemical industry in the State, as you heard from the gentlemen earlier. These same types of arguments were used for our current huge Six Billion Dollar cost overrun project, the Trans-Alaska oil pipeline. And has it rescued

Alaska's economy? If so, what a price we're paying!

Be sure you realize the full consequences of these contracts before you approve them, for they go far beyond the actual selling of the gas. They carry a commitment, if successful, for heavy development in Alaska -- more people, more demands for services, envircnmental degradation and concomittantly, more government to regulate and deal with the development.

We hope the Legislature will give some careful thought to the real costs of approving these contracts. They start something in motion that goes beyond wielding political influence. The State and its people will pay heavy costs, both socially and environmentally, if the all Alaska gas pipeline route is successful.

In a state that still can't answer "how" to waste and sewage disposal, adequate water supplies, decent housing and wildlife management, must we add the further burden of non-indigenous technology before being able to solve even our basic problems of existence in Alaska? There are no overriding reasons why the transportation system must become too costly because of environmental lawsuits, must be routed through wilderness that should be protected forever, must be the death knell for subsistence cultures, or must become an important factor in the extinction of any species or

ecologic zone.

Industry is rightly responsible for the economic benefits to be derived from developing resources. But profit alone does not justify socially nor environmentally irresponsible actions. The public is fast becoming aware of the limit of natural resources and are asking questions concerning all growth being good and all development being a blessing. Government is left in the role of responsible planner and arbitrator of contesting value systems.

We believe much more public discussion and presentation of alterntives, as through possibly the Alaska Public Forum, is needed before a final decision can be reached since it will be outside the context of an energy policy which does not exist in the State. We are on record to making this request to Governor Hammond in a letter dated July 26, 1976, asking that this be done.

The Alaska Conservation Society opposes any sale at this time as premature. It narrows the State's options for agreements that might be of more economic and environmental benefit in the future.

Thank you.

SENATOR RADER: Do we have any questions of the spokesman for the Alaska Conservation Society?

MS. DAL PIAZ: dal Piaz.

SENATOR RADER: dal Piaz, yes. Questions? Thank you very much. The next witness will be Mr. Gillam, City of Fairbanks.

MR. SCHOLES: My name is Peter Scholes and I'm the Alaska representative of the Wilderness Society.

The Wilderness Society is a conservation organization dedicated to the preservation of the wild land and waters of our nation. About five hundred Society members live in Alaska, including our President, Celia Hunter, a long-time resident of Fairbanks.

Allow me to present a view of the issue being considered here. Backed by several more or less conclusive studies and under great political pressure, the Governor and the State's Royalty Oil and Gas Development Advisory Board have suggested a sale of the State's royalty share of Prudhoe Bay gas. It is proposed that the gas be sold to three companies that have agreed to lobby in behalf of the Trans-Alaska gas pipeline system.

The Administration's position is made much more complex because it involves a choice among three alternatives, two of which appear to be almost equally advantageous for the State, the third being much less beneficial. The Administration has not only ruled out the unpopular alternative, it has chosen among its first choice and what it considers a good second choice. In making the choice between El Paso and Northwest and using the sale of the State's royalty gas as a method of promoting its choice, the Administration hopes to

substantially affect the gas pipeline sweepstakes.

Now let me explain the Wilderness Society's position in this matter. We are not primarily concerned with the sale of the State's royalty gas. From the beginning, three years ago, our objective has been to assure that the most environmentally sound natural gas transportation system is designed and built, following a route that minimizes impact.

Like the State, we are unalterably opposed to the gas pipeline route backed by Arctic Gas. The notion of a pipeline across the Arctic National Wildlife Range or its proposed extensions to the south and west within Alaska and eastward into Canada would be a travesty of the greatest proportion, an affront to the very purpose of the Wilderness Society. The Governor understated the significance of the Wildlife Range when he referred to it as "one of the last undisturbed wilderness areas in the State."

However, here the views of the Hammond Administration and the Wilderness Society diverge. Our evaluation leads us to support the Alaska Highway route and to rank the Trans-Alaska LNG route second. The use of already developed corridors is a definite plus for both routes, and we recognize that under any circumstances construction of a gas pipeline across the State will impact the

environment unfavorably.

In looking closer at potential environmental impacts we found that the hazards and risks of the Trans-Alaska LNG route are greater than those of the Alaska Highway route. Consider the following list of impacts that apply only to the Trans-Alaska LNG proposal:

The project crosses an inventoried roadless and undeveloped area in Chugach National Forest. Though it has not been selected as a Wilderness Study Area, the stretch of forest traversed by pipe could be designated as Wilderness.

Second, the liquefaction plant at Point Gravina poses several environmental threats not shared by an all-land transportation system; for example, thermal pollution and the potential for plant destruction or damage resulting from seismic activity.

Third, the LNG tankers will add to the proliferation of marine traffic in Prince William Sound and the northern Gulf of Alaska, thereby increasing the risk of collisions and accidents.

Fourth, there are potential threats to the environment and to human safety involved in the whole process of LNG transportation. It is a relatively new technology, especially with large tankers.

Fifth, the California Coastal Commission's adopted

Coastal Plan policy on the siting of LNG terminal facilities includes the following language: "Until the risks inherent in LNG terminal operations can be sufficiently identified and overcome and such terminals are found to be consistent with the health and safety of near-by human populations, terminals shall be built only at sites remote from population concentrations."

And sixth, we find that many Californians wish to protect the last few undeveloped stretches of the State's coast; hence, the strong opposition to terminal facilities and regasification at Point Conception.

The environmental considerations favoring the Alaska Highway route over the Trans-Alaska system seem to have been noted by the Governor, for he acknowledges that, "the Alcan proposal has certain desirable environmental aspects." The Wilderness Society feels that these considerations are persuasive.

However, we look also at the mood of the nation, and we think this is an important consideration as the Legislature reviews the proposed royalty gas sale. The route taken by the gas pipeline has become a matter of concern to elected officials in Washington, D.C., and putting Judge Litt's decision in proper perspective, we feel that the Alaska Highway route will continue to have broader national appeal than the Trans-Alaska system.

The big news in the Midwest and on the East Coast is cold weather. Every day of last week the Washington Post ran front page articles on the weather and the ensuing natural gas shortage. Factories have been forced to shut down and schools closed. People are being asked to turn their thermostats down and take other voluntary action to save fuel. In short, as we see it, a few jobs in Alaska are not going to begin to balance the impact on employment that the natural gas shortage is having in the Eastern United States.

And, as demonstrated by the Congressional vote on the controversial Western Leg, people do not trust displacement as an alternative to direct delivery. We anticipate that Midwestern and Eastern members of the Congress will have little patience for a gas pipeline system that delivers natural gas from the North Slope to California, and thereby shift other supplies to Eastern markets.

But Californians are not supporting the Trans-Alaska system either. This situation was reflected in the thirty-nine to zero vote of California Members of the House of Representatives on the Western Leg amendment. Speaking for the California Public Utility Commission, Leonard Ross said, "On the merits of the proposed transportation systems, our own preliminary assessment is that

the Arctic Gas Transportation route as presently proposed would be preferable."

Ross went on to say, "Another concern raised by the El Paso project has to do with liquefied natural gas. Two LNG projects involving Indonesia and South Alaska have already been proposed by the Southern California Gas Company, Pacific Gas and Electric, and their affiliates. Certification of El Paso Alaska would increase California's dependence on LNG to as much as ninety percent of our gas supply by the mid-1980's. Presumably, gas from the Southwest would be backed off and the existing pipelines either abandoned or used for reverse flow. The net effect would be to make California exceedingly vulnerable to any LNG supply interruption..."

Second in the running for major catastrophes of the winter are tanker accidents. We see the ARGO MERCHANT having spilled 7.6 million gallons of fuel when it ran aground on the Nantucket Shoal. The DAPHNE ran aground off Puerto Rico. The OLYMPIC GAMES suffered a hull puncture and spilled a hundred and thirty-four thousand gallons of oil when it ran aground in the Delaware River. And, the SANSINENA exploded in Los Angeles harbor, killing five people.

Staff for the United States Senate is presently drafting a bill to regulate commerce by establishing

procedures for the siting and operation of liquefied natural gas facilities In the working paper's Delcaration of Policy is this statement: "The siting and operation of liquefied natural gas facilities must be preceded by careful planning and evaluation of costs, dangers, and benefits, because liquefied natural gas is extremely hazardous. Current procedures for the approval of such facilities by the Federal Government are inadequate to meet the Government's obligation to prevent, or to reduce to the lowest possible level, the risk that such importation of natural gas will result in inury or loss. Such current procedures are also fragmented and slow."

We speculate that if Congress is serious about this piece of legislation it may be less inclined to approve the Trans-Alaska LNG gas pipeline system at this time.

The natural gas pipeline sweepstakes is far from over. There are many more steps in the comprehensive decision-making process prescribed by the Alaska Natural Gas Pipeline Transportation Act of 1976.

The Wilderness Society's recommendation to the Legislature is this: for environmental, as well as national political reasons, the Alaska Highway route is preferable to the Trans-Alaska system, both being

vastly superior to the Arctic Gas route. We urge the Legislature to reconsider its unswerving and unconditional support of El Paso's project.

SENATOR RADER: Do we have any questions of Mr. Scholes?

Mr. Scholes, we appreciate very much your remarks.

MR. SCHOLES: Thank you.

SENATOR RADER: The next witness is Ms. dal Piaz.

MS. HORTON: Good evening. I'm Allison Horton and I was asked to read the Friends of the Earth testimony because Jim Kowalsky couldn't be here. I'd be happy to relay any questions back to Mr. Kowalsky for response if this raises any.

Friends of the Earth is pleased to present these written comments to the Alaska State Legislature on Governor Hammond's proposals to sell the State's share of its royalty gas to the Tennessee Gas and Transportation Company in exchange for support of one of the three competing natural gas pipeline proposals.

FOE, a national conservation organization ---

SENATOR RADER: Excuse me. Is this the same testimony that Exhibit No. 5, do you know?

REP. GRUENING: Mr. Chairman, it may be, but we at that time reserved their wish to read it into the record.

SENATOR RADER: If they want to read it into the record then we might as well delete it though as an exhibit. That's what I was thinking. Is this the statement, would you take a look?

MS. HORTON: I assume that it is.

SENATOR RADER: It is the same testimony?

MS. HORTON: I believe the original copy was sent to Representative Gruening. Right.

SENATOR RADER: Well, if you're going to read it and make

it a part of the record, then make a notation on Exhibit 5 that it was read into the record and will not appear as an exhibit. In other words, there will be a blank Exhibit 5, a blank sheet for Exhibit 5 saying that it's in the record. I think that would be the proper way to handle it. That way we'll have the interrogation and the rest of it all in the proper place. Would you proceed?

(Whereupon Exhibit 5 was duly withdrawn.)

MS. HORTON: FOE, a national conservation organization with sister groups in a number of leading foreign nations, has an Alaska membership of approximately two hundred persons. The office of the Alaska Representative is located at 1895 Pioneer Way in Fairbanks.

FOE has a long-standing major interest in the matter of gas and oil development in Alaska. Jim Kowalsky and our Washington staff have lobbyed vigorously in Congress in 1975 and 1976 to prevent any progress on a bill to authorize the Alaskan Arctic Gas pipeline proposal sponsored by then Senator Walter Mondale of Minnesota, and ultimately defeated, or abandoned. Our major interest in the Arctic Gas proposal is the inevitable, ongoing destruction of the wildlife resource which would result from a whole cycle of developments which the Arctic Gas proposal would bring to the Arctic National Wildlife

Range, which it would cross if built as proposed.

The committees may also recall that FOE was one of the leading plaintiffs in the Trans-Alaska oil pipeline lawsuit, which accompanied and stimulated the debate over which route would be preferable for the construction of that pipeline. At that time we argued that an all overland oil pipeline from Prudhoe Bay through Canada, directly to oil short regions of the Midwest was the only pipeline system which made any sense at all. We also argued that a surplus of oil would occur on the West Coast as a result of the Trans-Alaska pipeline/marine tanker system, thereby making it necessary to ship oil to Japan. Our studies showed the surplus would result, and so did other research which was performed to find this information.

All this was ignored, and yet we note now that the wisdom of our arguments has been proven. So have our objections to the marine oil tanker system, a system which now appears to have turned from a string of promises of unique, modern, safe tanker and navigational system to a trail of broken promises.

We urge the committees of the State Legislature to listen to what we have to say in the matters of petroleum development in the North.

FOE has not endorsed any specific gas pipeline

proposal. We have, however, expressed our preference for a pipeline to parallel the Alcan Highway, even before there was a proposal to build it.

FOE opposes the Hammond Administration's proposal to sell the State's share of its royalty gas to Tennessee Gas and Transmission Company to purchase support, as it were, for the El Paso pipeline proposal. This position is based upon our observations in Washington that a proposal to bring gas directly from Alaska to the mid-continent is imminently more acceptable and more preferable than the El Paso project.

In other words, the Hammond proposal commits the State to sell its own resources in order to seek what we see as a failing project which never did capture the imaginations of the Nation's lawmakers who, under existing procedural gas pipeline legislation, will make the ultimate decision on the authorization of a gas pipeline route. Although FOE and all other major conservation organizations which we know about would prefer any proposal which does not breach the Arctic National Wildlife Range, we have also learned that Congress has been pre-conditioned to accept the direct pipeline concept, and to reject the end-run concept embodied by the El Paso proposal.

In a large part, this pre-conditioning has resulted

from the very early-on persistence on Capitol Hill of Alaskan Arctic Gas, who began their informational campaign there as early as the fall of 1973. It was at that time that FOE representative Jim Kowalsky first observed Arctic Gas literature in the offices of the Congressmen.

By contrast, El Paso has been virtually invisible on Capitol Hill, even notwithstanding our personal pleadings with their Washington staff to take a much higher profile. As a result of this entirely lackluster El Paso campaign, we received immediate reactions against this project, justified on the grounds of the perceived unacceptability of LNG tanker technology, as well as the unacceptability of the round-about routing of the El Paso proposal.

Meanwhile, the Northwest/Alcan proposal emerged. We believe that this proposal will very likely represent the acceptable compromise in the minds of the Nation's decision-makers, who have heard the rash of objections to the Arctic Gas proposal which many of us have raised, and the rash of objections to the El Paso proposal which Arctic Gas has very effectively raised.

The unacceptability of LNG technology was always an immediate objection raised by almost every staff person for the Congressmen we visited to press for consideration of a non-Arctic Gas proposal, for which

El Paso, at the time, was the only alternative.

FOE does recognize that the El Paso proposal is much more acceptable for the overlapping interests which we and the Hammond Administration seek to protect. But we do have considerable reservations over the LNG technology which accompanies that proposal, such as the loss of energy and the complications of tanker traffic in the coastal areas of the United States. The Alcan proposal, on the other hand, is the compromise which meets all the objections to LNG technology and to location which have been raised to us over and over and over again, and which seems to meet the criteria on which earlier expressions of preference for the Arctic Gas proposal are based.

We also note that the State of Alaska doesn't seem to have its information completely in hand on the competing proposals, witnessed by a recently commissioned study by the State to further study various benefits to the State from each proposed pipeline.

As a practical matter, we feel that Governor Hammond is wasting his breath and yours trying to sell the State's interests to gain favor for a proposal for which so very, very little grass roots support exists. Tenneco doesn't purchase the grass roots. Neither does any other pipeline/petroleum conglomerate when the

sentiment is elsewhere to begin with.

We respectfully suggest that the Governor and the Alaska State Legislature would do well to join us in the support for a more practical overland route which has a much higher degree of acceptability already built into the inevitable process, a process which began several years ago, long before Tenneco happened upon the scene.

Thank you for the opportunity to present these views.

SENATOR RADER: Any questions of Ms. Horton? Thank you very much for your testimony.

MS. HORTON: Thank you.

SENATOR RADER: We have Dennis Schlofeldt of the Chamber of Commerce, Fairbanks Chamber of Commerce. Is Mr. Schlofeldt present? Going once, going twice.

SENATOR HUBER: He was here earlier.

SENATOR RADER: Carolyn Berg, I have her name down as a witness. Ms. Berg is not present.

That concludes the list of witnesses, at least as delivered to my staff or to me. Are there any other witnesses in the audience who wish to testify, any other persons who wish to testify, other than those fellows who have to stay until tomorrow?

I think we all better take our materials with us tonight because tomorrow we will reconvene in the

courtroom, the State Courtroom right across from the Capitol Building, hopefully at 11:00 o'clock.

(Whereupon the hearing was adjourned at 5:45 p.m.)

and reconvened at 4:00 p.m.)

SENATOR RADER: The committee will reconvene. I have suggested to witnesses that they switch the order when it suits their mutual convenience. I have not felt that I should take it upon myself to deny and push contending witnesses or competing witnesses out of order. The order in which they're scheduled here is approximately the order in which we received a request for testimony. I understand that Mr. Hendershot has agreed to switch with Mr. Jeff Barry. Mr. Jeff Barry, you have the floor.

I want to suggest though, so that people understand where I think we are in this situation -- I think that tomorrow at 11:00 o'clock we're going to have to start with our experts that we've hired. Tomorrow is absolutely the last day that they'll stay. They've already stayed over-due; we cannot hold them beyond tomorrow, which means that we will go into our expert testimony tomorrow of Dr. Swanson, Dr. Kilgore and Mr. Rush Moody. I have a memorandum from Commissioner Martin that he will be forced to leave sometime tomorrow for Anchorage, if we wish to hear any rebuttal from him. Mr. Boness leaves Sunday for Washington, D.C. on an FPC reply brief, and Mr. Hamilton and Mr. Gilbreth are in Anchorage and can come down with notice. Mr.

Jack Byrd, our consulting attorney, has to leave tomorrow also, which means this to me: as far as tomorrow, I think it is going to have to be devoted first to our consultants who we have put over, put out of order, and to a rebuttal by the Administration. The citizens who have indicated their desire to testify, I suspect that what we will do is, frankly, just stay at this table this evening until people either walk away or get tired of talking, and they can say whatever they want to for as long as they want to, or else they can do it and come back next week. But I see no other alternative to that because we absolutely cannot lose our Thirty or Forty Thousand Dollars worth of expert witness testimony that's due tomorrow.

I am willing to stay here as long as we have a witness that wants to testify of the general public, and I will ask the recorder if she can do the same. Those of you on the committee who wish to stay will stay; those of you who do not will absent yourselves. We will at least develop a record which will be available for later examination by anyone who cannot stay. It's my thought that we might as well go straight through and give everybody an opportunity to talk.

Again, if they wish they may have an opportunity to speak in front of the Senate Finance Committee or

Senate Resources next week. I do not know, that will be up to Senator Poland and Senator Sackett. On the House side I understand it has been referred to Finance, and that would be up then to Representative Cowper to decide what he wanted to do there. I don't know of any other alternative. I'm open to suggestions.

Senator Poland.

SENATOR POLAND: Mr. Chairman, I just wish to support your statement there, that anyone who wishes to testify in front of Senate Resources will be most welcome at the time we look at the bill.

SENATOR RADER: Yes, Mr. Chatterton.

REP. CHATTERTON: I feel it's incumbent upon me to represent a constituent that is here. The time frame that you gave did not include the name, of necessity, for tomorrow of Mr. Hoyle Hamilton being here, and I'm wondering if maybe the committee could see its way clear to let him come back at a future date so he could testify.

SENATOR RADER: Mr. Hamilton, I believe, was to testify as to the reserves and the probable and possible volumes of gas that we can expect reasonably to be contracting for out of the reserves; is that not correct, sir?

MR. HAMILTON: That is correct.

SENATOR RADER: Now the question, he's here at the convenience of the committee. If the committee wishes to hear more

on that then we would ask Mr. Hamilton to come back, or hear him today, or else we would not. I, frankly, think that I've heard enough on that myself. He's testified on that matter in front of the Pipeline Impact Committee last year, he testified earlier this week on it, and I'm sure he can repeat himself once more, but I don't think it's necessary. Is there any other committee member who desires further to hear from Mr. Hamilton? Senator Huber.

SENATOR HUBER: Mr. Chairman, there just may be further information from him. I may not want to hear from him at great length, but there may be further information, and new, that pertains to these sales only; so I would ask that he not be removed.

SENATOR RADER: Well, the question is, he lives in Anchorage, and the question is, do you want him to stay here while you're thinking about this?

SENATOR POLAND: We can bring him back for Senate Resources, John.

SENATOR RADER: We can bring him back for Senate Resources.

SENATOR HUBER: He could best answer that, sir, being he's here.

SENATOR RADER: Well, can you read Senator Huber's mind and best answer the question he's not yet asked?

SENATOR HUBER: I said ---

SENATOR RADER: Ask him the question then right now. I don't know whether he can ---

SENATOR HUBER: The question is, Mr. Chairman, that if he thinks what he has to say is pertinent to these and that it isn't repetitious from before, then we can make our decision.

SENATOR RADER: Do you think what you have to offer now has already been presented to the committee or not?

MR. HAMILTON: Basically it has. We have made some new computer studies that we will be presenting the results probably in a few weeks, but they don't change much from what we presented here before.

SENATOR RADER: When you say have not changed much, how much? Ten percent? Five percent? Fifty percent?

MR. HAMILTON: We're talking basically about the same gas take-off rates as we've talked about before, previously.

SENATOR RADER: Does it change the postiion at all in the presentation of the Department of Natural Resources presentation of the contracts to them or their position on the desirability of them?

MR. HAMILTON: No, it does not.

SENATOR RADER: Then for our considerations that is immaterial, in your view?

MR. HAMILTON: That's right.

SENATOR RADER: Would you present yourself in case there is

someone here who thinks it is material, as I understand it?

MR. HAMILTON: Yes, I will.

SENATOR RADER: Is there anyone who wishes to hold him here for that reason? Mr. Hamilton, we appreciate very much your staying, but feel free to pursue your other business.

MR. HAMILTON: Thank you very much.

SENATOR RADER: We do appreciate your concern. We'll hear from Mr. Jeff Barry. Mr. Barry, would you identify yourself for the record? I know you've been here, so I know you'll keep your remarks as brief and to the point as possible.

MR. JEFFERSON BARRY: Thank you, Senator Rader. My name is Jefferson Barry and I'm representing Teamsters 959 through the delegation by Jesse L. Carr. Our union has collective bargaining agreements for more than twenty thousand Alaskan residents. We also have service facilities for attendants, hospital, medical, legal services, pensions and recreation, so that the total peoples, numbers, that we serve, both fraternally and economically, is in excess of forty-five thousand Alaskans.

I am really speaking for the people that I represent and, hopefully, also to speak for the people of Alaska that you represent.

When this first sale was announced it was received with a good deal of appreciation because, really, the words "only surplus royalty gas are sold" really presents the thing that the obverse is true, that there are going to be uses made of the gas that is not surplus.

Mention has been made of Commissioner Martin's statement about the poor gentleman down in the Lower 48 that was sitting at home because of the gas shortage and, with the exception of Cook Inlet, I think that -- and as a matter of fact, you would spend a Hundred and Fifty Million Dollars in communications, and a lot of people at Bethel with low lights and television sets, and in the background is an oil generator pumping away, and they're

looking at the same guy, and they see that he has hot water, he has heat in his house, he has lights and he has facilities, what we call the higher quality of life. I think that that's the decision that this committee has to make, is whether the needs of the people of Alaska -- certainly from a construction standpoint, we are interested in the jobs that will be generated, but we also are looking for the services that are generated because our whole history of our union, in fact of all the labor unions, has been to upgrade as much as possible and give as much security to the better things of life. And one of the things of life is to be able to have a decent style of living.

I haven't heard testimony to the effect, for instance, that if this line were to go to tidewater it wouldn't only create certain jobs from the thing, but it would also make available to every single person in the State of Alaska, if the people wanted it and the State approved it, this Legislature, to have either shipped to them, up rivers and down the coasts, or barged down the rivers out of Fairbanks and the Yukon, to every village, to the public buildings, to schools because, really, there isn't any place else that has as low a standard of living, and what we have always strived for is to be free at last, you know, like the Civil Rights thing.

When the discovery was made at Prudhoe Bay it was made on our land. It's our gas, that twelve and a half percent royalty. There has been testimony, and I believe it to be true, that any future lines that may be constructed would follow whatever line is going to be constructed this time. If it goes through Canada we are, in effect, having our gas, our life blood for a standard of living that can be achieved fairly soon expropriated just as though we were a foreign country.

After carefully reading the Governor's proposed sale, I think it is flexible and somewhat fainthearted. I would much rather have seen the appropriate person, like that Tarryton ad and the black eye, and I would much rather fight than switch because we believe that the only way possible to make this vital resource available to all Alaskans is for it to reach tidewater.

I don't think that this committee has too much of a decision to make on this until they make the very first decision and really a commitment to it, and that is of whether you want this gas in Alaska or not. Speaking for the Teamsters, we do, we want it to be made available, and we think that the overwhelming majority of Alaskans want to have access to their own gas. You know, it would be a terrible thing to have an oasis and you've got the coolest water in town, you live and die and you're always

drinking from somebody that brings it by warm camel.

I don't think that there is likely to be a chance at all that this gas line goes in Alaska, in either Alcan -- in fact, I think the only way that Alcan could get it is if they could cause some kind of a French and Indian uprising east of British Columbia. I don't think that this El Paso line is going to get it unless something more than to send mercenaries back to lobby is going to achieve it for us. In fact, I think it will take a miracle to do it.

I've been in Alaska long enough to have seen two miracles occur in such a fashion as this. I'd like to take you back to Statehood days. In 1955 the Legislature convened the Constitutional Convention, there was an election, and we performed a Constitution. Then in 1956 it was to be ratified. The then Governor of Alaska didn't propose any positive action, but the Legislature did, people just such as yourselves.

We had about a Six Million Dollar budget, and they did the extraordinary thing of sending what they called the Tennessee Plan back to Washington, two Senators and one Representative. There was the same kind of three options that we have now. There were those who were for statehood; there were those who were for commonwealth, which is the alternative that got rid of the income tax; and there were those who said, "Hey, we don't have a

goddamn thing to say about it anyway, they're going to do it in Washington."

But I'll tell you -- for the first time in seventy-five years, I believe, is when Earnest Gruening, Bill Egan and Ralph Rivers went back and did so impress the Congress and the President that within two years Congress voted the Statehood Act, and on January 3, 1959, President Eisenhower proclaimed that we were a state. It was a miracle that was done by the people of this state because they all wanted to create their own destiny, to be free really. And the nicest thing that's said in the Statehood Act, and those words really come alive, that Alaska is declared admitted to the Union on an equal footing with all of the other states in every respect.

Then in Section Six, Congress clearly recognized, because only one percent of the land was owned in Alaska by private interest, so they awarded for the development and the economies of the communities four hundred thousand acres without mineral rights surrounding some urban areas, and four hundred thousand acres with rights that we got if they weren't already taken, and a hundred and two million five hundred and fifty-five thousand acres with all mineral rights. They did that, and the words are used that this is a compact between the United States and said State for the development and the economic well

being. That's what we're really facing here now, how much do we want to guarantee that every citizen in this state has an opportunity from that immense wealth that's the largest gas and oil field on the North American continent. We may not ever be able to get anything out of it unless we buy it in the canned and manufactured use in Houston, Texas.

I don't think that the State's action is going to change radically what has already transpired. We're faced with a decision already being made by the staff report of the Federal Power Commission, we're faced with Judge Litt's decision. And really, it's a very complete and logical decision for what he was studying and the records indicate. In it he calls attention to the fact that we have already -- both the staff statement and his statement, that we are supporting the El Paso proposal on economic grounds, bargaining with the pipeline purchase of its royalty gas to release portions of that intrastate industrial use.

As I say, I think a miracle can occur if this Legislature will cause it to occur as it did in 1956. And I should have said the second miracle was reconstruction after the earthquake.

We have never been treated badly by Congress nor any president. Who we have been treated badly by is

Big Brother, and I term Big Brother the departments, the bureaucrats, the Secretary of Interior. For instance, out of that hundred and three million acres that we were to get in twenty-five years, we're going into the nineteenth year and have received less than twenty percent, and they're already withdrawing a hundred and forty-six million more acres before we get to choose the remaining amount.

The Department of State has treatied our fish away. The Department of Interior and Forestry have shoved us out of some of the most productive forests in Alaska. But always Congress has said that, "We want to make you whole, we want you to be economically viable." I think that we can create another miracle, and that's the reason that I think, first of all, that the Governor really has done no more than send mercenaries.

I don't know what other enabling legislation this state contemplates, but I know from the report that it's not going to affect the Commissioners, and we have some suggestions to make to you. Besides being in the people business we also have learned to negotiate contracts, and I can tell you gentlemen and ladies that you have the most powerful weapon in the world to really knock out a hell of a good contract on the basis of this other.

The one door opening, I should say -- they closed

the front door on us, but Judge Litt opened the back door. What he says is that the financial plan prepared by Arctic Gas does not outstrip the capacity of any of these markets and is generally feasible. He concluded, however, that the magnitude of the capital investment is such that the gas transmission company sponsors cannot provide the institutional lenders with the security necessary to warrant financing. There must be reliance upon both the consumer and the taxpayer to guarantee the project will be completed and the debt service will be secure against any sustained outage.

Legislation to protect tracking of rates to the consumer level and to approve U.S. participation is necessary if the project is to be built. He made the following recommendations: consumer participation in guarantees on capital costs, but only for debt service; the equity holder should accept the usual risk of equity investment; and the Federal Government should entertain an insurance or completion guarantee arrangements to facilitate raising project debt capital at a more reasonable cost.

What we're suggesting to the Legislature that they immediately, because I agree that you must act in haste if we are to get a line -- I would open further negotiations with El Paso and ask to be included on an option plan as a full partner so that when you go to

Washington before the Commissioners you can say, "Hey, this is the State of Alaska that is going to build this equally with El Paso," and you can get that from El Paso for free.

What your kicker is and what's the most powerful weapon that you have is that you can issue the general obligation bonds exactly as he says the Federal Government has to do. I spoke with Mr. Holland earlier today and he thought that approximately Five Billion Dollars is necessary in the State of Alaska, 2.4 Million for the line down to Gravina, 2.6 about, or 2.5 for the completion of that terminal. That's El Paso Alaska, and that's who has made this complex.

Taken over a twenty-year period you're going to save, by debt service on tax exempt bonds, you're going to save Several Billion Dollars. That's your equity to ownership, just the same as you gave them equity in our royalty gas only for actively supporting your Governor's selection. That's what we call bargaining, and when you go back with such a project to the Commissioners and the Federal Power and to the President and to Congress all over again you're an equal partner. You're reducing the debt service on that gas line, you're maintaining the integrity during construction and operation, you're participating in the management level of the rate structure.

Incidentally, Judge Litt's proposal said that there was fifteen to seventeen percent profit built into it. I don't think that there is any other possibility, really, of changing dramatically or actually, from an essential standpoint, anything to the Commissioner, the Federal Power Commission, without having a different project in mind. They've already recognized that we have a contract on this royalty sale.

You also have one other extra powerful tool. This proposed contract, I believe has been testified to, amounts to about a Billion Dollars. Under the Permanent Fund twenty-five percent of that goes into a bank of investment that must be for income producing purposes. I can think of no higher rate for the people of Alaska, to be able to pledge the receipts of that fund against any outages that might occur; but more than that, to agree to purchase if the general public doesn't.

You started a State Industrial Bank for political subdivisions in the state. The City of Valdez has sold bonds of about Two Hundred Million Dollars worth now. They have a proposed thing of Two Billion for the facilities at the terminal site. Those bonds were, I am told, a little over seven percent, and they were just snapped up.

The State of Alaska could sell revenue bonds

as you do, for instance, for the airport. Those are about one point higher than the bonds that you sell under the G.O. The last bid you got, I believe, was 5.08 and there have been some last year at the airport that were about 6.1, which was one percent higher. But it made a difference in that Forty Million Dollars -- in the Twenty Million Dollar bond issue of Three Million Dollars of the debt service.

The debt service on Five Billion Dollars is a terrific amount of money over twenty or twenty-five years.

Mr. Holland said that El Paso's testimony was that they anticipated they could get the money from the general public for nine and a half percent. This is a way for them to get money at six percent, and for you, and I, and all of the people of the State of Alaska that own half that gas line. Half that gas line means a terrific thing for the state.

It's not a unique thing for governments to participate. In almost a similar circumstance British Petroleum is a Crown corporation sixty percent owned by the British Government. They entered into a contract with SOHIO in order to get the money to finance their portion of Alyeska BP Alaska, and in so doing they took options that, as their oil that came from their ground was

produced to SOHIO they began to acquire stock in SOHIO, until they were going to become a majority stockholder.

I hope you understand that this is a suggestion that can be done. But I don't believe that there is any other manner, any other manner at all, that there will be a gas line through Alaska with access unless the Legislature takes the action to do it.

I know that I haven't addressed myself to the particular contract in those three companies. It's just that I am really very superstitious, and Tenneco happens to be Tennessee, and a Tennessee Plan was a hell of a lucky thing for us. If we went back to the Commissioners with such a proposal of a half ownership and then Tenneco and Southern would have a whole new thing to use their political clout for, perhaps the Governor's decision was wise in the essential parts of the contract that he made.

SENATOR RADER: Any questions of Mr. Barry? Representative Hayes.

REP. HAYES: Just to boil that down to the issue before us, I have concluded from what you've said that the question before us -- that your feeling about the question before us, which is whether or not we should approve these contracts, is that you're recommending that we not approve them.

MR. BARRY: No, I'm not at all. I'm recommending that you examine the contracts, and whatever portion that you're going to approve, that you will put enabling legislation that those contracts become a part of that enabling legislation.

SENATOR RADER: Representative Chatterton.

REP. CHATTERTON: Thank you, Mr. Chairman. Mr. Barry, as I'm told, and correct me if I'm wrong, I have two options I guess, two alternates. The way through the mechanics of this system I can either vote "yes" or vote "no" on these gas sales contracts; I cannot modify. Is that your understanding?

MR. BARRY: Well, no, that's not been my understanding. I suppose that from a technical nature, if you voted to modify that you would be making a change and sending it back to see if that would be approved by the Governor and the Gas Advisory Board.

REP. CHATTERTON: Thank you.

SENATOR RADER: I've made preliminary inquiry in that regard, and there seems to be the feeling, preliminarily anyway, that what Mr. Barry says is basically correct, and that is that if we suggested modifications it would be a rejection in the nature of a counter offer which is really not within the terms of the statute, which gives us only an ability to confirm an existing contract, which means

that they would probably start the process again and come back through with an additional resolution asking us to approve it outright. I don't know if that's correct or not, but that's a preliminary opinion that was given to me that perhaps could be changed.

REP. CHATTERTON: Thank you.

REP. GRUENING: To comment on that, Mr. Chairman, I also heard, maybe from the same source, that we could change through Bill the procedure by which these contracts would again have to be approved so that you could have an expedited approval process.

SENATOR RADER: We can pass a bill that changes on anything we're doing here, you know; that's true. Any further questions of Mr. Barry?

Mr. Barry, we thank you very much for your distinctly new approach to this problem.

Our next witness -- we have a change, as I understand it between the Alaska Conservation Society and the Wilderness Society. Scholes, I believe, is going to testify next, P. Scholes, Peter Scholes. Mr. Scholes, please identify yourself for the record and who you represent.

MR. STAHR: Senator Rader and Representative Gruening, and Members of the Committee. I am Thomas Stahr, I'm manager of the Anchorage Municipal Light and Power Department. I have some brief written comments which I think have been pased out, plus a little amplification on it, and I will read this.

Natural gas is the primary source of energy or heating and electric power generation in the Anchorage area. While there is no question but that we must ultimately develop renewable energy sources, the time and money required to do this are great. Therefore, it is essential that in-State requirements for natural gas are given the highest priority. The proposed contracts for royalty gas sale appear to adequately provide for in-State use, but I believe the Alaska Legislature should additionally make a strong statement of policy that in-State use of all royalty gas is to have continuing preference.

The price received by the State for royalty gas exported from the State should be as high as permissible and proper. The proposed contracts appear to maximize our options for a good price. Royalty gas for in-State consumption should be priced so that it neither penalizes or subsidizes consumers and other tax payers.

The exchange provisions of the proposed contracts

may be even more important if an inaccessible pipeline route is chosen. If the Arctic route is selected this may be the only way that Alaskans can obtain direct benefit of this energy source. We must be certain that our options for this possibility are maintained and enhanced.

When we observe what has happened in the Lower 48 this past winter due to having supplies inadequate to meet the demands imposed by a severe weather condition, we must take steps to insure that Alaskan royalty gas is made available for Alaskan needs.

To amplify on this, for life to exist in Arctic and sub-Arctic environments a high energy consumption is a basic prerequisite. For all except the most rural areas near total reliance must be on commercial energy delivery systems.

The energy supply future for the Anchorage area is far from secure. The economic availability of North Slope gas is contingent on the pipeline route selected. Export of large quantities of Cook Inlet gas is also being actively pursued. It is entirely possible that South Central Alaska will not be left with sufficient gas for its long-term needs, much less gas for the industrial development required to provide a productive employment base.

The development of alternate energy sources takes a long time and is extremely expensive. Major hydroelectric developments require ten to twenty years to complete. While they will yield the lowest long-term energy costs, the intiail investments required are very large. Coal based plants of the size necessary to replace natural gas as a primary energy source take six to ten years to construct, yield high energy costs, second only to oil, and require large initial investments. Capital costs for coal based energy are in the order of fifty percent of hydro, and there are large ongoing fuel and labor costs.

Conservation of a depletable resource is by definition not a long-term solution. However, when properly applied, conservation of depletable resources can yield immediate social and economic benefits. Anchorage has under construction a waste heat generation facility which will save three billion cubic feet of gas annually. This will benefit our consumers economically, but as large as the saving is, it is not large enough to significantly affect the gas supply problem. Conservation alone is not a solution.

When we look at the most pessimistic picture, as we must, we are left with the Cook Inlet royalty gas as the only sure potential addition to the gas reserves

committed and accessible for Alaskan use.

Just as reputable stock brokers advise prospective clients to have adequate insurance and savings before investing in the market, I urge that we insure our energy future by firmly committing Cook Inlet and all other accessible royalty gas to in-State use before investing the North Slope gas.

Thank you.

SENATOR RADER: Do you have any questions of Mr. Stahr? Representative Parr.

REP. PARR: Mr. Stahr, how long do you have gas for now, in your guess? I'm sure you're looking ahead in your job with the Anchorage Municipal Light and Power; what are you looking at, a five-year supply, a ten-year, a fifty-year, or what right now?

MR. STAHR: Representative Parr, it looks that in the mid '80's the gas supply situation is very questionable. Part of this has to do with some ongoing negotiations for royalty gas which, for reasons inexplicable to me, seem to be going very slow and poorly.

REP. PARR: But from your existing actually Cook Inlet and so forth gas, in the mid '80's you'll start running out, perhaps?

MR. STAHR: These are the gas reserves that are committed to our supplier. I believe the other, Chugach Electric,

may have somewhat longer gas reserves. But the gas that is committed for the use of the Anchorage area, the people of that area, sometime in the mid '80's that gas will run out. There is still uncommitted gas.

SENATOR RADER: Any other questions? Representative Gruening.

REP. GRUENING: Mr. Stahr, do you have any hesitation about the contracts that are before us in terms of protecting in-State use and particularly your problems?

MR. STAHR: Representative Gruening, it seems to me that so much is dependent upon the route that certainly if the route, if the contract would help lead to a route accessible, this is good. If it doesn't -- I think the point I'm trying to make, and I know it's somewhat tangential to what you gentlemen have to do, is this: the use of this energy source in the State has to be the most important consideration.

REP. GRUENING: Have you considered the possibility of an exchange as being an in-State use; in other words, exchange even though we may not have a pipeline going to Cook Inlet from the North Slope, but exchanging, in other words, as the gas goes out whatever, Alcan route, or the El Paso route or the Arctic route, we could exchange that gas so that you could have greater access to Cook Inlet gas?

MR. STAHR: This would certainly be a very desirable thing.

It may, in fact, be one of the only feasible ways in the long run. In regards to that, I don't see, and I'm not an attorney, how -- the contract provides for it, but it doesn't provide any means to enforce this, and this is an excellent thing that should be pursued.

REP. GRUENING: Thank you.

SENATOR RADER: Any other questions of Mr. Stahr? Representative Chatterton.

REP. CHATTERTON: Thank you. Mr. Stahr, are you speaking for the Anchorage utility, are you speaking for the City of Anchorage, the municipality of Anchorage, or for yourself?

MR. STAHR: Representative Chatterton, I am speaking for the utility only, not for the municipality.

REP. CHATTERTON: Thank you, sir.

SENATOR RADER: Thank you, Mr. Stahr. I'd like to ask the reporter, I understand that the remarks by Mr. McCutcheon were somewhat abbreviated. Did he give you a full copy of his statement and did you intend to include it in your transcript?

MRS. SANDERS: Yes.

SENATOR RADER: Under those circumstances, his full remarks will be included in the transcript and it will not be necessary to make it a supplement or an exhibit. Is that correct?

MRS. SANDERS: Yes.

SENATOR RADER: Okay. I didn't see you writing at the time, so I thought that he was -- fine.

Our next witness is Allison Horton, Friends of the Earth.

MR. GILLAM: Senator Rader, Representative Gruening, Members of the Committee that are left. I'm Harold Gillam, Mayor of the City of Fairbanks, and that makes me an expert on nothing. I do appreciate the opportunity to speak before you.

I first wish to state that I, as eighty-five percent of the Alaskans are, am in favor of seeing that we get the maximum of construction work done within the State of Alaska. So I favor either the Alcan route or the El Paso route, and my third choice, as is prevalent in Alaska, is the Arctic gas route. I am, however, a firm believer that the resources within the State should be developed, but in being developed that we, as a state, have an obligation to make sure that the maximum utilization of that resource is made within the State.

A proposal was made, and I don't know that it was a valid proposal or not because it was never explored; but it was made to utilize the royalty share of the gas to processing fertilizer in the Big Delta area. This proposal was not at all considered by the Administration. I believe the excuse given was that it was received too late. However, this is the type of development that we must encourage. Such utilization would put Alaskans to work, and I see nothing wrong with that. It would also provide a source of southbound freight, the lack of which

is the reason that high freight costs are pressed on the Alaska trade.

I wish to commend the Governor for his efforts to date. I believe that both he and Representative Young earned their keep by getting the ability of the State to retain control of their royalty share. I think it's almost unheard of elsewhere. Since we got that right, I don't think we should forfeit it and give it away.

I do wish to testify in opposition to the proposed contract to Tenneco at all. I believe that the sale is premature, and I see no over-powering reason that it should be concluded. I believe that the political clout that Tenneco and all profess to have will be, in any event, exercised in favor of the El Paso route, for the simple reason that it is in their own best interest.

If the Arctic gas route prevails they will probably not get a whiff of the gas, and the other routes at least give them a chance. I believe in just keeping our complete options open.

So I'm opposed to the proposed contract for two prime reasons. We're not going to get the maximum utilization of a non-renewable natural resource and, secondly, nothing is more odorous to me than sale of a natural resource in exchange for some dubious political clout.

That concludes my testimony, sir.

SENATOR RADER: Any questions? Representative Chatterton.

REP. CHATTERTON: Yes, sir. You were speaking, Mr. Gillam, for the City of Fairbanks?

MR. GILLAM: No, this is not. If you know the City of Fairbanks, you know no one man ever speaks for the City of Fairbanks.

SENATOR RADER: Do you speak for the City Council?

MR. GILLAM: Again, if you know the City Council, this is not a unanimous position of the City Council.

SENATOR RADER: Is it a majority position of the City Council?

MR. GILLAM: Certain statements that I made are a majority position, some are a minority.

SENATOR RADER: Okay. Any other questions?

REPRESENTATIVE GRUENING: You're speaking for yourself today?

MR. GILLAM: I speak for myself, as I think anybody who knows me knows that I do that.

SENATOR RADER: Senator Huber, have you got a question?

SENATOR HUBER: Yes. Harold, your statements, you do make them with the of your abilities in the engineering business, particularly where it comes to using petro-chemical products? You didn't set any stage for that other than the Mayor of Fairbanks.

MR. GILLAM: No.

SENATOR HUBER: Would you like to comment on it?

MR. GILLAM: No comments. That's well beyond my expertise. I think that we should get the maximum utilization of our resources. I don't think that we have been firm enough in our past policies in doing this. I think that any sales of the royalty gas and oil should be conditioned on the maximum utilization of employment within the State of Alaska. Beyond that I guess I just have no further comment.

SENATOR RADER: Any further questions of Mr. Gillam? Thank you, sir, very much.

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SENATOR RADER: Any further questions of Mr. Gillam? Thank you, sir, very much.

Our next witness is Carl Heinmiller of Haines. I haven't seen Carl around recently, I don't know if he's here or not.

The next witness will be Mr. Jerry McCutcheon.

MR. McCUTCHEON: Mr. Chairman, I understand that you're going to have the hearings continued on tomorrow, and since I'm stuck here for another day now and I would like to listen to some of the State's witnesses before I speak, I wonder if I could appear tomorrow.

SENATOR RADER: I can't at all guarantee you that you can appear tomorrow, sir. Our difficulty is that we have about Forty Thousand Dollars worth of experts that we've hired that have to testify tomorrow, and also we have to hear from the State rebuttal tomorrow. If you want to take the chance of appearing at the tail end of

tomorrow's testimony you can do so, but you would be at the tail end.

MR. McCUTCHEON: I was hoping to get on the front end so that I could catch the plan out of here. Actually I don't think it's an unreasonable request, after waiting for four days.

SENATOR RADER: I also have another request from OMAR for the same request. I can only tell you this: tomorrow, as far as I'm concerned, if the committee wants to overrule me they can -- but tomorrow we absolutely have got to start in with our Thirty or Forty Thousand Dollars worth of expert witnesses and get their testimony. We're staying here this evening to try to accommodate anybody else. If there is time tomorrow we will be more than happy to accommodate you, but I'm going to take that other testimony first.

MR. McCUTCHEON: Well, I believe it will go long past plane time tomorrow.

SENATOR RADER: I'm afraid it probably will too, and that's why I think you should do it now.

MR. McCUTCHEON: For the record, my name is Gerald McCutcheon, my mailing address is Box 2340, Anchorage, Alaska 99510. I'm a life-long Alaska resident. I represent nobody but myself. I'm not paid by anybody else. I'm down here at my own expense.

I will start with some remarks which were made here . It seems to be a giddy thing to talk about the Trans-Alaska oil line and the surplus oil on the West Coast, and Mr. Tussing's remarks, and he knew this in '72, and rocks were thrown at him, etc. That is not a fair statement. There were those of us who knew that in 1969. There were us who knew where the terminal would be in 1969 before it was announced, and there are those of us in this room who also purchased property down there in 1969 before the terminal was announced.

So we did have some idea where it was going. We put our money in there. The fact that the Native Land Claims interceded, for some people in the State it left a very confusing situation; you were on both sides at one time. It's sort of like watching your mother-in-law go over the cliff in your brand new Cadillac. I was one of those people in that position.

What I guess I'm saying is simply that they have a complete track record, this way or that way. There was a man by the name of Hal Galliett, who spoke during that

period of time, and he went from one luncheon to the next luncheon begging for a place to speak, anywhere he could, and he was talking about the other line and the surplus oil on the West Coast. So it was a known fact. It was just that the intervening State Administrations have seen unfit to take any remedial action, and that's the real problem. It wasn't that we didn't know it; it was known. And I think if you'll rummage around in the old newspapers you will find some remarks by Senator Stevens at that time when there was a wrangle in Congress, that he didn't like the prohibition of export of oil to Japan on a temporary basis. It still is the more reasonable solution to the trade of Alaska.

Now, as to the Trans-Alaska pipeline and whether or not it should have gone in the other direction, I would be very happy to debate anybody publicly anywhere on that decision. We made the right decision at that time, and it's still right today. If we had made the other decision, the costs would have been enormous, the building would have been greater, and I believe the wellhead value would probably have been zero. It's more than three times as long, and to deliver the oil there you can expect three times the charges. If we had to pay for three times the charges we would not have the wellhead value of any sufficient amount.

Now, I'd like to see the Governor, or whoever else, come back and answer that one.

Going now now to this one: the determination of whether or not the State should sell its gas, or that anybody's gas should be allowed to be withdrawn, is dependent upon the best management of the reservoir. The oil companies look at the reservoir from the standpoint of present value. While the State also can do the same, the State must remember that the discount rate for the State and the oil companies is very different. No one had refuted Tanzer's estimation of the discount rate of the oil companies with respect to the pipeline and the reservoir. It will be an almost unbelievably high rate for any kind of a business or industry; in short, an exorbitant profit. The State, on the other hand, is hard pressed to show a discount rate much above zero, and some of us believe that it is negative. After what the public believes to have happened to the Nine Hundred Million Dollars, I am sure the public would agree.

The State has not only the need to see that the field is operated to the best interest of the State, but also that the best long-term interests of the Nation are also served. Again, America's interest and the oil companies' interests are not the same. I will

skip part of that.

Multinational oil interest are not our interests, monetarily or otherwise. Thus, the State being the second largest holder in the reservoir and having the power to control the way the reservoir is produced, should operate the reservoir to maximize the State's own interest first and last, for that is exactly what any other oil company would do if they had control. We are now an oil company, and we are one of the largest oil companies in the world.

There are 19.1 billion barrels of oil in that reservoir, and that somehow seems to escape a number of people. What we are trying to do is maximize recovery from that reservoir. The maximum oil recovery occurs with total gas reinjection, ninety-two percent. I've heard here recently now there are some figures that that has been reduced. There's new material out, they can't get that much gas to liquefaction. No one disputes this. This is the maximum oil recovery. Other computer runs were done to show sales of two billion cubic feet a day, and these are portrayed as only being a little less than the total reinjection run of Run No. 10.

While there appears to be not much real difference, a closer examination revealed that it is sophistic for computer run No. 10 was not done the same way that the

other runs were done. The operational limits were changed to a more favorable procedure in those which show a high recovery with gas sales. Fifteen thousand cubic feet was used as the upper mit for runs under No. 19, while twenty-five thousand cubic feet per stock tank barrel was allowed for runs 20 through 29. From computer run No. 10 the gas-oil ratio never got above four thousand cubic feet , while some of the other computer runs were actually allowed to reach fifty thousand cubic feet per barrel before being terminated. Obviously, if you allow a blowing down of the reservoir in one case and not the other, the two will not be comparable for considerable more oil will be produced under the blow down operational limits.

An analogous situation might be used in clarification. Pacific Lighting bought some old exhausted reservoirs in California for use as gas storage. When Pacific Lighting removed the gas during the winter, up came the oil. These were reservoirs that were exhausted. They pumped the gas down, and when they recovered their gas up came some more oil.

I have another problem with the water injection and fluid displacement. At first reading one does not observe things that take place in the reservoir. It is not until one begins to calculate the net fluid

withdrawal that one observes what takes place in a reservoir. In computer run No. 26, the most likely producing situation, with gas sales of two bcf, by the twentieth year more fluid is reinjected in the reservoir than has been withdrawn. However, in computer run No. 10 total gas reinjection, the one that's used for standard, there is 3.2 billion barrels of fluid more had been withdrawn, than had been withdrawn than reinjected, and that was 3.2 billion barrels, over a three billion barrel difference in the net amount of fluids withdrawn. I believe this is bound to have a pronounced effect on the reservoir.

There were two additional well groups added near the gas-oil contact in the fourth year. This was not done in computer run No. 10.

While computer run No. 10 is used as a standard against which other runs are weighed, run No. 10 is not really comparable for it did not receive the same favorable treatment. The question becomes, how much higher would oil recovery be above the current 8.2 billion barrels. I had speculated that it would be more than nine billion barrels. For more than a year now I've tried through various legislators to have additional computer runs performed. These gaps in knowledge were never filled although there was admission by the Administration that

they should be done.

I have found further evidence which moves the question from statements of a layman to statements of a professional. This finding was a graph which plots oil recovery versus gas sales. This was obtained from Alcan Gas, who apparently obtained it from the State of Alaska, and it bears the VanPoollen Report label. You gentlemen, I think, saw that yesterday.

It is a graph based on the State's VanPoollen report. In an extension of this graph we find a little over nine billion barrels of oil as a probable amount of recovery when the operational limits are changed to those above computer run No. 19. From this we can see there will be, at gas sales of two billion cubic feet a day, a 1.4 billion barrel loss of recovery.

This is almost twenty percent of the anticipated reocvery to give up. One out of every five or one out of every six barrels of oil for a gas line is too high a price to pay. Gas in the South 48 States is shut in and today AMCO is flaring substantial amounts of gas in the Rocky Mountain states from a recent discovery. Their statement was, "It wasn't worth building a line for." That's important gas and oil, gentlemen.

Earlier the State Administration testified before the Oil and Gas Taxation Committee that they could

predict forward with some certainty that the producibility of Prudhoe Bay equalled the number of years of experience. Thus, when they've had one year's experience they will be able to predict the second. When they have had five years' experience, they can predict another five years.

Alaska is nine months to a year away from production and we have no experience. You are trying to make a decision on Prudhoe Bay producibility, which will commit the State for the life of the field to a project can only be met under the most optimistic conditions and which will still be a very substantial sacrifice in oi. The amount of oil is equal to a giant field, twice over.

Today data is being gathered for additional computer runs. These will not be available until next month, if the Administration is willing to release them, and I understand that was what Mr. Hoyle Hamilton was to testify about. But there are some discrepancies there because it was known that reruns were actually back, that the material was supposed to be gathered, and they're not supposed to be run; new runs were not supposed to be run until about the middle of next month.

My question is, shouldn't you wait until these runs are available, until all the information is in?

There are problems with heavy oil, tar, at the gas-oil boundary, and this week I learned there is a similar problem at the water-oil contact zone. Should we not have some production history before any gas is released from the reservoir?

Although the previously mentioned computer runs called for water flooding, there are no plans for water flooding nor will the industry start serious consideration of water flooding until after production begins according to the State Administration. The Oil and Gas Journal hinted that the oil industry is going to resist the State's request for water flooding. Without water flooding the recovery would fall as low as 6.4 billion barrels of oil at two bdfd, computer run No. 5. This would be a loss of recovery of 2.7 billion barrels of oil.

Should we not wait until the oil industry has determined whether or not it's going to water flood and the method of water flood? After all, it will take four or five years to construct the plan after it's devised. Should we not wait until the industry determines whether or not there is going to to be general water injection, peripheral water injection, or spot water injection?

This committee does not have current information, and I defy any one person on this committee to show me where he has basic information with reference to the

reservoir which is not at least two years old.

Why is the Legislature considering gas sales when we don't even know the producibility of the reservoir or have access to the latest information?

The Hammond Administration has refused to let a reservoir engineer appointed by the Legislature to review the proprietary information that went into the State's decision-making process. Thus, you are considering a sale of the State's royalty gas on blind faith and committing the State to a course of action which is irreversible.

The pipeline is not economically feasible. It requires government guarantees of financing and of customers, and I'm hearing today now for the first -- it's not the first time, but again we have the question of, "We want to get the State involved in the financing of this line." It's very strange that the oil industry did not want us in, and they fought us over entering the oil line. It's strange how the industry doesn't want us in on that which is possible, and some of the people would like to have us in when it's not possible, not profitable, and it's the only way they're going to be able to finance that, is with some kind of a government agency holding the golden sack for them. It requires government guarantees of financing with customers.

El Paso requires even more; it requires the State to subsidize it with its royalty gas, to buy El Paso a tanker fleet, and to forego any substantial use of the royalty gas within the State.

The economic studies done by the State require eight-eighths of the gas for the El Paso line, and as we're all aware, there is a study done by the State showing any use of the gas within the State of Alaska -- and don't you think you gentlemen should have that information to see what happens to the line?

The Federal Government will guarantee the customers through an all-events tariff. The customers will be forced to pay for the gas line from the time the construction starts, including costs, interest and profit, and continue to pay even if the line is never completed.

BLM's economic analysis shows the pipeline requires 2.5 bdfd, rising to 3.5 bdfd in order to meet the minimum economic requirements of a Seven or Eight Billion Dollar line. On page 149 the BLM states the figures they use for costs, Seven or Eight Billion Dollars, are not possible for they are predicated upon a hundred percent engineering perfect line. This so-called engineering perfect line of Seven or Eight Billion Dollars has a port of entry average cost of Two Dollars and

Sixty Cents per mcf. And I think you gentlemen at this juncture should find out the difference between cost of service and cost averaging of it, because you're faced with cost averaging in the future, and if you think with cost averaging you're going to be able to benefit the State of Alaska, I really don't.

Since even the State admits the gas system will cost Fourteen to Sixteen Billion Dollars, the real expected cost would be Five Dollars and Twenty Cents per mcf. Even if a Dollar was considered to be the wellhead price and subtracted from the delivered cost, the price would be Four Dollars and Twenty Cents per mcf, and we Alaskans will be getting nothing for our gas. That price is still three times the highest interstate price, and two times the highest intrastate price. I'm not talking about the small quantities of gas presented to this committee in December of a year ago, I believe it was, where they said the gas of Five Dollars was sold. That's true, they sold Five Dollar gas, but they forgot to tell you how much Thirty-One Cent gas was sold with that Five Dollar gas. There's a big difference.

Five Dollar gas is Thirty Dollar oil and Eighty to Eighty-Five Dollar a ton coal. Coal is currently Thirteen to Fifteen Dollars a ton in the South 48 the last time I looked through the Wall Street Journal for it,

and Twenty Dollars a ton in Fairbanks. Do you really think you're going to take that kind of gas to market?

The market for gas drops rapidly as the price rises. At a Dollar Eighty Cents per mcf the market has dropped nineteen percent. If the market drops nineteen percent there is no market for Alaska's royalty gas at the current time. Interesting enough, in the discussion the other morning -- I believe it would be Wednesday morning -- on the radio, there is currently apparently some twenty-five percent of the gas reserves which are held in and held intrastate. Now, those gas reserves will come on line when the price rises high enough, and if we go to full deregulation the gas problems in the South 48 States will resolve themselves, I think.

By Two Dollars and Forty Cents it drops another twelve percent; with a rise of another Forty Cents, to Two Dollars and Eighty Cents, the market has dropped another twelve percent, for a total loss of fifty percent of demand. With South 48 gas at a little more than half the price of Alaska's gas delivered to the South 48, the market for gas is only one-half the current demand. Even at a Dollar Eighty Cents, there is no need for Alaska's gas. Thus, if we sell the gas and deregulation occurs, Alaska's royalty gas will have a wellhead value of zero. Governor Hammond, Commissioner

Martin and Attorney General Gross have all admitted that this is a strong possibility, but pointed out (in Gross' case) it is the ad valorem taxes with which they hope the State will make money.

The cost of gas delivered to Fairbanks will be higher than the current highest interstate price. Do you gentlemen believe that a petrochemical industry based on gas will locate at Fairbanks?

There is extremely little likelihood that Alaska will be allowed to keep its royalty gas. Senator Stevens, along with Senator Hollins, Senator Stevenson and Senator Jennings, have already introduced a bill which would appropriate gas from anywhere, in interstate or intrastate, in the case of emergency. This will be the harbinger of things to come. That's our own Senator. No petroleum petrochemical plant is going to locate in Alaska based on interruptable gas.

Another question which has not been raised is the fact that the BLM proposal calls for cost averaging, not cost of service, and that is probably what is going to happen. So the users of the gas within Alaska will have to pay part of the cost for delivery of gas to the South 48 States. If these previously mentioned things did not preclude the use of gas within Alaska, the cost averaging alone would make the use of gas in Alaska

prohibitive. And remember, it is the Federal Power Commission that gets to set the rate for Alaska's gas, for Alaska's charges, and if you take something out of that system, part of that system, you're going to get to pay for that part of the system.

The State of Alaska should use all its gas except that which is needed for equipment fuel and the gas liquids to pressurize the reservoir. Oil field pressurization is, without a doubt, the highest and best use of Alaska's gas at this time or in the foreseeable future. There is no reason for Alaska to allow the withdrawal of gas from the reservoir until a water flooding plan is not only completed but also under construction, and all the plans for the gas line should be shelved until that time. The gas will still be there. It won't have gone anywhere.

Petrochemical plants are now being built in the Middle East. The world's largest construction project is in Saudi Arabia, not Alaska -- gas injection, water flooding and petrochemicals, Fifteen to Sixteen Billion Dollars.

It is interesting to note that an LNG plant that was to be built in Iran for a project of two bcfd was cancelled. The partners were Iranian National Gas, DISTRA Gas and a company by the name of El Paso. You

might recognize that name El Paso. The project was cancelled when the costs rose to Six Billion Dollars, and the project became economically unfeasible. Iran stated that the highest and best use of their gas was for field pressurization. If a two billion cubic feet plant a day LNG project at Six Billion Dollars failed, how are we going to build this project of two billion cubic feet a day at a Fifteen Billion Dollar charge and have it economically feasible -- I'll add in here -- without a great screwing of the American public?

Middle East gas costs more to deliver than the value of the gas at the point of delivery; thus, they are turning to petrochemicals. This is true for Alaska too. Petrochemical companies are finding it is cheaper to go to the source of supply. The market for petrochemicals will rise from One Hundred and Six Billion Dollars to Three Hundred and Fifty Billion Dollars by 1985. The market for petrochemicals will go up. Thus, there will be plants which must be built to supply an additional Two Hundred and Fifty Billion Dollars in petrochemicals by 1985.

I believe it was in a report in the summer, of the Oil and Gas Journal, that said that roughly, say, six percent of our oil and some seven or eight percent of our gas is being used for petrochemicals now, and

this will rise to approximately fifteen, sixteen percent by about 1985. That just happens to be about what might be on the North Slope at that time.

I don't know of any reason why Alska should not go after part of those petrochemical plants and look out for the long-term interest of Alaska. Those plants belong on the North Slope with a railroad to serve them.

There is now economic justification to build the railroad to the North Slope, even without the petrochemical plants. Thus, a railroad would be assured to the petrochemical industry; it would be there when the petrochemical industry was ready to move in.

That concludes my testimony.

SENATOR RADER: Any questions of Mr. McCutcheon? Mr. Gruening.

REP. GRUENING: Jerry, I take it that your major theme in the presentation is that natural gas is too valuable to burn.

MR. McCUTCHEON: Well, that's a true statement; at least that's what the Arabs think at this juncture, and they're going to do their best to stop burning it, or shipping it to somebody and letting them flare it under a boiler, if you want to put it that way. Just ten percent of the petrochemical increase in the petrochemical market built on the North Slope where the exhaust gases could be placed in the reservoir and used for the beginning

of tertiary oil recovery, ten percent of that would be Twenty-Five Billion Dollars a year and, hell, that outweighs royalty gas or anything else we've got, and that would be year in, year out. Take methanol, for example, three-quarters of the equipment that's used for methanol would be also adapted for coal. You know, we've got more coal on the North Slope than any form of energy that the Arabs have got in the Middle East. With that reservoir tied in, the United States wouldn't be buying it.

SENATOR RADER: Any further questions? Mr. McCutcheon, have you discussed any of this with the Department of Natural Resources or Commissioner Martin or any of the people involved in this?

MR. McCUTCHEON: Have I discussed it with them?

SENATOR RADER: Yes. Do they agree with your analysis, or do they disagree with it, or what?

MR. McCUTCHEON: They run for cover.

SENATOR RADER: You've talked about highly technical matters which I don't claim to have near the expertise on either. I'm wondering, what do our oil and gas people say though when you present these arguments to them?

MR. McCUTCHEON: Well, those that will discuss it privately agree this is the way it should be done, and those who do not work for the State I've discussed it with who are

in a similar position in the Federal Government also agree it should be done.

SENATOR RADER: How do you account for the fact that they won't publicly state it?

MR. McCUTCHEON: Political suicide. It depends on who the Administration is. When Wally Hickel was in the Administration some years back, he got his back up over the gas that was being flared in Cook Inlet and he made the oil companies bring it ashore. Now, some people may have condemned him because he had an interest in an Alaska interstate and, consequently, he had an interest in the gas company. But I don't give a damn which way you cut it, at least he did a service for the State. He made them start bringing it ashore, and out of that we wound up with a lot of condensates in the line, and we had troubles for a while, but they've gotten resolved.

Now, all of that came along about that period of time, to prohibit flaring of gas on the North Slope, and anticipating what is happening now. Just let me finish, John. Then came the further intervening Administration which turned around and looked the other direction over flaring on the North Slope, and actually went out of their way to make it possible for the oil companies to flare the gas on the North Slope by putting

in deliberately false information.

SENATOR RADER: Does anybody else have any further questions. Representative Hayes.

REP. HAYES: Jerry, the relationship you mentioned between, was it methylene and coal?

MR. McCUTCHEON: Methanol and coal.

REP. HAYES: Methanol and coal, yes. You mentioned some use of common equipment. Are you talking about transportation equipment?

MR. McCUTCHEON: No, manufacturing process equipment. As a matter of fact, your best combination is to use some coal along with your natural gas in the manufacture of methanol. The problems which have always been dynamiting methanol have been they've always took a look at methanol, converting it to methanol, taking the whereofs back, and then converting methanol back to gas again, and then using that, and that's a very inefficient method of utilization of gas. What they can do on the North Slope is an improvement on the spectrum of all the alcohols of the various gases, ethyl alcohol, propyl alcohol, etc. And you can use them in an automobile. Using straight methanol in a country like Alaska in a gas tank is disastrous -- the first drop of water, the two go separate. But with your longer chain alcohols they remain in a mixable state, or an emulsion there, if

you want to call it that. These could be used in an automobile. I don't have the figures on that, but if you turned the whole thing into methanol, shipped it down to the South 48 States, and then used it in gasoline at, say, ten percent, they would absorb it, the whole, all of it that way.

I don't really even think -- the more I've looked at this thing the less I see that it's appropriate at this juncture to commit Alaska's gas or to make any determination of what we're going to do with that North Slope gas field, and the gas cap gas, and the solution gas, because its highest and best use at this time is to run that reservoir. And I think it's more appropriate when we determine what else we've done in there. We can't even get information on the reservoir, we can't get information on the lisburn formation. Those are there, and we can't get any information on it. You know, you go talk to the Gas and Oil Division and they absolutely dummy up. As a matter of fact, there's two billion more barrels of oil there, and they've never bothered to tell you people. But you can find it in John's little report there, if John will go look in his report; it's there, it shows up in one little paragraph, and it even gives production rates. But the State of Alaska -- and it's attributed to them -- the State of Alaska

doesn't even go out and try to find that information, and they deny it.

SENATOR RADER: Representative Gruening.

REP. GRUENING: Jerry, you might be aware of the fact the Administration just last Thursday commissioned a Thirty-Four Thousand Dollar study to look into the in-State uses of this gas, and I'm assuming it includes petrochemicals. Do you expect that study will produce some of the findings, or agree with your findings?

MR. McCUTCHEON: No. It will be not too unlike the last study which Dobey did.

REP. GRUENING: It isn't Dobey's study, it's another one.

MR. McCUTCHEON: I know, but I suspect it will come out the same way the last one did. It came out and all of a sudden it bounced around. I sat down and did some calculations on it and said, "Hey, man, you can't do those things with State royalty gas that you think you're going to do. You haven't got the gas to get it done."

I'd like to go back and calculate it again because I've heard today here, and I think your accountants will tell you, the State does have enough royalty ethane gas to run a billion pound plant; but I question that. I'm old and rusty and I'd have to go back and polish up on it. I'm not an engineer, so it takes me some time to

struggle around with. But I don't think the State's got enough ethane gas in its ethane to run a billion pound plant, and I think it's going to have to bend. That might be a way to do it, you might be able to trade some of the methane for ethane and make some trades in there. But I don't think that you're really going to see petrochemicals up here until until such time as -- so long as the State keeps parading its resources out on a long leash like a bitch in heat, you've got everything coming around that except what you really want, and I think if you hold it back and say, "This is what we want and this is what we're going to do, and we're going to wait until it's there," then I think you'll see something, and I think you'll see something worthwhile.

SENATOR RADER: Senator Huber.

SENATOR HUBER: My question, I think, Mr. Chairman, is very much like Mr. Gruening's except rather than asking you if you know of a State study, asking if you know and can relate of any industry interest or industry study in this direction.

MR. McCUTCHEON: Are you leading me to the Westinghouse Study?

SENATOR HUBER: The Chairman doesn't allow me to lead. I mean Westinghouse, I mean Wentworth Brothers, I mean all areas that you know about in regards to methanol and all other petrochemicals.

MR. McCUTCHEON: One of the ways to look at this, the State of Texas will be a net importer of oil and gas in 1985, and I think one of those places that oil is going to come from is a place called Alaska. We should be doing what they're doing.

Now, Arthur Little did a study for the State of Texas, and I have never seen it, but I would suggest to you, Senator Rader, that you might have your committee get their hands on it from the Texas Delegation -- and that study shows the various profitability of what happens. A barrel of oil in the State of Texas is worth Five Dollars when it's produced. When it's processed it's worth Fifty Dollars. But when it's made into material or other things, it becomes worth Two Hundred Dollars a barrel.

SENATOR RADER: Mr. Chatterton, do you have a question?

REP. CHATTERTON: Thank you, Mr. Chairman. One question -- I think I heard you right, but I would to double check. When you said, I think using your language, we should hold our gas back, I gather you mean not only our one-eighth tail but also the seven-eighths dog; is that right?

MR. McCUTCHEON: You bet! Right under our -- we have control of the reservoir and there's nothing they can do about that. And the question is a good sound matter of conservation, and I think we should practice it first,

and then go from there. I don't mean to threaten anybody that we're going to withhold our gas, and I don't mean to pirate anybody around, because I don't think we should engage in that kind of game. But I think that we should run our reservoir in a tight-fisted manner. Remember, we're the second largest holder up there. You may think that twelve and a half percent -- but remember, we've got eight percent in taxes too at this juncture, and you subtract that from what Exxon and ARCO have got and all of a sudden we become second and they're third and fourth.

SENATOR RADER: Mr. Parr.

REP. PARR: One brief question, Mr. Chairman. Mr. McCutcheon, I hope I heard you wrong, but I'd recheck. Early in your testimony, if I heard you right, you said that an engineer hired by the Legislature was refused data on the reservoir. I would like to know if I heard you right, and then who is the engineer if that's the case?

MR. McCUTCHEON: Let me state this in expanded form and maybe it will become clear. There was a proposition which was passed by the Oil and Gas Taxation Committee to hire a reservoir engineer, a person who normally deals with proprietary information and does it every day. This person was to be responsible to the Legislature. This was Senator Croft's committee, and my position was

that the man should be hired. Approval was for the man to be hired. Then the next question of my position was that he should be hired but that he should not proceed further untill such time as there was access to the proprietary information because we've had enough people going down exactly the same corridor but without the proprietary information and, thus, a question -- Mr. Martin wouldn't let him see. First the question was bounced off and, yeah, they would. The next time around when it came in formally, formalized in writing, no, they would not. And I think that this committee, or any other committee having a person who normally handles this thing -- I don't mean anybody, but I mean a man industry-wise who does this all the time, should have access and should be responsible only to the Legislature, the same way as Congress has got access if it really want's to buckle it down to anything that the United States Government has got, little secrets that they're supposed to be holding back from them. And I think that the same damn thing applies to the Legislature. I don't think we should have an Administration which can withhold information. True, if you've got to have one thing and the information the man comes back with to you is going to have to be secret, he can give you an opinion of what he has seen because he can't release the

information, that has to still remain proprietary. But the Legislature should have a man that has access to proprietary information when it applies to the Legislature.

SENATOR RADER: Representative Parr, any further questions? Any further questions of Mr. McCutcheon? Thank you very much, Mr. McCutcheon, we appreciate your patience and your testimony.

We have in addition to those listed on our agenda several others whose names have been added since then. We will continue. Mr. Penney sent me a note at 4:50 saying that he had another commitment, that he couldn't testify. After that we have Mr. Thomas Stahr of the Anchorage Municipal Light and Power. Is Mr. Stahr still here? Mr. Stahr, do you wish to testify?

MR. PENNEY: Yes, that would be fine, Mr. Chairman. Chairpeople, if that is the correct term, my name is Bob Penney, and I'm President of the Organization for the Management of Alaska's Resources. On my left is Ms. Paula Easley, she is our Executive Director.

This month OMAR is two years old. It was started some two years ago, with the idea of having some citizenry input into what happens to the development and/or the management of Alask'a resources. One of the first goals and projects that we took on was the issue of this natural gas line, and since then we've spent many, many hours and an awful lot of time trying to at least get a layman's understanding of what's really happening.

We have an office in Anchorage. The address is the Fourth Avenue Theater Building. We have a one-man office in Fairbanks, Alaska National Bank, and this next month we'll have an office in Seattle, and we have an associate office in Washington, D.C. under USA, Alaska. We have forty-nine directors from all over the State, and we have an executive board of eleven people, and the executive board meets once a week. We have public meetings once every Thursday in the Anchorage office.

I'd like to start off by saying OMAR doesn't really say who builds the gas line, we never have. We don't care where it goes, through what cities it may

pass; we just say it must go to a tidewater, ice-free port within the State of Alaska. And our second point, in our estimation, Prudhoe Bay gas is going to be produced. Now, it's produced with the oil and, as we understand it, we don't own one-eighth of the gas, we own one-eighth of the production and initially, unless we take it in like kind, we own one-eighth of the revenue. And, as we understand it, if we elect to take it in like kind, as Commissioner Martin has done, we then can take one-eighth of that production of that gas in like kind or take the gas itself.

(b) Per Atlantic Richfield Company engineers (Chat was at the meeting) it will cost nine to ten and a half percent of the gas to reinject it into the ground.

(c) It's against the law to flare it, as it should be.

(d) Eighty-seven and a half percent of the gas is already sold to others. It will leave the State, the rest of the country will demand it. There is a Federal law that sets a time frame for delivery of this gas. The gas is going to be produced.

Our share, as brought out by Mr. Moody, of the estimated three and a quarter trillion cubic feet, we have in this contract before you sold or are endeavoring to sell eighty percent of that gas, or 2.6 trillion feet,

and that amounts to eighty percent of the gas. Somebody said the other day they thought only seventy-five percent should be sold, and this is approximately eighty.

Our surplus royalty gas has to be sold for a period of time; that's what our observations have given us. We can't use it all right now in the State. I believe the State of Alaska looked for four and a half months trying to find a user for that gas specifically within our State. OMAR really feels this, and the reason we feel we're for this line is as follows.

We feel that the eventual use of the royalty gas within our State is the number one reason and benefit that Alaskans will accrue from this gas line.

(b) At a flow of three hundred million cubic feet a day, this royalty share equals, according to our figures, 2.2 times the amount of gas presently being used by forty percent of our population, the Anchorage Bull.

Last year the State could not find, nor is there a user at this time, who will agree to use or develop all the gas within our State.

(d) OMAR concluded over a year ago that we have to sell our surplus gas in order to have it back again some day. The eventual use in our State, as we stated before, the eventual use in our State of that gas should

be our number one priority.

Number Four: Prudhoe gas is going to market and the routing of that gas line will be a political decision finally decided by the Congress of the United States of America.

(a) We initially started working for a royalty gas contract at the recommendation of Senator Stevens and Representative Young over one year ago. They told us the route would probably be a political decision, just as the oil line one was.

(b) El Paso's application, in our opinion, is the overall number one choice for Alaska. Let's face it, they're a pretty small company in the big picture, when compared to the forces and money behind Arctic Gas at this time.

(c) We have been urging Commissioner Martin and the Administration since last February to conclude a royalty gas sale as recommended by the Congressional Delegration. As far as we're concerned, Guy Martin took a long time, worked on it very thoroughly, and went through extensive negotiations. We believe that last April 14 the contracts were almost signed and would have possibly been included for review by the last Legislature, but they were not completed until this November.

A sale, to be most effective for our State, should have been concluded, in our estimation, last spring. It has taken twelve months to get this contract before you in the steps it's in. Six to eight months from now it will all be over, the decision for the routing will have been made.

(d) The FPC Judge stated many times during the testimony and asked, "What's Alaska going to do with its gas? Is their gas going to go into the system? Are they going to keep it?" This contract you have before you was entered into the FPC record in its rough draft on the last afternoon of the last day before public testimony was closed.

(e) If all the gas goes to Arctic and if our State found no new reserves for some reason, wouldn't it be something if Alaska ended up some day like Louisiana, some years hence, with a shortage of gas? It's not probable, but it is conceivable.

(f) A political decision? Alaska is using all the forces we can to affect a Congressional decision. Do you mean like we did for the oil line? Or like we did for Statehood? You bet we are! If we don't stick up for our own state, I don't really think anybody else is going to.

Here are some of the letters we have received

from Senator Stevens, Senator Gravel and Representative Young dated November 2, November 5 and November 17, 1976, mandating a royalty gas contract.

MS. EASLEY: Last fall when we were getting pretty nervous about whether the royalty gas contracts would be concluded in time to be included in the FPC record, we asked Don Young and Ted Stevens and Mike Gravel to meet with us, and we did separately. And we asked them each a very important question. We said, "Do you still consider the royalty gas contract critical to the success of the Trans-Alaska gas line."

Ted Stevens told us that if we did not have the royalty gas contracts we didn't have a chance to win. Don Young said the same thing, and Mike Gravel said the same thing in different words. So we were convinced then, as we are now, that that is the most important thing that we need in order to do our job in committing the funds that have been contributed to our organization to carry this fight to the nation.

MR. PENNEY: November 2 in a letter to Honorable Jay Hammond from Mike Gravel: "In response to a request from the Organization of Management of Alaska Resources, I am putting on paper my position with respect to the commitment of Alaska's royalty gas. I have enunciated this position on numerous public occasions, both in Alaska and

Washington, D.C. Without doubt, the commitment of Alaska's share of the Prudhoe Bay natural gas could bring us allies in our cause if only because the beneficiaries would thereby have a proprietory interest in the success of our endeavor, designation of an all-Alaskan gas line."

November 5, in a letter from Senator Stevens, to Paula Easley at OMAR: "Dear Paula: I am writing to confirm to you my feelings that Alaska's royalty gas should be committed so as to pick up as much support as we possibly can gain in the Congress, in the South and in the Southwest. As you know, I have not expressed any opinion on the question of that share that any respective purchaser receives. However, these commitments will only make sense if they are associated with support for the all Alaskan line, and to get that the share to the new supporters must be credible." That's the time when we were being asked by, for instance, Senator Stevens wanted to see Tenneco, I think, at the time get it all, and Senator Gravel was thinking that El Paso should have gotten half. But it was a decision of what the percentages was, was left up to the State Administration. In fact, we didn't make any comments because we don't think that's within our vein.

"The recent report of the Berger Commission's

staff recommendations (continuing with the Senator's letter) reinforces my feeling that we have a real chance to win, and when the review of Alaska's gas transportation system comes before Congress we will need all the help we can get."

November 17 from Don Young to the Honorable Jay Hammond, in addition to a wire he had sent the prior day. "It is timely that the State has taken this action to achieve the goal of an all Alaskan route and to preserve the State's option for use of its royalty gas in the State. In the past, FPC Hearing Judge Nathan Litt has repeatedly inquired about the disposition of the State's royalty gas. It has been argued that if the State sold its gas it would be an unrefutable indication that the State is willing to do all that is in its power to commit itself to an all Alaskan route. Now at last this is the case and any reservations on this point can be swept aside."

Political decision? It is. If we don't listen to and seek the feelings of our Congressional Delegation as to what should be done on an issue decided in Congress, then who should you ask.

Number A: I would like to take a moment out at this time to do the same thing that Russ did, and I would like to publicly say how much I thought Bob Ward's

testimony was really right on the button yesterday, and he renewed my respect for him so much -- that he just told it like he really thought it was. I thought that was probably one of the nicest presentations I ever heard anybody give, particularly when they've got to have the least desired position of anybody involved. I thought it was well done.

We concur with that thinking. We thoroughly endorse the concept of these contracts. As we said, it's taken twelve months to get this far. We weren't privy to the negotiations. When last April we asked Commissioner Martin how negotiations were to be handled he told us no one was going to be involved but the four companies and the State. We understood and agreed. It took almost seven months to conclude these negotiations.

We really can't answer the questions as to the technical terms and things that you've heard now. The only thing that we can do is address ourselves to the concept of the contracts, which was initially told to us by the Congressional Delegation.

We have some concerns about the switching clause, and we've dicussed it at some length. We have a couple of suggestions after, if you want to. It's hard now for us to judge what's going to be hindsight in two to three years from now, and I'm sure it was

awfully hard for Commissioner Martin and the attorneys to judge now the best contract to draw for probably 1982. But I think from testimony I've heard here, I think the contract is probably as well done as it could have possibly been.

After all our encouraging Commissioner Martin to finally conclude a sale, we have to admit we think on an overall basis the contract really exceeds in many ways our best expectations. We think overall that he's done a fine job and actually has done the best he possibly could for our State, particularly under the circumstances.

One of the points that, as we understand it -- in essence if this contract is inked and it goes for approval, or if it doesn't go for approval but if Congress eventually approves the all Alaskan route as it's proposed, as we understand the contract, the next day our Governor could say, "We have the route now; however, we have an in-State use for the gas and two years from now we're going to take it back," and then two years hence, even before the line is even built, before it's ever constructed, we can cancel out the terms of the contract. I just have a feeling that there's got to be a little faith on both sides, because I don't know how I'd sign it if I were a gas company. But evidently they did think it was all right.

One other point that hasn't been brought out and I don't know why they don't want to talk about it, but I'm going to talk about it because I think it's very important. But El Paso, in essence, and I think you'll find that as we go into this the next six months and some more testimony, if you want it, will show that the financing of either one of these three routes is going to be one of the major critical things, and we think at this time it is the major critical stumbling block for Arctic Gas. And we have testimony, if you want to review that further.

But El Paso, in essence, has already got twenty-five percent of their system financed, as we understand it. Their tankers are going to cost 1.6 Billion Dollars, which is a quarter of their project, and under the Maritime Act (I don't remember the name of the Act) there is a low interest rate available for that, and also in a Federal insurance. So, in essence, they've already got twenty-five percent of their package cut and done. I don't know if that's been brought out before, I don't think it has.

In summation, don't forget, we won't have any accessible surplus of royalty gas if Arctic is certified, and I really think people lose sight of that. We will just have dollars of revenue from then on, because Mrs.

Jones is going to be cooking eggs in Ohio for the next twenty-five years with our royalty gas.

And (b), we think this is almost as important: if either Canadian line gains approval, you will then have an established corridor from the heartland of our State funneled directly to the South 48. If we ever want or choose then to see Pet 4 or other resources used or developed within our State, the chances of doing so will become much, much more remote. Whatever you do with this contract, somebody, some day is going to buy a portion of our surplus royalty gas, and we think that if El Paso, Southern and Tenneco would be foolish enough -- they would be foolish, they'd be unfair to their stockholders, and less effective for Alaska if they publicly review their game plan for approval of the Trans Alaska line. If they do, they're almost sure to read again about it in Jack Anderson's column or else somewhere else in national print. If you haven't heard about the column, I'll tell you about that.

They are large companies, they need the gas, and "no ticket, no laundry." If they don't work with us they very probably will get no gas. So we have to have some reliance on their ability to perform.

(c) To me, personally, this contract is also important nationally, as it's like the tapping of a pencil

on the negotiating table by the State of the Far North, that we're not asleep, we are interested in our own destiny, we do want a say in the use of our own natural resources, in our way of life, we do want to get off the Federal dole, and we do want to direct our own heritage.

We have over one hundred and fifty press clippings. Somebody asked if this was going to be news across the nation, and I'll let Paula enunciate on that. This news of the royalty gas sales has already been in most of the major papers in the United States.

MS. EASLEY: I'm sure most of you are aware of that, and unfortunately it has been reported and accepted as an already concluded situation, and quite a few of the articles have mentioned that the contracts do have to have the stamp of approval of the Alaska Legislature. But the way it is stated, it's just been that it is an assumed fact. And we are concerned about this element of it, should the contracts not be approved, the effect of that at the national level in indicating to the public and to the Congress that Alaska is not behind the proposal that it professes to be, and that eighty-five percent of its citizens say they are.

MR. PENNEY: Last, review, assess, discuss, make sure it's right for all of us, if you have to, this contract. The

final terms are in your hands. But, if you will, pass it out as soon as you can with a large majority. Affirm and then make it your first step in the fight for our own gas line.

Then second, (that's the first step) pass an appropriation bill to be used nationally in an effort to tell the Alaskan side of the story, that the all Alaskan U.S. route is the best one for all of the United States.

Then thirdly, we respectfully ask that you do everything you can legislatively to see that it's "easier" to go through Alaska with our gas than through the middle of another country.

SENATOR RADER: Thank you both. Any questions? Senator Huber.

SENATOR HUBER: One short one. Bob, you didn't agree with Bob Ward's testimony so much as to agree with his bottom line, did you, that it wouldn't make any difference?

MR. PENNEY: No, John, but if you'd like to -- some of the points he brought out we think were very valid, particularly as far as the part that gets into problems in Canada, and we researched those very thoroughly. We subscribe to two clipping services from Canada, and it keeps one person busy just reviewing those, and we think we have a pretty good grasp or feeling for what is taking

place in Canada, at least as far as the press reports. And if you want to get in and talk with some of that, we can tell you where we think some of the tough parts and some of the good parts will be.

SENATOR HUBER: You at least agree that he was very candid?

MR. PENNEY: Yes, sir.

SENATOR HUBER: As far as the last line -- I wanted to be sure you didn't agree with his last line.

MR. PENNEY: That's true, John, but I was very impressed with his testimony. One other aside, there has been some mention in talk made about the treaty here, and last February 1, I believe, Aron Tussing brought this up, so we will be able to see how his suggestion worked. But February 1 we sent a letter to Senator Gravel, Senator Stevens and Don Young, and in essence said this, that while we understand that the U. S. and Canada are agreeing to the treaty in which no line will be taxed any different than somebody else's line, as we all know the -- just let me read the paragraph. "We at OMAR are concerned that the provinces through which the Arctic Gas or Alcan Pipeline might pass have not ratified nor endorsed this treaty between U.S. and Canada. We are all aware the provinces of Canada have unusual taxing powers when compared to those enjoyed by each of the states of the United States. We ask that you consider

a proposal requiring each province through which a Prudhoe Bay gas line might pass to give a written pledge to support these treaty provisions before the U. S. Senate ratifies the treaty itself."

SENATOR RADER: Any further questions? Senator Sumner.

SENATOR SUMNER: You mentioned an appropriation. Did you have a figure in mind or have you gone through some other channels with that?

MR. PENNEY: Senator Sumner, Mr. Chairman, yes, we have. We've projected out two or three different things that could be done. But if the State were to hold down its expenses as closely as possible, we think it's going to require a Three Hundred Thousand Dollar contribution just on the part of the State itself to do any kind of effective job. But there are so many things we could be doing in the next six months to try and win this thing. There are so many avenues we could explore. We've asked the Governor, and Lowell Thomas is going to take another trip now for thirty days. We have to raise the funds to take care of his airplane tickets. He was very effective last time. He's written letters to every one of the other Attorney Generals throughout the United States -- or Lt. Governors, excuse me, asking them about the Alaska route. There's an awful lot we could be doing. We're going to have two more flights going back

to Washington, D.C., about a hundred and ten people, later on this spring and early summer, as soon as our Delegation tells us. And there is so much we could be doing, but if we don't start doing it, and if we don't start doing it right away, and really if we do nothing, and we get nothing, that's just about what we deserve.

SENATOR RADER: Any further questions?

MR. PENNEY: Thank you very much.

SENATOR RADER: Thank you very much. We have a number of exhibits that we need to introduce. Let me just identify them. We have a letter from United States Senator Mike Gravel supplementing his wire of several days ago. That will be Exhibit 20. I won't read it, it will be attached. Exhibit 21 is a series of correspondence including a letter from the Lt. Governor of the State of Alabama, a letter from George E. Smith, Alaska Chapter of Associated General Contractors, a letter from Robert L. Hardick, Anchorage Chamber of Commerce, a telegram from A. L. Swalling of Anchorage, Alaska, a telegram from J. A. Sproul, a telegram from Richard L. Maullin, a letter from Mrs. Jeanne Wilson, President of Greater Fairbanks Chamber of Commerce, a letter from George Easley, President of the Easley Construction Company, a telegram from James T. Jefferson, of Jefferson Enterprises, Detroit, Michigan. Most of these were responses to our

invitation to come and testify, and they sent written letters or telegrams expressing approval or disapproval of what we were doing. I don't intend to read them but I intend to make them a part of the record; so that will be Exhibit No. 21, called miscellaneous correspondence.

(Whereupon Exhibits 20 and 21 were duly marked.)

Do we have any other ---

SENATOR HUBER: Mr. President, may the list to whom invitations were sent to be a part of the record?

SENATOR RADER: Senator, I don't know that we can do that. Representative Gruening's office, I know, sent out some and my office sent out some in two different groups that had some overlap. I'd invite you to come to my office. We've got the letter from the Legislative Affairs people, and, Elke, maybe you know more about those lists than anyone. Would you explain to us what ---

MS. KALLAB: Yes, to the extent that I can. As far as on the Senate side, the list that we initially began with was furnished to us by the Department of Natural Resources which are used as lists as far as Oil, Gas and Royalty Board invitation lists. Those are the three lists we worked from.

As it turned out, in the confusion, everybody got an invitation. So I don't think we've lost anybody from the Department of Natural Resources that has been

on that side.

On the House side, as far as Representative Gruening is concerned, I know that he invited several people that were also invited by Senator Rader, namely Dr. Tussing, and in addition he invited Dr. Michael Scott to testify for the joint hearings here. I don't know, but I'm sure aide, Brian Rogers, will have a complete listing as to what other invitations were issued, either verbally or by writing.

The material that went out through Senator Rader's office is very readily available and could be very easily made a part of the record.

SENATOR RADER: Without objection, I will make available a list of the invitations sent out by my office, and it will be marked Exhibit No. 22. Representative Gruening, do you want to supply such a list for Exhibit 23?

REP. GRUENING: That's fine.

(Whereupon Exhibits 22 and 23 were duly marked.)

SENATOR HUBER: My only reason for the request was so that the record should show that we had invited a large cross section of people so it couldn't be said that we had a selected list later on.

SENATOR RADER: Fine.

REP. GRUENING: Mr. Chairman, in that regard you might want to put another exhibit, and that is newspaper ads that

were run by the joint committees, and we might even get a proof from the paper to attach so they know the dates.

SENATOR RADER: How many newspaper ads were run and in what newspapers?

REP. GRUENING: Daily News Miner, the Anchorage Times and the Daily News.

SENATOR RADER: One ad or several ads?

REP. GRUENING: Two days in each paper.

SENATOR RADER: If we can find a copy of that, that will be supplied to the reporter as Exhibit No. 24.

(Whereupon Exhibit 24 was duly marked.)

SENATOR RADER: Do we have any other requests for exhibits to be attached? We have one final exhibit, No. 25, which will be supplied by the Department of Natural Resources, and with that I take it that concludes our joint hearings; is that correct?

(Whereupon Exhibit 25 was duly marked.)

REP. GRUENING: Do we have the relevant statutes attached in there?

SENATOR RADER: No, we do not. Exhibit 26, would your office supply what you consider to be the relevant statutes?

REP. GRUENING: Sure.

SENATOR RADER: Exhibit 26 will be the relevant statutes, to be supplied by Representative Gruening's office to the reporter.

(Whereupon Exhbit 26 was duly marked.)

SENATOR RADER: Ms. Easley.

MS. EASLEY: I'm sorry, I just gave the reporter some telegrams and letters from other organizations that had asked us to speak on their behalf. Can she just do that, write them in?

SENATOR RADER: I'll make that Exhibit 27, it will be called miscellaneous correspondence and written testimony submitted by OMAR on behalf of others.

(Whereupon Exhibit 27 was duly marked.)

SENATOR RADER: Are there any other exhibits that should be made a part of this written record? Ladies and gentlemen---

REP. GRUENING: John?

SENATOR RADER: Yes.

REP. GRUENING: I know you want to get out, but what are your plans for talking to the Department of Resources people?

SENATOR RADER: Mr. Boness was scheduled to leave Sunday for Washington, D.C. and be gone for several weeks to work on the Federal Power Commission brief. Commissioner Martin has submitted to both you and I a schedule of his activities. It appeared to me that if we d d not meet with him Monday -- Mr. Boness agreed to stay over and Mr. Martin agreed that Mr. Boness' presence was important if he was going to submit any rebuttal testimony -- it

appeared to me that if we did not meet Monday it might be several weeks before we could meet again.

It was my judgment and it was my feeling, as the chairman of our committee, and I've announced it in the Senate, that we will meet with Commissioner Martin and Mr. Boness of the Attorney General's office, and whomever of their staff that they deem important, to take any supplemental, rebuttal or additional testimony that they think has been brought out by any of the testimony that has been presented thus far.

REP. GRUENING: What time?

SENATOR RADER: 10:00 o'clock, here.

REP. GRUENING: We normally have a session. We'd like to attend.

SENATOR RADER: Our problem is our session. I scheduled it for 2:00 o'clock. As I recall, I talked to you and I thought that you were not interested in this, so I scheduled our session for 2:00 o'clock.

REP. GRUENING: It was my understanding it wouldn't be part of the record.

SENATOR RADER: It will not be a part of the record.

REP. GRUENING: But it is from your prior statement that they will be submitting something and you're taking testimony.

SENATOR RADER: They will submit written testimony or whatever

they think is important for this record, and I don't know what that's going to be. But our committee wanted to hear from them and didn't want to wait two weeks for it.

REP. GRUENING: Well, I'm wondering -- I haven't talked to the rest of the committee, but there might be some interest in talking to these folks if it's going to be on the record.

SENATOR RADER: I did not plan to have the reporter here; in fact, the reporter had asked to be relieved. I did not intend that it would be a part of the written record. If you are interested, let's make it 10:30, if we could do that.

REP. GRUENING: Whenever.

SENATOR RADER: All right. Now let me ask you this: if you wish, we can make that a part of the joint hearings and ask the reporter to come back. I don't know whether the reporter can or not.

REP. GRUENING: I don't know if that's necessary, but as long as Mr. Boness is going to be here especially for that, we might as well make it a half an hour later and we'll all attend.

SENATOR RADER: All right. Then I think we should continue the joint hearing, and I will ask the reporter then to come back at that time. I understand we have the

courtroom committed to us at that time, 10:30 Monday, and I'd like to ask the staff if they will make certain that is posted on the bulletin board; my own staff if they will contact the Department of Natural Resources and inform them, and try to get a page over here from the Senate, or send a page over here at a quarter to 10:00 to inform people who come here for that purpose that the hearings will not commence until 10:30, and to see that order is preserved in the courtroom.

We will adjourn until 10:30 then Monday.

(Whereupon the hearing adjourned at 6:05 p.m.)

Exhibits

AGO 800522

JOINT PUBLIC HEARINGS

of the

ALASKA STATE LEGISLATURE

on

SCR 3, 4, 5 and HCR 11, 12, 13

"THE PROPOSED SALE OF ROYALTY GAS"

January 31, 1977 - February 7, 1977

Juneau, Alaska

VOLUME VI

EXHIBITS

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AGO 800523

EXHIBITS

1. Telegram to Senator John Rader from Senator Gravel dated January 28, 1977.
2. Telegram to Senator John Rader from Senator Stevens dated January 28, 1977.
3. Effect of Alaska's Royalty Gas on Natural Gas Supply: Tenneco Market Area (25 states).
4. Letter to Senator John Rader from Congressman Young dated January 28, 1977.
5. Letter to Senator John Rader from Senator Mike Gravel
6. Letter to Senator John Rader from William H. Kumm of K M Associates dated January 27, 1977, with attachments.
7. Telegram to Senator John Rader from Hall Green dated January 31, 1977.
8. Letter to Mr. Richard Maullin from Robert C. Thomas of Tennessee Gas Transmission Company, dated January 18, 1977.
9. Amendment to Application or Report - Securities and Exchange Commission.
10. Statement of Southern Natural Gas Company before Special Committee of Alaska Legislature.
11. "An Inkling of the Long Journey" by Arlon R. Tussing, Northern Perspectives, Volume four, number four, 1976.
12. Summary of Comments by Arlon R. Tussing at National Economic Research Associates, Inc. Workshop on Economic Growth in the West and Related Energy Problems.

13. El Paso Natural Gas Company - Natural Gas Consumption for those States Served Wholly or in Part for Calendar Year 1975 and Natural Gas Curtailment in 1976 and Estimated Curtailment in 1981.

14. "The Alcan Pipeline Project - A Realistic Solution to the Transportation of Alaskan Gas."

15. Cost Estimates for Gas Transmission Line and Distribution System for Movement and use of North Slope Natural Gas to Interior Alaska, prepared by Robert Dempsey.

16. "Economic Analysis of Alaskan Royalty Gas Contracts" a report to the State of Alaska: Legislature by Jensen Associates, Inc.

17. United States of America Federal Power Commission, Report to the Commission signed by Judge Nahum Litt April 27, 1976.

18. Two-page document dated February 4, 1977, from Jerry McCutcheon to Senator Rader

19. Report dated January 28, 1977, to Committees from Vinson, Elkins, Searls, Connally & Smith

20. Letter to Honorable John Rader from Senator Mike Gravel

21. Group of documents consisting of:

    a. Letter from Honorable Jere Beasley, Lt. Governor State of Alabama to Honorable Lowell Thomas, Jr. Lt. Governor, State of Alaska.

    b. Letter from George E. Smith, Alaska Chapter of

Associated General Contractors.

c. Letter from Robert L. Hardick, Anchorage Chamber of Commerce.

d. Telegram from A. L. Swalling, Anchorage, Alaska

e. Telegram from J. A. Sproul, Pacific Gas & Electric Co.

f. Telegram from Richard L. Maullin, Chrm., Ca. State Energy Commission.

g. Letter from Mrs. Jeanne Wilson, Pres., Greater Fairbanks Chamber of Commerce.

h. Letter from George W. Easley, Pres. G.W. Easley Co., to Senator Rader

i. Telegram from James T. Jefferson; James T. Jefferson enterprises, Detroit, Michigan

22. Mailing list of invitations by Senator Rader's office.

23. Mailing list of invitations by Representative Gruening's office.

24. Newspaper ads in Daily News Miner, Anchorage Times and Daily News.

25. Report by Department of Natural Resources

26. Statutes relevant to sale of royalty gas.

27. Group of documents consisting of:

a. Telegram from Lynn Chrystal, Mayor of Valdez.

b. Telegram from Barney Neyring, Valdez

c. Telegram from C. W. Ellis, Valdez Airport Terminal

d. Telegram from James C. Manley

e. Telegram from Mr. and Mrs. Ervin Michael

f. Resolution of January 26, 1977, by Greater Anchorage Chamber of Commerce

g. Telegram from Paul and Ellen Foster, Valdez

h. Letter from Mrs. Jeanne Wilson, President, Greater Fairbanks Chamber of Commerce.

28. Federal Power Commission news release from Washington, D.C., No. 22868, dated February 1, 1977

29. Federal Power Commission news release from Washington, D.C., No. 22869, dated February 1, 1977

30. Letter of January 30, 1977 from Ruth A. M. Schmidt, Ph.D.

31. Letter and Resolution from John W. Pemberton, Clerk, Alabama House of Representatives.

32. Letter of February 3, 1977 to Honorable Lowell Thomas, Jr. from Evelyn Gandy, Lt. Governor, State of Mississippi

33. Letter of February 7, 1977 to Committees from Don Dickey, President, Alaska State Chamber of Commerce.

34. Resolution No. 76-1117-13 by State of California State Energy Resources Conservation and Development Commission

35. Letter of February 3, 1977 to Honorable John L. Rader from K.E. Showalter of Sohio Pipe Line Company, enclosing copy of letter of March 10, 1976 to Honorable John L. Rader from C. E. Spahr of Sohio

36. Letter of February 7, 1977 to Senator John Rader from Eric Eckholm of Anchorage, Alaska

37. Telegram from Dave Rose, Chairman, Anchorage Assembly
38. Telegram from Doug Bechtel, President, Cordova Chamber of Commerce
39. Telegram from Ron Moore, Levance Forsythe, Les Reynolds, Richard J. Sears, John Berggren and Teri Young
40. Telegram from F. W. Catalano, President, Home Builders Association of Alaska
41. Letter from Axel (Bud) Janson, Vice-Mayor, City of Cordova
42. Resolution of February 15, 1977, from Juneau Chamber of Commerce
43. Telegram from Fairbanks Clinic, Abram H. Cannon, M.D., Gary L. Walkup, M.D., Glen W. Straatsma, M.D., James N. Bertelson, M.D., H. James Jordan, M.D., Joseph M. Rebar, M.D., Robert D. Hanek, M.D., Joseph K. Johnson., M.D. and Donald A. Denneson, Administrator
44. Letter of February 8, 1977, together with attachments to Honorable John Rader and Honorable Clark Gruening from Michael C. Holland, Assistant to the Vice President, El Paso Alaska Company

FEBRUARY 1, 1977

SENATOR RADER: The Joint Committee will come to order. Some of our people are not yet here. I have a communication from Congressman Don Young which will be made an exhibit but I did agree with him that I would read it to the committee. Because it will be a part of the exhibit, I thought I might go ahead and read it now even though some of our committee members are not here.

(Whereupon Exhibit 4 was duly read into the record)

SENATOR RADER: Exhibit 4 will be Congressman Young's letter. Exhibit 5 is a Friends of the Earth communication.

SENATOR HUBER: Can we have theirs read to us, Mr. Chairman?

SENATOR RADER: We certainly can if you wish, sir. All exhibits can be read if any member of the committee wants to. I only read Congressman Young's because I agreed with the Congressional Delegation that I would read theirs.

SENATOR HUBER: I thought with the testimony coming up it might be good to hear what some of the environmental groups have got to say before we read it afterwards. It might affect some of the questions that I want to ask of some of the people that are testifying so I request that it be read if it isn't too long.

SENATOR RADER: Exhibit 6 will be K M Associates' communication

dated January 27th addressed to me, with attachments. Exhibit 7 will be a wire addressed to me from Alaska Farmland International Energy Company dated January 31st.

SENATOR HUBER: What is the address on that, Senator?

SENATOR RADER: I have only Anchorage. I hand the exhibit to Senator Huber, I'm not able to determine for certain what it is.

SENATOR HUBER: May I look at it now?

SENATOR RADER: Certainly. Do we have any further exhibits? Exhibit 8 is a copy of a letter from Robert C. Thomas to Mr. Richard Maullin dated January 18.

(Whereupon Exhibits 4, 5, 6, 7, and 8 were duly marked)

SENATOR RADER: Any exhibits can be read although I do want to -- frankly, some of these are quite lengthy. If it looks like it is going to delay us too much, I'll leave it up to the committee and we'll take some votes on it. Otherwise though, if we have miscellaneous exhibits you wish to read why we'll go ahead with that.

SENATOR HUBER: I would request, Senator, that we read the one from the Friends of the Earth, which apparently is quite short, and this telegram from Alaska Farmlands that I have briefly skimmed over. I think it is very pertinent and should be read.

SENATOR RADER: I'll ask Mr. Gruening if he would read it.

My voice is going to give out before I get through with this.

SENATOR HUBER: It does, Mr. Chairman, it does tie in with questions I asked about what groups were sold or had chances to bid on it yesterday, and I think this is quite important.

SENATOR RADER: I want to make only one point and that is that we have a great number of out-of-town witnesses here and matters which can be read by members later on, unless it is pertinent I'd prefer to take our out-of-town witnesses first and our written communications at the end of the hearings. But, at your request, Senator, we'll make an exception in this instance.

SENATOR HUBER: I would appreciate it if you would on those because I think they'll affect the --

REP. GRUENING: Okay. Mr. Chairman, on the Friends of the Earth statement, I think we'll have somebody reading that later.

SENATOR RADER: Mr. Gruening informs me that someone will, at a later date in the hearings, read the Friends of the Earth statement.

SENATOR HUBER: In that case I will withdraw my request.

REP. GRUENING: All right.

REP. SWANSON: Mr. Chairman, will we also hear the letter from Farmland Incorporated?

REP. GRUENING: I'm about to read that.

SENATOR RADER: Yes, Mr. Gruening is going to read that right now.

(Whereupon Exhibit 7 was duly read into the record)

SENATOR HUBER: Mr. Chairman?

MR. HUBER: Inasmuch as they -- in that telegram they did mention certain communications between them and the Department of Natural Resources which they said is the reason for them taking this stand, I would request that the committee, through you -- through the joint chairmen, request from the Department of Natural Resources as a part of our record, such correspondence. I mentioned yesterday that there was a complete turndown in correspondence from certain other companies too, so I would request that you do request the Department of Natural Resources their correspondence with Farmland, Inc. which is mentioned in the telegram. Also, correspondence with Wentworth and Signal Burma groups in regard to purchases.

SENATOR RADER: Senator, we'll certainly consider that but I don't want the committee at this time to be diverted from the taking of testimony from persons who are out of town. We'll have an opportunity after they leave. We're going to have a hard time getting them into the

schedule we've already proposed. I think your point is well taken and we'll consider it at later times with your permission.

SENATOR HUBER: Maybe, Mr. Chairman, if you'll bear with me just a moment, it may be that the accusations these people raise have absolutely no bearing whatsoever and that they are not worthy of it but certainly by seeing all of the record in the Department of Natural Resources, in their letters and requests and in the answer to them we'll be able to make our determination of it.

TELEGRAM

RCA ALASKA COMMUNICATIONS, INC.
PHONE: 586-6440
JUNEAU, ALASKA 99801

1977 JAN 28 PM 7 25

02036 NL ANCHORAGE ALASKA 51 01-28 0345P AST

EXHIBIT# 1

PMS SEN JOHN RADER

JUN - - 1296

I URGE PROMPT CONSIDERATION AND APPROVAL OF THE ROYALTY GAS CONTRACTS FACING THE LEGISLATURE

EXPEDITIOUS ACTION ON THE LEGISLATURES PART WOULD ACCURATELY REFLECT THE VAST MAJORITY OF PUBLIC OPINION ON THIS ISSUE IN THE STATE. IT WOULD ADDITIONALLY HELP IN WASHINGTON THE CHANCES FOR APPROVAL OF AN ALL ALASKA GAS PIPELINE.

MIKE GRAVEL USS

1977 JAN 28 PM 7 42

TELEGRAM

RCA ALASKA COMMUNICATIONS, INC.
PHONE: 586-6440
JUNEAU, ALASKA 99801

AAX

EXHIBIT # 2

IPMAFUB AHG

I-035734A028 01/28/77

ICS IPMNAWB WSH

SUSPECTED DUPLICATE

09027 GOVT NFWASHINGTON DC 460 01-28 710P EST

PMS HONORABLE JOHN RADER

1297

PRESIDENT

ALASKA STATE SENATE

POUCH V

JUNEAU AK 99811

I APPRECIATE YOUR REQUEST FOR MY VIEWS ON THE PROPOSED CONTRACTS FOR THE SALE OF THE PRUDHOE ROYALTY GAS TO EL PASO, SOUTHERN AND TENNECO.

AS YOU KNOW, LAST YEAR I URGED GOVERNOR HAMMOND TO NEGOTIATE A SALE OF THE ROYALTY GAS FOR SEVERAL REASONS. I FELT THAT A SALE WOULD CLEARLY ASSERT THE STATES RIGHT TO CONTROL THE GAS AND WOULD, THEREFORE, PREVENT DEDICATION OF THE GAS TO INTERSTATE COMMERCE. THAT ARGUMENT IS STILL VALID IN SPITE OF THE AMENDMENT TO PUBLIC LAW 94-586, GIVING ALASKAS GAS SPECIAL

PROTECTIONS. I ALSO ASKED THE GOVERNOR TO SELL THE GAS FOR THE ADDITIONAL HELP SUCH A SALE WOULD BRING TO THE APPROVAL PROCESS IN WASHINGTON. THE ASSISTANCE SOUTHERN AND TENNECO CAN GIVE HAS ALREADY BEEN DEMONSTRATED IN WASHINGTON. THEY HAVE INTERVENED BEFORE THE FEDERAL POWER COMMISSION AND HAVE INITIATED CONTACTS WITH OTHER MEMBERS OF THE HOUSE AND SENATE. ALSO THE SALE REPRESENTS THE FIRST CONCRETE COMMITMENT OF GAS TO EITHER PROJECT AND, THEREFORE, AFFECTS THE ECONOMICS OF THE PROPOSALS.

SOME OF THE SPECIFIC CONTRACT PROVISIONS CAUSE ME SOME CONCERN, BUT I FEEL THE CONTRACTS SHOULD BE APPROVED.

TO REJECT THE CONTRACTS NOW WOULD BE A SERIOUS BLOW TO THE ALL-ALASKA LINE. THOSE WHO FAVOR OTHER ROUTES WOULD SEIZE ON FAILURE TO APPROVE AND MAKE MUCH OF IT. THE COMPETITION BETWEEN THE PROPOSALS IS INTENSE AND WILL GROW MORE SO. I THINK THERE IS A GENERAL CONSENSUS IN THE STATE THAT THE ALL-ALASKA LINE IS PREFERABLE. IT WOULD PROVIDE BENEFITS TO MOST AREAS THAT WOULD BENEFIT FROM ANY OTHER LINE AND WOULD BENEFIT OTHER AREAS, AS WELL. THE ECONOMIC IMPACT ON THE STATE AND THE IMPACT ON STATE REVENUES IS GREATER FOR THE ALL-ALASKA LINE. REJECTION OF THESE CONTRACTS COULD STALL EFFORTS TO HAVE THAT LINE APPROVED.

ALSO, THERE IS SIMPLY NOT ENOUGH TIME TO RENEGOTIATE THE CONTRACTS. LAST YEAR THE CONGRESS ADOPTED LEGISLATION SETTING FORTH A TIMETABLE FOR APPROVAL. UNDER THAT LEGISLATION, THE INITIAL DECISION OF THE FPC ADMINISTRATIVE LAW JUDGE WILL BE ANNOUNCED BY FEBRUARY 1ST. THE FINAL COMMISSION DECISION WILL BE REACHED BY MAY. THE PRESIDENT MUST REACH A DECISION BY SEPTEMBER

1ST, ABSENT UNUSUAL CIRCUMSTANCES. THE CONGRESS WOULD THEN HAVE 60 DAYS TO ACT ON THE PRESIDENTS PROPOSAL.

IN VIEW OF THE LENGTH OF TIME THAT WAS REQUIRED TO NEGOTIATE THESE CONTRACTS, I DO NOT FEEL THAT WE CAN AFFORD TO DELAY FINAL APPROVAL OF THE SALE. FURTHER NEGOTIATIONS WOULD RESULT IN NO AGREEMENT UNTIL IT WAS TOO LATE TO BE OF ANY ASSISTANCE.

IN SUM, ALTHOUGH I HAVE CONCERNS ABOUT SOME PROVISIONS, I FAVOR APPROVAL OF THE CONTRACTS. THEY ARE IN THE INTEREST OF THE STATE AND ITS PEOPLE, IN MY OPINION.

PLEASE LET ME KNOW IF I CAN BE OF ANY ASSISTANCE.

TED STEVENS

UNITED STATES SENATOR

2240 EST

IPMAFUB AHG

IPMAFUB AHG

Exhibit 3

EFFECT OF ALASKA'S ROYALTY GAS ON NATURAL GAS SUPPLY:

TENNECO MARKET AREA (25 states)

Prudhoe Bay natural gas production rate is assumed to be
2.0 Bcf/day

Yearly Prudhoe Bay natural gas production 730 Bcf.

Royalty Share of Prudhoe Bay production = 1/8 of 730 Bcf = 91.25 Bcf/Year

Tenneco Share of Royalty Gas = 50 % of 91.25 Bcf = 45.625 Bcf/year.

Tenneco Summary of Operating Data (from "Tenneco Statistics 1975")

Volume of Gas sold and transported: 1,634 Bcf
Volume of Gas purchased: 1,459 Bcf

Tenneco's share of 25-state gas market:
1,284 Bcf
9.9 %

Tenneco's share of royalty gas as a per cent of Tenneco's share of 25-state gas market:

(45.625 Bcf/year / 1,284 Bcf/year) = 3.55 %

Tenneco's share of royalty gas as a per cent of total 25-state gas consumption:

(45.625 Bcf/year / 12,879 Bcf/year) = 0.35 %

Total U.S. Consumption of Natural Gas in 1975 (rounded): 19,000 Bcf

Yearly Royalty Gas Production as a percent of total U.S. Consumption:

(91.25 Bcf/year / 19,000 Bcf/year) = 0.48 %

Yearly Prudhoe Bay gas production as a percent of total U.S. Consumption:

(730 Bcf/year / 19,000 Bcf/year) =3.84 %

Note: Above calculations do not take into account shrinkage of natural gas through transportation (e.g. 6% loss in liquefication and deliquification).

TABLE I

EFFECT OF ALASKA'S ROYALTY GAS ON NATURAL GAS SUPPLY:
TENNECO MARKET AREA

STATE	1975 Consumption (Bcf)	Tenneco % Share of Market	Tenneco Share of Market (Bcf)**	Tenneco Royalty Gas Share of Market (%)***
*Alabama	260	10	26	.36
Arkansas	270	<1	<2	<.03
Connecticut	64	46	29	1.63
Illinois	1130	16	181	.57
Indiana	488	<1	<4	<.03
Kentucky	208	13	27	.46
Louisiana	1376	<1	<13	<.03
Maine	2	91	2	3.23
Maryland	147	20	29	.71
Massachusetts	153	53	81	1.88
Michigan	902	6	54	.21
Minnesota	318	2	6	.07
*Mississippi	208	4	8	.14
N. Hampshire	8	72	6	2.55
New Jersey	279	6	17	.21
New York	571	27	154	.96
No. Dakota	26	21	5	.75
Ohio	951	21	200	.75
Pennsylvania	698	27	188	.96
Rhode Island	22	23	5	.82
*Tennessee	255	39	99	1.39
*Texas	3911	<1	<39	<.03
Virginia	123	20	25	.71
W. Virginia	172	19	33	.68
Wisconsin	367	14	51	.50
TOTAL 25 STATES	12,879	9.9	1284	.35

Notes to Table I:

* indicates state will receive additional royalty gas supplies from Southern Natural Gas:

Alabama receives 66% of supply from Southern
Mississippi receives 13% of supply from Southern
Tennessee receives 8 % of supply from Southern

** Tenneco share of market expressed in Bcf was calculated by multiplying each state's 1975 consumption by Tenneco's percentage share of market (Source of these figures was Table II from "Why Tenneco", published by Tenneco). Minor inaccuracies may have occurred due to rounding.

*** Figures for Tenneco Royalty Gas share of market assume equal distribution among states by relative share of consumption

Tenneco was chosen as an example of the impact of royalty gas commitment because original data was readily accessible. Figures for 1976 consumption among the states served by Southern Natural Gas indicate similar results. El Paso service area figures were not available.

The calculations indicate that the addition of Alaska's royalty gas to U.S. supply will increase total U.S. supply by less than 1/2 of one percent.

Prepared for House Special Committee on the Sale of Royalty Gas

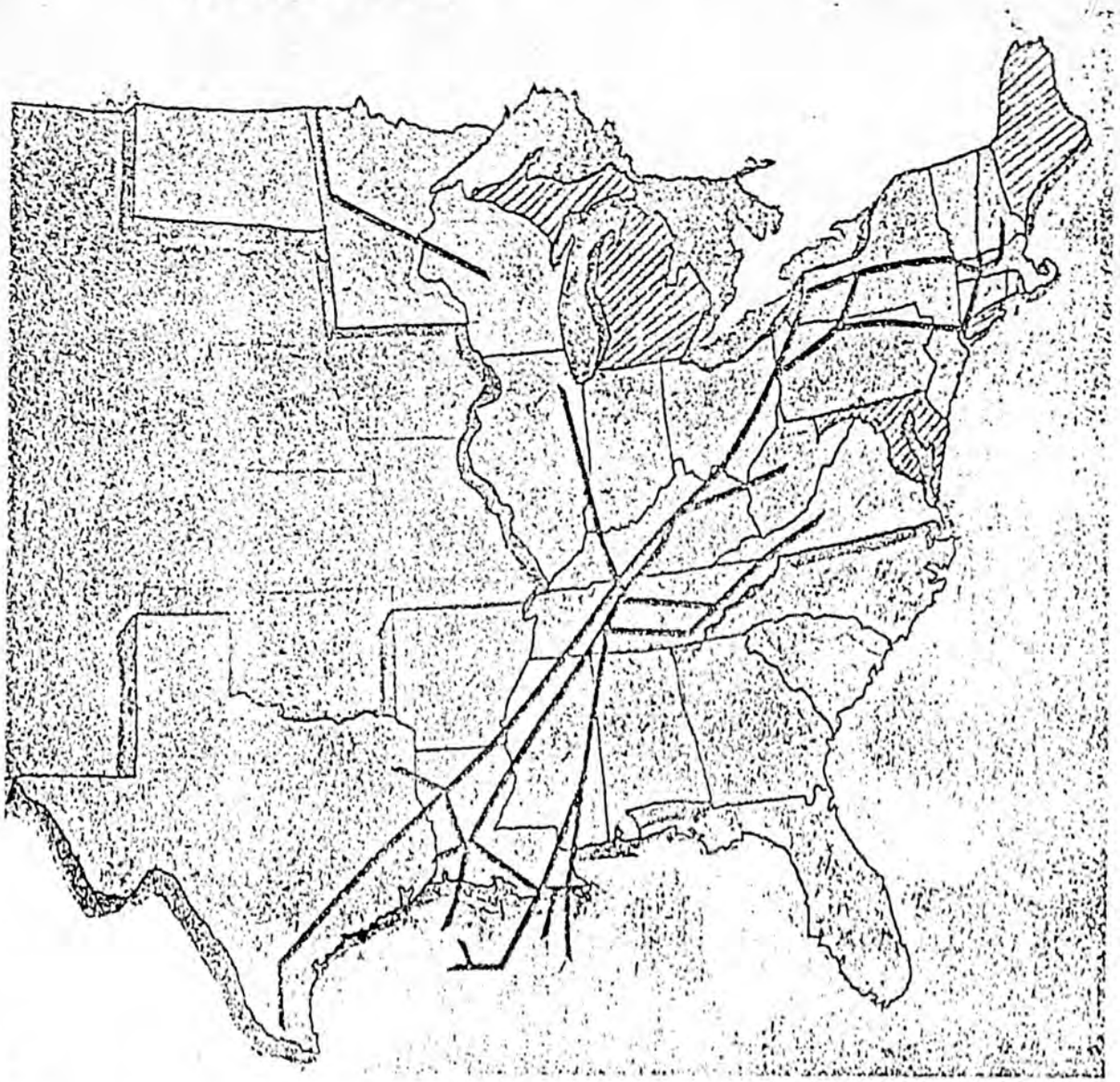
TENNECO'S INTERSTATE NATURAL GAS PIPELINES

MARKET AREA

Market Impact

State	1975[1] Natural Gas Consumption (Bcf)	Tenneco's Share of Total State Gas Market	Population[1]
Alabama	260	10%	3,577,000
Arkansas	270	<1	2,052,000
Connecticut	64	46	3,088,000
Illinois	1,130	16	11,131,000
Indiana	488	<1	5,330,000
Kentucky	208	13	3,357,000
Louisiana[3]	1,376	<1	3,764,000
Maine[2]	2	91	1,047,000
Maryland[2]	147	20	4,094,000
Massachusetts	153	53	5,800,000
Michigan[2]	902	6	9,098,000
Minnesota	318	2	3,917,000
Mississippi	208	4	2,324,000
New Hampshire	8	72	808,000
New Jersey	279	6	7,330,000
New York	571	27	18,111,000
North Dakota	26	21	637,000
Ohio	951	21	10,737,000
Pennsylvania	698	27	11,835,000
Rhode Island	22	23	937,000
Tennessee	225	39	4,129,000
Texas[3]	3,911	<1	12,050,000
Virginia	123	20	4,908,000
West Virginia	172	19	1,791,000
Wisconsin	367	14	4,566,000
TOTAL	12,879		136,428,000
% of United States	68%		65%

[1]Gas consumption based on Gas Requirements Committee, September, 1976 Report. Population data based on 1975 Statistical Abstract of the United States.
[2]Served indirectly through another wholesaler.
[3]Louisiana provides 75% of Tenneco's gas. Texas provides 16%.



Source: "Why Tenneco" published by Tenneco
1976

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AGO 800542

DON YOUNG
CONGRESSMAN FOR ALL ALASKA

COMMITTEES:
INTERIOR AND INSULAR AFFAIRS
MERCHANT MARINE AND FISHERIES

Congress of the United States
House of Representatives
Washington, D.C. 20515

WASHINGTON OFFICE
1210 LONGWORTH BUILDING
TELEPHONE 202/225-5765

DISTRICT OFFICES
115 U.S. FEDERAL BUILDING
ANCHORAGE, ALASKA 99501
TELEPHONE 907/279-1587

202 U.S. FEDERAL BUILDING
FAIRBANKS, ALASKA 99701
TELEPHONE 907/456-6949

January 28, 1977

Exhibit 4

The Honorable John Rader
President, State Senate
Juneau, Alaska

Dear President Rader,

Thank you for your letter of January 13 requesting my views on the approval of the contracts for the sale of the State's royalty gas to Tenneco Alaska, Southern Natural Gas and El Paso Natural Gas. I welcome the opportunity to respond to these agreements and hope they will receive speedy approval by the legislature.

The sale of the State's royalty gas is a unique and highly significant element in the final decision for a route for the transportation of the North Slope natural gas to the lower fortyeight states. The difficult task of gaining first Congressional approval for Section 13(b) of the Alaska Natural Gas Transportation Act and later presidential approval for the Act will only be brought to fruition upon the successful sale of the State's royalty gas. I have reviewed the contracts at some length and would like to comment on several points contained in them.

I am impressed with the straightforward approach of the contracts. An acknowledgement of the State's desires and expectations to the purchasers of the gas will insure a well understood relationship between the parties. The people of Alaska can only benefit from this relationship.

Next, and this should be carefully considered by the Legislature, the price of the State's gas has not been established and will be subject to change by the Federal Power Commissions actions on the price of natural gas in the rest of the nation.

Overall, the protection of the State's interest is impressive throughout the contracts and is the basis for my support for the mechanics of the contracts.

The current natural gas shortages in the lower forty-eight states is firm evidence of the possible reconsideration of the comprehensive deregulation of natural gas by the Federal Power Commission and the Congress. The greater awareness of the Nation's reliance on natural gas as a result of the shortages will only heighten the controversy surrounding the selection of a route for the delivery of North Slope natural gas. Since the announcement of the sale of the State's royalty gas to Tenneco, Southern and El Paso, it has been my view that the deliberations might have been forced off center in favor of the an All-Alaska route with the entry into the lobbying effort of two more established natural gas distribution firms. With the addition of Tenneco and Southern, both of which distribute natural gas to the Southern United States, key members of the House and Senate can be convinced of the favorable aspects of the All-Alaska route and the direct benefits to their constituents. Greater National interest in the North Slope gas question can only improve the chances for the selection of an All-Alaska route.

It is imperative that this effort not be jeopardized by lengthy discussions of the Legislature over the approval of these contracts. This is not to suggest that the Legislature should fail to carefully consider the proposed contracts. I would hope that upon examination of the contracts the Senate Special Royalty Gas Review Committee will conclude as I have that the sale should be approved and the Legislature will follow suit. If the joint efforts of the Congressional Delegation, the State and the people of Alaska are to meet with success, the existing momentum generated from the sale of the royalty gas should be allowed to continue.

One last point is of some importance to your consideration of the royalty gas sale. As you know, last Friday a gas treaty was signed between Canada and the United States. It is my hope that the U.S. will continue its good relations with Canada in this regard but one shouldn't reach false conclusions from the type of diplomatic exchange which is a part of our ongoing relationship with Canada. For example, the recent treaty which was signed by low-ranking officials of the State Department does not resolve critical questions which must be addressed should an overland pipeline be built through Canada. The questions of expanding the capacity of the line; the protection of U.S. equity in the line; the rate base; the Canadian native land claims; etc. have not been answered.

The two issues which we touched on in the treaty, the non-intervening of through-put and the non-discrimination of taxation are questions which in the long run will have to be answered by the Provinces and not by the U.S. All in all, the greatest obstacle to a Canadian pipeline is Canada and it is my hope that the Legislature will approve the contracts so that we can get on with it down here in Washington, and let the Canadians haggle among themselves.

Thank you for the opportunity to express my views on this important issue. I look forward to continuing my efforts to gain approval of an All-Alaska route for the natural gas line.

Sincerely,

Don Young

DON YOUNG
Congressman For All Alaska

Exhibit 5

RUSSELL B. LONG, LA., CHAIRMAN

ERMAN E. TALMADGE, GA.
NCE HARTKE, IND.
RAHAM RIBICOFF, CONN.
RY F. BYRD, JR., VA.
LORD NELSON, WIS.
TER F. MONDALE, MINN.
GRAVEL, ALASKA
BENTSEN, TEX.
M D. HATHAWAY, MAINE
M. HASKELL, COLO.

CARL T. CURTIS, NEBR.
PAUL J. FANNIN, ARIZ.
CLIFFORD P. HANSEN, WYO.
ROBERT J. DOLE, KANS.
BOB PACKWOOD, OREG.
WILLIAM V. ROTH, JR., DEL.
BILL BROCK, TENN.

MICHAEL STERN, STAFF DIRECTOR
DONALD V. MOOREHEAD, CHIEF MINORITY COUNSEL

United States Senate

COMMITTEE ON FINANCE
WASHINGTON, D.C. 20510

Honorable John Rader
Alaska State Senate
Pouch V
Juneau, Alaska 99811

Dear John:

Thank you for writing me on January 13 to solicit my views on (1) the proposed contracts for sale of Alaska State's royalty natural gas from the Prudhoe Bay field to Tenneco Alaska, Inc., El Paso Natural Gas Company and Southern Natural Gas Company, and (2) Senate Concurrent Resolutions Nos. 3-5, to approve these sales.

I find the contracts attractive in that they require the buyers to support a trans-Alaska route for a natural gas line from Prudhoe Bay, thereby building into the contract a strong incentive to work hard for such a line. In the event, however, than any other route is chosen and certified for gas from Prudhoe Bay, the Governor may terminate the contracts.

Furthermore, the provision whereby the State has the right to take back whatever gas it needs for in-State use is of obvious merit. This provision, I understand, includes the exchange of Prudhoe Bay gas for gas located elsewhere in Alaska if the exchanged gas is used in Alaska.

Commissioner Martin assures me that although the price provision in the contract is complex, the basic principle behind the term is simple: under all "reasonably foreseeable circumstances" the State will receive the highest price being paid for gas from the same reservoir and never less than would have been received had the State taken its royalty-in-value.

It also is possible under the contracts for the State, should the situation ever arise where it is advisable, to switch its position on the gas line route. If this occurred, the buyer may either terminate the contract or shift its support to the new route supported by the State.

The contracts clearly recognize the Legislature's authority to approve or disapprove, as provided for in AS 38.06. The review and approval by the Legislature are both necessary and desirable actions.

Lastly, these contracts would see Alaskan gas potentially reaching consumers in 42 of the lower 48 states, since the three purchasers combined have markets in 42 states. This major concern, that Alaska's gas abundance reach as much of the rest of the United States as possible, cannot be over-stated with my colleagues in the Congress.

I concur wholeheartedly in these contracts and in the Senate Concurrent Resolutions Nos. 3-5 and add my support to them all.

Thank you for the opportunity to express my views to you as Chairman of the Alaska Senate Special Royalty Gas Review Committee.

Sincerely,

Mike Gravel

cc: Honorable Clark Gruening
Chairman, House Special Committee
on Sale of Royalty Gas
Pouch V
Juneau, Alaska 99811

K M ASSOCIATES
Consultants
511 HEAVITREE LANE
SEVERNA PARK, MD. 21146

January 27, 1977

Exhibit # 6

Senate President John Rader
Alaska State Legislature
Pouch V
Juneau, Alaska, 99811

Dear Senator Rader:

Thank you for the invitation to testify before your Special Senate Royalty Gas Review Committee.

Westinghouse Electric Corp. has not been involved in any aspect of Alaska natural gas since mid-1976, but my consulting organization, KM Associates, is.

We do not now have adequately documented material sufficient for submission for the public record. We believe oral testimony, unsupported by data, is insufficient for your committee's purpose.

We do, however, feel the gas rights applicants have been less than candid about the pipeline proposals. Without intending any presumption, we ask the committee to find out several crucial details about the applicants' view of a new trans-Alaska gas pipeline. Specifically, we think well supported answers should be obtained for a number of questions which are contained in the attached list.

The questions are quite detailed and specific and, while the applicants may not be prepared for them, the applicants should have enough information to reply within a few weeks. The issues of a well defined market for the gas, a respectable wellhead value to the Alaska royalty gas and a supportable gas transmission cost estimate must be faced. Please pardon our scepticism about the applicants' plans but other applicants in other contexts (notably before the Canadian National Energy Board) have not been candid or straightforward.

We have been doing an intense study of the Prudhoe Bay associated gas issue and some of our observations will shortly be released in a brochure. We will forward this brochure to you as soon as it is available.

Although the entire story is not in on the gas pipeline proposals, a mounting collection of evidence suggests the pipelines

K M ASSOCIATES
Consultants
511 HEAVITREE LANE
SEVERNA PARK, MD. 21146

6.1

have very serious problems. We believe the wisest course for Alaska is to do nothing about gas rights sale at this time. We realize Alaska does not want to be steamrollered by the FPC and the lower 48 interests but the Alaska royalty share is protected somewhat from sequestration by PL 94-586. A more important point, perhaps, is that the pipelines are a very long way from being operational. Enclosed are some of the illustration from our forthcoming brochure.

We have also taken the liberty of advising Dr. Sullivan S. Marsden of Stanford University of your interest and the hearings. He is sending his material directly to you. His work is cited in the Department of Interior Environmental Impact Statement in the volume on "Alternatives to the Proposed Action", under "Alternative Transportation Systems", pages 123, 124.

Thank you for asking us to testify. When the needed study has been performed we would be happy to testify. It is to be hoped that the State will assist us in getting the study done and will not preclude the ALASKAN METHANOL APPROACH by precipited action approving the sale of 1/8th of the gas to an as-yet-unbuilt gas pipeline.

Sincerely,

William H. Kumm

William H. Kumm
Principal
KM Associates

enclosures

WHK:agk

ATTACHMENT 1

6.2

QUESTIONS FOR ROYALTY GAS APPLICANTS

January 1977

1) What is the expected cost of the entire gas transmission project in current dollars - including the North Slope gas processing plant, the pipeline, the liquifaction plant, the tankers, the lower 48 terminals and the re-gassification plant?

Allowing for interim capital charges, what is the ultimate "rate base" investment expected?

3) What are the expected operating costs in current dollars?

4) What will be the planned offer price to the lower 48 distribution companies? That is, what "city gate" price will the distribution companies have to pay?

5) What is the projected price of non-Alaska gas in the projected sales period? Will North Slope gas be more or less costly?

6) If the applicants expect the North Slope supply to require a higher price than other lower 48 supplies of gas, how will the premium price gas fit into the regulated utility price structures?

7) What customer categories do the applicants expect to serve? Applicants need to identify year round base loads, in areas such as home heating, industrial process fuel, electric utilities, and petrochemical.

8) What is the applicants' estimate of the "netback" value of the North Slope gas? Will the use of the gas cap affect oil production? Will costs or charges be levied onto the gas cost structure if oil production is adversely affected by use of the gas cap?

9) If the FPC rules in favor of a non-trans-Alaska route, for the gas pipeline, what plans do the applicants have for disposal of their gas rights? Do the applicants propose to find an alternative to the gas pipeline? Would the applicants propose to retain their rights to the gas and ship it through the FPC certificated pipeline for separate lower 48 distribution?

Do the applicants plan to acquire other gas rights? What value do the applicants project for the non-Royalty gas?

11) What methods of finance do the applicants foresee for the trans-Alaska pipeline route? Can the applicants offer any guarantee that the trans-Alaska pipeline can be financed?

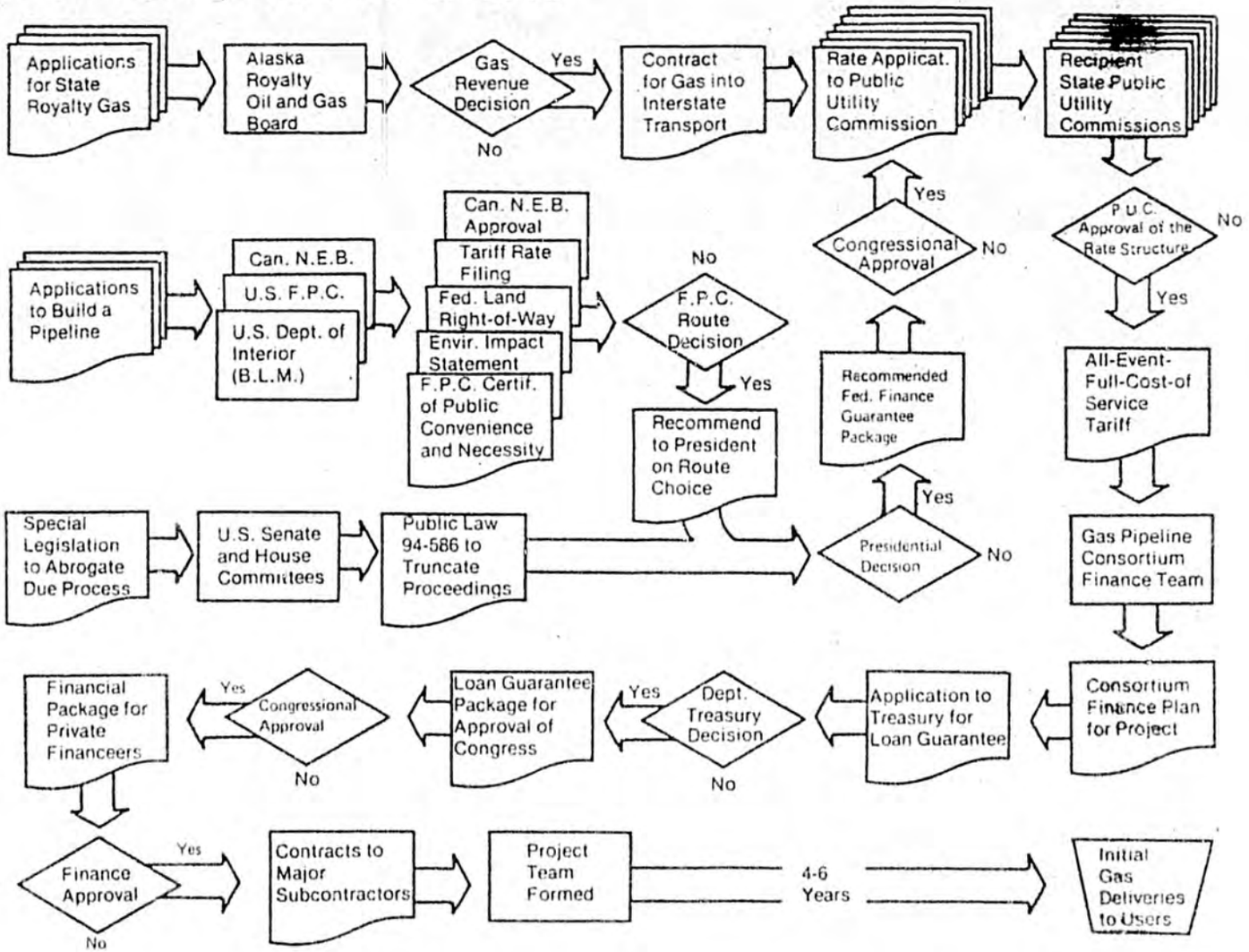
12) Do the applicants plan to request of the FPC an "all-events tariff"? That is, will payment floor guarantees be necessary or desirable?

THE ALASKAN METHANOL WAY

AGO 800552

6.4

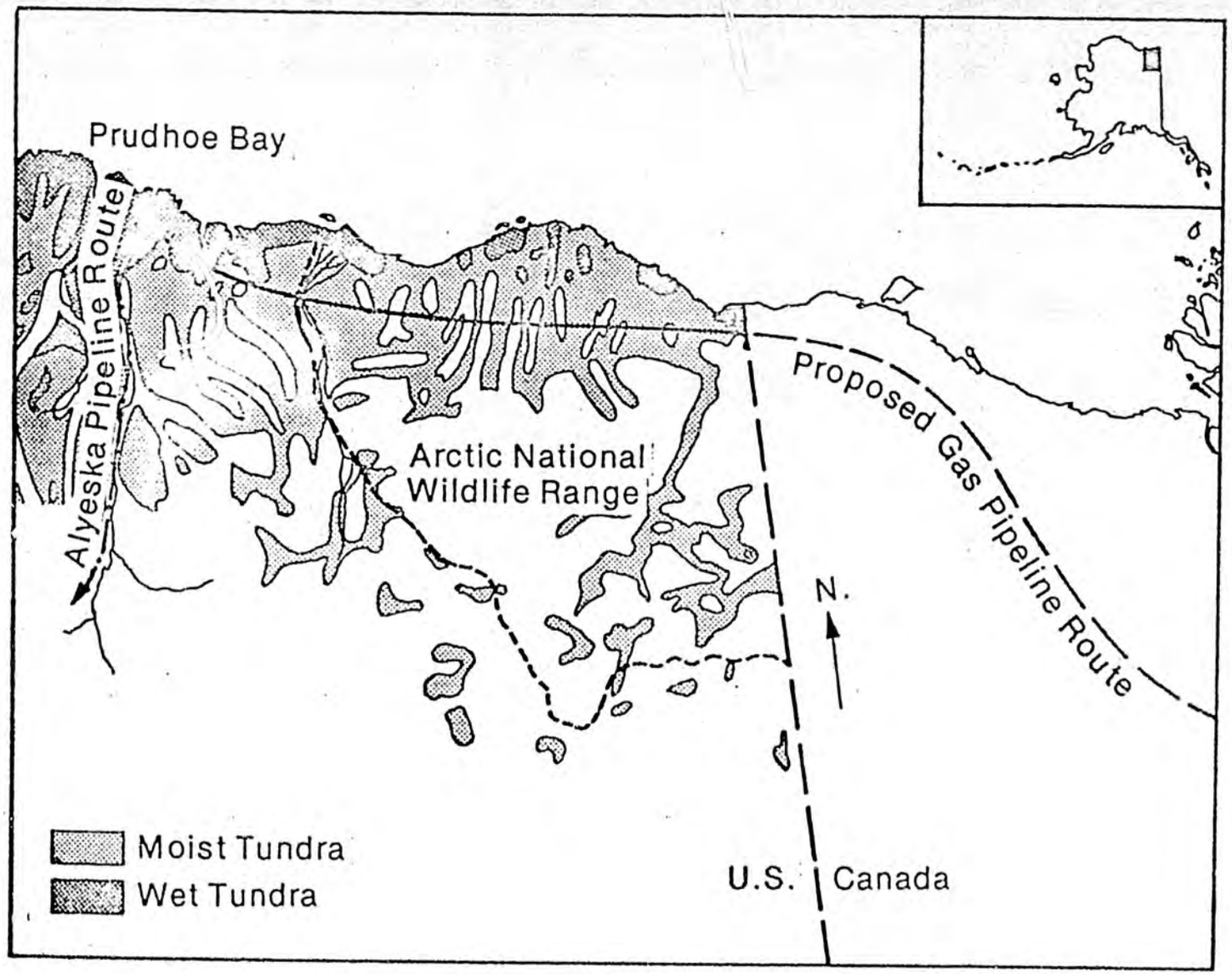
THROUGH THE MAZE WITH GAS



AGO 800553

6.5

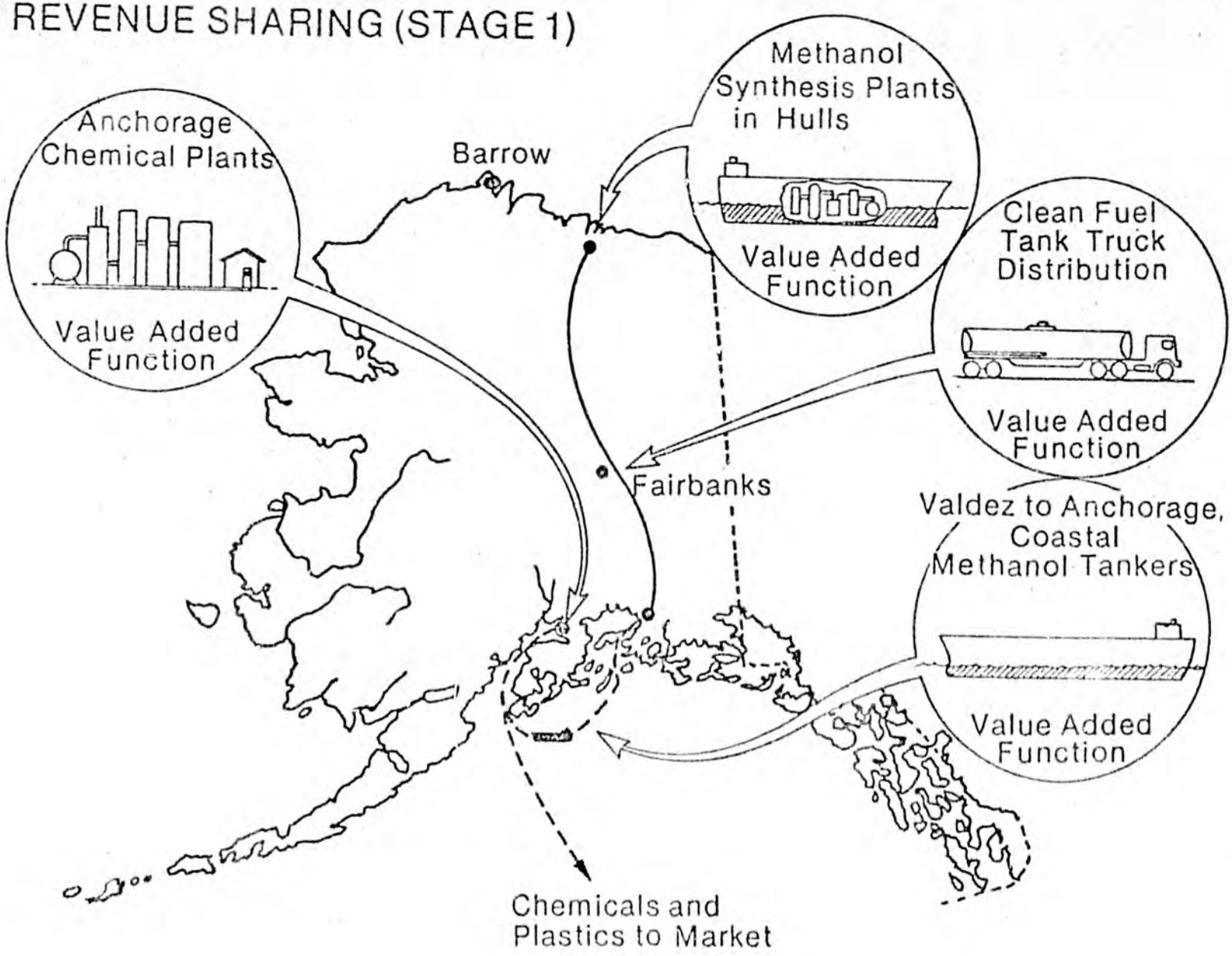
THE ENVIRONMENTALISTS LAST STAND



6.6

AGO 800554

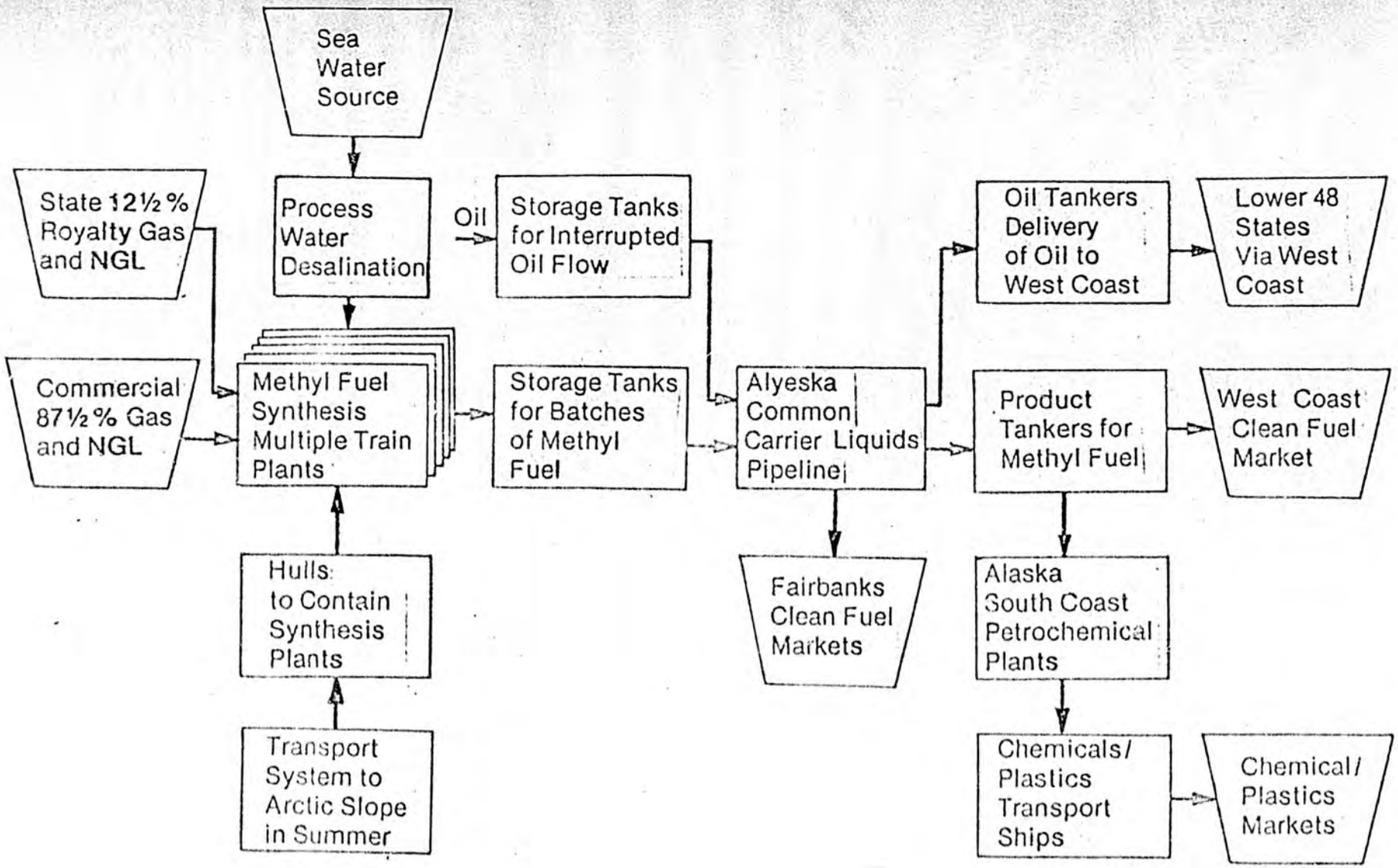
REVENUE SHARING (STAGE 1)



AGO 800555

6.7

STAGE I SYSTEM ELEMENTS



AGO 800556

8.9

THE IDEA

An Unmarketable Commodity
- Solution Gas From Prudhoe Bay

+

A People's Dilemma
- Maximize Alaska's Royalty Oil and Gas Value

+

Surplus Capacity
- The Alyeska Liquids Pipeline

+

Imagination

=

The Alaskan Methanol Way

AGO 800557

TELEGRAM

RCA ALASKA COMMUNICATIONS, INC.
PHONE: 586-6440
JUNEAU, ALASKA 99801

EXHIBIT # 7

Alaska Farmland Interna
Energy Co.

1977 JAN 31 PM 9 37

#

02059 NL ANCHORAGE ALASKA 501 01-31 0540P AST

PMS SEN JOHN RADER .

POUCH V 1374

JUN

I WILL BE UNABLE TO ATTEND SENATE ROYALTY GAS REVIEW HEARINGS TOMORROW. IT IS MY WISH HOWEEVER, TO CONVERY TO THE COMMITTEE SOME COMPANY AND PERSONAL FEELINGS REGARDING THE THE CONDUCTANCE OF NEGOTIATIONS IN OUR EFFORTS TO PURCHASE A PORTION OF PRUDHOE BAY ROYALTY GAS. IT SHOULD BE MADE CLEAR THAT FARMLAND INTERNATIONAL ENERGY CO. OR THE PARENT COMPANY FARMLAND INDUSTRIES INC. NO LONGER MAINTAIN AN INTEREST IN THE PURCHASE OF THE ROYALTY GAS. REASONS FOR NO LONGER HOLDING AN INTEREST SHOULD BE CLEAR IN DEPARTMENT OF NATURAL RESOURCES CORRESPONDENCE ON THE MATTER. WHEREIN WE EXPRESSED DISPLEASURE WITH THE MISLEADING TACTICS ENCOUNTERED DURING THE COURSE OF OUR ATTEMPT AT NEGOTIATIONS WITH HIGHLY PLACED OFFICIALS. RESULTING IN THE PARENT COMPANIES DECISION NOT TO PURSUE THE MATTER. AS FARMLANDS ALASKAN MANAGER AND A CITIZEN OF ALASKA I HOLD PERSONAL FEELINGS

ABOUT THE PROPOSED SALE OF ALL THE PRUDHOE BAY ROYALTY GAS TO 3 COMPANIES AS FOLLOWS; 1. I QUESTION UNDER WHAT AUTHORITY THE STATES NEGOTIATORS SELECTED THREE LARGE COMPANIES AND VIRTUALLY ELIMINATED EVERY OTHER PROPOSING COMPANY ON THE GROUNDS THAT THEY COULD NOT SHOW SUFFICIENT POLITICAL PROWESS TO QUALIFY OR THAT THEIR PROPOSALS QUOTE. COMPLICATED THE ISSUE UNQUOTE. TO QUOTE COMMISSIONER MARTIN IN THAT THEY JIXED PROPOSALS TO DEVELOP INSTATE INDUSTRY AND PROVIDE GAS LINE SUPPORT WHEREAS, THE SELECTED THREE PROMISED SOLELY TO PROVIDE POLITICAL SUPPORT FOR A SYSTEM WHICH HAS NOT BEEN PROVEN TO BE IN THE BEST INTEREST OF ALASKA OR OF THE UNITED STATES OF AMERICA. 2. I QUESTION WHAT SUPPORTING MATERIAL WAS USED TO SEEK AN AMENDMENT TO THE ALASKA NATURAL GAS TRANSPORTATION ACT OF 1976 ALLOWING THE STATE TO RETAIN CONTROL OVER ITS ROYALTY GAS UNLIKE OTHER STATES. IT SEEMS UNLIKELY THAT A GAS SALE TO EXPORT 100 PER CENT OF THE GAS WOULD HAVE INFLUENCED THIS LEGISLATION, YET VERY LIKELY THAT PROPOSALS TO UTILIZE ROYALTY GAS OR A PORTION THEREOF WITHIN ALASKA WOULD HAVE BEEN EFFECTIVE AND MOST LIKELY WAS. 3. I QUESTION THAT POLITICAL CLOUT ALONE IS A SUFFICIENT REASON TO SELECT A BUYER COMPANY WHILE NUMEROUS INSTATE

USE PROPOSALS WERE THROWN OUT. VIRTUALLY ELIMINATION THE POSSIBILITY OF ENTICING INDUSTRIAL DEVELOPMENT THROUGH THE SALE OF ROYALTY GAS AND THAT FUTURE ROYALTY GAS CAN BE COMMITTED TO A COMPANY BECAUSE IT IS UNHAPPY WITH THE VOLUME INITIALLY COMMITTED AND WITH THE STATES ABILITY TO RECALL THE GAS FOR INSTATE USE. 4. I BELIEVE THAT DEPARTMENT OF NATURAL RESOURCES DRAFT STIPULATIONS REGARDING THE PRIVATE DEVELOPMENT OF INDUSTRY AS ADVANCED TO ALASKA PETROLEUM COMPANY, AND TO FARMLAND FOR TWO, ARE DESIGNED TO DISCOURAGE DEVELOPMENT IN ALASKA. 5. I BELIEVE THE SO CALLED QUOTE POLITICAL CLOUT UNQUOTE WE ARE SUPPOSED TO RECEIVE IF THE GAS SALES ARE APPROVED BY THE LEGISLATURE WILL SERVE MOSTLY TO INSULT THE BASIC INTELLIGENCE OF OUR U S CONGRESS AND WILL ALIENATE ALASKAS INTERESTS WITHIN THAT BODY FOR MANY YEARS TO COME. 6. I BELIEVE HEARINGS SHOULD BE CONDUCTED ON THIS MATTER IN BOTH FAIRBANKS AND ANCHORAGE. RESPECTFULLY SUBMITTED.

CC LESLIE SWANSON
POUCH V
JUNEAU ALASKA

HALL GREEN

Tennessee Gas Transmission
A Tenneco Company

Tenneco Building
P.O. Box 2511
Houston, Texas 77001
(713) 229-2131

Exhibit # 8

January 18, 1977

Mr. Richard Maullin
Chairman
California Energy Resources Conservation
and Development Commission
1111 Howe Avenue
Sacramento, California 95825

Dear Mr. Chairman and Members of the Commission:

The purpose of this letter is to provide comments directed essentially toward Volume IV of your draft Biennial Report: "Alaskan Natural Gas: Criteria for Selection of a Transportation System."

Tennessee Gas Transmission and its sister company Tenneco Alaska, Inc. have not been an active participant in hearings leading to publication of your draft Biennial Report. We have, however, communicated with your staff concerning some issues discussed in the Report.

Recently Tenneco Alaska, Inc. signed an agreement with the State of Alaska to purchase a portion of the State's Prudhoe Bay royalty natural gas; a copy of that agreement is attached at Tab A. One term of that contract, which is presently being considered by the Alaska legislature, provides that we will support a transportation system for Prudhoe Bay gas involving a Trans-Alaska pipeline, a liquefaction facility in Southern Alaska, and trans-shipment to the lower 48 by LNG tanker As provided in the agreement, we may lose the right to purchase Alaska's gas if that system is not selected.

Prior to signing that agreement, we were not committed to any of the three competing systems for transporting Alaskan natural gas to the lower 48 states. Before agreeing to support the Trans-Alaska transportation system our Company analyzed many of the same issues discussed in your draft Biennial Report for we risk the loss of our investment made in supporting the route if that route is not selected. We agreed to support that delivery system because we have concluded that it is more in the national interest of the United States than the two competing delivery systems and, for this reason, is more likely than either of them to be designated by the President pursuant to Section 7 of the Alaska Natural Gas Transportation Act of 1976.

In the following portions of this letter I will set forth, though necessarily in somewhat summary fashion, many of the considerations behind our conclusion that the Trans-Alaska del very system has national interest advantages over the competing systems. I am hopeful these

comments will be useful to you not only in preparing your final Biennial Report but also in preparing comments to the President pursuant to Section 6 of the Alaska Natural Gas Transportation Act of 1976.

The criteria we applied in reaching our decision were essentially the same as those outlined on pages 9-10 of Part IV of your Biennial Report. Since we do not have customers in California, we were not directly concerned with your criteria 8 and 10; however, we recognize that these issues are appropriate for consideration by the State.

In addition to the criteria listed in your report, we also considered the following specific criteria:

--- Future expansibility of the delivery system to accommodate new discoveries of Alaskan natural gas;

--- Consistency of the delivery system with probable future U.S. energy policy.

To a degree we agree with the statement at page 9, Part IV, of the draft report that:

> Given the difficulties in siting and regulating operations of liquefied natural gas (LNG) terminal facilities, El Paso's proposal to transport North Slope gas by pipeline to Southern Alaska and then to liquefy it and transport by ship in the form of LNG would place California in a position of unnecessarily high reliance on a form of gas delivery more appropriate for import projects for which there is no overland pipeline alternative.

The degree to which we agree is that if the proposed pipeline projects crossed only U.S. territory thereby eliminating the additional levels of governmental controls and regulations and if they did not give rise to serious native claims issues, we believe the pipeline delivery system proposed by Arctic Gas would be preferable to an LNG delivery system from a "national interest"--as opposed to a California or an Alaskan point of view, even though the Arctic Gas Route presents some very difficult environmental problems and some unique Arctic construction problems. For reasons discussed below, we do not have the same view of the Alcan route.

We believe, however, that it is not possible to ignore or minimize the significance of the fact that both of the competing pipeline proposals must transit a very significant portion of Canadian territory and that this fact gives rise to many serious questions concerning financability, timely completion, operating costs, and the expansibility of these projects. In fact, under the test quoted above, we seriously doubt that, as a practical matter, there is an available "over-land pipeline" alternative to the Trans-Alaska delivery system because legitimate and foreseeable Canadian interests

will preclude approval and completion of a trans-Canada pipeline within the time frame within which Alaska gas must reach our lower 48 states if our national interests are to be served.

Our assessment of these issues has been made from the perspective of a company that is by no means anti-Canadian. We have substantial business interests in Canada, and we intend to maintain and, to the extent possible, further those interests. Moreover, we have the highest respect for the ability of Canadian leaders to reach and implement decisions that are in the interest of the Canadian people. It is precisely for these reasons, however, that we believe the Canadian government will not reach a decision within the near future (i.e., the next two years) to grant necessary permits for, and to allow the actual construction of either the proposed Arctic Gas pipeline (with or without a Western Leg) or the proposed Alcan pipeline.

The salient points of our analysis are as follows:

a. Neither of these projects is necessary to assure that projected Canadian demand for natural gas can be met by Canadian supply within the next five to seven years.

--- As recent testimony before the NEB reveals, there are substantial unconnected supplies of natural gas now available in Canada other than discoveries in the Mackenzie Delta. These supplies could be connected and delivered through existing delivery systems to markets in Canada.

--- Demand in Canada has not been increasing at previously projected rates. Prices have increased more in that country than in this country, which has had a dampening affect upon demand.

--- If interim supplemental supplies are necessary within approximately five to seven years, there are other alternatives available to Canadians. As an example, Tenneco LNG Inc. has contracted to land the equivalent of a billion cubic feet per day of Algerian LNG in New Brunswick of which up to 17% is available for Canadian consumption.

b. Available evidence indicates that reserves sufficient to sustain Canadian participation in a major pipeline project are likely to be proven in the Canadian Arctic Islands before they are proven in the Mackenzie Delta.

--- Current reserves discovered in the Arctic Islands total 15-16 Tcf. Threshold volumes sufficient to justify a pipeline market outlet range from 20 to 30 Tcf depending upon pipeline size and desired deliverability.

--- Two new ventures have recently been consummated which will commit sufficient exploratory funds in the Arctic Islands to insure the discovery of threshold reserves. In the fall of 1976, Home Oil Company agreed to purchase $30.5 million of Panarctic common stock with the funds to be allocated to exploration over a three-year period. The second venture involves a commitment by a consortium composed of Imperial, Gulf, Petro-Canada and Panarctic to spend $80 million for Arctic Island exploration over the next five years. These new funds, combined with other monies destined for Arctic exploration, will support the activity level necessary to discover the reserves required to meet future Canadian demand plus the possibility of additional future exports to the U.S.

c. Approval and implementation of either the Arctic Gas or the Alcan project would have negative economic impacts in Canada which would not be off-set by economic advantages, at least in the absence of a strong Canadian demand for Mackenzie Delta gas. In any event there are insufficient proven reserves in the Mackenzie Delta to provide the daily deliverability required to justify the project.

--- Canadian law and regulations require majority equity ownership of facilities located in Canada and that, to the extent possible, such facilities be built by Canadian materials and labor. Fulfillment of these requirements will preclude the implementation of any other substantial gas pipeline project in Canada for the next several years and could deny financing to other substantial public works, or energy-related projects in other parts of Canada during this same time period.

--- Implementation of either of these projects will have an inflationary impact in Canada that will be nationwide.

--- The primary benefits to be derived from these projects will be jobs and tax base in Western Canada, where unemployment is lower than in other parts of Canada and where per capita income is higher.

--- The negative economic impacts of these projects will be felt primarily in Eastern Canada where there is higher unemployment, lower per capita income, a greater population,

political division, and where a substantial portion of economic activity is devoted towards the manufacture of products for export, which activity is very directly and negatively impacted by inflation.

d. Legitimate native claims, socio-economic and environmental concerns expressed by many Canadian citizens will be voiced in the forthcoming Berger Commission report. The existence of this report, regardless of its conclusions, will make it difficult for the Canadian government to override these concerns and approve and allow the prompt implementation of either the Gas Arctic or Alcan projects without an extended period of debate.

--- All indications we see from Canadian news reports are to the effect that there is substantial opposition by the native peoples and by environmental and other groups in Canada to either the Arctic Gas or the Alcan projects.

--- While opposition to the Alcan project appears to be less than opposition to the Arctic Gas project, the benefits to Canada are much less from the Alcan project than from the Arctic Gas project because Alcan will supply no Canadian gas to Canadian markets.

e. The facts under paragraphs a through d provide the Canadian government an opportunity and sound reasons to delay at least two years the decision whether Mackenzie Delta gas or Canadian Arctic Island gas should be the next source of Canadian gas to bring to Canadian markets. Proposals that do not depend upon approval of the Arctic Gas or the Alcan project are on the drawing boards for both such projects--i.e., the Foothills project for Mackenzie Delta gas and the Polar Gas project for Canadian Arctic Island gas. Many complicated considerations will bear upon a Canadian decision as to which project should proceed first. It would not be in the Canadian government's interest to make a precipitous decision on that issue, which would be the case if they were to approve the Arctic Gas project or the Alcan project within the next year or two.

f. Other, more fruitful avenues of U.S.-Canadian cooperation are available than the Arctic Gas or Alcan projects.

--- Success in any jointly-approved and supported major energy project will be important to both the U.S. and the Canadian governments. For reasons discussed in this letter, both the Arctic Gas and the Alcan projects involve substantial risks of delay, financial difficulties, and of disputes over future expansibility and provincial taxes. Both the U.S. and Canadian federal governments will want to avoid disputes over these issues.

--- The most immediate prospect for successful cooperation is the Tenneco-Algerian LNG project which is the subject of filings before the NEB and FPC on December 20, 1976.

--- The Polar Gas Project is also a possible avenue of successful U.S.-Canadian cooperation in the energy area. We expect that project to be the subject of a filing before the NEB in the last quarter of 1977.

--- U.S.-Canadian cooperation may be required to implement a delivery system to take surplus West Coast oil to our Midwest.

A review of the submittals to the National Energy Board concerning the proposed Arctic pipelines reveals some divergence of opinion as to which route or if any proposed route is in the best interests of Canada. In the near future we will consider commissioning a study by a neutral, respected Canadian expert to assess the validity of the points made under paragraphs a through d above and to determine the probable net economic benefits to the Canadian economy and the various geographical areas of Canada of the various alternatives available to Canada. If such a study should reveal that it is not in the national interest of Canada to grant the necessary approvals and allow implementation to begin for either the Arctic Gas or the Alcan projects within the next two years, we believe that these projects should not be considered by U.S. authorities as practical alternatives to a Trans-Alaska LNG system for delivering Prudhoe Bay gas to the lower 48 consistent with United States' national interest. The supply/demand picture in the lower 48 states requires the promptest practical delivery of Prudhoe Bay gas to our markets. The critical shortage of domestic natural gas supply existing today due to the extremely cold and prolonged weather east of the Rockies has highlighted these requirements.

We believe the following considerations also support the conclusion that the Trans-Alaska delivery system is in the national interest and will be approved by the President.

i. Once construction starts, timely completion of the Trans-Alaska system is more reliable than timely completion of either of the other projects. Risks of construction delays for the Arctic Gas project are substantially greater than they are for the Trans-Alaska project, as revealed by Department of Interior reports. Both Arctic Gas and Alcan face purely internal Canadian issues, such as native claims. As your report so appropriately points out beginning at page 11 of Part IV, decision makers must consider the probable completion date, rather than the date when permits are granted, in determining what project is in the national interest.

ii. The Trans-Alaska project will create more U.S. jobs and generate more U.S. taxes than either of the competing systems.

iii. The Trans-Alaska system can much more readily be financed for the reasons cogently set forth in the December 16, 1976, summary brief of El Paso filed in the FPC proceedings (CP76-96, et al) at pages 13 to 16. This is a matter of extremely great practical and political significance as reflected by Section 7 of the Alaska Natural Gas Transportation Act. It would be a serious mistake to believe that these financing problems will not materially delay both the Alcan and Arctic Gas pipeline routes after necessary governmental approvals for the project have been obtained.

iv. Present information indicates to us that the Canadian government may not reach a decision on this issue prior to the end of 1978, while the Alaska Natural Gas Transportation Act requires a decision from the President no later than the end of 1977. Arctic Gas Pipeline indicated in mid-December, 1976, that final government approval of the project could not be expected before April 15, 1978.

v. If the U.S. government takes action to reject as a practical matter the Trans-Alaska delivery system before the government of Canada has taken all necessary steps to assure that it will grant permits for and allow the promptest practicable completion of one of the competing pipeline alternatives, the United States will be subject to a serious bargaining disadvantage vis-a-vis the Canadian government. The Canadian government's responsibility is to its citizens, and this responsibility will require it to take advantage of its bargaining position.

vi. Because onshore and offshore Alaska will be the most prolific area of exploration for energy in the lower 48 states during the next 20 to 30 years, national policy should favor the development of delivery systems to take that energy (oil and gas) from the West Coast to other parts of the United States. (Existing delivery systems from the Gulf Coast to the West, East and Midwest reflect the fact that the Gulf Coast has been our major source of energy supply.) Natural gas will probably be found in substantial quantities in various parts of Alaska, onshore and offshore. West Coast LNG facilities will facilitate delivery of this gas to the Eastern part of our nation. They will also facilitate the importation of LNG from Indonesia and Latin America as natural gas in those areas becomes available for our markets.

vii. There will be substantial U.S. opposition to the Arctic Gas proposal because of its impact upon the Arctic Natural Wildlife Range. This opposition can take many forms and can delay timely completion of that project, even if it is approved. The prospect of such delay will be a major factor in any decision looking toward the promptest practicable implementation of a delivery system from Prudhoe Bay gas.

viii. Close scrutiny reveals, as reflected in the Staff report of the FPC, that the Alcan project offers no substantial economic or environmental benefits to the U.S. compared to the Trans-Alaska project. In fact, it is economically inferior to the Trans-Alaskan route and involves serious environmental and conservation problems that are avoided by that route. It requires many more miles of pipeline and, therefore, many more real, non-renewable resources than either of the other projects. It also involves substantial risks that the project will not be able to be expanded to accommodate future discoveries of Alaskan gas. Moreover, as mentioned, since the project offers very few benefits to the Canadian nation and several detriments, its approval and implementation is highly improbable. Its apparent attractiveness is that it is a "compromise" between two vigorously competing projects. But the real interests involved in the selection of a delivery system for Alaska gas are so important that it is unlikely that this quality alone will justify approval of the Alcan route.

We hope these comments are useful to you. We would be happy to meet with you or your staff to discuss them in more detail.

Very truly yours,

TENNESSEE GAS TRANSMISSION COMPANY

Robert C. Thomas
Senior Vice President

RCT:kl

Attachment

Exhibit 9

SECURITIES AND EXCHANGE COMMISSION
Washington, D. C. 20549

Form 8

AMENDMENT TO APPLICATION OR REPORT

Filed pursuant to Section 12, 13 or 15(d) of the
Securities Exchange Act of 1934

For the Month of January 1976

Tenneco Inc.
P. O. Box 2511
Houston, Texas 77001

9.1

SECURITIES AND EXCHANGE COMMISSION
Washington, D. C. 20549

FORM 8

AMENDMENT TO APPLICATION OR REPORT

Filed pursuant to Section 12, 13 or 15(d)

of

THE SECURITIES EXCHANGE ACT OF 1934

TENNECO INC.
(Exact name of registrant as specified in charter)

AMENDMENT NO. 1

The undersigned registrant hereby amends its Current Report on Form 8-K for the month of January 1976 by providing information for the following item as set forth in the pages attached hereto:

ITEM 13

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this amendment to be signed on its behalf by the undersigned, thereunto duly authorized.

TENNECO INC.

By EDWARD J. HARRISON
Edward J. Harrison
Senior Vice President and
General Counsel

Date: February 13, 1976

Item 13. Other Materially Important Events

In March 1975 the management and the Audit Committee (composed of four ouside directors) of Tenneco Inc. reviewed certain payments to foreign business consultants during 1974 in connection with the acquisition or proposed acquisition of properties or materials from foreign governments or agencies thereof. It was concluded at such time that the payments were for valid business purposes and that there was no indication the payments were illegal or improper. Accordingly, no action was taken. Later in 1975, however, the matter was reconsidered by management because of the publicity concerning the new and emerging concept of "sensitive payments" and the concern expressed by various Securities and Exchange Commission (the "Commission") representatives with respect thereto. At a meeting in October 1975 the Audit Committee, with the concurrence of the full Board of Directors, determined that in light of the information presented at the meeting concerning such 1974 payments and the recent publicity concerning foreign and domestic bribes and political activities of an illegal or questionable nature by other corporations, management should undertake at once a full and complete review of the Company's foreign and domestic operations. Tenneco Inc. and its subsidiaries are hereinafter referred to as the "Company" unless otherwise indicated. The Audit Committee authorized Arthur Andersen & Co., the Company's independent public accountants, and Baker & Botts, the Company's outside legal counsel, to assist in such review. The Commission was promptly advised that, in compliance with the Commission's publicly enunciated and recommended voluntary disclosure program, the review was being made for the period beginning January 1, 1970 and that a report to the Audit Committee and to the Commission would be made as promptly as practicable.

The review has been conducted by representatives of Arthur Andersen & Co. and Baker & Botts, with the active assistance and cooperation of the Company's management. Interim reports by such representatives to the staff of the Commission were made on October 30, and December 18, 1975 and January 20, 1976. Reports to the Audit Committee, and to the full Board of Directors, were made on December 10, 1975 and January 7, 1976.

Information was obtained through written inquiries and personal interviews of executive personnel and other employees of the Company and of certain foreign consultants. Approximately seventy-five such persons have been contracted in one manner or the other, or both. Although no pattern of improper or questionable conduct was revealed either in foreign or domestic operations reviewed at the direction of the Audit Committee, there have been reports of apparently improper or questionable practices in certain instances.

The Company uses numerous local attorneys, advisers, consultants and agents in connection with certain of its foreign operations in approximately 24 countries. These individuals are independent businessmen, many of whom have written contracts with the Company relating to specific countries or areas or to specific projects. During the period January 1, 1970 through September 30, 1975, the Company made or accrued payments aggregating approximately $12 million to such persons (or entities designated by them). Although it is not feasible to state with substantial certainty that none of the payments during such period, other than those described in the following paragraph, were indirectly for the

use or benefit of employees of foreign governments or agencies thereof, the investigation did not reveal the existence of any other payments to foreign government employees or military personnel or that any such payments were being "kicked back" to the Company or its employees or used to create a "slush fund" of any kind. However, in some cases the payments are made to the consultant or his nominee outside the country of his residence and verification of the end use of the payments is not feasible. The question of whether local laws of the countries involved are being violated by making such payments to the consultant or his nominee outside the country of his residence is being reviewed and will be reported to the Audit Committee.

Of the payments reviewed for such period, (i) $10,000 is known to have been paid to a foreign government employee, (ii) $25,000 is known to have been invested in a U.S. concern in which one or more foreign government employees probably have a beneficial interest, (iii) approximately $500,000 was paid to the military and to certain military personnel in a foreign country for protection of a subsidiary's employees working in remote, dangerous locations and for rental of military aircraft and related equipment and (iv) a local sales manager of a subsidiary purchased in 1975 out of the subsidiary's petty cash fund merchandise valued at approximately $480 and gave same to three employees or officials of a foreign government purchasing office or agency to which the subsidiary was selling equipment. The two payments totaling $10,000 were improperly described on the books of the Company and may have been improperly deducted for U.S. income tax purposes. The $25,000 investment is properly described on the books of the Company. The payments totaling $500,000 for military protection and equipment were properly described on the Company's books and are considered properly deductible for U.S. income tax purposes because of the absolute necessity of military protection in that particular country. The $480 payment was not correctly described on the Company's books.

In connection with negotiations involving proposed long-term, multi-billion dollar purchases of raw materials from certain countries, consultants have contractual commitments to receive from the Company additional sums aggregating up to approximately $12.0 million (subject to adjustments, not presently subject to determination, under certain circumstances because of fluctuating currency exchange rates) plus out-of-pocket expenses upon successful conclusion of all phases of such arrangements.

Under contractual arrangements in four countries, the Company has made scholarship payments from time to time aggregating $330,000 for the five years and nine months ended September 30, 1975.

In connection with certain sales of products through independent dealers in foreign countries, the Company follows the practice, where requested by such dealers, of withholding all or a portion of the dealer's commission as an account payable to the dealer or of paying all or a portion of the dealer's commission to a bank account outside the country in which the dealer resides. Such deposits are made by check directly to the dealer's designated bank account. Commissions not paid by check are either disbursed in cash or by credit

against amounts due the Company. The payments are properly described on the Company's books and the Company's tax returns. The question of whether local laws of the countries involved are being violated is being reviewed and will be reported to the Audit Committee.

The Audit Committee of the Board of Directors has directed management of the Company to formulate procedures and policies to eliminate possible irregularities in connection with foreign operations and to present such procedures and policies to the Audit Committee and the Board of Directors for review, comment and approval. Thereafter, management will be charged with the responsibility, through internal audit procedures and such other techniques as may be deemed reasonably necessary (including disciplinary action, and, where appropriate, dismissal for violations), of insuring compliance with such procedures and policies on a company-wide basis. In this connection, and in addition to broader policy statements to be enunciated with respect to U.S. and foreign business operations in general, management intends to recommend the affirmation of substantially the following policy regarding payments which may be made in any country in connection with the purchases of products or raw materials or the sale of products or services:

> "The Board of Directors and management of Tenneco Inc., having due regard for and recognition of the responsibilities arising from and attendant to international operations, hereby affirm the corporate policy of Tenneco Inc., its subsidiaries and divisions to the effect that all employees and agents are to comply with the ethical standards and legal requirements of each foreign country in which business is conducted."

Commencing in 1966 or 1967 many high-level executives of the Company made annual cash contributions of $2,000 each to a fund to be used for political contributions. It is reported that approximately twenty executives made contributions each year and that the fund did not exceed $40,000 in any one year. It is reported that this fund was discontinued after 1973. Under applicable Federal law, the legality of the fund turns primarily on "voluntariness". If there was direct or indirect coercion or inducement, whether in terms of advancement or company cars or other job perquisites, the fund would probably be deemed illegal. "Voluntariness" is a subjective determination by each individual participant, and most participants would probably state that their contributions were made voluntarily. For this reason, it is believed that the establishment of the fund did not violate Federal law.

Another employee fund was established at the Newport News Shipbuilding subsidiary before it was acquired by the Company in 1968. Cash contributions were made to the fund by high-level executives of the subsidiary. It is believed that contributions were made only once in the aggregate amount of approximately $10,000. The fund presently has a balance of $2,370 and is in the custody of the subsidiary's general counsel. Disbursements from the fund were made at the direction of the President of the subsidiary. The establishment of the fund is considered to comply with applicable Federal law on the basis that contributions were made voluntarily.

Recipients of campaign contributions from the Company's executive fund are believed to have been generally

determined by the chief executive officer of the Company. During the fund's existence from 1966 or 1967 until 1973, campaign contributions were made in Federal elections and in state and local elections. It is believed that contributions in state and local elections were made primarily in Texas and Louisiana. Contributions from a voluntary employee fund are specifically permitted by Federal election law and the Supreme Court has held that such voluntary employee funds were permissible prior to enactment of such election law. It is believed that such contributions are also permissible under Texas and Louisiana law, although no specific statutory authority exists, because of analogous Federal judicial precedent exempting voluntary employee funds and the intent of the law to prohibit only contributions of corporate money.

Contributions were made from the Newport News Shipbuilding employee fund in one Federal election and various state and local elections in Virginia. The contribution to the Federal election is believed to comply with Federal election law on the basis that the contribution was made from a voluntary employee fund. The state and local contributions are likewise believed to be permissible. In any event, state and local corporate contributions are permitted by Virginia law.

During the period from January 1, 1970 through December 1, 1975, three subsidiaries, Tenneco West, Inc., Heggblade-Marguleas-Tenneco Inc. and Stockdale Development Corporation, made campaign contributions in California elections aggregating approximately $180,000. State and local corporate campaign contributions are permissible under California law.

It has been reported that since 1970 two corporate campaign contributions of $100 each were made by local sales managers of a subsidiary, J. I. Case, in connection with state or local elections in Rhode Island and Florida, in both of which states corporate campaign contributions in state and local elections are believed to be permissible. In one or, perhaps, both of such cases, the contribution was not correctly described on the subsidiary's books and/or was improperly deducted for tax purposes.

Beginning prior to 1970 and continuing until August 1972, it is reported that cash amounts ranging from $200 to $2,000 were given on several occasions by the President of a subsidiary, Midwestern Gas Transmission Company, to state public utility commission chairmen in Indiana, Illinois, Kentucky and Wisconsin. The subsidiary officer states that the money was understood to be given in turn by the recipients to various charitable projects of their choice. In 1972 the same subsidiary officer gave $2,000 in cash to the chairman of the Pennsylvania Public Utility Commission. The officer states that the Pennsylvania chairman requested the money for use as a contribution to a chairtable dinner in Washington, D.C., honoring a U.S. Senator from Pennsylvania. The money was given to the Pennsylvania chairman several months after the dinner, and the Pennsylvania chairman states that the money was applied as a reimbursement of his contribution to the dinner. Two other employees of the Company state that they believe or had heard that the money was given to the Pennsylvania chairman to obtain his influence with the head of the General Services Administration, which was participating as an

intervenor in a Federal Power Commission regulatory proceeding, Rate Proceeding 71-6, to which a Company division, Tennessee Gas Pipeline, was a party. The subsidiary officer who delivered the payment and the Pennsylvania chairman deny that this payment had any connection with such proceeding. The money was given to the Pennsylvania chairman several months after the regulatory proceeding had been ultimately resolved in a manner favorable to the division. The Company's executive fund may have been the source of these payments, although this has not been clearly determined since there are no records of disbursements from the fund and the recollections of the subsidiary President and the administrator of the fund differ.

Beginning on October 27, 1970, and continuing until September 1975, a subsidiary, Tenneco Oil Company, made payments of $2,000 per month to the sheriff of a Lousisana parish who is also an attorney. There are conflicting statements regarding the reason or reasons for the payments. The payments were approved by senior management of the subsidiary, but there is no evidence that the Board of Directors or high-level management of Tenneco Inc. were aware of the arrangement. The sheriff is presently under investigation by officials of the U.S. Department of Justice, and the Company does not believe that it would be appropriate to comment further about the matter pending resolution of such Federal investigation.

In June 1970, a $2,000 cash campaign contribution was made to a State District Judge in Louisiana for use in his race for a Louisiana appellate court seat. Approximately eighteen months prior to the contribution, the Judge had granted an injunction against violence on the picket line in connection with a union strike at the plant of a Company subsidiary, Tenneco Oil Company. Approximately two months after the contribution was made, the union filed a motion to dissolve the injunction, which was denied by the Judge in late 1970. The $2,000 was given to the Judge by a local employee of the subsidiary. The payment was approved by senior management of the subsidiary, but there is no evidence that the Board of Directors or high-level management of Tenneco Inc. were aware of this payment. The money probably came from either the personal funds of an officer of the subsidiary or the Company's executive fund, and not from corporate funds. It is believed that the campaign contribution did not violate the Louisiana prohibition against corporate contributions which was then in effect because the money probably did not come from corporate funds.

In 1972 contributions of $1,000 each were made by a subsidiary, Tenneco Oil Company, to two Louisiana District Judges and a Louisiana District Attorney who were running for re-election, all in the same parish. The contributions were made in cash by an employee from the subsidiary's working fund account. The payments were incorrectly described on the subsidiary's books and improperly deducted for tax purposes. The contributions were approved by senior management of the subsidiary, but there is no evidence that the Board of Directors or high-level management of Tenneco Inc. were aware of the payments. The contributions violated the then existing Louisiana prohibition against corporate campaign contributions.

9-7

Tenneco proposes to turn over to the Internal Revenue Service the relevant information relating to the foregoing matters and to amend tax returns and make additional payments where appropriate. It is not considered at this time that material income tax deficiencies will result.

At its meeting in October 1975 the Audit Committee of the Board of Directors approved and adopted the following policy statements:

1. The use of assets of the Company or any subsidiary for any unlawful or improper purpose is strictly prohibited;

2. No undisclosed or unrecorded fund or asset of the Company or any subsidiary shall be established for any purpose;

3. No false or artificial entries shall be made in the books and records of the Company or its subsidiaries for any reason, and no employee shall engage in any arrangement that results in such prohibited act;

4. No payment on behalf of the Company or any of its subsidiaries shall be approved or made with the intention or understanding that any part of such payment is to be used for any purpose other than that described by the documents supporting the payment;

5. Any employee having information or knowledge of any unrecorded fund or asset or any prohibited act shall promptly report such matter to the chief executive officer or general counsel of Tenneco Inc.;

6. All executive officers of the Company shall be responsible for the enforcement of and compliance with this policy including necessary distribution to ensure employee knowledge and compliance;

7. Appropriate officers and employees will periodically be required to certify compliance with this policy; and

8. This policy is applicable to Tenneco Inc. and all its domestic and foreign subsidiaries.

The Audit Committee has also directed management to implement procedures for insuring compliance with such policies and to report to the Audit Committee and to the Board of Directors with respect thereto. Following such report and review thereof by the Board of Directors of the Company, a definitive statement of such policies and procedures will be distributed on a company-wide basis.

The matters described herein have been voluntarily disclosed by the Company, and the Company has advised the staff of the Commission that its documents, books and records relating to the investigation ordered by the Audit Committee will be made available at the Company's offices for examination by the staff of the Commission upon request.

In keeping with the practice of other companies reporting matters of the type described herein, the Company

9.8

SECURITIES AND EXCHANGE COMMISSION
Washington, D. C. 20549

Form 8

AMENDMENT TO APPLICATION OR REPORT

Filed pursuant to Section 12, 13 or 15(d) of the
Securities Exchange Act of 1934

For the Month of January 1976

Tenneco Inc.
P. O. Box 2511
Houston, Texas 77001

9.9

SECURITIES AND EXCHANGE COMMISSION
Washington, D. C. 20549

FORM 8

AMENDMENT TO APPLICATION OR REPORT

Filed pursuant to Section 12, 13 or 15(d)

of

THE SECURITIES EXCHANGE ACT OF 1934

TENNECO INC.
(Exact name of registrant as specified in charter)

AMENDMENT NO. 2

The undersigned registrant hereby amends its Current Report on Form 8-K for the month of January 1976 by providing information for the following item as set forth in the pages attached hereto:

ITEM 13

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this amendment to be signed on its behalf by the undersigned, thereunto duly authorized.

TENNECO INC.

By M. W. Meyer
M. W. Meyer
Assistant Secretary

Date: February 23, 1976

9/10

Item 13. Other Materially Important Events.

On February 13, 1976 Tenneco Inc. filed Amendment No. 1 to its Form 8-K Current Report for the month of January 1976, containing in part the following statements:

> "Beginning prior to 1970 and continuing until August 1972, it is reported that cash amounts ranging from $200 to $2,000 were given on several occasions by the President of a subsidiary, Midwestern Gas Transmission Company, to state public utility commission chairmen in Indiana, Illinois, Kentucky and Wisconsin. The subsidiary officer states that the money was understood to be given in turn by the recipients to various charitable projects of their choice."

By affidavit dated February 23, 1976 George Perrine made the following statements:

> "I was President of Midwestern Gas Transmission Company from 1961 until August 1972. I am presently a consultant to Tenneco Inc. Although I gave the information quoted above in substantially the language therein to Tenneco Inc. representatives, upon further reflection I am unable to recall any names, dates or amounts or whether any sums were actually delivered to public utility commission chairmen, members or employees in any of the states of Indiana, Illinois, Kentucky or Wisconsin or elsehwere. Because of such inability to recall specific information, I have concluded that my original statement was in error."

Item 14. Financial Statements and Exhibits.

(b) Exhibits

1. Affidavit of George Perrine dated February 23, 1976.

~~EXHIBIT 1~~

9.11

THE STATE OF TEXAS §

COUNTY OF HARRIS §

AFFIDAVIT OF GEORGE PERRINE

BEFORE ME, this day personally appeared George Perrine, who, after being duly sworn, deposed and said:

I.

My name is George Perrine. I have personal knowledge of every statement made in this Affidavit and am fully competent to testify about the matters stated herein.

II.

I understand that Tenneco Inc. has filed Amendment No. 1 on Form 8 amending its Current Report on Form 8-K for the month of January 1976, and that the following appears as part of said Amendment:

> "Beginning prior to 1970 and continuing until August 1972, it is reported that cash amounts ranging from $200 to $2,000 were given on several occasions by the President of a subsidiary, Midwestern Gas Transmission Company, to state public utility commission chairmen in Indiana, Illinois, Kentucky and Wisconsin. The subsidiary officer states that the money was understood to be given in turn by the recipients to various charitable projects of their choice."

III.

I was President of Midwestern Gas Transmission Company from 1961 until August 1972. I am presently a consultant to Tenneco Inc. Although I gave the information quoted above in substantially the language therein to Tenneco Inc. representatives, upon further reflection I am unable to recall any names, dates or amounts or whether any sums were actually delivered to public utility commission chairmen, members or employees in any of the states of Indiana, Illinois, Kentucky or Wisconsin or elsewhere. Because of such inability to recall specific information, I have concluded that my original statement was in error.

9.12

Further, the affiant sayeth not and I have read the foregoing Affidavit and it is true and correct.

George Perrine

SUBSCRIBED AND SWORN TO before me by George Perrine on this 23rd day of February, 1976.

Jerry Barry
Notary Public in and for
Harris County, Texas

[illegible] Harris County, Texas
[illegible] 77

AGO 800581

Exhibit 10

WRITTEN STATEMENT BEFORE

SPECIAL COMMITTEE OF ALASKA LEGISLATURE

HEARINGS HELD ON JANUARY 31 – FEBRUARY 2, 1977

Southern Natural Gas Company (Southern) is the major supplier of natural gas in the southeastern United States. The Company provides service to numerous markets in Louisiana, Alabama, Georgia, South Carolina and Mississippi and portions of Tennessee. Southern also supplies gas to a portion of northern Florida through its wholly-owned subsidiary, South Georgia Natural Gas Company.

CORPORATE STRUCTURE AND FINANCIAL ASPECTS OF SOUTHERN

Southern is a wholly-owned subsidiary of Southern Natural Resources, Inc. (SNR), which is a diversified billion dollar company. Attached is an organizational chart of SNR (Attachment No. 1). SNR is the parent company for seven energy-related and natural gas pipeline companies. In addition to Southern and South Georgia Natural Gas Company, which are natural gas pipeline companies, Southern Energy Company will own and operate a liquefied natural gas (LNG) receiving terminal near Savannah, Georgia. Southern Deepwater Pipeline Company is a 50% participant in Sea Robin Pipeline Company, which operates a large offshore gas supply system in the Gulf of Mexico. The Offshore Company is one of the world's largest contract drilling firms and is principally engaged in drilling for oil and gas in offshore and onshore areas around the world. SONAT Exploration Company is engaged in oil and gas exploration and production activities. Southern Forest Products, Inc. holds a 50% interest in Boise Southern Company, a forest products joint venture.

The common stock of SNR is listed and traded on the New York Stock Exchange and the Pacific Stock Exchange. SNR has approximately 10,000,000 outstanding common shares and 22,000 shareholders located in every state of the union and in many foreign countries.

SNR and its system of companies enjoy a very sound financial reputation. Indicative of SNR's sound financial condition is its rating included in Forbes, January 1, 1977 rating of utilities. In this connection, SNR's 5-year rank is No. 1 among other natural gas utilities in return on equity, return on total capital and growth in earnings/share (Attachment No. 2).

Southern also has outstanding debt securities, some of which are listed on the New York Stock Exchange. The Moody's ratings of Southern's debt securities are equal or superior to the ratings of debt securities of other pipeline companies participating in the Alcan Gas pipeline project and the Arctic Gas pipeline project (Attachment No. 3).

PIPELINE SYSTEM AND OPERATIONS OF SOUTHERN

In 1930, when it began operations, Southern operated a 1,250 mile pipeline with 15,000 total installed compressor horsepower. Today, the Company operates a 7,700-mile pipeline system with 399,364 compressor horsepower, which traverses the southeastern portion of the United States. Attached is a map depicting its pipeline system (Attachment No.4).

Southern sells gas for resale to 9 distributing companies, to 102 municipalities and gas districts and to 3 connecting interstate pipeline companies. It also makes direct sales of gas to 67 industrial customers located throughout the southeast. These industrial customers are very important to the economy of the southeast, and some are major U. S. companies. Attached is a list of the major resale customers and its direct industrial customers (Attachment No. 5). The population of its market area is about 7,000,000.

Through a subsidiary, Southern owns 50% of a major gas supply system, known as Sea Robin Pipeline Company, which consists of 335 miles of pipeline extending into the Gulf of Mexico from Louisiana. At the time this gas supply system was built, it was one of the largest offshore pipeline projects in history -- it was the first offshore project to use 36-inch diameter pipe in the Gulf of Mexico and the pipeline system reached further into the Gulf than any previous pipeline project. Sea Robin commenced operations in 1970 and today represents a gross investment of approximately $175,500,000, of which Southern is a 50% participant. Attached is a picture of a typical drilling platform located offshore, Louisiana; after drilling is completed, production facilities will be installed as the platform and the facilities will be tied in to Sea Robin's system (Attachment No. 6).

The Company is a participant in a unique project to import liquefied natural gas (LNG) into the United States from Algeria. This is the first (and only) major base load LNG project which has received all necessary government approvals. Through a subsidiary, Southern is constructing and will operate an LNG terminal on an island near Savannah, Georgia (see page 3 , infra) for further details regarding this project.

In 1977, the Company will sell about 555 billion cubic feet of gas from its pipeline system. The rated delivery capacity of the pipeline system is 2.230 billion cubic feet per day.

SOUTHERN'S GAS SUPPLIES

The Company presently obtains its gas supplies from 153 oil and gas fields in south Louisiana, the Gulf of Mexico offshore Louisiana, north Louisiana, east Texas, Mississippi and from one source in Alabama. It presently purchases over 50% of its gas supplies in the Gulf of Mexico. While this percentage is increasing each year, a substantial portion of the oil and gas provinces offshore in the Gulf have been leased (Attachment No. 7), which means that Southern will have to broaden its search to meet the gas requirements of the southeastern United States.

Since the late 1960's, the Company has been unable to acquire enough gas to replace that used on its system each year. Because of this, Southern notified all of its customers in 1970 that it could not accept any new customers or increase the contractual volumes it was obligated to deliver to existing customers until the gas supply situation improved. Unfortunately, this situation has not improved, either on Southern's system or nationwide. Indeed, the severe winter now being experienced in the southeast and other parts of the nation has seriously aggravated the nationwide critical gas shortage.

Recognizing that the natural gas shortage was developing, Southern in the late 1960's intensified its efforts to obtain new gas supplies and undertook unique and innovative gas supply programs. These efforts include:

— In recent years, major investments by Southern, at a cost of about $243 million, in offshore natural gas pipeline systems in the Gulf of Mexico (the area which the Company has relied on for virtually all of its new gas reserve additions).

— Prior to 1970, the Company and its affiliates owned interests in 13 offshore Gulf of Mexico blocks -- since 1970, Southern and its affiliates have made successful bids, totaling approximately $69,000,000 for interests in 33 additional offshore federal blocks. Also, Southern and its affiliates have substantially expanded their own exploration programs -- they now own interests in 39 oil and gas fields. Attached is an artist's rendition of a gigantic production platform now being constructed for one of these fields located in the Gulf (Attachment No. 8).

— Southern aggressively pursued the FPC's advance payment program as a means of obtaining new domestic gas supplies -- during that program's existence, it made a cumulative total of $151,000,000 in advance payments.

— Another major and significant step was Southern's development of the Muldon Gas Storage Field in northeastern Mississippi several years ago. This field, representing an investment of over $63,000,000, is one of the largest underground gas storage fields in the U. S. which is owned by a single company. It has become a major factor in helping the Company meet its winter peak delivery obligations. This storage field, under normal conditions, can provide Southern with 34% of its winter peak-day requirements. It can be of great utility in accomplishing the distribution by substitution and exchange of the Prudhoe Bay gas into Southern's service area. Attached is a picture of the Muldon Gas Storage Field facilities (Attachment No. 9).

Also, as the Company saw the gas supply shortage beginning to threaten in the 1960's, it initiated studies, internally and through outside consultants, to determine the most appropriate means of supplementing the depleting domestic gas supplies. The studies concluded that over and above the major initiatives described above, Southern must undertake non-coventional, non-traditional gas supply efforts if it hoped to supply the existing requirements of its customers in future years. The studies also concluded that, at that time, the first, most immediate, viable non-traditional supplementary supply available to Southern was the importation of liquefied natural gas (LNG) from overseas.

LNG PROJECT

Southern's LNG project was mentioned earlier (p 2, supra). Since the Trans-Alaska pipeline project involves LNG facilities of a similar nature, it is appropriate to discuss in some detail how the Company handled the various aspects of its LNG project. In particular, the discussion will focus on the technical and environmental features of the LNG project. Southern's expertise in all phases of LNG projects, described below, comprises the type of expertise that Southern will bring to the Trans-Alaska pipeline project.

In 1970, Southern contracted to purchase LNG to be imported from Algeria. A prime mover in this project is a subsidiary of El Paso Natural Gas Company, which had agreed to purchase the LNG from Sonatrach, the Algerian national oil company, and to transport it to the USA. Southern became one of three east coast USA purchasers to contract, in turn, for the purchase of the LNG from El Paso.

This was the first base load LNG project ever proposed for the USA -- and, although others have since been proposed, it is the only one which has received all of the necessary governmental approvals. However, the LNG to be supplied through this project represents a supplementary gas supply source and does not answer the nation's and the southeast's desperate need for significant new domestic gas supplies.

At the time of the project's inception, the Company realized that the project could only succeed through a concerted effort between it and many other people, and groups, including state and federal governmental officials, federal and state legislators, Southern's customers, environmental groups and state Public Service Commission officials. The project required the support and approval of all of these groups -- which was achieved as a result of concerted efforts spanning a period of several years.

With the support and approval of all these groups, there were two principal objectives: (1) to construct and operate energy transmission systems to get the energy from the source to the market, and (2) the need and concern to have these facilities constructed and operated in a manner that would be compatible with the local environment. The input of all groups was necessary to accomplish the objectives. As aforesaid, these efforts spanned a period of several years.

From day one, Southern concluded it should locate, design, construct and operate its LNG terminal and connecting pipeline facilities in a manner that would cause minimum degradation to the environment. With this mandate, the Company sought the advice of leading authorities in the environmental community, local environmental groups, concerned citizens and political forces in the area. All of these groups concluded that Southern had approached the problem in an intelligent fashion and gave their support to the project - with the result that there have been no environmental roadblocks with the Company's Savannah terminal facilities. As a result of the support of these groups and their team efforts with Southern, this LNG importation project has received all required local, state and federal governmental approvals (which included about 90 permits and authorizations).

In order to select an environmentally preferred site for the LNG terminal, Southern conducted an exhaustive study of every port on the lower Atlantic Seaboard from Jacksonville, Florida, to Charleston, South Carolina. Many of the ports investigated were rejected because of physical or environmental reasons. The ultimate selection of the Elba Island location, approximately five miles downstream from Savannah, Georgia, was a sound choice. This island is in a very remote area although it is in the general vicinity of a highly industrialized city, Savannah, Georgia. The island is completely surrounded by water and consists of approximately 850 acres which had been created from many years of maintenance dredging of the channel in the Savannah River. It is located approximately eight miles upstream from the mouth of the Savannah River with an unobstructed, reasonably straight channel to the open sea. It was necessary to build a 2.6 mile road and 1,780 foot high-rise bridge over an alternate channel of the intercoastal waterway to Elba Island. However, for the most part, this road was constructed on an old abandoned tramway in order to preserve and cause a minimum amount of damage to the marsh areas in the vicinity. The road and bridge were constructed in record time of only six months. During the design and construction phase of the terminal facility the environment and safety issues were of foremost importance. As an example, only approximately 120 acres of land were cleared of the total 850 acres on the island for the plant site. A greenbelt of trees between the plant site and the Savannah River was left for aesthetic considerations. Southern has considered and designed into the facility the ultimate in safety facilities. The latest in monitoring and fire protection equipment has been installed in order to provide the greatest possible degree of safety.

Initial plans called for the use of river water circulated through open rack vaporizers to heat the LNG and convert it back into a gas. The Company engaged Skidaway Institute of Oceanography, a unit of the University System of Georgia, to make a one-year study of the water quality and marine biology in the waters surrounding Elba Island and what effect the use of river water to convert the LNG back into a gas might have on the water quality and marine biology. This study concluded that the effect would be a reverse pollution and a benefit to the Savannah River. The discharge water from the plant would be five degrees cooler than the intake water in addition to having the oxygen content of the water increased by virtue of going over open rack vaporizers. Both of these effects would have a beneficial effect on the quality of the water and the marine biology.

At the recommendation of environmental consultants all facilities were constructed and painted in a manner to blend in with the environment As an example, the three 400,000-barrel LNG storage tanks were painted a pastel blue to blend in with the skyline. Throughout the construction of the Savannah Terminal facilities an environmental consultant from the Institute of Ecology of the University of Georgia was employed to monitor all construction activities to insure that these activities would be compatible with the environment and that they would not result in any adverse pollution of the waters surrounding Elba Island or the general vicinity.

In order to transport the revaporized LNG into Southern's existing facilities near Savannah, Georgia, it was necessary to construct a pipeline from Elba Island to these facilities for a distance of approximately 13½ miles. Approximately 80 percent of the route is through marsh areas subject to 7½ foot tides twice each day. In addition, it was necessary to cross several miles of the Savannah National Wildlife Refuge which is principally a wildfowl feeding ground. In order to assure an absolute minimum chance of ever having to go back in this area during the life of the facility, the Company constructed two parallel 30-inch pipelines and installed pipe with a wall thickness equivalent to that installed in congested areas - the idea being that once the pipelines are laid, it is anticipated that they will not have to be disturbed in the future. Southern's careful planning in this matter will also permit the expansion of its regasification facilities without another intrusion into this environmentally sensitive area.

Prior to the announcement of the LNG project, Southern held many meetings with the Fish and Wildlife Service, which has jurisdiction over the Savannah National Wildlife Refuge, to seek their assistance in planning the location of the pipelines and a method of construction which would minimize any possible environmental damage to the Refuge. Through the joint effort of the Fish and Wildlife Service and Southern, an acceptable route was determined. The Company developed construction techniques which would further minimize any damage to these environmentally sensitive areas. In developing these construction techniques, Southern relied upon its almost 25 years of experience in constructing pipelines and facilities in the marshlands and offshore areas of South Louisiana. Southern was one of the first companies to extend its pipeline system through the environmentally sensitive areas of South Louisiana and into the deep waters of the Gulf of Mexico. At the time of constructing its West Delta and Main Pass Pipeline Systems in the Gulf of Mexico, these systems incorporated the largest diameter pipe laid to date in these depths of water. A few years later the Company constructed the Sea Robin Pipeline System which, as mentioned earlier (page 2, supra), at the time of construction was the largest offshore system in existence and it extended further from shore than any previous pipeline. The technical expertise and knowledge gained by the Company from these operations, along with its knowledge and experience in construction of pipeline facilities since 1929, have been very

beneficial in designing and constructing pipelines in environmentally sensitive areas. Although Southern has not constructed pipelines in arctic areas, the experience gained in the lower 48 states and the Gulf of Mexico will most certainly be beneficial and add to the expertise of others in developing techniques to minimize any degradation of the environmentally sensitive Alaskan area.

The construction techniques developed for the twin 30-inch pipelines crossing the Savannah National Wildlife Refuge consisted of four push sites at accessible areas where the pipe could be fabricated from ramps and pushed into place by means of flotation attached to the pipeline until it reached its final location in a narrow backhoe ditch. At this point, the flotation was removed from the pipeline allowing it to sink to the bottom of the ditch and the pipelines were backfilled to their normal condition. In order to minimize the loss of spoil in the backfilling operation it was decided to dig the first ditch for the first pipeline and after installing that line while digging the ditch for the second pipeline to place the spoil from the second pipeline into the ditch for the first pipeline. This resulted in a minimum handling of the spoil and, consequently, a minimum reduction in the spoil available for backfilling operations. All of this effort resulted in considerable additional construction expense; however, it provided a minimum of disturbance and maximum recovery to the area as is indicated by the attached photograph. Attachment No. 10 shows the after construction, restoration and natural growth after one growing season in the Savannah Wildlife Refuge. The black dots on either side of the photograph represent the center line of the pipeline right-of-way. As shown by this photograph, the regrowth after construction of the pipeline indicates a remarkable recovery and from an eye level standpoint it is difficult, if not impossible, to determine the actual location of the pipeline route.

In addition to all of these efforts, Southern contracted with the Institute of Ecology of the University of Georgia to provide an environmental consultant to monitor the entire pipeline construction. Southern also funded a regrowth study which has been underway for approximately a year and a half to study the regrowth conditions in the marsh areas. (This is one of the first regrowth studies actually conducted after installation of pipelines through marsh areas and has been most beneficial to the environmental community and to Southern.)

The natural gas to be liquefied and sold to El Paso Algeria for the El Paso Algeria LNG Project originates in the Sahara Desert in Algeria. Natural gas from this field is gathered and routed to a liquefaction plant at Arzew, Algeria on the Mediterranean Coast. The gas is then liquefied by the use of a refrigerant system. The LNG is then stored in tanks at Arzew to await shipment. El Paso Algeria is constructing a fleet of nine (9) tankers specially designed with insulated cryogenic cargo containment systems to transport the supercold LNG from Arzew across the Atlantic for about 3,995 nautical miles to Savannah, Georgia and Cove Point, Maryland on a combined fleet basis. Attached is an artist's rendition showing the LNG tanker route from Arzew to Savannah (Attachment No. 11). Each ship will have a nominal cargo capacity of 125,000 cubic meters (approximately 2,700,000 Mcf). Typically, the overall length is 935 feet and the width is 140 feet, but dimensions of the vessels will vary depending upon the type of cryogenic containment system employed. Attachment No. 12 is a picture of one of the LNG tankers. It will take approximately 21 days to make the round trip between Arzew and Savannah. During the course of a year, fifty (50) shiploads of LNG, or approximately one shipload every seven days, will be delivered to the Savannah terminal. This amounts to approximately three million short tons of cargo that will be unloaded annually at the Savannah terminal. The cargo onboard the ship when it arrives will be at atmospheric pressure and a temperature of approximately -260° F. After re-gasification through the Savannah terminal, the gas will be transported by pipeline through the Company's eastern

market area. (As mentioned earlier, two 30-inch pipelines had to be installed to hook up the Savannah terminal to the Company's existing pipeline system.)

In order to receive, store and regasify the LNG, Southern's LNG team became intimately involved in the design and construction activities of its consultants and contractors. The major consultants and contractors employed were Bechtel, Incorporated for the process and civil design and construction; Raymond Technical Facilities for the design of the South Channel bridge and unloading dock; Raymond International for construction of the South Channel bridge; Gulf Foundations for the construction of the unloading dock; Chicago Bridge and Iron Company for the design and construction of the LNG storage tanks; University Engineers for the design of a fire prevention and control system; and Walter Kidde Company for the installation of the fire prevention and control system. Personnel of the Company have been involved in all decisions and most daily problems encountered by the contractors listed.

To construct the dock at the Savannah terminal to unload the LNG from the tankers, and to allow the tankers to be turned around, involves considerable dredging. Dredging for dock construction has been accomplished and this involved the removal of about 500,000 cubic yards of material. Maintenance dredging in the dock area and initial dredging of the turning basin involves the removal of approximately four million more cubic yards of material. Numerous discussions were conducted with Federal, State, and local groups to gain authorization to dredge, and once dredging activities started close coordination had to be maintained with certain of the approving agencies.

Design and construction of the LNG process facilities, as well as others, necessitated that consideration be given to earthquake criteria, that an extremely effective quality assurance program be designed, implemented and followed, and that effects of cryogenic temperatures be evaluated in all calculations. The Elba Island facility design was subjected to a cryogenic safety review by consultants from the National Bureau of Standards working for the FPC which concluded after considerable study that the LNG terminal can be expected to operate safely.

LNG delivered by the tankers at the Savannah terminal will be stored in the three 400,000 bbl. insulated tanks. These tanks are of identical capacity and structural design. These tanks are erected on a reinforced concrete and pile foundation with air space between the concrete pile cap and ground to prevent soil freezing and heaving. These tanks will normally store the LNG at about -260 F and can operate up to pressures of 2.0 psig before venting. The maximum daily boil-off rate will be less than 0.06% of full liquid volume. Construction is of the double wall type, with an inner aluminum tank and an outer carbon steel tank. Each tank holds approximately the equivalent of 1,380,000 Mcf of gas and is supported by more than 600 pilings. These tanks are designed to withstand a Zone 3 earthquake. Tank design and construction are essentially complete.

The Elba Island facility has a very sophisticated fire prevention and control system. All major process equipment on the plant site is protected from fire by a combination of dry chemical and foam systems. The fixed dry chemical system is used to extinguish any LNG fires which might occur and is automatically activated when flames are sensed, or the system may be manually actuated from the control room. The fixed foam system is primarily used for controlling boil-off vapors should LNG accidentally be spilled. This system is actuated automatically be means of cold sensors, or it may be actuated manually from the control room. The plant also has an underground fire water loop with hydrants and nozzles located

throughout the facility for extinguishment of non-LNG fires. Water from the system will also be used as a heat shield to protect structures or equipment from any fires that might occur elsewhere in the plant. Two fire trucks have been purchased. One is strictly a firewater truck and will be used to combat grass fires that might occur. The second truck contains a dry chemical unit and also has a foam generator. This vehicle will be used to supplement the fixed foam and dry chemical systems and is needed to serve areas not covered by the fixed systems.

The Company is very familiar with all facets of shipment of LNG by cryogenic tankers. At one point in time on the Algerian LNG-I project, Southern had the option to own one of the tankers and, as a result, made extensive studies into the construction and operation of LNG tankers. Also, through an affiliate company, The Offshore Company, which is one of the largest offshore drilling firms in the world, Southern is thoroughly familiar with the planning, design, construction and operation of mammoth offshore drilling rigs and the transportation of these rigs and other ocean transportation on the high seas. The Offshore Company has developed sophisticated patented systems for offshore drilling rigs and is thoroughly familiar with the shipyard construction of these rigs and other large ocean-going vessels. Attached is a photograph of one of The Offshore Company's Discoverer-Class drillships. Offshore's Discoverer Seven Seas is a very large self-propelled drillship capable of drilling in water depths of 6,000' (Attachment No. 13). The technical expertise of The Offshore Company will add much to the LNG shipping aspects of the project.1/

The necessary facilities in Algeria, the required LNG tankers and Southern's receiving terminal at Savannah are now in advanced stages of construction.

In summary, through advanced planning and cooperative efforts of all concerned, Southern overcame possible environmental and other problems related to this project. This result was quite unique, considering the problems which others have faced. The Company expects to receive the first shiploads of LNG in early 1978. The total investment of Southern in the LNG terminal and related pipeline facilities is in the order of $170,000,000.

Attached is an artist's rendition of how the LNG terminal will look when it is completed, and two recent aerial photographs showing the state of completion of these facilities (Attachments Nos. 14, 15 and 16).

Although this LNG project is essential to the southeast, it by no means diminishes the need of the nation and the southeast for new domestic gas supplies. In fact, the Southern-Algeria LNG project is expected to only supply 15% of the requirements of Southern's customers.

1/ Offshore operates one of the largest fleets of offshore mobile drilling units in the world. Its fleet includes self-elevating mobile platforms, drilling tenders, drilling rigs for self- contained platforms, an inland drilling barge, self-propelled drillships, a self-propelled, self-elevating drillship, and a self-propelled, semi-submersible drilling vessel. Offshore also owns and operates workboats, land drilling units and various transportation equipment. In addition to providing contract drilling services, Offshore also provides services for others in engineering, design and construction of offshore drilling equipment. In this area, Offshore and its subsidiaries own or are licensed to use over 70 United States patents relating to equipment used in the drilling industry. These patents expire at various dates from the present until late 1992.

The Company is studying the feasibility of purchasing additional LNG. For example, Southern is in close touch with every major potential source of new LNG that logically could come into the east coast -- such as Algeria, Venezuela, Nigeria, Iran, the Arabian Gulf, etc. The LNG terminal at Savannah, one of the only two base load LNG facilities approved by the FPC, puts Southern in an advantageous position to purchase LNG from these sources. Also, the Company is studying the feasibility of other synthetic fuels, such as coal gasification.

But, while LNG and other synthetic forms of energy are needed to supplement dwindling gas supplies, they do not take the place of new domestic gas supplies. There can be no question that the southeastern United States is in dire need of new domestic gas supplies -- such as Alaska royalty gas.

SOUTHERN SUPPORTS AN ALL-AMERICAN ROUTE

The Company believes that an Alaska natural gas transportation project which follows an all-American route has several significant advantages over projects which cross Canada (see Attachment No. 17). Primary among the advantages of an all-American route are the time required to bring Alaskan gas to the lower 48 markets and the greater positive impact on the United States economy. Environmental considerations and the ultimate widespread geographic distribution of Alaskan gas (which will be distributed to 43 states) are also important factors in favor of a Trans-Alaska natural gas transportation system.

Considering the severe winter which a major portion of the United States has experienced this year (Southern's market area in the southeast is experiencing its coldest winter ever recorded), the Company believes a critical factor in the selection of an Alaska natural gas transportation system is how quickly Alaskan gas can reach the lower 48 markets. El Paso Alaska estimates that its project can commence deliveries of Alaskan gas to the lower 48 markets approximately 5 years after the construction commences with deliveries of full volumes 10 to 12 months thereafter. The sponsors of the Arctic Gas project estimate that their project can commence deliveries to United States markets after 5½ years of construction. But this estimate is subject to challenge. The Department of the Interior made a study which concluded that the risk of delay in an Alaska-LNG project would be about half of that for an Arctic Gas project. Also, El Paso Alaska commissioned the Green Construction Company, one of the Alyeska pipeline contractors, for an independent study of the proposed Arctic Gas construction schedule. This study concluded that the Arctic Gas project had nearly a 100% probability of experiencing 1.5 to 2 years' delay, which would result in a cost overrun of approximately $2.7 billion.

Southern believes the earlier delivery of additional gas supplies to the lower 48 markets by the Trans-Alaska pipeline will have a significant positive impact on the national economy. In addition, this project offers several other positive impacts on the economy. It has been estimated that the Trans-Alaska pipeline project would result in 749,000 man years of direct and induced employment in the United States as compared to 245,000 man years of direct and induced American employment resulting from the Arctic Gas project. This additional employment will improve the likelihood of achieving the national goal of reducing unemployment. Further reductions in unemployment are likely to result from the fact that the Trans-Alaska pipeline project is projected to have a net economic benefit of from $0.9 to $1.9 billion larger than that of the Arctic Gas project. A third economic benefit of a Trans-Alaska project is the amount of revenues it will provide to all levels of government. It is estimated that this project will generate $19.2 billion in United States income taxes, Alaska ad valorem taxes, and miscellaneous taxes. In

addition to the direct benefit the State of Alaska will receive from its share of these tax revenues, it is estimated that the State's economy will greatly benefit from an estimated $5.44 billion in direct expenditures made in Alaska on construction payrolls, goods, services and pipeline facilities.

Southern is convinced that a major advantage of the Trans- Alaska pipeline project is the limited environmental impact it will have. This project avoids the unique Arctic National Wildlife Range. In the Company's opinion, this factor alone gives it an overwhelming advantage in this area. The Trans Alaska pipeline project, however, has another significant environmental advantage: the proposed realigned route will utilize the Alyeska oil pipeline workpad for nearly its entire length of the State. In this manner, a separate cut across the State's wilderness will be avoided. Only where the gas pipeline diverges from the Alyeska pipeline, its last 42 miles, will the project invade a part of the State's pristine environment. Southern believes the small incremental impact of the natural gas pipeline on the State of Alaska's environment and the preservation of the Arctic National Wildlife Range make the Trans-Alaska pipeline project environmentally preferable to the competing projects.

Finally, the Company anticipates that the Trans-Alaska pipeline project will bring Alaska natural gas to 43 of the lower 48 states. This represents a very broad geographic distribution of Alaska's royalty gas in the lower 48 states.

THE ROYALTY GAS PURCHASE CONTRACT IS BENEFICIAL TO ALASKA

Southern believes that the royalty gas purchase contract between it and the State of Alaska is a mutually beneficial arrangement. While the Company will receive much needed gas supplies, this contract contains many favorable aspects for the State of Alaska. In addition to the favorable terms contained in the contract itself, by entering into this arrangement Alaska received the benefit of gaining an enthusiastic participant in support of the Trans-Alaska pipeline project. From the time the royalty gas agreement was concluded, the Company has repeatedly gone on the public record in support of the project. Southern has stressed the reasons listed in the above section in endeavoring to build public support for an all-American gas transportation system.

Concerning the contract itself, the State has the benefit of two unique contractual provisions. First, the contract provides that Southern will reimburse the State for Southern's pro rata share of any costs attributable to the preparation and transportation of the State's royalty gas incurred by the State as a result of its decision to take its royalty gas in kind. Second, and probably the most advantageous provision in the contract to the State, the State has the right to reclaim its royalty gas when it has a need to use this gas within the State. If the State exercises this right, the contract gives Southern the right to purchase surplus royalty gas from the State to replace any gas which it so reclaims. However, the gas used in repayment will be surplus gas, i.e., gas which would be exported from Alaska anyway. In addition, the only gas eligible to be used as replacement gas is that gas moving through the Prudhoe Bay pipeline.

The contract provides for a mutually beneficial price for the gas. The State of Alaska will receive the best price paid for gas from the Prudhoe Bay Field, but Southern is not required to pay any premiums or extra charges.

Finally, Southern believes it is to the State's advantage that the sales contract is for a stated amount of gas. This enables the State to know the precise maximum amount of gas it has committed from the Prudhoe Bay Field. Also, the contract is for a stated term, 20 years, but is considered completed if the maximum volume designated in the contract is delivered at an earlier date.

SOUTHERN'S NEED FOR ALASKA'S ROYALTY GAS

In spite of its intensified efforts, Southern's domestic gas supply additions have diminished drastically in recent years. During the five-year period 1971-75, the Company was successful in adding under new contracts reserves amounting to only 40% of the total gas consumed during that period. Thus, Southern considers the Alaska royalty gas from the Prudhoe Bay Field to be a very significant and important source of new domestic gas supplies for its customers in the southeastern United States. No other Prudhoe Bay gas has been contracted for markets in the southeastern United States.

Southern's farsighted gas supply efforts have enabled it to maintain service to its customers without curtailment of high priority users until this severe winter season. The present gas shortage situation resulting from this abnormal winter underscores Southern's need to add significant new gas reserves to its system. At the time of commencement of deliveries of the Prudhoe Bay gas, the Company will be serving only users of the very highest priorities. The addition of a portion of Alaska's royalty gas to Southern's supplies will, therefore, be vital to Southern's ability to serve high priority gas users. This fact is completely demonstrable and clearly substantiates Southern's vital need for this gas.

The gas supply situation in the southeastern United States is critical. Southern went into this winter with enough gas from its conventional sources, a full storage field and every expectation of being able to serve the essential requirements of all the residences, small businesses, and industries in the southeastern states that its customers serve. However, the southeast has experienced unprecedented cold weather for almost the entire period since October 1. This has been the coldest winter since before the turn of the century in Southern's service area. Temperatures during the last quarter of 1976 averaged approximately 45% lower than in any previous winter. January has been even colder. The much colder weather means that gas which Southern was able to sell last winter to industries must now be dedicated primarily to heat homes and hospitals. Also, as a consequence of the severe cold, Southern has had to withdraw from its storage facilities at a much faster rate than anticipated.

The southeastern United States must receive gas from new supply sources, such as the Alaska reserves. As vividly illustrated by Attachment 18, the southeastern United States is experiencing substantial economic growth and must be assured of adequate gas supplies.

10.11

SUMMARY

A brief review of the highlights of this statement accents the mutual benefits which Southern and the State of Alaska will derive from the approval of the royalty gas sales contract.

First and foremost, for Southern the approval will commit an extremely important gas supply to its customers, and for the State it will begin the foundation of a strong revenue base to be derived from the sale of this gas. There is no question that new gas supplies are desperately needed in the southeastern United States.

Second, Southern brings a vast amount of experience in the construction and operation of all types of pipelines. This technical experience encompasses not only pipeline construction in environmentally sensitive areas such as the Savannah Wildlife Refuge, but also the planning and construction of an LNG terminal and related facilities.

Finally, Southern and the State of Alaska have been enthusiastic supporters of a trans-Alaska pipeline project since this agreement was concluded. The national and local economic benefits of such a project are well-known. The approval of the royalty gas contract will be an additional factor both parties can present to the public in their efforts to build support for a trans-Alaska pipeline project and thereby increase the probability that these economic benefits will be realized.

Peter G. Smith, President
Southern Natural Gas Company

For further information, attached is a copy of Southern Natural Resources, Inc.'s 1975 Annual Report to Stockholders (Attachment No. 19).

AGO 800593

Exhibit 11

Northern Perspectives

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AN INKLING OF THE LONG JOURNEY

Arlon R. Tussing

There are, I believe, serious questions about the viability of the transportation systems proposed by both the Arctic Gas consortium and the El Paso Company for taking Alaska natural gas to U.S. markets. An investigation I conducted in 1975 on the economics of the two proposals for the State of Alaska raised the possibility that the cost of delivering the gas might actually exceed its value to consumers. At best, it appears that both projects, as proposed by their sponsors, are so risky that it may not be possible to finance them privately, even if their political and regulatory problems can be overcome — itself a questionable issue.

Both U.S. projects face the following risks.

Gas supplies: Production from the Alaska North Slope, and in the case of the Arctic Gas proposal, from the Mackenzie Delta, may be substantially less than the design capacity of either transportation system, meaning that each unit actually carried would have to bear a larger portion of the system's fixed costs than projected by its sponsors.

Delays and capital cost overruns: Actual construction costs may exceed estimated costs by substantially more than the effect of general inflation. The Arctic Gas project involves construction and operating technology untested in North America, while its route traverses hundreds of miles of difficult Arctic terrain where there has been no previous construction of either pipelines or roads. El Paso proposes a system of unprecedented pipeline pressures and a huge scale-up of existing liquified natural gas (LNG) technology. New technology, unfamiliar environments, and a large scale — relative to previous projects, are exactly the ingredients of the most spectacular cost overruns. Arctic Gas, for example, envisions a system from Alaska across Canada, and into the Lower 48 States with an estimated cost in 1975 dollars of about 8½ billion. I would not be surprised to see the total cost of either project exceed $20 billion, including interest on funds used during construction.

Experience in North America with big, custom-engineered construction projects has been that they normally cost two or three times their original projections, even including an allowance for inflation. Cost estimators are like accountants in that they prefer a solid, empirically based figure to a realistic figure. They do attempt to project the increase in anticipated labour rates and in the prices of specific materials but they don't take into account the fact that huge projects, particularly if they involve new technology or a remote construction site, usually don't work the first time around, nor that both the purchaser and the licensing authorities change their minds several times in the course of planning and construction. The cost engineers don't appreciate that

"It's new, man—it's bound to have a few little bugs."

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such projects are usually clumsily managed and subject to a number of re-organizations during their design and construction. They don't allow for the fact that materials and equipment are always late and often mis-specified or defective, or that enterprises of this sort suffer not normal, but abnormal labour cost increases. Because of their size and urgency, they are especially vulnerable to wage pressure, even more so to featherbedding, and often to racketeering.

The Alaska oil pipeline was initially estimated at something less than one billion dollars in 1969. It will finally come in at a cost between eight and ten billion. This particular project is an especially horrible example because it has suffered from each of the diseases I mentioned. But it isn't unique. Nuclear generating plants in the United States have been coming in at four to five times their projected cost per on-line kilowatt.

On this basis the cost of the Arctic Gas project *could* easily become twenty billion dollars. Let's assume it *will* cost twenty billion and also that the project is to be paid for in 20 years, that is, a five percent amortization. Let's also assume that the investors should receive a 15 percent pre-tax rate of return on total assets.* Under a conventional utility accounting scheme, the project would need a first year cash flow of four billion dollars just to cover its fixed costs. On a discounted cash flow basis the annual fixed charge would be about $3.2 billion.

With a throughput of something like a trillion cubic feet per year, we are talking of $3.20 to $4.00 per thousand cubic feet (mcf) for the capital plant just to get the gas into the existing distribution systems in the Lower 48 states and eastern Canada. If less gas can be delivered, as is likely, the cost would be even higher. This charge doesn't include the cost of developing the gas fields, any return to the producers, royalties, operating costs or costs of distribution.

Market: Both El Paso and Arctic Gas insist that the natural gas shortage in the United States is an absolute one, and that Lower 48 markets will accept North Slope natural gas at any price. Not everyone agrees; the Federal Energy Administration, for example, estimates that no market for Prudhoe Bay gas would exist in 1985 at a "city gate" price exceeding $2.40 per million BTU (in 1975 dollars). The Interior Department's study reaches a similar conclusion. This price could easily be exceeded even *without* implausibly large cost overruns or shortfalls in gas supplies to the system.

Experience in North America with big, custom-engineered construction projects has been that they normally cost two or three times their original projections, even including an allowance for inflation. New technology, unfamiliar environments, and a large scale — relative to previous projects, are the ingredients of the most spectacular cost overruns.

One assumption of the studies mentioned here is that natural gas field prices are free of Federal Power Commission (FPC) controls, and that the Alaskan gas is priced incrementally. Even relaxing these assumptions, however, it is not at all clear how much customers would be willing to pay on a year-round basis for the quantity of gas that would be carried by this system. The gas delivered through such a pipeline would be a base load supply delivered into southern distribution systems which have typical load factors in their premium markets of less than 40 percent. The seasonal swing in residential and commercial demand is one reason why about half the natural gas produced in the United States is now being burned as a boiler fuel. Some of the gas from the Arctic would have to be "dumped" in the boiler fuel market in competition with heavy fuel oil at an equivalent of about $2.00 or coal at about $1.00. The cost of Arctic gas delivered into the distribution system for premium customers could therefore reach $5.00, $6.00 or even more, per million BTU. Six dollar gas is about equivalent to oil at $30.00 per barrel. It would seem on its surface that there ought to be some question about the economic wisdom of such a project.

Political, regulatory and other institutional issues: Each project would face serious political and legal obstacles, even *after* it received a certificate from the Federal Power Commission. Lack of co-ordination in U.S. and Canadian approvals, for example, could block or delay construction of the Arctic Gas system, while there is some chance that resistance in California to port and terminal facilities would jeopardize completion of the El Paso system. The Arctic Gas system is, significantly, opposed by the governments and the preponderance of public opinion in both Alaska and Alberta, and the El Paso system is widely opposed within the state of California, where the liquified natural gas would be landed. The major environmental organizations are hostile to both projects. Neither they nor various local interest groups are likely to abandon every attempt to obstruct or delay construction simply because the system has been sanctioned by the Federal Power Commission.

Financing problems: The financial consequences of the risks I have listed are magnified by the fact that neither project can be built in smaller self-sustaining stages. Either would be a large integrated system which could not carry any gas or produce any cash flow until it was completed. Most of the capital invested ($10 to $20 billion or more) would therefore be exposed to these risk factors for at least the entire planning and construction period.

Private leaders simply will not accept risks of this sort, and neither project's sponsors are financially large enough to carry them, even if they were willing to do so. They do not in fact seem to be willing, as they both propose tariff conditions which would protect their own profits as well as their debt service obligations against "all events". Only the federal governments and/or, perhaps, potential gas consumers are in a position to carry financial risks of the size associated with either of the systems.

Accordingly, El Paso proposes to use federal loan guarantees (under an existing programme) for its LNG tankers and spokesmen for Arctic Gas have suggested that governments indemnify the sponsors against cost overruns exceeding 40 percent (nearly certain, in my judgement). But, more importantly, each applicant proposes to rely on "full cost of service all-events tariffs" to cover their debt service obligations and to ensure a return on their equity. These tariffs provide, in brief, that consumers are required to pay the debt service and operating costs of the transportation system (plus a profit to the owners) no matter how great these costs are and whether or not the customers receive any gas. Arctic Gas's tariff would begin to run as soon as gas was first delivered; El Paso's would begin 60 months after approval of its project, even if it were never completed.

The proposition that consumers should bear or share in the risks associated with a project which benefits them is not in itself unreasonable, provided that the economic expectations of the project are clearly favourable and the risks are of a reasonable magnitude. But with these projects there are good reasons for doubt on both scores. Moreover, even if the Federal Power Commission were to approve "all-events" tariffs, local gas distributors would not

*Arctic Gas's example on 75 percent debt at an average interest rate of 10 percent, a 15 percent after tax return on equity, and a 50 percent average tax rate on profits.

sign contracts containing such tariffs unless they were assured *in advance* by their state regulatory commissions (as well as by their own market analyses) that they would be able to pass these charges through to their own customers. Responses by the state commissions to Federal Power Commission enquiries suggest that there is almost no chance that they would give such advance approval.

These considerations lead inexorably to the conclusion that neither system can be built in the form proposed by their sponsors without either substantial federal financial backing, Federal Power Commission authority to preempt the jurisdiction of state utility commissions over the tariffs of local distributors, or both. No plausible proposals of either sort have yet been made, either by the applicants or by any of the responsible federal agencies.

Perhaps the most chilling prospect is that the Federal Power Commission (and the National Energy Board, in the case of the Arctic Gas project) would license one of the projects on the basis of conventionally estimated costs. The Commission would permit the transmission companies to begin collecting interest on construction debt before the project goes on line, and on that assurance the capital market would provide the sponsors with three or four billion dollars for engineering studies, site preparation and materials acquisition.

At the completion of this first phase, the sponsors will try to borrow the money for actual construction. At this time the cost estimators will have brought the figure up to $13 or $14 billion or more. After some point even all-events tariffs would not assure debt repayment, so that the money just won't be there to finish the system.

But a commitment would have been made. The transmission companies and their customers will come to Congress (and the Canadian government) with figures that show the present benefits will still exceed the present costs, because sunk costs don't matter (except to the investors). They'll talk about the pressing need of consumers who don't have any alternative in sight (because they have been counting on Arctic gas), they'll talk about energy self-sufficiency, and they'll talk employment and the balance of payments. If Congress and the Canadian Parliament have any inkling now about the long journey on which they are about to embark, they may hesitate.

In summary, there seem to be two problems that work together to make questionable the completion of either project as proposed: each of them requires too large an initial capital, and that capital would be exposed to too many large risks. Once these are recognized as the critical problems to be overcome, it is obviously worthwhile to investigate whether there might not be some alternative system (or modification of one of the applicant's systems) which could begin with a smaller investment and perhaps be expanded in stages after gas and income begin to flow, a system with a smaller potential for cost overruns, and one which would raise less opposition on environmental, development or economic nationalist grounds.

The proposition that consumers should bear or share in the risks associated with a project which benefits them is not in itself unreasonable, provided that the economic expectations of the project are clearly favourable and the risks are of a reasonable magnitude. But with these projects there are good reasons for doubt on both scores.

The Fairbanks-Alcan route: One system which seems to have the possibility of meeting some of the criteria mentioned here would be an overland natural gas pipeline along the general route of the Trans-Alaska oil pipeline to a point about 100 miles south of Fairbanks, and along the general route of the Alaska Highway into northern British Columbia or Alberta. Such a route has been suggested as an alternative for the Arctic Gas system by various parties, including the FPC environmental staff.* Simply as an optional way of completing the Arctic Gas proposal, however, the Alaska Highway route would result in higher costs, because an additional separate pipeline leg would be required to bring the Mackenzie Delta gas reserves to market.

Use of the Alaska Highway routing would at first seem to have only two advantages over the system proposed by Arctic Gas: a reduction of the likelihood of major cost overruns because the new system would follow existing transportation corridors, where construction conditions are less extreme and better known, and less intense environmental opposition because this route has far fewer river crossings, would not invade the Arctic Wildlife Range, and follows a corridor already affected by development.

Coupled with two other changes relative to the Arctic Gas proposal, however, an Alaska Highway system would appear to be considerably cheaper in initial capital outlay, and still competitive or even superior in terms of expected transportation tariffs for Prudhoe Bay gas. The first of these two variations is to use, as much as is practical, conventional technology and existing transportation facilities in the United States and Canada. The second is to postpone construction of a transportation system to serve the Mackenzie reserves.

Northwest Pipeline Company, a U.S. company, together with three Canadian companies, Westcoast Transmission, Alberta Gas Trunk (AGTL), and Foothills Pipeline Co. (a joint venture of the other two) has formally proposed to build a system from Prudhoe Bay along the oil pipeline route to Fairbanks, then following the Alaska Highway to Fort Nelson, British Columbia and Zama Lake, Alberta, where the gas would enter existing Canadian transmission facilities. These facilities would be expanded where necessary to accommodate the increased volumes.

The pipeline concept proposed by Northwest and its Canadian partners would have several technical and financial advantages over the other two systems. It uses a 42-inch pipe, conventional technology, a corridor where there has already been highway and/or pipeline construction, and maximum employment of existing facilities. By virtue of these changes, the initial capital cost outlay before any gas or cash could begin to flow might be held considerably lower than the cost officially anticipated for the Arctic Gas system. The likelihood of large cost overruns, as well, would be much reduced by these features. Whereas ultimately, higher volumes would be required to cover the investment, the system could begin to operate with a flow of as little as a billion cubic feet per day. And, in my judgement, the political and regulatory barriers to an Alaska Highway system would be far less formidable than for either of the other two systems.

The system proposed by Northwest, Foothills, *et al*, may not yet be the cheapest way of moving Alaska gas to the United States Midwest and East. The Alcan proposal presented to the FPC and NEB still includes the 1117 mile Northern Border pipeline which is part of the Arctic Gas system. The sys-

*In September 1976 the FPC staff issued an Alcan system supplement to the Final Environmental Impact Statement on Alaska natural gas transportation systems. The supplement urges that none of the proposals be approved as proposed. It concludes that the Arctic gas proposal would be environmentally superior to other alternatives if the leg to the Western United States were dropped (and that area were served with Alaska gas by displacement) and the Fairbanks Corridor (Alcan Highway) route were adopted. The FPC staff did not endorse the Alcan proposal of Northwest and Foothills "because it lacks the necessary expansion flexibility."

11.3

tem with the lowest initial capital cost, however, seems to be one which would expand the Trans-Canada pipeline and the Great Lakes pipeline, instead of building an entirely new line across the Prairies. Both the U.S. and Canadian partners in the Alcan project understand the advantages of maximizing the use of existing facilities, and I can only speculate on the reason for retaining Northern Border. The Trans-Canada Pipeline Company, which is part of the Canadian Arctic Gas group, may be unwilling to co-operate with a rival proposal at this time, although there is no reason to suppose that Trans-Canada's facilities would not be available to move Alaska gas if the Arctic Gas proposal were to be rejected by the National Energy Board.

There is good reason to believe that the announcement by Northwest makes the State of Alaska's commitment to support El Paso obsolete, and that this support may deteriorate rapidly. The Northwest project would avoid most of the state's environmental objections to the Arctic Gas system; it also makes gas available in the Fairbanks area and involves almost as much pipeline construction within the state as would the El Paso system. Because it does not involve an LNG terminal, however, the boom resulting from building a pipeline along the Alaska Highway would be substantially smaller than the boom that would be generated by the El Paso project.

Alaska and the Alcan proposal: According to preliminary estimates from the University of Alaska's Man in the Arctic Program, construction of the Arctic Gas system would add $19 million to the state's gross product and three thousand persons to the state's population in the peak year of construction. The El Paso system would increase gross product by $235 million and population by 24 thousand, while the Alaska Highway pipeline routing would increase Alaska's gross product by $111 million and population by 15 thousand. These calculations do not take account of the fact that Haines and Skagway would undoubtedly be major ports of entry for materials and equipment destined for construction activities in Yukon Territory.

For these reasons, the Northwest proposal seems at the very worst to be a workable compromise that would be acceptable to almost every important Alaskan interest group. The newly proposed system may, however, be more attractive to Alaskans than as just a fallback position or a workable compromise. Northwest Pipeline's approach to the state contrasts sharply with the "take it or leave it" stance of both of the original applicants. Northwest has at least informally suggested that the state take an equity share in the pipeline system and take part in its planning and operation. The company also has approached, or plans to approach, Alaska-based corporations for participation, including the Inuit-owned Arctic Slope Regional Corporation and the Athabascan-owned Doyon, Ltd., and has suggested that a block of shares in the enterprise be offered to the general public in Alaska. The effect of these innovations would be to ensure that the system within Alaska would be closely identified with local interests and be responsive to them.

Regional interests outside of Alaska: The Alaska Highway pipeline proposal offers significant advantages over the two other proposed systems to a wide variety of regional and sectoral interests outside of Alaska.

British Columbia

For British Columbia, introduction of Prudhoe Bay gas will more fully utilize the existing facilities of Westcoast Transmission, and thereby reduce the cost of British Columbia gas delivered to consumers in the province. Construction of the pipeline would provide a stimulus to the development of northern British Columbia and Yukon Territory, and strengthen the territory's links with market and financial centres in British Columbia. The proposal is now being discussed in the province as a possible justification for extending the British Columbia Railway to Whitehorse and eventually to Fairbanks. For these reasons, the provincial government has endorsed, and is reportedly considering joining in the pipeline project, perhaps as an equity participant.

Alberta

The project could be supported by the crucially important Province of Alberta (which now opposes the Arctic Gas application) because it would contribute to the optimum use of Alberta's own gas transmission system, rather than establishing a competing trunkline through the province. Unlike Arctic Gas, moreover, the new system would not in the immediate future compete with, and require the shutting in of, Alberta gas now dedicated to markets in eastern Canada.

Canada

For Canada as a whole, the Alaska Highway proposal would postpone the necessity of deciding when how and by whom the Mackenzie Delta — Beaufort Sea region was to be developed, and whether that region or the Arctic Islands should take first priority for development among Canadian frontier regions. By reducing the total amount of new construction and shifting a substantial part of the construction out of Canada and into Alaska, the Alaska Highway system would reduce the stress on Canadian capital and labour markets and on the nation's foreign exchange position.

Pacific Northwest

The system proposed by Northwest Pipeline is by far the most economical method of moving North Slope gas into the Pacific Northwest, and it is for that reason supported by the gas distributors of the region. In contrast to the Arctic Gas proposal (which is a second-best gas supply alternative for the Northwestern states), construction of an Alaska Highway system would rely mainly on Seattle-Tacoma and other ports in the region as supply and transportation bases for the northern half. The Alaska Highway route would not make as large a contribution to Port of Seattle activity and revenues as would El Paso's LNG project but the latter is not in my judgement likely to prevail, and the Alaska Highway system therefore offers maritime interests and construction in the Northwest the greatest volume of business they are actually likely to obtain from any Alaska gas transportation system.

California

For California, the Alaska Highway system offers a comparatively economic and (because it utilizes conventional technology) reliable source of incremental gas supply. Unlike the El Paso project it would not raise novel safety issues nor would it threaten to displace California's present low price gas from the Permian Basin in favour of high price LNG imports from Alaska.

Midwest & East

For the United States' Midwest and East, the Alaska Highway project (like the Arctic Gas project) would provide an assured supply of natural gas directly into the market areas where the shortages are most acute. Because of its smaller risk of construction delays and cost overruns, however, the Alaska Highway system should, on balance, be preferable. By preserving Canada's option to develop the Arctic Islands and the Polar Gas pipeline earlier than the Mackenzie Delta and Beaufort Sea, the Alaska Highway proposal may offer a better possibility (however remote) of increasing producible and transportable Canadian reserves to such a quantity that the Canadian government would be willing to consider new export commitments.

There cannot help but be some losers. First, of course, are those gas transmission companies whose projects would be turned down and the construction and service firms who hoped to build a bigger system or a different system from the one which is finally approved. There is Exxon, whose affiliate Imperial Oil is part of the Canadian Arctic Gas group, and other producers with interests in the Mackenzie, who would be deprived of an early hookup to their Arctic reserves, however superfluous that hookup may be at the present time from the standpoint of Canada's energy economy. Finally, there are those who would expect to build and operate the LNG tankers if the El Paso project prevailed, together with those (in the Port of Seattle, for example) who hope for a larger demand for their transportation and other services than an Alaska Highway project can generate.

For Canada as a whole, the Alaska Highway proposal would postpone the necessity of deciding when, how and by whom the Mackenzie Delta-Beaufort Sea region was to be developed, and whether that region or the Arctic Islands should take first priority for development among Canadian frontier regions.

On balance, however, if we take into account the lower front-end cost, the smaller vulnerability to cost overruns, and the widely agreed-upon environmental advantages of the Alaska Highway route, a system similar to that proposed for the Alcan may be the best practical alternative for almost every region in both Canada and the United States. Together with its broad acceptability to Alaskans these considerations make a system like that proposed by Northwest and Foothills a possible winner despite its late entry into the competition.

Arlon R. Tussing

Arlon R. Tussing is a professor of economics at the University of Alaska. He has done extensive research and writing on northern oil and gas development and has served as chief economist for the U.S. Senate's National Fuels and Energy Policy Study, headed by Senator Jackson. He is currently completing a term on Alaska's Royalty Oil and Gas Development Board.

What's in it for Canada?

The probable reception of any Alcan proposal by Canadian authorities has been a most difficult issue to forecast. A major appeal of the Arctic Gas project is purportedly its early (if not necessarily more economical) attachment to the Mackenzie reserves. Without this feature, it may be asked, what is the advantage to Canada of accommodating the United States in moving Alaska gas?

The attachment of the Mackenzie reserves may, on the other hand, be seen as a major *disadvantage* of the Arctic Gas system, from at least one Canadian standpoint. There is no particular reason why Canada should *not* accommodate the United States with a transit line across Canadian territory; after all, a substantial portion of Canada's oil and gas supplies transits the United States. There would seem to be little objection in Canada on nationalistic grounds to American gas moving in either an American or a Canadian-owned pipeline across Canada. The Mackenzie project, in contrast, raises the issue of an American-dominated consortium developing an important frontier area of Canada. The fact that an early Mackenzie connection is being justified in the United States by the (doubtful) proposition that it would lead to greater Canadian exports to the United States aggravates its potential difficulties in Canada. Both its timetable and logistics would be dictated by the convenience of the American interests. The native claims and environmental complications of this route are also well known.

If Congress and the Canadian Parliament have any inkling now about the long journey on which they are about to embark, they may hesitate.

The 60 trillion cubic feet of proved reserves in the western provinces are enough to sustain the expected growth of Canadian demand plus present export contracts for about ten years. This would be the case even if there were no further discoveries, but recent exploratory results in Alberta have been rather encouraging, more so in fact than in the delta area. For this reason a decision on an Arctic pipeline carries much less urgency for Canada than it does for the United States.

More importantly, however, a decision today in favour of immediate development of the Mackenzie Delta- Beaufort Sea region can be seen to prejudice whether that region or the Arctic Islands (where recent exploration seems to have been more successful) shall be developed first. Either project could strain the capacity of domestic capital markets so that simultaneous construction of two major pipeline systems under Canadian majority ownership is almost out of the question.

It is not obvious which of several competing considerations is likely to be dominant in the eventual decision by the National Energy Board and the Cabinet, but on balance there now appears to be a favourable climate for a co-operative project with the United States concerning Alaskan gas. If the Alcan project were not a serious contender, this means that the Arctic Gas proposal would be approved. The Maple Leaf project is not timely either in terms of known reserves or in terms of Canadian demand, and it is not a serious contender at this time.

A decision in favour of Arctic Gas would, however, be a reluctant one and would be opposed from many quarters within the Canadian federal government, by several provinces and by a large body of Canadian opinion. These objections rest on a broad range of environmental, economic, nationalistic and native claims considerations, and most decisively perhaps on the fact that the approval of Arctic Gas might effectively preclude or postpone for many years the Polar Gas alternative. For these reasons, my own tentative judgement is that the Canadian government will — once it has had an opportunity to consider the alternative — welcome the opportunity to avoid an early decision one way or another regarding the Mackenzie. This is likely the biggest benefit to Canada from the Alcan proposal.

Arlon R. Tussing

Exhibit 12

NATURAL GAS SUPPLY OUTLOOK FOR THE WEST

SUMMARY OF COMMENTS

BY

ARLON R. TUSSING

AT

NATIONAL ECONOMIC RESEARCH ASSOCIATES, INC.

WORKSHOP ON ECONOMIC GROWTH IN THE WEST

AND RELATED ENERGY PROBLEMS

Los Angeles Marriott
August 26-27, 1976

1. It no longer means much to speak of a gas supply outlook for the Pacific states as distinct from the outlook for the contiguous 48 states as a whole. With a nearly complete nationwide gas transmission network and transmission loads that are stagnant or declining, an abundance or shortage of gas in one region can be shifted to any other region or spread evenly across the country, without major investments in new transportation capacity.

2. The emergence of a single national market for natural gas is of course inhibited by FPC wellhead price controls, which discourage both interstate sales generally and reallocation of gas among interstate purchasers. And existing long term sales contracts together with the need for certification and abandonment procedings before the FPC and state commissions make even the most economically logical exchange and displacement arrangements difficult to put into effect.

3. Nevertheless, if institutional obstacles effectively prevent the smoothing out of gross regional disparities in gas supply, we can expect Congress to give the FPC authority to reach into intrastate markets, to allocate new natural and synthetic gas among regions, and perhaps even to reallocate flowing gas among interstate pipelines.

12.2

4. Congress would surely direct the FPC to allocate gas nationally if it were to approve any LNG system for the delivery of North Slope natural gas, which would require large areas of the United States to receive new gas supplies by displacement rather than directly. Approval of a MacKenzie or Alcan system without a western leg would also strengthen the demand that the FPC have direct allocation authority. Such an outcome would be unfortunate because any non-market allocation system would blunt the incentives of transmission companies and gas utilities to solve their own supply problems.

5. It is possible to make some broad generalizations about both the commodity value and the cost of gas on a national scale. The demand for gas can be separated into three main components: (a) a premium market in which only electricity is a competitive energy source, (b) an intermediate market in which refined petroleum products (distillate fuel oil, naphtha, propane, etc.) are effective substitutes, and (c) the "black fuels" market in which natural gas can displace coal and residual fuel oil only when it is cheaper.

6. The intermediate market, which is composed of household and small commercial space heating, and use for crop drying, in combustion turbines and for chemical feedstocks

12.3

(plus utility boiler fuel in times and places with severe air quality problems), is by far the major part of total consumption, so that all plausible projections of United States natural gas supplies through 1990 fall into this intermediate segment of the demand function. For this reason the long-term commodity value of gas will be equivalent, more or less, to the cost of refined petroleum products. Assuming that the real price of imported crude oil remains about the same as it is today, we can anticipate a long-term demand price for gas of $2.50 to $3.00 in 1976 dollars.

7. The demand price for gas will be somewhat higher than that of distillate fuel oil if total gas supplies continue to decline over the period, because the alternative to gas for many consumers will not be simply the substitution of a petroleum product but will also include the cost of converting or replacing existing gas-burning equipment.

8. The average (rolled in) cost of gas will be just about equivalent to this commodity value or demand price. Pipelines and distributors will continue to get some quantity of gas purchased on long term contracts or controlled at less than its commodity value. They will therefore be able to augment these low price conventional supplies with just enough high cost gas "supplements" at $4, $5, $6 or more per Mcf, to bring their average price up to the demand price.

12.9

9. For this reason deregulation (or the level of regulated gas prices) can not be expected to have a great effect on the average price consumers pay for gas. It might, however, have a powerful influence on how much gas is available at that price (although the direction of this influence is not obvious -- see footnote), and upon the economic cost to the nation as a whole of its gas supply. (The national economic cost would be lowest under deregulation, but the larger part of the net benefit would be captured by gas producers rather than by consumers.).

10. The most certain and economical source of additional gas for premium and intermediate markets are the volumes now being burned under industrial and electric utility boilers and as refinery fuel. End use controls

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The question hinges on the responsiveness of conventional gas supplies to price. If supply is relatively price-inelastic, the main impact of deregulation or higher wellhead prices would be to transfer revenue to gas producers and royalty owners at the expense of the pipelines and distributors. Since the latter would otherwise have used this revenue to finance the purchase or production of high-cost gas supplements, total gas supply would be less than it would be at the old regulated prices. On the other hand, if the supply of new reserves of conventional gas is highly responsive to price (as I believe is more likely), an additional dollar paid to the gas producers will elicit a greater volume of gas than the same dollar spent on such projects importing LNG or manufacturing SNG from coal or oil.

12.5

by the FPC and state authorities are already encouraging such a shift. But in order to employ existing reserves most efficiently around the year, elimination of interruptible sales for low-priority use must go together with investments in storage facilities and in increased peak deliverability in the field. Incentives for the latter adaptation are now blunted by price controls, but added storage is probably a worthwhile investment for almost every gas transmission company or utility.

11. The main supplemental sources of gas appear to be Canadian pipeline imports, LNG imports, Alaskan natural gas and SNG from coal and petroleum.

12. The price of future Canadian imports is reasonably predictable, but their volume is not. The Canadian federal government and Alberta have adopted an explicit commodity value standard for gas pricing in both domestic and export markets (though it is being implemented more slowly for Canadian consumers), and there is little reason to believe that this policy will be changed.

13. The approximately 60 TCF of presently proved reserves in the Western Provinces are sufficient to serve projected Canadian demand plus existing export commitments for about 10 years without creating deliverability problems. A continuation of recent Alberta discovery

12.6

trends may be sufficient to assure that existing export contracts will in fact be honored. But there is no development, short of huge discoveries (perhaps another 60 TCF) in the Arctic that would be likely to induce the Canadian government to approve new export commitments.

13. The sufficiency of present supplies to Canada for about ten years, means that any Mackenzie or Polar pipeline will be superfluous to Canada's needs for at least that period, unless reserve volumes justifying exports are developed. This implies that there is no urgency for Canada in an early determination regarding the desirability, scale or timing of a Mackenzie Valley pipeline.

14. Large LNG import projects, coal gasification, and facilities to deliver gas from the Alaskan (and/or Canadian) Arctic to Lower 48 markets share several features which raise serious questions about their economic viability or practical feasiblity. Each of them requires large, "lumpy" investments -- in the billions or tens of billions of dollars -- and involves unproved technology or a substantial scale-up of proved technology. Some proposals involve a unique physical or institutional environment (e.g., the Arctic Gas proposal and Indonesian LNG) in which no engineering projects of their magnitude has ever been attempted. Each of them involves numerous regulatory jurisdictions, including more than one sovereignty or quasi-

sovereignty (states and provinces). Each of them involves major environmental and safety issues, real or imagined, usually in more than one regulatory jurisdiction.

15. The construction and operating cost projections offered by the proponents of each of these gigantic capital-intensive projects are already near the margin of economic feasibility, even assuming the absence of major delays, technological or engineering false starts, or cost overruns.

16. Recent experience with military procurement, nuclear power plants, the Trans-Alaska pipeline and other large custom-engineered construction projects indicates that all the large supplemental gas projects are exceptionally vulnerable to delay and cost-overruns, if not to non-completion.

17. The scale of these projects typically exceeds the net worth of their sponsors, precluding conventional secured financing. Uncertainty about construction costs and completion dates, aggravated by political and licensing uncertainty make no-recourse debt financing equally improbable. Each project therefore probably requires government loan guarantees (increasing their vulnerability to political opposition) and/or all-events tariffs which state commissions are unlikely to approve.

12.8

18. In short, I believe that the odds are against any supplemental gas supply facility with a total projected capital cost of greater than $1 billion. The chances that all the supplemental gas projects considered necessary to provide an adequate gas supply to any region (e.g., California) will be actually completed, is nil.

19. Of the three proposals for transporting North Slope gas, the Alcan project is in my judgment the most credible, even though the comparison of pro-forma cash flow projections would seem to favor Arctic Gas. By using conventional pressures, pipeline size and construction technology, already developed transportation corridors, and existing pipeline routes and systems in Western Canada, Northwest Pipeline's Alcan proposal avoids or mitigates the major sources of cost overruns. Moreover, Alcan is the only proposal of the three which does not depend for its feasibility on larger volumes of gas than can be assured from presently proved reserves.

20. The Alcan proposal is probably the least vulnerable of the three to political opposition on regional or sectoral grounds. It does not involve the siting and safety issues of the LNG system, but unlike Arctic Gas, it is favored or at least is not vehemently opposed by any of the states or provinces (including Alaska and Alberta) which it must transit. The Alcan concept is the one favored by the major U.S. environmental organizations. Native claims issues, moreover, seem to be closer to resolution in the Yukon than in

the Northwest Territories.

21. The synthesis of pipeline quality gas from petroleum does not suffer from most of the handicaps of coal gasification or of the other capital-intensive sources of natural gas supplements. Here again, as in the case of the alternatives for transportation of Alaska gas, a priori cost comparisons may be deceptive. SNG from oil appears to be more costly than SNG from coal, but this comparison ignores the fact that it is a proved technology on a commercial scale, that its optimum economic scale of plant is an order of magnitude smaller, and that the feedstock is (barring a new embargo) available in unlimited quantities.

22. The smaller scale and general abundance of feedstocks for SNG plants using petroleum fractions (naphtha or LPG) means that each plant can be located within the consuming state, (freeing it from FPC jurisdiction), within the service area of the pipeline or utility which distributes it (reducing local opposition), and in a site chosen for environmental acceptability (rather than one dictated by location of the resource or by proximity of a deep water harbor). For all of these reasons, I suspect that the West Coast gas industry's ultimate recourse when almost everything fails (as it probably will) is the construction of decentralized SNG plants using naphtha feedstocks from overseas (or even Alaskan) topping plants which ship their residual crude oil fractions to Japanese or Atlantic customers.

12.9

23. The best bets for new pipeline gas supplies, I believe, come from state-of-the-art technologies and scales of effort, not from ten year leaps into the future and tenfold leaps in size. The source of gas that best meets this standard is conventional natural gas conventionally extracted. Exploration for gas (and for oil, which is found in similar environments by the same techniques) is an entirely different kind of business from producing synthetic fuels or building major gas transmission projects or the maximum scale electrical generating plants. The minimum unit of physical capital, a single wildcat well for instance, ranges in cost from tens of thousands of dollars to several millions -- a scale on the order of one thousand times less than the investment thresholds for coal gasification, oil shale, nuclear power or Arctic gas transmission.

24. There are literally thousands of enterprises in the oil and gas producing industry, with perhaps hundreds that are large enough and progressive enough to stand on the cutting edge of new technology. The journey to new frontiers of gas exploration and recovery, whether they are technological frontiers, deeper or stormier water, permafrost or deep rocks, can be taken in small steps, with part of the industry consolidating information and techniques from the last step while other firms take the pioneering risk.

12.10

Onshore, the payoff to exploration investment can be a matter of weeks, and is seldom more than two years. Offshore and in the Arctic, it may be three, five or seven years, but seven years is probably the minimum lead time for the big-ticket gas supply projects.

25. Regarding the potential price-responsiveness of natural gas supply, there are an incredible number of different opinions. It is obvious, however, that FPC price controls are not a major obstacle to exploration and development in any state large enough to have a significant intrastate gas market: these include present net exporters of gas like Texas and Louisiana as well as net importers like California. It has now been three years since the Arab embargo and the energy price revolution, so that some evidence one way or another on the price responsiveness of conventional onshore gas supply ought to be available before long.

26. Price controls on gas may or may not be an effective deterrent to development of new gas resources on the Outer Continental Shelf, but they are not the major deterrent. It is unfortunate that environmentalist opposition to energy development has been most effective here, because OCS oil and gas will be in my judgment/the least environmentally harmful source of large new supplies of primary energy for the United States, as well as the least costly in terms of real economic resources.

12.11

27. In summary, small seems indeed to be beautiful in energy supply alternatives. Or, at least, small is practical given today's political and financial realities. At the same time, I would urge along with the ecologists that diversity is stable, and so is decentralization. Diversified and decentralized systems are also more predictable in the aggregate. For this reason, a strategy for gas supply which depends mainly on a few large coal gasification and Eastern Hemisphere LNG projects and on the Arctic Gas pipeline stands a large risk of total failure. A strategy which puts even half of the cpaital projected for these projects into storage and increased peak deliverability, into conventional and modestly innovative onshore and offshore gas exploration, into SNG from naphtha facilities, into small LNG projects (as in Cook Inlet), and into a minimum scale transportation system for North Slope gas (like the Alcan system) may not yield the grandiosely optimistic projections for 1985 or 1990 gas supply which industry and government agencies like to put on their charts. Such a strategy will, however, surely and predictably produce enough gas at acceptable prices to serve the premium markets, and will continue to make some contribution to satisfy the intermediate market.

Exhibit 13

EL PASO NATURAL GAS COMPANY
NATURAL GAS CONSUMPTION FOR THOSE
STATES SERVED WHOLLY OR IN PART
Calendar Year 1975

STATE	EPNG SALES	TOTAL CONSUMPTION	EPNG PERCENT OF TOTAL CONSUMPTION
Arizona	164,704 MMCF 1/	164,704 MMCF	100.0%
California	1,008,158 MMCF	1,807,604 MMCF	55.8%
Colorado	120 MMCF	290,798 MMCF	<1%
Nevada	28,590 MMCF	60,446 MMCF	47.3%
New Mexico	43,336 MMCF	167,220 MMCF	25.9%
Oklahoma	11 MMCF	639,575 MMCF	<1%
Texas	34,627 MMCF	3,911,026 MMCF	<1%
Utah	19 MMCF	123,098 MMCF	<1%

1/ MMCF = millions of cubic feet

NATURAL GAS CURTAILMENT IN 1976
AND ESTIMATED CURTAILMENT IN 1981

1976

	VOLUME	% OF REQUIREMENT
P 1	0	0
P 2	1,731 MMCF	1%
P 3	35,666 MMCF	16%
P 4	2,862 MMCF	21%
P 5	219,809 MMCF	65%
TOTAL	260,068 MMCF	19%

1981

	VOLUME	% OF REQUIREMENT
P 1	83,071 MMCF	15%
P 2	143,261 MMCF	52%
P 3	254,693 MMCF	100%
P 4	11,440 MMCF	100%
P 5	348,723 MMCF	100%
TOTAL	841,188 MMCF	58%

prepared by El Paso

Exhibit 14

What is the Alcan Pipeline Project?

The Alcan Pipeline Project is the proposal of the Alcan Pipeline Company, a wholly-owned subsidiary of Northwest Pipeline Corporation, headquartered in Salt Lake City, Utah. Northwest Pipeline owns and operates a 4,400-mile pipeline system extending from the San Juan Basin in New Mexico and Colorado to the Canadian border, serving natural gas customers in seven western states. The company supplies all of the natural gas consumed in Idaho, Oregon and Washington and part of the gas used in Nevada, Wyoming, Utah and Colorado. Northwest Pipeline has assets of more than $500 million.

On July 9, 1976, the Alcan Pipeline Company filed a request with the Federal Power Commission seeking authorization to construct a 731-mile pipeline in Alaska, utilizing the Fairbanks Corridor / Alcan Highway Route. This pipeline will be part of a proposed new pipeline system to transport natural gas from the Prudhoe Bay on Alaska's North Slope to markets in the lower 48 states.

The planned pipeline would follow established utility and highway corridors in Alaska and Canada and would utilize existing Canadian pipeline systems to deliver the gas to the United States border. This conforms to the Mineral Leasing Act which calls for joint use of rights-of-way to prevent unnecessary scarring of public lands.

Four Canadian Companies — Westcoast Transmission Company Limited; The Alberta Gas Trunk Line Company Limited and its subsidiary, Alberta Gas Trunk Line (Canada) Limited; and Foothills Pipe Lines Ltd. — have entered into an agreement with Alcan and Northwest Pipeline to transport the Prudhoe Bay gas through Canada to the U.S. border and have filed the necessary applications for Canadian regulatory approvals.

Alcan Pipeline's project will be designed to transport all of the Prudhoe Bay gas, up to approximately 2.4 billion cubic feet per day, through a 42-inch diameter pipeline. The pipeline will follow the Alyeska oil pipeline for ap-

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14.1

Facts about Alcan

The Alcan Pipeline Project is one of three systems currently being considered by the Federal Power Commission for the transportation of Alaskan gas reserves to markets in the lower U.S.

The Alcan Pipeline Route will parallel the Alyeska oil pipeline for 539 miles to Delta Junction, at which point it will proceed along the Haines utility corridor and the Alcan (Alaska) Highway to Fort Nelson, British Columbia and Zama Lake, Alberta. Existing Canadian pipelines will carry the Alaskan gas for redelivery to U.S. transmission companies at three points along the U.S./Canadian border.

New Pipeline: 1,806 new pipeline miles — 731 in Alaska and 1,073 in Canada.

Diameter: 1,499 miles of 42-inch pipe and 307 miles of 36-inch pipe.

Capacity: 2.4 billion cubic feet per day (expandable to 3.1 billion) within three years of operation. Initial capacity of 1.2 billion cubic feet per day.

Cost Estimate: In 1975 dollars, the Alaskan portion of the Alcan Project will cost $2.3 billion, and the Canadian portion will cost $2.4 billion. Alcan's total costs, including additional facilities in the lower 48 states, are $6.3 billion.

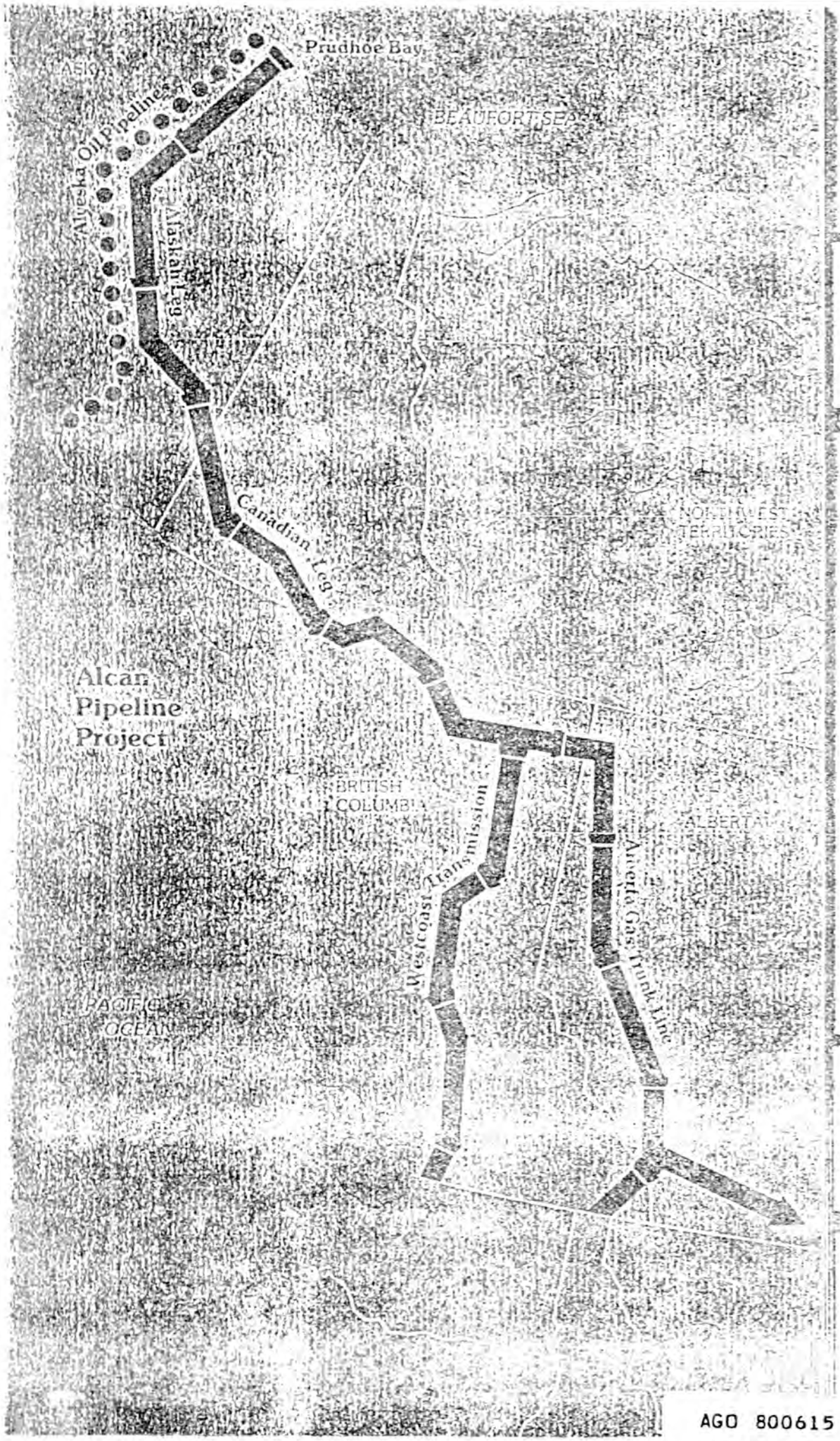
Comparative Costs are $10.4 billion for Arctic Gas and $6.6 billion for El Paso.

Canadian Associates: Alberta Gas Trunk Line Company, Limited and its subsidiary, Alberta Gas Trunk Line (Canada) Limited; Westcoast Transmission Company Limited; and Foothills Pipe Lines Ltd.

Alcan's Advantages:

- Lowest total investment for transporting Prudhoe Bay gas.
- Lowest delivery costs.
- Earliest delivery date.
- Provides stable economic growth base for the Alaskan interior.
- Least environmental impact.
- Year-round access to all facilities.
- Can be built independent of Canadian decision to develop its frontier gas reserves.

AGO 800614



14.2

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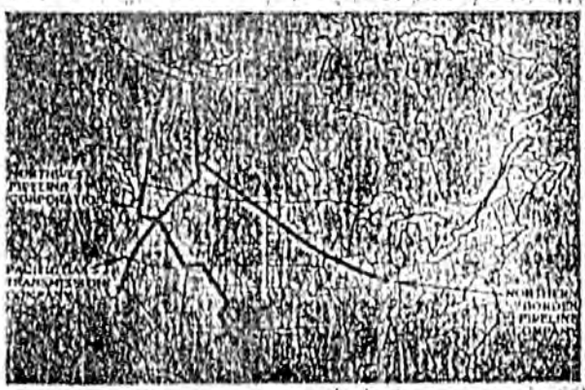
proximately 539 miles to Delta Junction, south of Fairbanks, where it would then parallel the Alcan (Alaska) Highway to the Yukon border.

At the Alaskan/Yukon border gas would be delivered to a new pipeline to be constructed by a Canadian company, Foothills Pipe Lines Ltd., which would continue the transportation of gas through a 42-inch pipeline along the Alcan Highway to the Yukon-British Columbia border and then by Westcoast Transmission Company Limited to Fort Nelson, British Columbia.

At Fort Nelson, a portion of the gas would be diverted into the expanded existing system of Westcoast for ultimate delivery to the United States at an interconnecting point on the border near Sumas, Washington, where the gas will be received by the Northwest Pipeline system for delivery to western markets.



The Alcan Project will provide for direct pipeline delivery of Alaskan gas to markets in the lower 48 states.

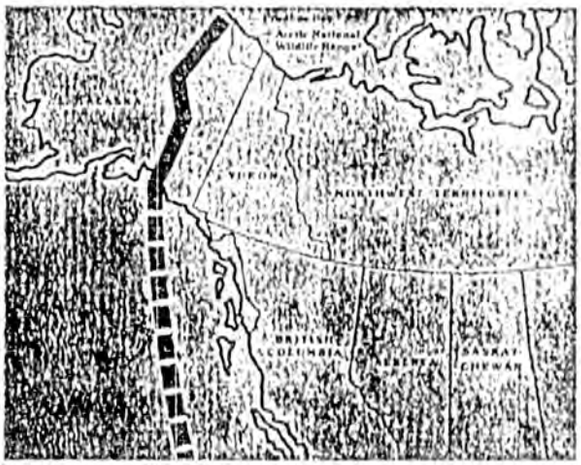
The remainder of the gas would be transported from Fort Nelson to Zama Lake, Alberta through a new pipeline for delivery at Zama Lake to Alberta Gas Trunk Line Company Limited. Alberta Gas Trunk Line would then transport the gas through its expanded existing system for delivery to Empress, Alberta, and to Coleman, Alberta where the existing Alberta Natural Gas Company line would carry the gas to Kingsgate, British Columbia, for delivery to the Pacific Gas Transmission system, which would transport the gas to California.

From Empress, Alberta, Foothills would construct a new pipeline to Monchy, Saskatchewan and from there, gas destined for the Midwest and Eastern regions of the United States could be delivered through the Northern Border Pipeline, presently pending before the FPC.

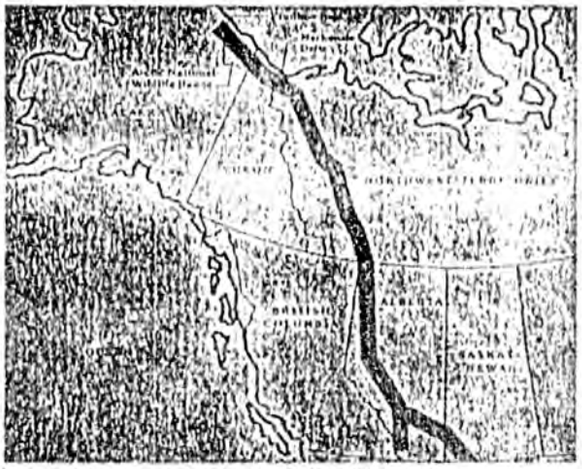
What are the Alternative Proposals?

The El Paso Natural Gas Co. proposes to construct a trans-Alaska pipeline that would roughly follow the Alyeska oil pipeline. Under El Paso's proposal, gas would be liquefied in Alaska and transported as LNG to southern California where the gas would be delivered from the West Coast to the rest of the U.S. by a displacement mechanism which has not yet been defined.

The proposal of the Arctic Gas Group is an all-land route that would begin in Prudhoe Bay, cut straight across the virgin wilderness areas including the Arctic National Wildlife Range, to Canada's Mackenzie Delta, then south to the U.S.-Canadian border, where proposed companion lines would carry the gas to the eastern and western U.S.



EL PASO LNG ROUTE



TRANS-CANADA ROUTE OF ARCTIC GAS

Economic Advantages of Alcan

The total cost of the Alcan Project, including facilities for transporting the gas within the lower 48 states, is $6.3 billion in 1975 dollars. This compares with $10.4 billion for the Arctic Gas proposal and $6.6 billion for the El Paso proposal.

The lowest total cost is a major advantage. The Alcan Project will almost certainly be easier to finance. Capital, like natural gas, is a resource that is limited but very necessary.

This lower total cost makes Alcan transportation costs lower. Figures filed with the Federal Power Commission show that Alcan will be able to transport Alaskan gas to the U.S. at a lower cost than either of the competing projects. We estimate the transportation cost of our service to markets in the lower U.S. to be $1.35 per million BTU, compared to $1.59 per million BTU for Arctic Gas, 24 cents higher than Alcan. El Paso's transportation costs, on a comparable basis, are expected to be $1.69 per million BTU, 34 cents higher than Alcan.

There are many reasons for Alcan's lower total cost and lower transportation cost figures. One is that Alcan is following existing highway and utility corridors all the way. Additionally, use of the existing oil pipeline construction work pad, communications system, airfields and all weather roads will allow work to begin immediately with a minimum of preliminary construction.

Transporting equipment and supplies to the construction sites is a major logistical problem. Without existing roads, the problem is multiplied many times.

New Construction Pad

Arctic Gas proposes construction of snow roads and would have to bring much equipment in by air. Under the Arctic Gas plan, pipeline construction would take place from snow roads during the short winter construction periods.

However the northern reaches of Canada and the area along Alaska's North Slope are semi-arid regions, with [illegible] only about 10 inches per year and occurring mostly in summer.

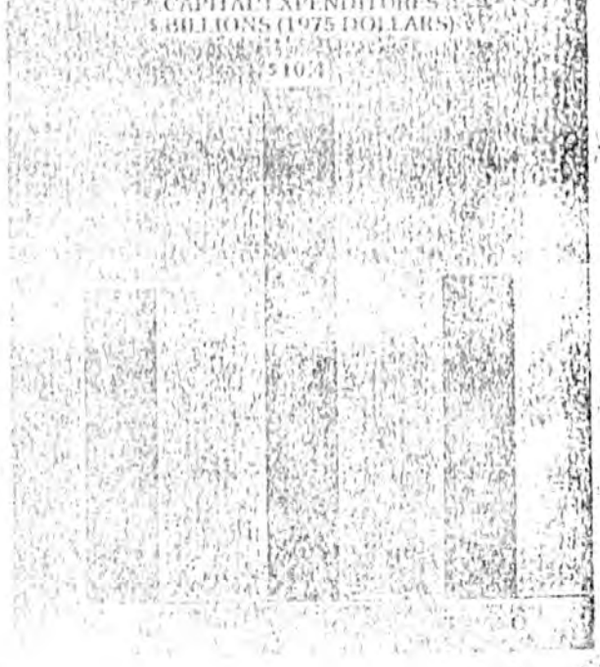
Therefore, annual snowfall would be insufficient for the construction of snow roads and the manufacture of artificial snow would be required. However, Arctic Gas has no prototype machine to produce the snow necessary for the roads.

Even if it were possible, most experts doubt that the snow roads would prevent damage to the highly sensitive arctic soil. They also doubt that there's enough water to make the snow to construct the roads and even if the water can be found, utilizing it in this fashion would almost certainly damage fish populations irrevocably. Use of ocean water is clearly impossible because the high salt content would create permanent damage to the arctic soil and wildlife. In short, Arctic Gas is relying on a totally unproven concept.

El Paso's prime route generally follows the Alyeska oil line but would require construction of a new work pad. El Paso has filed an alternative route which would utilize 79 per cent of the Alyeska work pad, but still proposes its prime route which would lead to much duplicated work and increased environmental impact.

When the Alcan route departs from the

Cost of the Alcan Pipeline Project is $4.4 billion less than that of Arctic Gas and $300 million below El Paso's project.



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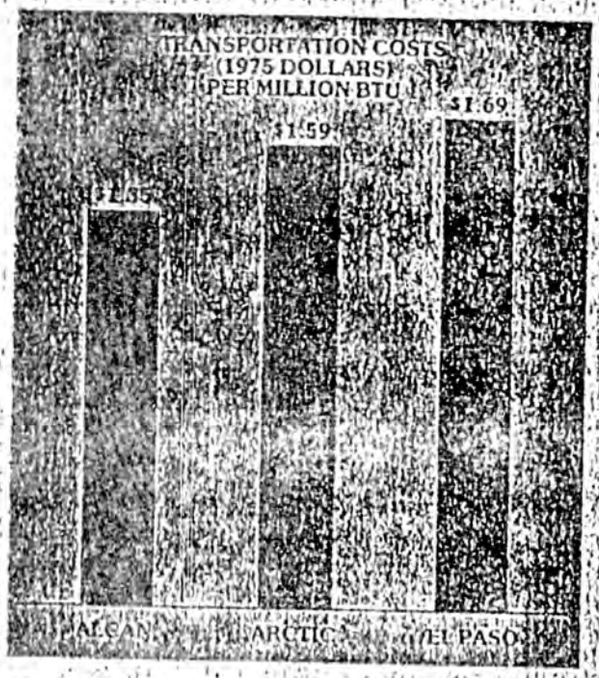


Alcan delivery cost per million BTU, an all-important cost to the consumer, is the lowest.

route of the oil line near Delta Junction and continues southeast following the Haines pipeline corridor and the Alcan Highway, the highway itself will provide access to all construction areas and will enable Northwest to get supplies and equipment to the work site more quickly and with less expense.

We believe that utilizing facilities presently available is an important way to keep costs down.

Another area in which we adhere to this philosophy is in the utilization of existing Canadian pipelines. Our Alcan route would tie in to Westcoast Transmission Company facilities at Ft. Nelson, British Columbia and to Alberta Gas Trunk Line facilities near Zama Lake, Alberta. These Canadian lines have excess capacity at present and can be "looped" to handle more of the Alaskan gas as it comes on stream.

Unlike Arctic Gas, we see little reason for an entirely new pipeline in areas where existing pipelines can do the job. This is another reason why Northwest can deliver the gas two years sooner than Arctic Gas or El Paso.

14.5

Time Means Money

Those two years mean money. If men and equipment are on the job two years longer, it simply stands to reason that costs will be substantially higher, not only because of the amount of time but because of inflated unit costs of labor and equipment.

Constructing the Alcan route as quickly as possible is another way we plan to hold costs down.

Our Canadian associates in the Alcan Pro; have North America's greatest experience in gas pipeline construction through permafrost. This experience will enable them to hold costs down and complete construction on schedule.

We also chose the 42-inch pipeline because it is the most economical method of transporting a daily volume of from 2.0 to 2.5 billion cubic feet of gas, as projected by Prudhoe Bay producers. Total recoverable reserves in the field are estimated at 26 trillion cubic feet, but Prudhoe Bay is essentially an oil field — not a gas field — and gas production above certain levels may cause an irreplaceable loss of oil in the gas cap. The State of Alaska has the responsibility of deciding how much oil and gas will be produced from the field, and one of the considerations is to adopt a plan which prevents undue loss of oil. For this reason it will be some time before the Prudhoe Bay field produces large volumes of gas. Our system is the only one with flexibility to handle small gas production rates and build up to the volumes which are realistically expected to be produced from the Prudhoe Bay field.

Half for Canada

Arctic Gas is proposing a 48-inch pipeline to carry up to 4.5 billion cubic feet daily. One-half of this capacity is dedicated to Canadian use for transportation of Mackenzie Delta reserves, destined exclusively for Canadian markets. Therefore, Arctic Gas is transporting only 2.25 billion cubic feet daily for U.S. markets. This compares with 2.4 billion cubic feet per day for the Alcan Project. We estimate that the Alcan line is adequate to carry all of the gas production which may be realistically expected from the Prudhoe Bay oil field.

AGO 800618

Although Northwest's proposal does not need Canadian gas to operate profitably, it should be pointed out that the Alcan Project is compatible with Canadian plans to develop Mackenzie Delta gas at a later date.

It is definitely in the U.S. national interest to develop Alaskan North Slope reserves quickly and to transport them to energy-hungry U.S. markets. But is it in Canadian interests to develop Mackenzie Delta reserves immediately? This is a question that only Canada can answer.

Some facts are known. The Arctic Gas proposal would force development of Mackenzie Delta gas in the early 1980's. However because of increasing prices and a corresponding reduction in demand — in conjunction with increasing supplies in British Columbia and Alberta — it may not be in Canada's national interest to develop the Mackenzie Delta reserves at this time.

Northwest's proposal gives Canada the option of developing these reserves at a time when they will be most needed to meet the country's long-term requirements. The Canadians have made quite a point of wanting to reserve Canadian gas for domestic use and it is highly unlikely that additional imports from Canada to the U.S. are forthcoming. The Alcan Project can be approved to deliver Prudhoe Bay gas independent of Canada's policy for developing frontier gas.

14.6

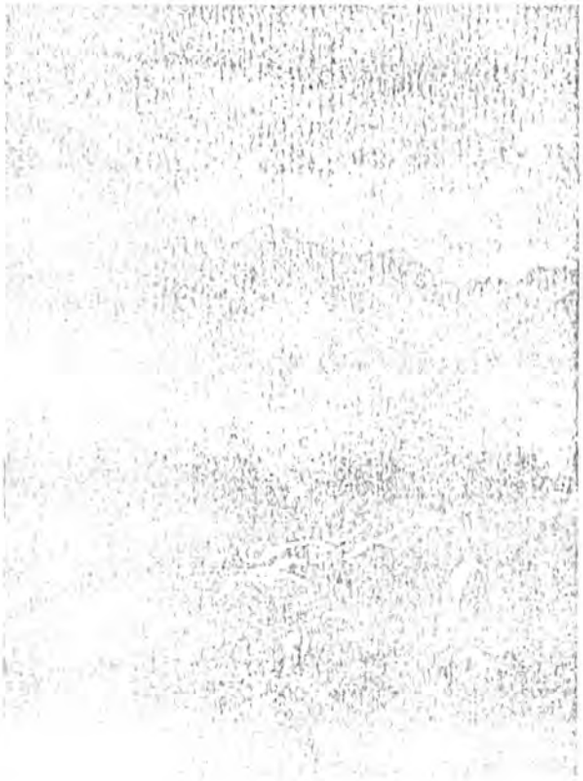
Environmental Advantages of the Alcan Plan

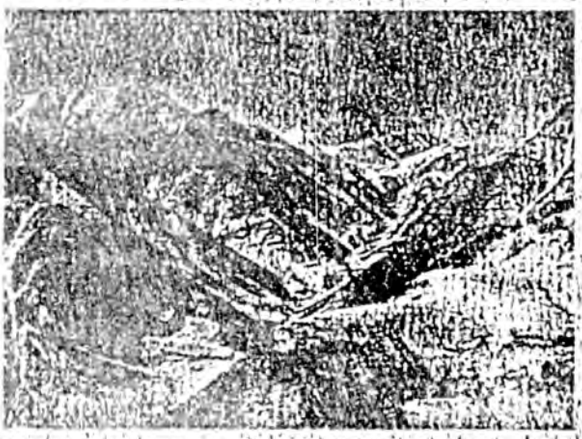
The pipeline route chosen by Alcan and Northwest has been widely acclaimed as environmentally superior to the other two alternatives. The Federal Power Commission environmental staff and the Department of Interior both favor the Alcan Highway route. This route also has won the support of the Sierra Club, Friends of the Earth, National Audubon Society, Wilderness Society and others, and some of their comments have been included in this brochure.

The reasons for their objections to the Arctic Gas proposal are primarily that it would gouge a pipeline corridor directly across the coastal plain of the Arctic National Wildlife Range, the only large, pristine arctic wilderness area and the largest of our national wildlife refuges.

Environmental and safety objections have prompted their opposition to the El Paso proposal. El Paso is proposing a complex system

Caribou calving grounds in the Arctic National Wildlife Range.





Alcan would affect no undisturbed wilderness areas.

of gas liquefaction, transportation and regasification in environmentally sensitive areas on a scale never before attempted and not yet proven.

Which brings up another point. These ingredients: new technology, sensitive environments and a large scale relative to previous projects are the major ingredients for mammoth-sized cost overruns. Dr. Arlon Tussing, former chief economist of the Senate Interior Committee and a professor at the University of Alaska, has said that he would not be surprised to see the cost of either the El Paso or Arctic Gas projects exceed $20 billion.

The Alcan Project, however, has all of the ingredients for realistic costs and the lowest probability for cost overruns. Alcan proposes conventional technology — a 42-inch diameter line at normal pipeline pressures and only traverses environments where construction experience exists.

Environmentalists prefer route of the Alcan Pipeline Project

"(The Wilderness Society) is most pleased to see the filing by Northwest Pipeline Company — at the Federal Power Commission — to construct a transportation system along the existing TAPS Corridor and the Alcan Highway to connect with existing distribution systems in Canada. This route appears to us to be the most environmentally sound."

—Bob Cooke, The Wilderness Society

14.7

"The Fairbanks-Alcan corridor appears to be the most environmentally acceptable alternative because it uses a developed transportation corridor which will not degrade the wilderness character of the Arctic National Wildlife Range and obviates the inherent long-term risks of an All-Alaska, LNG system."

—Pamela Rich, Friends of the Earth

"A less elaborate system (than that proposed by either Arctic Gas or El Paso Alaska Company) would certainly benefit the consumer, and a proposal which utilizes existing corridors would have far fewer adverse environmental effects, lower operating and maintenance costs, and less chance of cost overruns than either of those proposed."

—Barbara Heller, Environmental Policy Center

"... there is increasing evidence that the Alcan Highway routing may be the most environmentally preferable of all the alternatives now before us."

—Brock Evans, The Sierra Club

Sheenjek the Arcti Range

AGO 800620

14.8

"We believe that the Fairbanks highway alternative deserves further analysis and review so that it can be compared with the other two proposed routes. If your (the Senate Commerce Committee's) purpose is to assure more direct delivery of natural gas to the Midwest or Northeast, the Fairbanks route would do it."

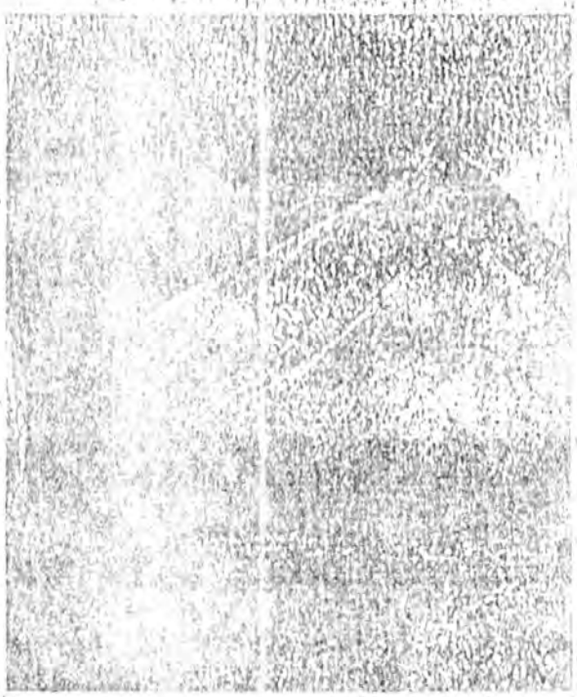
—Cynthia E. Wilson, The National Audubon Society

"... the Center favors construction of the gas pipeline in a utility corridor that is already in use with the provision that the pipeline should utilize to the maximum extent facilities that are already built, including highways, construction pad, access roads, material sites, camps, etc."

—Peter Scholes, Alaska Center For The Environment

"The staff concludes that ... the Fairbanks Alternative ... is the most environmentally acceptable system to transport Prudhoe Bay gas to the lower 48 states."

—Environmental Staff, The Federal Power Commission



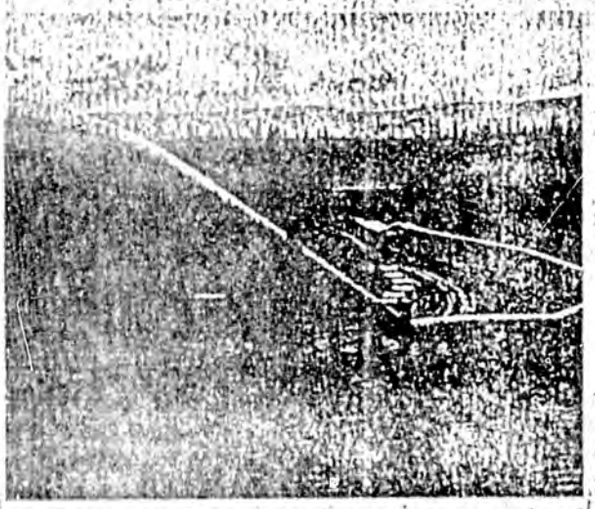
"The Fairbanks Route, because it follows the Alyeska Oil Pipeline and other transportation routes through Alaska and Canada, would avoid some of the im[illegible] associated with the Applicant's (Arctic Gas') [illegible]

The Department of Interior

"[illegible] Fairbanks-Alcan route may be the least envi[illegible] while, at the same time, [illegible]

[illegible] Conservation

AGO 800621



Alcan will utilize the Alyeska work pad.

Other Objections Cited

There have been other objections to the El Paso proposal. El Paso has proposed an LNG liquefaction plant site in an active earthquake zone at Prince William Sound in Alaska. In contrast the Alcan route follows a relatively placid zone north of the most active earthquake areas.

No less eminent a scientist than Dr. Edward Teller of the University of California called for a re-examination of the LNG safety issue. LNG tankers of the size proposed by El Paso have never before been built.

El Paso has proposed an LNG terminal at Point Conception, California, but faces considerable opposition. The Friends of The Earth organization recently reaffirmed its opposition to El Paso's proposed LNG plant sitings at either the undisturbed beach area of Point Conception or the alternative Los Angeles Harbor, which already is overly congested.

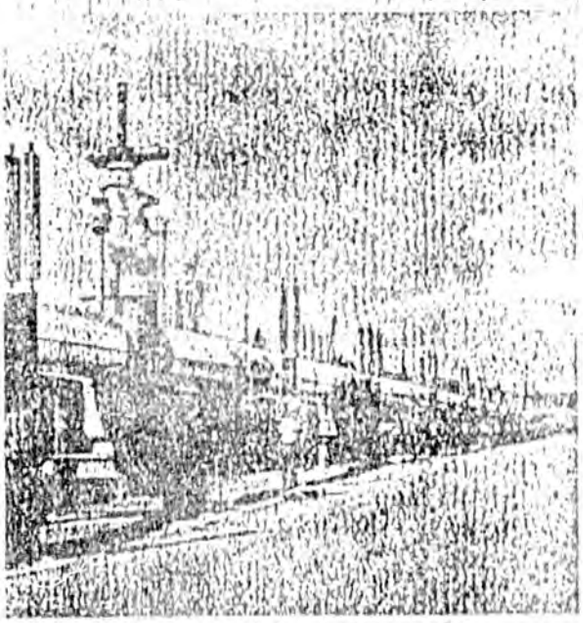
Also in order to site its LNG regasification plant at Point Conception, El Paso must receive approval from a number of California state regulatory agencies.

Uses Less Gas

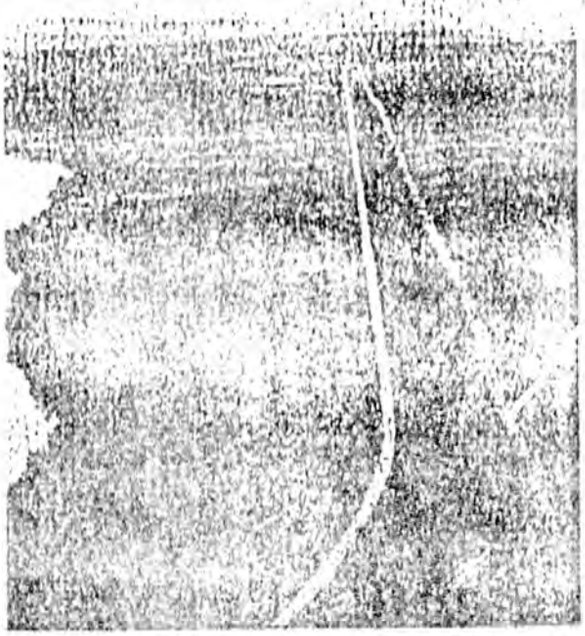
Few doubt that Alcan will use less gas for transportation than El Paso. Not only does El Paso use gas for transportation but also for liquefaction operations. The pipeline system is also more reliable. Bad weather and rough seas could easily delay shipping, and under the El Paso plan the [illegible]

The pipeline would continue carrying gas in all kinds of weather, and has the added advantage, should a mishap halt service temporarily, of having gas flow restored quickly.

In summary, Northwest's Alcan Project avoids the Arctic National Wildlife Range, disrupts no other wilderness areas, avoids earthquake zones, is more reliable than an LNG system, and would deliver the natural gas where it's needed and when it's needed.



Alcan follows Alyeska oil line for 539 miles from Prudhoe Bay to Delta Junction south of Fairbanks.



Alcan Pipeline [illegible] the Alcan Highway [illegible] Delta Junction [illegible]

14.10

Canadian Issue

Supporters of El Paso have occasionally made exaggerated and sometimes outrageous claims about Canadian interests, institutions and intentions. They would have everyone believe that Alaskan gas will not be secure once it is in transmission systems owned by Canadian companies, that Canada will unfairly tax or otherwise impede the flow of Prudhoe Bay gas to the lower 48.

However, the U.S. and Canada recently initialed a treaty which protects the flow of Alaskan gas in transit through Canada and provides that any provincial taxes and duties must be nondiscriminatory. The movement and the rate of return allowed for transporting the gas will be regulated by Canada's National Energy Board (equivalent to our FPC), not by the provinces. The NEB has exclusive jurisdiction over the pipeline of our Canadian partners.

Both Alberta and British Columbia have ad valorem taxes, as do the individual states in America, and British Columbia has a fuel tax. Like taxes in the U.S., these taxes would be applicable to the Alcan Project, but only as they are applicable to Canadian gas facilities. In both Alberta and British Columbia, Alaskan gas will be co-mingled with Canadian gas and, as a practical matter, the provinces cannot tax Alaskan gas without taxing the transportation of Canadian gas.

The proposed gas flow is merely a part of the huge economic trade that passes daily between the U.S. and Canada. For example, the oil flow from western to eastern Canada, some 510,000 barrels of crude per day, goes through pipelines in the United States. At Portland, Maine, Canada imports 437,000 barrels of crude oil per day which is transported to Montreal through the United States. All of these 947,000 barrels of oil are under the control of our federal government. Canada also transports approximately 40 percent of its natural gas supplies, or 315 million cubic feet daily, through transmission lines across the United States. All of this gas is under U.S. government control.

We at Northwest Pipeline believe it's totally unrealistic to talk of Canada discriminating [illegible]

Gas For Alaska

The Alcan Pipeline Project would provide a sound and stable energy base for an expanding Alaskan economy. It is the only plan which provides a high degree of flexibility and is not locked into huge front-end investments.

Since Alcan's capital costs are lower, Alcan management can respond more quickly and positively to Alaska's future industrial requirements. Alcan provides many options for the development and delivery of Alaskan gas. One option is a spur line down the industrial corridor through Anchorage into the Cook Inlet area. Or if gas were discovered along the southern coastal area along the Gulf of Alaska, a spur could be run back to the Alcan line for redelivery of the gas to markets elsewhere in Alaska or to the lower 48 states. The Alcan system also has the flexibility to accommodate new gas discoveries in central Alaska.

As noted, the Alcan Pipeline will follow the old Haines pipeline as far as Haines Junction. If Alaska so desires, the existing spur from Haines Junction to the Haines/Skagway area could be put into service. The Haines line has the potential for transporting about 50 million cubic feet of gas per day. If Alaska decides to develop small industries in this area, Alcan will be able to supply the energy required.

These are only a few examples. There are dozens of other possibilities that could contribute to the long-term growth and stability of Alaska, including development of the petrochemical industry in Alaska and development of Alaska's vast mineral resources. The steps Alaska should take to develop new industry are for Alaska to decide. However industrial, commercial and agricultural development will surely follow gas availability, and in the long term, this will provide the jobs and the economic base for orderly and continuing growth in Alaska.

AGO 800623

14.11

Conclusion

If American Energy Independence is to become a reality, we must carefully consider the selection of a route and system for bringing North Slope gas to markets in the lower 48 states.

Northwest's Alcan Pipeline Project is the responsible, practical choice. The Alcan plan is in the best interests of the United States because it will bring the Prudhoe Bay gas reserves on stream two years earlier than the proposals of the Arctic Gas or El Paso, and our project will cost billions of dollars less than either of the two alternatives.

We also recognize the need to protect the state of Alaska from haphazard development, and we have designed our Alcan Pipeline in such a way that it will reliably supply the U.S. with vitally needed gas and not invade lands that are not already developed.

In Canada, we will follow the Alcan Highway through the Yukon and British Columbia and, therefore, will not invade Canada's wilderness areas. Because the Alcan Pipeline will not require additional volumes of Canadian gas to operate economically, our plan also will permit the orderly development of the frontier gas reserves at a time of Canada's choosing.

Northwest's Alcan Pipeline Project is superior in several ways: it saves time, money and the environment, and provides for the earliest delivery of Alaskan gas to U.S. markets.

We're convinced Alcan is the best plan — for Alaska, for the nation and for future generations throughout America.

AGO 800624

Exhibit 15

COST ESTIMATES FOR GAS TRANSMISSION LINE AND DISTRIBUTION SYSTEM FOR MOVEMENT AND USE OF NORTH SLOPE NATURAL GAS TO INTERIOR ALASKA.

(NORTH STAR BOROUGH AREA)

BY

Robert Dempsey

FOR

Petroleum Economics - Pet 497

University of Alaska

Fairbanks, Alaska

GENERAL PARAMETERS

In determining the cost of a transmission line and distribution system the following items were considered.

1. Approximately 400 miles of 24 inch pipeline from Prudhoe Bay to the North Star Borough area. $1,000,000/mi

2. Assume 10,000 residential hookups at $2500 each. Tie in for major (industrial) users and physical plant necessary for the distribution system computed at $25,000,000.

3. Interest rate for distribution system has been calculated using a most favorable municipal bond rate.

4. State royalty share (1/8) of calculated reserves in the Prudhoe Bay field. Approximately 3.5 trillion cu. ft. of natural gas. For the purposes of these calculations, we have estimated usage in the interior at 2 trillion cu. ft. over the 20 year period.

5. All major cost items were extrapolated from known arctic and sub-arctic construction costs.

COST BREAKDOWN TRANSMISSION LINE.

A. Capital Investment	$ 400,000,000
B. Interest (20 year) See Computer Printout	401,502,000
C. Operations & Profit	350,000,000
	$ 1,151,502,000 / 20 years

COST BREAKDOWN OF GAS DISTRIBUTION SYSTEM

A. Capital Investment	$ 50,000,000
B. Interest (20 year) See Computer Printout	37,739,000
C. Operation & Reserves	200,000,000
	$ 287,739,000

NOTE: This reserve figure allows for reinjection costs of surplus gas if necessary.

TOTAL PROJECT COSTS OVER 20 YEARS.	$ 1,439,241,000
CONSUMPTION PER YEAR	100 billion cu. ft.
ROYALITY to STATE at FPC new gas price $0.52/mcf	$ 52,000,000 /yr or
	$ 1,040,000,000 Total
COST PER mcf delivered to users in North Star Borough	$ 1.24/m.c.f.

, GAS TRANSMISSION LINE

LOAN AMOUNT 400,000,000
INTEREST RATE (% PER YEAR) 8%
YEARS 20 15.3
MIN MONTHLY PAYMENT 345.77
ACTUAL MONTH PAYMENT 3,500,000
PAYMENTS START(MT,YR) Jan I980
PRINT LINE EVERY ? PAYMENTS
PRINT MAX OF ? LINES

MORTGAGE REPAYMENT SCHEDULE (8.00%)
MONTHLY PAYMENTS $350.00

M-YR	INT PAY	PRIN PAY	TOT INT	BAL.	
0 0-8C				400000.00	
12-8C	2614.85	735.15	31692.55	391492.55	
12-81	2553.83	796.17	62678.99	382278.98	
12-82	2487.75	862.25	92900.70	372300.70	
12-83	2416.19	933.81	122294.22	361494.22	
12-84	2338.68	1011.32	150790.82	349790.81	
12-85	2254.74	1095.26	178316.03	337116.02	
12-86	2163.84	1186.16	204789.24	323389.24	
12-87	2065.38	1284.62	230123.14	308523.13	
12-88	1958.76	1391.24	254223.15	292423.14	
12-89	1843.29	1506.71	276986.88	274986.86	
12-90	1718.23	1631.77	298303.39	256103.38	
12-91	1582.80	1767.20	318052.60	235652.58	
12-92	1436.12	1913.88	336104.39	213504.38	
12-93	1277.27	2072.73	352317.89	189517.88	
12-94	1105.24	2244.76	366540.53	163540.52	
12-95	918.92	2431.08	378607.06	135407.05	
12-96	717.14	2632.86	388338.53	104938.52	
12-97	498.62	2851.38	395541.12	71941.11	
12-98	261.95	3088.05	400004.93	36204.94	
12-99	5.65	847.03	401502.68	0.	LAST PAYMENT 852.65

NOTE: multiply all results by I000

AGO 800628

GAS DISTRIBUTION SYSTEM

LOAN AMOUNT 50,000,000
INTEREST RATE (% PER YEAR) 6.5%
YEARS 20
MIN MONTHLY PAYMENT 372.79
ACTUAL MONTH PAYMENT 380,000
PAYMENTS START(MT,YR) Jan 1982
PRINT LINE EVERY ? PAYMENTS
PRINT MAX OF ? LINES

15.4

MORTGAGE REPAYMENT SCHEDULE (6.50%)
MONTHLY PAYMENTS $380.00

M-YR	INT PAY	PRIN PAY	TOT INT	BAL.
0 0-82				50000.00
12-82	264.15	115.85	3210.26	48650.26
12-83	256.39	123.61	6330.12	47210.13
12-84	248.11	131.89	9353.54	45673.54
12-85	239.28	140.72	12274.05	44034.05
12-86	229.86	150.14	15084.76	42284.76
12-87	219.80	160.20	17778.31	40418.31
12-88	209.07	170.93	20346.87	38426.87
12-89	197.62	182.38	22782.06	36302.06
12-90	185.41	194.59	25074.94	34034.94
12-91	172.38	207.62	27215.99	31615.99
12-92	158.47	221.53	29195.04	29035.04
12-93	143.64	236.36	31001.24	26281.24
12-94	127.81	252.19	32623.01	23343.01
12-95	110.92	269.08	34048.00	20208.00
12-96	92.90	287.10	35263.03	16863.03
12-97	73.67	306.33	36254.05	13294.05
12-98	53.15	326.85	37006.04	9486.04
12-99	31.26	348.74	37503.01	5423.01
12-00	7.91	372.09	37727.86	1087.86
3-01	1.83	337.62	37739.45	0.

LAST PAYMENT 339.45

NOTE: multiply all results by 1000

Exhibit 16

ECONOMIC ANALYSIS OF
ALASKAN ROYALTY GAS CONTRACTS

A Report to

STATE OF ALASKA: THE LEGISLATURE

January 1977

Jensen Associates, Inc.

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(617) 227-8115
Telex: 94-0057

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I. INTRODUCTION AND SUMMARY

16.4

INTRODUCTION

Three contracts for the sale of the State of Alaska's royalty gas from the leases on the Prudhoe Bay oil and gas field have been negotiated by the State of Alaska with Tenneco Alaska, Inc., El Paso Natural Gas Company, and Southern Natural Gas Company. These contracts must be approved by a majority of each House of the Alaska State Legislature. The Legislative Affairs Agency, acting on behalf of the Alaska State Legislature, has retained Jensen Associates, Inc. to perform an economic analysis of the State of Alaska's Proposed Royalty Gas Sales Agreements. The economic analysis of these proposed agreements is presented in this report.

The purpose of our analysis is to determine if the contracts protect the interests of the State of Alaska. In this analysis, we were asked to examine two questions:

1. Is Alaska protected if the El Paso project is not the one selected? and
2. If the El Paso project is approved, does the contract provide favorable value to Alaska?

SUMMARY

Alaska will receive favorable benefits from royalty gas either by obtaining the highest possible price from the sale of gas into interstate markets or for soundly based use in Alaska. Because of the large volumes of royalty gas available and because of the possibility of additional gas discoveries near Alaskan markets for natural gas, the more important question for this analysis appears to be the price that Alaska can receive in interstate markets. Second, it is necessary to analyze the flexibility built into the contract to allow Alaska to use the gas for its own needs.

AGO 800634

There is significant uncertainty about the price of the Prudhoe Bay royalty gas. Table I-1 illustrates this range where it shows the possibility of prices ranging from $0.20 to above $2.00 per Mcf. The uncertainties in the value of the gas and thus risks to Alaska are caused in part by uncertainties in energy markets, but much more importantly are caused by the uncertainties surrounding the legislation and regulation of natural gas.

The initial deliveries of Prudhoe Bay natural gas will occur at a time when--in our view--significantly increasing prices for energy world-wide are likely. Between now and 1985, we believe that the Organization of the Petroleum Exporting Countries (OPEC) is not likely to lose control of international oil pricing despite occasional periods of surplus and some degree of internal dissention within the organization. Beyond 1985, however, the possibility exists for sharply higher real world oil prices. This would result from continued growth of world oil demand combined with growing producing capacity limitations in many OPEC countries, thereby creating the conditions for shortage pricing by those few national oil suppliers who can still respond to world demand growth.

Between now and 1985, U.S. energy prices should rise because of (1) OPEC oil prices rising to keep pace with inflation in industrialized countries, (2) a rise in U.S. oil prices to approximate world oil levels as the current domestic price controls are relaxed or eroded, and (3) the U.S. beings to use higher energy prices to foster energy conservation as do Japan and the countries of Western Europe. Beyond 1985, much greater price uncertainty exists, but in our view, rising real prices are the most likely possibility.

The value of Prudhoe Bay gas netted back to the wellhead from No. 2 oil market values in California and the Midwest are shown in Table I-1 for 1980. Because the market price of No. 2 oil is expected to increase, and perhaps sharply, over the

TABLE I-1

16.6

RANGE OF POSSIBLE WELLHEAD PRICES FOR

PRUDHOE BAY NATURAL GAS

1980

Market Values via El Paso Project*	Dollars per million Btu
Competing with No. 2 oil**	
Mid West	0.94
California	1.22
Competing with coal based synthetic natural gas	
Mid West	2.71 - 3.05
Regulated Values	
Opinion No. 770 National Rate on new gas	
$1.42 plus $0.01 per quarter from October 1, 1976	1.56***
Possible Alaska Area Rate****	0.20 - 0.45

*Assuming F.P.C. staff estimate of gas capital transportation costs and netback value for fuel cost.

**Equivalent Btu value with No. 2 oil giving natural gas a 10 percent form value premium.

***If the prices are regulated using more recent drilling costs and discovery data, the cost based price should rise above that shown here.

****Computed with only Alaska data including associated gas.

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twenty-year contract life, the netback market values will be higher than the 1980 wellhead price shown.

The greatest uncertainty about price is caused by uncertainty over legislation and regulation. If new gas is deregulated and Prudhoe Bay gas qualifies as new gas, as it will under some bills, then market value pricing will prevail. If wellhead prices continue to be regulated, Prudhoe Bay prices remain uncertain. Recent national rate opinions by the Federal Power Commission (F.P.C.) have specifically excluded Alaska and Hawaii from both the rates and the cost calculations that underlie the rates. If Alaska is included in the national rates as currently computed based only on non-associated gas, the prices will change little from current calculations because of the small amount of Alaska non-associated gas. However, if the vintaging formula under the most recent national rate decision, (Opinion 770-A), were to prevail, in which well spud-date determined the vintage, then some gas would not qualify for the new gas rate. However, vintaging is not the source of great price uncertainty. If regulation does not include Alaska in the national rate and an area rate is set for Alaskan reserves as the associated gas of Prudhoe Bay sets the possibility for lower wellhead prices. Since some of the costs of exploration and development will be allocated to oil for an associated gas discovery, and the Prudhoe Bay field is large, the costs per Mcf of gas is low as shown in the sample calculation in Table I-1. However, such a calculation assumes that the F.P.C. will depart from its recent tradition of excluding associated gas from its national rate calculations as had been done earlier in F.P.C. history. In any case, regulatory decisions can have great impact upon the value to Alaska of the Prudhoe Bay royalty gas.

CONCLUSIONS

The termination clauses built into the contracts protect Alaska in the event that the El Paso project is not approved or that there is excessive delay in approvals.

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If the El Paso project is approved or if the terms of the contract prevail under another pipeline route, then the pricing provisions and the reservation clauses become important. The most important question is how does the contract protect Alaska's interest in the face of considerable price, regulatory, and legislative uncertainty. Our conclusions are:

- Future wellhead prices of Alaskan natural gas will be determined either through regulatory processes as they are now, or through price negotiation should Congress deregulate natural gas.
- In the event of deregulation, the contract will play a significant part in price determination. The pricing clauses with periodic redetermination, assuming a proper clarification of the ambiguity of redetermination relative to Section 6.3, are sound.
- If wellhead price regulation remains in force, the role of price determination will remain with the Federal Power Commission, or possibly with Congress and the contract itself can do little to influence the price. It is important to recognize that the contract has adopted a passive stance, having tied itself to the efforts of the producers in obtaining a ceiling price. Since no real precedent for price setting of Alaskan associated gas exists at present within the F.P.C., and since the strength of the producers' gas is not known, the state might have a stronger future position by setting its own price precedent now in this contract under Section 6.2.
- In addition, there is ambiguity in the interpretation of the price including severance taxes on royalty gas under regulation. This may keep severance taxes or their equivalent from being collected on the royalty gas at a loss of $50-$150 million dollars. The ambiguity needs clarification either in the contract or through Alaskan severance tax legislation.

The clauses reserving gas for Alaska are very good and provide significant flexibility. The State can make both time and location exchanges when they provide a better value for natural gas to Alaska than by selling interstate.

Finally, favorable value of the gas will be brought to Alaska more by action outside the contract in legislation and regulation than by the contract itself.

II. SUMMARY OF CONTRACT

The proposed sales by the State of Alaska of 2.6 trillion cubic feet of Prudhoe Bay royalty gas to Tenneco Alaska, Inc., El Paso Natural Gas Company, and Southern Natural Gas Company are designed to help Alaska in three ways:

1. Promote the construction of a trans-Alaska gas pipeline system, with the associated benefit of making gas available close to people and industry;
2. Establish a gas pricing structure favorable to Alaska for sale of royalty gas outside the State; and
3. Protect future needs for gas within Alaska.

A brief review of the contract mechanisms designed to implement the above goals follows.

PROMOTE TRANS-ALASKAN PIPELINE ROUTE

Article I of the contracts (entitled Support for Trans-Alaska Pipeline) requires both the State of Alaska and the royalty gas purchasers to work actively for the selection of a trans-Alaska gas pipeline system. The provision in Article XI (Conditions Precedent) that the royalty gas contracts may be terminated by directive of the Governor of Alaska if another route is approved appears to give sufficient motivation to the buyer to work hard in its endeavors to seek passage of a trans-Alaska pipeline route. Alaska's interests are adequately protected on this point. Alaska may choose to support any trans-Alaska pipeline route, although the State has indicated a preference for that proposed by El Paso Alaska Company. Alaska may also terminate the contract if pipeline route approvals are not forthcoming by December 31, 1978 or if a route other than El Paso's is approved.

ESTABLISH FAVORABLE GAS PRICING STRUCTURE

In order to obtain favorable prices for Alaskan royalty gas, the contracts establish different pricing mechanisms depending upon the regulatory or non-regulatory status of the gas. Article VI (Price) identifies three regulatory situations which might occur:

Section 6.2: Federal Power Commission has jurisdiction at the time of first deliveries over royalty gas resale rates in interstate commerce;

Section 6.3: No Federal Power Commission rate-regulation exists for royalty gas for interstate resale at the time of first deliveries; and

Section 6.4: Federal Power Commission deregulation occurs after first deliveries of royalty gas have begun.

If Federal Power Commission jurisdiction applies, the initial price of the royalty gas is to be the highest applicable rate allowed and never less than the price paid producers for their gas from the same reservoir for comparable interstate sales. If regulation does not apply, then the initial price is to be the highest interstate price being paid producers for similar sales from the applicable Prudhoe Bay leases.

If deregulation occurs after first deliveries, the price is subject to redetermination with a provision for arbitration in the event that price accord can not be reached. Annual redetermination may occur thereafter at the request of either buyer or seller. In all cases, the gas price is adjustable up or down if the gross heating value is more or less than 1,000 British Thermal Units (Btu's) per cubic foot.

Since no specific prices are established in the contracts, our analysis focusses on three issues:

1. The likely U.S. and world energy marketing context facing Alaskan royalty gas in the period 1980 and beyond. Chapter III examines energy economic trends in the U.S. and world pressures on energy prices in that period;
2. The market value of Alaskan royalty gas at the time of actual deliveries (Chapter III); and
3. Possible pricing formulas that may apply in the event of price regulation existing at the time of royalty gas deliveries (Chapter III).

Two additional aspects of natural gas pricing--vintaging and severance taxes--are considered in our analysis.

Vintaging refers to the date assigned to an interstate gas sale to determine the applicable regulatory price. Severance taxes are state-imposed producer taxes on gas extraction. The implications of vintaging and severance taxes to the contracts are discussed in Chapter III also.

PROTECT ALASKA'S FUTURE GAS NEEDS

Alaska clearly desires to retain future access to Prudhoe Bay gas for internal requirements. Under Article III (Quantity), the State has the right to reduce the quantity of royalty gas for interstate sale by varying percentages throughout the life of the contract. Alaska may retain 25% of the royalty gas for the first five years and increase this amount by 25% in each subsequent five-year period over the life of the contract. Alaska also has the right to change the percentages of royalty gas taken for internal needs upon a 24-month written notice as well as to export products, such as ammonia, manufactured from its retained gas. While the three contracts also contain "take-back" provisions enabling the buyer to recoup the quantities retained by the State to meet internal needs, this applies only if additional surplus royalty gas is available. Chapter IV of this report considers possible situations in which Alaska retains royalty gas for internal usage.

Finally, in reviewing the royalty gas contracts, some concerns arose regarding specific contract language. While relatively minor, these points are outlined in Chapter V. It is also recognized that in the process of negotiating a contract, both parties must "give and take" on the various issues. Since Jensen Associates, Inc. was not involved in the negotiating process, we acknowledge that some of the matters on which we comment here may have been dealt with in the negotiations themselves. Nevertheless, the issues are outlined in the report in accordance with our obligation as consultants.

III. SALE OF PRUDHOE BAY NATURAL GAS

Alaska wants the most favorable price it can obtain for its royalty gas sold into interstate commerce. As we look ahead, we see considerable uncertainty about the price of energy in general and specifically about the price of natural gas in Alaska which may prevail when initial deliveries of royalty gas occur and for the subsequent twenty years over the term of the contracts. These uncertainties were apparently understood in the negotiation of the royalty gas contract. The contract pricing clauses simply state that the price shall be set at the highest price determined for comparable contracts, and if deregulation occurs, periodic price redetermination is established.

The uncertainty in price and thus risks in the payments to Alaska are created by forces outside the contract. These forces are markets and the course of natural gas regulation and/or legislation at the Federal level. This contract can influence the course of markets, regulation or legislation only slightly. However, the Legislature of the State of Alaska needs to be aware of and understand the causes behind these very real uncertainties about the price of Alaskan gas and their economic risk as it evaluates these contracts. Consequently, our evaluation of the contracts focusses more on contractual ability to adapt to changing price circumstances than upon the ability of the contracts to influence the prices.

In order to understand the extent and cause of the uncertainty about price of Alaskan royalty gas, we describe below the movement of energy markets in the United States and the world from 1975 to 1990, market value pricing of Alaskan gas which would prevail if deregulation of the wellhead price of gas were to apply to Prudhoe Bay gas, costs of alternate forms of energy for natural gas pipelines, and the impact and differences in pricing which regulation by a body such as the Federal Power Commission could bring to the price of Alaskan royalty gas.

ENERGY MARKETS IN THE UNITED STATES AND THE WORLD, 1975-1990

The Organization of Petroleum Exporting Countries (OPEC) has demonstrated since late in 1973 that it has considerable power to set the price of crude oil unilaterally in world markets. Western Europe, Japan, and increasingly the United States, as natural gas production declines, are dependent upon this imported oil which is the incremental source of energy in the industrialized nations and tends to set the price of all forms of energy. Consuming nations can influence price through controls or taxes to be more or less than the world market crude oil price. But controlling price below world market levels requires the nation to have its own energy production, as is true of the United States.

OPEC Production and Pricing

Table III-1 is the estimate of the world oil trade to 1985. The growing demands for OPEC oil production make a break-up of the cartel unlikely. We expect the United States to continue to rely upon imported oil, and, thus, be heavily subject to the world price of oil. The production of oil from OPEC nations should increase steadily but within productive capacities. In particular, Saudi Arabia, a country with the largest oil reserves in the world, should be able to accommodate increases in demand without strain to the mid-1980's.

The price of OPEC oil is not expected to decline, rather we expect the oil producing nations to attempt to maintain the value of their oil. As inflation continues in the industrial nations, the price of oil should increase apace to the mid-1980's.

Forecasts of oil, supply, demand and price are subject to an increasing range of error the further into the future the forecast is made. However, the contracts for royalty gas are scheduled to run for twenty years beyond the initial deliveries of gas which should occur sometime between 1980 and 1985.

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TABLE III-1

WORLD OIL TRADE

(Million barrels per day)

	1975	1980	1985
IMPORTS			
United States	5.8	11.5	11.5
Western Europe	12.4	12.0	14.0
Japan	4.9	6.0	8.0
Net to Balance[1/]	4.3	6.5	9.5
OPEC PRODUCTION			
Total	27.4	36.0	43.0
Saudi Arabia[2/]	7.1	10.0	12.0

1/ Includes net imports (exports) of the Non-OPEC developing countries, the Sino-Soviet countries, OPEC internal consumption, stock changes, and adjustments.

2/ Includes 50% of Neutral Zone.

Source: Jensen Associates, Inc.

Thus, most of the gas under these contracts will be delivered after 1985, the time horizon to which most international oil forecasters have recently chosen to limit their estimates. In order to understand how energy prices will behave in the latter part of the 1980's and beyond, it is important to review the likely trends in world oil consumption compared with the development of both non-OPEC and OPEC supply.

Oil will be a major source of energy into the 1990's and beyond. Even though non-traditional energy sources may begin to grow rapidly, they do so from a small base so that continued economic growth needs to be, for some years after 1985, fueled by oil. But as oil demand on OPEC production increases, production capacity limits for most of the OPEC countries could very likely be strained. It is not hard to see oil demand bumping up against capacity constraints most everywhere except in Saudi Arabia after 1985. If this were to happen, the conditions would be set for another dramatic upward shift in the price of oil. It is also possible to envision very effective conservation efforts and accelerated alternate energy supply programs being developed, in which case the strains on OPEC production capacity would not be severe and oil price increases would be moderated. However, it is difficult to envision a decline in OPEC production in the decade following 1985 which would place downward pressure on world oil prices unless the industrialized nations of the world were to sink into depression.

As the time of initial deliveries of royalty gas nears, the post-1985 energy supply and demand balances will become clearer. These forecasts should begin to have a significant impact upon domestic U.S. energy prices and government policy. The post-1985 conditions are unclear today and the range of uncertainty about energy prices is high. However, forces that would create sharply higher prices seem more likely than a worldwide depression that might force oil prices downward.

U.S. Price Controls

At the current time, the price of oil in the United States is controlled by the Federal government at levels below the world price. However, the price for "new" oil is higher than for "old" oil in order to encourage further exploration and the development of additional supplies. The stated intention of the Energy Policy and Conservation Act is to allow the price of oil to increase and eventually for it to be decontrolled. Either as "new" oil becomes an increasing share of supply or oil price is decontrolled, the price of oil will increase more rapidly in the United States than in world markets as the U.S. prices catch up to the world prices.

U.S. Energy Conservation

There is a developing consensus in the United States that the conservation of energy is an important national objective. Currently, there is no equivalent consensus on how this objective is to be reached. There have been some attempts to use engineering standards mandated by regulation or legislation to promote energy conservation such as mileage requirements for new cars. Meanwhile, government policy has concentrated on keeping the price of energy low.

Other countries, such as Japan and those in Western Europe who have a longer history of oil imports than the United States, have relied upon the price system to bring about energy conservation. These nations increase the cost of energy to the consumer above world oil prices by taxation. Energy consumption in Japan and Western Europe is below that of the United States by more than can be explained by a difference in the standard of living. The use of the price system to bring about energy conservation has proven to be successful in other nations.

As the United States develops an energy conservation program, an increasing reliance upon higher energy prices to bring about conservation is to be expected. This, too,

should reinforce both the OPEC determined price increases, the price increases of oil and other energy forms in the United States as oil market levels are approached, to bring about an even greater increase in the price of energy for the United States.

Conclusion

OPEC oil pricing, the phase-out of oil price control in the United States or an increasing proportion of "new" oil, and greater reliance upon higher prices to foster energy conservation all point to increased energy prices in the U.S. The extent of these increases is uncertain. However, the greatest uncertainty is about prices in the mid-1980's. The potential for oil demand running hard against world productive capacity exists. Sharply increased prices would result. But, if the industrialized nations can aggressively conserve energy and develop sources other than oil, or if economic growth falters, then OPEC oil production capacity will not be under the same stress.

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In the event of deregulation, market forces would determine the field price of Alaskan North Slope gas. One way to anticipate this price is to forecast the market price of alternate fuels and to netback to the North Slope using the costs of transporting the gas to market. The theory is that the price of natural gas at the market (e.g., Los Angeles) would tend toward a level related to the price of alternate fuels, and that the field price resulting would be the market price less the cost of transmission.

We have computed the netback value of Alaskan North Slope gas based on the market prices of competing alternate fuels in Los Angeles and Chicago. This section describes the method and the results of this analysis.

Number Two Fuel Oil

The calculations which compare natural gas with fuel oil are based on the projected prices of No. 2 oil in Los Angeles and Chicago. In the case of Los Angeles, it was assumed that No. 2 oil would be refined primarily from Alaskan crude, priced to be competitive with Saudi Arabian light landed in Houston. The present price of Saudi Arabian light is $12.09 F.O.B. Ras Tanura. This price can be inflated at 5% per year to 1980 and, with the addition of transportation costs, terminal costs and refinery margins, yields a projected price for No. 2 oil in Houston in 1980. Netting back to Los Angeles via crude pipeline results in a price for No. 2 oil refined from Alaskan crude and delivered in Los Angeles. A 10% premium must then be added to account for the fact that natural gas is often preferrable on a Btu basis to No. 2 oil.

To compute a price for No. 2 oil in Chicago, we added to the price of No. 2 in Houston the cost of transporting the fuel by product pipeline to Chicago. Again we added 10% to reflect a premium for clean-burning natural gas.

In both Chicago and Los Angeles, it was assumed that the relevant price comparison was between No. 2 oil at the refinery

rack and natural gas at the city gate. The cost of local delivery to large volume industrial users was assumed to be small and approximately equal for either fuel.

SNG from Coal

Current estimates for the cost of producing gas from coal form a range of between $3.00 and $4.00 per million Btu. To obtain a 1980 price for coal-based SNG, we selected $3.50 as a middle-range figure, inflated it at 8% per year for five years, and added projected transportation costs.

Netback Value

The netback value is computed in the following way. Suppose the projected market price of No. 2 in Los Angeles is $3.50 per MMBtu. Adding 10% results in a market value for natural gas of $3.85 per MMBtu, competing against No. 2 oil. In other words, pipelines could charge gas distributors in Los Angeles up to $3.85 per MMBtu, the price of the competing incremental fuel source. The field price in Alaska is then determined by subtracting from $3.85 the cost of transporting the gas from the field to Los Angeles. If the transport costs were $2.00 per MMBtu, then the price that Alaska could charge for its royalty gas in the field would be $3.85 minus $2.00 equals $1.85 per MMBtu.

It should be noted that transportation costs include the cost of gas used and lost along the respective routes. Consequently, transportation costs vary with the netback value which in turn varies with the projected market price of the competing fuel. In short, the higher the value of Alaskan North Slope gas, the more expensive it is to transport.

Tables III-2, III-3, and III-4 show netback values computed for the El Paso project and the Arctic Gas project separately.

Strictly speaking, netback values show what price would prevail for natural gas (regardless of source) in each market, assuming insufficient gas is available to replace the alternate

TABLE III-2

NETBACK VALUATION OF ALASKAN NORTH SLOPE GAS
BASED ON NO. 2 OIL
1980
(Dollars per million Btu)

El Paso Route

	Price of No. 2 Oil (Incl. Premium)*	- El Paso Transportation Costs**	= Netback Value
Chicago	$3.34	$2.40	$ .94
Los Angeles	$3.10	$1.88	$1.22

Arctic Route

	Price of No. 2 Oil (Incl. Premium)*	- Arctic Transportation Costs**	= Netback Value
Chicago	$3.34	$1.68	$1.66
Los Angeles	$3.10	$1.40	$1.71

*Assumes that the current price of Saudi Arabian light ($12.09) will rise at the rate of 5% per year to 1980 and 7.4% per year from 1980 to 1985. These estimates are representative and merely reflect current expectations.

**Based on average fifth-year cost to the Mid West and California as published by the F.P.C. staff (12/7/76). Estimates assume 2.4 and 2.25 Bcf/d capacity for the El Paso and Arctic systems respectively. Gas lost or used as fuel in transit is valued at the netback value.

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NETBACK VALUATION OF ALASKAN NORTH SLOPE GAS

BASED ON NO. 2 OIL

1985

(Dollars per million Btu)

El Paso Route

	Price of No. 2 Oil (Incl. Premium)*	- El Paso Transportation Costs**	= Netback Value
Chicago	$4.59	$2.61	$1.98
Los Angeles	$4.27	$2.08	$2.19

Arctic Route

	Price of No. 2 Oil (Incl. Premium)*	- Arctic Transportation Costs**	= Netback Value
Chicago	$4.59	$1.79	$2.80
Los Angeles	$4.27	$1.50	$2.77

*Assumes that the current price of Saudi Arabian light ($12.09) will rise at the rate of 5% per year to 1980 and 7.4% per year from 1980 to 1985. These estimates are representative and merely reflect current expectations.

**Based on average fifth-year cost to the Mid West and California as published by the F.P.C. staff (12/7/76). Estimates assume 2.4 and 2.25 Bcf/d capacity for the El Paso and Arctic systems respectively. Gas lost or used as fuel in transit is valued at the netback value.

TABLE III-4

NETBACK VALUATION OF ALASKAN NORTH SLOPE GAS

BASED ON SNG FROM COAL

1980

(Dollars per million Btu)

El Paso Route

	Price of SNG Delivered*	- El Paso Transportation Costs**	= Netback Value
Chicago	$5.46	$2.75	$2.71
Chicago	$5.46	$2.41***	$3.05

Arctic Route

	Price of SNG Delivered*	- Arctic Transportation Costs**	= Netback Value
Chicago	$5.46	$1.87	$3.59
Chicago	$5.46	$1.61***	$3.85

*Current estimates place the cost of producing SNG from coal of between $3 and $4 per MMBtu in 1975 dollars. We have used $3.50/MMBtu and inflated at 8% per year to 1980. Cost of transporting SNG assumed to be 32¢/MMBtu.

**Based on average fifth-year cost to the Mid West and California as published by the F.P.C. staff (12/7/76). Estimates assume 2.4 and 2.25 Bcf/d capacity for the El Paso and Arctic systems respectively. Gas lost or used as fuel in transit is valued at the netback value.

***Assumes gas lost or used as fuel in transit is valued at $1.00/MMBtu.

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fuels. Of course, if all Alaskan gas were channeled into Los Angeles, saturation would occur and Los Angeles' market price of gas would fall. However, in the broader context of the national market, (which size is currently on the order of 55 billion cubic feet per day), the additional 3.5 billion cubic feet per day anticipated from Alaska may not be sufficient to render uneconomical even the most expensive alternate fuel sources now being contemplated.

Contracts

Section 6.3 of the contracts states that in the event of deregulation, prior to first deliveries of Alaskan North Slope gas, "the initial price for gas delivered hereunder shall be the highest price being paid by any interstate gas purchaser for gas under contracts. . . ." This provision appears adequate to insure that Alaska receives the full netback value based on the appropriate competing alternate fuel source, providing that the North Slope producers have marketed their gas judiciously; and with the price incentives inherent under deregulation, there is every reason to believe that they would do so.

Section 6.4 provides, moreover, for price redetermination in the event that the price of gas is regulated at the time of first deliveries and subsequently deregulated.

These two sections together provide that Alaska receives full market value for its royalty gas under deregulation, providing vintaging allows, whether or not deregulation occurs before or after the date of first deliveries. Moreover, inasmuch as Alaska contemplates taking royalty gas in kind, and selling it in the field, netback pricing serves to illustrate the market price potentially available to Alaska for its royalty gas.

In the event the sales of Prudhoe Bay gas contemplated in the contracts are found to be jurisdictional by the F.P.C., the price clause (Section 6.2) provides that

1. ". . . The initial price . . . shall be the highest area, national or ceiling rate allowed to be paid by any interstate gas purchaser to any working interest owner . . ."
2. "The price to be paid thereafter shall be subject to all periodic changes permitted in accordance with the . . . Rules and Regulations of the Federal Power Commission . . . or such other changes in price as may be permitted by any new area, national or ceiling rates . . . which may subsequently be established."

Thus, the value of the contracts depends upon the ceiling price which may be established by the Federal Power Commission. The contracts do not specify or assume that the nationwide rate established by the F.P.C. will apply to the contract sales. On the contrary, the contracts accept in advance, whatever rate-making method the F.P.C. might apply to sales of Prudhoe Bay gas. Moreover, the contracts tie the interests of the State of Alaska to the interests of the private companies producing Prudhoe Bay gas. The State will not receive a price for its royalty gas any higher than the cost-based price which the companies can justify to the F.P.C.

The National Rate and Alaska Gas

The current nationwide wellhead ceiling price for "new" natural gas in the United States is $1.42/Mcf (plus 1¢/quarter beginning October 1, 1976), established in F.P.C. Opinions 770 and 770-A. However, these Opinions and the earlier nationwide rate Opinion 699-H all explicitly excluded the States of Alaska and Hawaii.[1] A simple decision could be made by the Commission to delete the exclusion and thus bring Alaskan gas under the

[1]Title 18, U.S.C., paragraph 2.56a (f).

nationwide ceiling. The difficulty with this approach is that the $1.42/Mcf is a cost-based ceiling price, calculated using cost data from only the lower-48 states. That is, the exclusion of Alaska from the $1.42/Mcf ceiling is not only a legal or procedural fact but also a computational fact. If the F.P.C. were to attempt to establish a single uniform national rate including Alaskan gas, the Commission would likely bring data on the cost of gas production in Alaska into the computation process.

One fundamental assumption underlying Opinions 699-H, 770 and 770-A is that most natural gas produced in the U.S. is from non-associated gas wells (wells which produce gas from reservoirs which do not also contain crude oil). For this reason the Opinions consider data on the drilling costs and drilling footage of gas wells only. All data on oil wells (many of which also produce gas) are excluded. If the F.P.C. were to revise the national rate to incorporate data on non-associated gas wells in Alaska, the national rate would not be much affected. The number of Alaskan non-associated gas wells and the quantity of Alaskan non-associated gas reserves are not large enough (relative to the national total) to have a significant impact upon the calculation of the national rate.

However, the inclusion of Alaska within the national uniform rate may be difficult precisely because of the fundamental assumption stated above, i.e. that most U.S. natural gas is produced from non-associated wells. Such an assumption, some may argue, is inapplicable to Alaska, where over four-fifths of natural gas reserves exist in conjunction with oil. For this reason, there is a reasonable possibility that the Commission will establish a separate area rate for all gas in Alaska or for casinghead gas from oil wells in Alaska.

An Area Price Ceiling for Alaska

The calculation of a wellhead ceiling price for all natural gas in Alaska, or for casinghead (associated-dissolved) gas alone, requires the allocation of costs between oil and gas. During the

long history of F.P.C. wellhead price regulation, many methods have been proposed for making such an allocation. Most of these methods have been based upon a combination of two principles:

- That oil and gas may be substituted for each other as sources of energy and are valuable because of their energy content as measured in Btu's, and
- That oil, which has traditionally sold at a higher wellhead price per Btu than gas, should receive a premium value over gas.

A brief review of F.P.C. wellhead price regulation uncovered no instance in which the Commission had actually allocated costs between oil and gas in order to set an areawide ceiling price on associated gas (called "casinghead gas" in the area rate opinions). In setting area price ceilings between 1961 and 1974, the Commission established various categories of gas according to vintage date. The calculation of the price applicable to each vintage category was based entirely upon the costs of non-associated gas production. Newer vintages of gas received higher ceilings than did older vintages, due to inflation of drilling costs and declining sizes of gas discoveries. Casinghead gas was included in the older vintage and was not vintaged in its own right. Thus, "new" casinghead gas received a lower ceiling price than did new non-associated gas.

The most recent case in which the Commission allocated costs to arrive at a separate cost of service for casinghead gas was in the Phillips Petroleum opinion of September 1960, the last of the individual producer rate cases. In the Phillips opinion, the Commission used separate methods for allocating production costs and for allocating exploration costs. Production costs on leases producing both oil and gas were allocated in proportion to the relative costs of producing oil from oil-producing leases and of producing gas from gas-producing leases. Exploration costs (which were viewed as joint costs because, at that time, the F.P.C. did not accept the concept of directional exploration) were allocated first among oil-only leases, gas-only leases and joint-product

leases on the basis of net investment in each of these three categories of leases. Then the exploration outlays assigned to joint product leaseholds were divided between oil and gas using a modified Btu method. The number of Btu's contained in crude oil produced from the joint-product leases in the test year was multiplied by 4 as an "economic factor" reflecting the then-prevailing higher market value of oil than of gas. Thus, the following fraction of joint-lease exploration costs was assigned to gas:

$$\frac{\text{Btu's of gas produced}}{(4 \times \text{Btu's of oil produced}) + (\text{Btu's of gas produced})}$$

The Commission stated that "we are of the opinion that the proper economic factor to be applied to the straight Btu content of oil to allocate Phillips' test year exploration costs is 4, so that the cost relationship of finding one Mcf of gas to one barrel of oil will be about 1 to 24."

Estimation of Alaskan Natural Gas Ceiling Price

Keeping in mind the long span of time which has lapsed since the Phillips precedent for separating oil from gas costs, we have, nevertheless, calculated several hypothetical ceiling prices for Alaska natural gas. These were calculated under the assumption that the F.P.C. would set an area ceiling price for the State of Alaska as a whole, with no differentiation within the State. It was also assumed that the Commission would follow a method roughly analogous to the present method used in setting the nationwide rate (that is, the method used in Opinion No. 770-A) with the following modifications:

- Data pertaining to drilling cost, drilling footage and reserve additions would be drawn from Alaska's experience only. Successful drilling cost and footage would include both oil and gas wells.
- Lead times between capital outlays and start-up of production could be considerably greater than those used in calculating the Lower-48 ceiling, and
- Unit costs would be divided between oil and gas on a Btu basis, or a value-modified Btu basis.

Working entirely from published data (the same sources used by the F.P.C. in setting the nationwide ceiling price), we calculated wellhead ceiling prices which ranged from under 20¢/Mcf to about 45¢/Mcf. The higher end of this range was calculated assuming a straight Btu division of oil and gas, which is the most favorable calculation from the gas producer's standpoint. No allowance was made in these calculations for any special capital outlay for waterflood or other enhanced oil recovery operation necessitated by the removal of the natural gas drive mechanism in the reservoir.

F.P.C. Jurisdiction Over Alaska Royalty Gas

The basic presumption of government regulation of an exhaustible resource is that economic rents should be captured by the private consumers of the resource rather than by the private firms or individuals who own and produce the resource. This presumption reflects the present distribution of political power and influence between the two groups, the consumers and the producers. The purpose of setting a ceiling price based upon cost calculations is to carry out this allocation of rents.

The State of Alaska, as a public rather than a private producer and owner of resources, may not be subject to the same political arrangement which underlies cost of service regulation. That is, in addition to the legal argument that a State is not a "person" within the meaning of the Natural Gas Act, there is also an economic and philosophical argument that a State is vested with quite different and much broader social responsibilities than is a private firm. For this reason, the State may be entitled to capture a greater share of the resource rents than has been awarded by the political process to private resource producers. The contracts for the sale of Alaska royalty gas, as they are currently formulated, establish price by reference to a ceiling price established for private producers. Such pricing by reference appears to abdicate the position that the State, even if subject to regulation, should not be subject to cost-based regulation. It would

16.29

also appear to place the State in the position of accepting a regulated ceiling price established for private producers even if the State is not found subject to regulation.

As the representative of a diverse social group, the State may not wish to bind itself to prices received by private producers, because these prices may be determined without reference to the public nature of the State of Alaska.

VINTAGING

16.30

As presently written, the contracts for the sale of Alaskan royalty gas do not mention the possibility that several ceiling prices might simultaneously apply to gas from the Prudhoe Bay area. Such a circumstance could arise from whatever "vintaging" policy is chosen by the F.P.C. to apply to Alaska gas, and could have a significant impact on the value of Alaskan gas.

"Vintaging" refers to the establishment of a date--such as the date of discovery of the reservoir or date of commencement of the well--which separates the produced gas into two (or more) categories for pricing purposes. For example, the current national rate for interstate natural gas is $1.42 (plus 1¢ per quarter) for gas produced from wells commenced on or after January 1, 1975. Gas from wells commenced between January 1, 1973 and December 31, 1974 qualifies for a price of $.93 (plus 1¢ per annum). In this example, the date of well commencement ("spud date") is the vintaging criterion.

At the present time, Alaska is in a unique position. No existing vintaging basis clearly applies to Alaskan gas. Thus, Alaska is limited in its ability to address future vintaging treatment of royalty gas through the terms of the sales contracts. Alaska can, however, strengthen its future position by clearly understanding the implications of vintaging and being prepared to act through regulatory intervention or otherwise at a future date. This chapter attempts to clarify the vintaging issues pertinent to royalty gas contracts.

Vintaging Under the Uniform National Rate

For Alaskan royalty gas to qualify for the highest national rate, under present vintaging methods, the gas must be produced from wells spudded in after January 1, 1975.

The "spud-in" date is the moment of drilling the first foot of a well regardless of the date of completion or recompletion. Well completion refers to the installation of permanent equipment for the production of oil or gas. The date of completion of an oil well or gas well is the date on which the installation of permanent equipment has been completed for the production of oil or gas as reported to the appropriate regulatory agency.

Depending upon the gas field or reservoir drilling development pattern, spud-in date may or may not be a vintaging basis favorable to Alaska. If most gas is produced from wells spudded-in after January 1, 1975, then Alaska may qualify for the highest available national rate for most of its gas if the national rate applies to Alaska. If the royalty share comes from wells spudded-in at a considerably earlier date than the January 1, 1975 cut off, then Alaska clearly is in a less favorable position vis-a-vis the national rate. At the present time, wells spudded-in on or after January 1, 1973 and before January 1, 1975 receive separate national rate treatment from the F.P.C. while gas from wells commenced prior to January 1. 1973 receive rate treatment under F.P.C. Opinion No. 749 which has established a price of 29.5¢/Mcf nationally for "old" gas. Clearly, the maximization of Alaskan royalty gas revenues will depend on the type of vintaging mechanism allowed under regulation.

Other Vintaging Methodologies

In the evolution of gas pricing regulations, the Federal Power Commission has used various methods for determining the vintage of gas. Other regulatory vintaging methodologies have used contract date, type of gas, date of dedication to interstate commerce, and reservoir discovery date. Table III-5 details the vintaging mechanisms in national and area rate regulation as well as in two proposed 1975-76 deregulation bills.

TABLE III-5

SUMMARY OF NATURAL GAS VINTAGING APPROACHES RELATED TO INTERSTATE PRICE REGULATION

VINTAGING APPROACH	ALLOWED HIGHEST APPLICABLE RATE FOR: Type of Gas: Associated or Oil Well Gas	Type of Gas: Non-Associated or Gas Well Gas	Qualifying Date for "New" Gas Vintage: Spud-In Date	Recompletion Date	Date of Initial Interstate Dedication	Date of Contract	Date of Reservoir Discovery	RATE ESCALATION
1. National Rate								
a. Opinion 770-A (November 1976)	yes	yes	yes	no	no	no	no	yes
b. Opinion 770 (June 1976)	yes	yes	yes	yes	yes	no	no*	yes
c. Opinion 699-H (December 1974)	yes	yes	yes	yes	yes	no	no*	yes
2. Area Rate								
Permian Basin Opinion 468 (August 1965)	no	yes	no	no	no	yes	no	no
3. 1975-1976 Proposed Deregulation								
HR 10480 Krueger-Broyhill Bill (October 31, 1975)	yes**	yes**	yes	no	yes	no	no	As Per Contrac
S-3422 Pearson-Hollings Bill (May 12, 1976)	yes	yes	yes	yes	yes	no	yes	yes

*Date of discovery of a new gas reservoir on acreage previously dedicated to the interstate market was a vintaging criterion.

**If producer is not affiliated with a pipeline.

16, 32

AGO 800662

Jensen Associates, Inc.

Contract date and type of gas were used together in the first area rate vintaging methodology (Opinion No. 468 issued August 5, 1965). In this case, an established date (January 1, 1961) was the dividing date between old and new gas with new gas being that which was sold through a contract dated after the January 1, 1961 date. However, this system also vintaged gas on the basis of whether it was gas well gas or oil well gas. All casinghead gas (or oil well gas) was categorized as old gas; only post-January 1, 1961 gas well gas received new gas treatment. Similar vintaging methodologies were used in other area rates established by the F.P.C. with some variations as to the applicable contract vintaging date. The pricing implications for Alaskan royalty gas if vintaging occurs on a basis comparable to area rate regulation are considered elsewhere in this chapter. Alaska should understand, however, that by stating a contractual willingness to accept an area rate with its inferred vintaging mechanism, it may face future rate rulings that are either unanticipated or clearly less favorable than more recent pricing regulations.

Vintaging on the basis of first sales into interstate commerce (under contracts executed after a specified date) has also been used by the F.P.C. in the first uniform national rate (June 1974). This methodology has been superceded by well commencement date vintaging. Date of first sales into interstate commerce appears to be an attractive vintaging basis. It has a clear disadvantage, however, if the market value of gas is expected to rise over the term of the contract by committing all the gas to a price set when market value was lower.

Conclusions

1. No single vintaging method yet applies to Alaskan royalty gas and Federal Power Commission actions on this are uncertain.

2. Revenues to Alaska for royalty gas sold interstate are highly dependent upon the vintaging method selected.

3. No single vintaging system is clearly superior to all others, although in general, the more gas that falls into the "new gas" category or vintage, the greater are Alaska's opportunities to maximize royalty revenues.

Vintaging Under Proposed Gas Legislation

Numerous proposals to deregulate or reregulate natural gas pricing were introduced into the 1975-76 Congressional Session, and already in the current Congress eleven bills as of this writing have been proposed. Passage of a particular bill at this time is unclear. However, based on 1975-1976 bills, vintaging is likely to remain an issue in current proposed legislation of great economic significance to Alaska.

The importance of future deregulation or reregulation to Alaska's royalty gas contracts is the possibility that there may be multiple vintages applicable to the Prudhoe Bay gas. That is, depending upon the vintage method, there may be a deregulated and a regulated price in effect at the time of first deliveries.

SEVERANCE TAXES ON ROYALTY GAS

It is possible that $50 - $150 million[1/] in revenue might be lost to Alaska from an interpretation of price in Section 6.2, 6.3, and 6.4. While the Alaskan severance tax legislation currently does not apply to state-owned royalty interests, the price clause should not preclude by omission the collection of a severance tax or revenue in lieu of severance taxes on Alaskan royalty gas in addition to the base price. Under F.P.C. regulation, the price paid to a producer by a pipeline for the working interest share will be adjusted upwards from the ceiling rate to cover severance tax. This payment for severance tax is in turn fully recovered by the pipeline. If a severance tax on the Alaskan royalty interest is not charged in addition to the highest allowable area, national or ceiling rate under some interpretations of the gas contract pricing clauses, the price for royalty interest gas will be less than the price paid by pipelines for the working interest portion. In the condition that Alaska is not subject to F.P.C. jurisdiction, the royalty gas will be sold at the highest price paid by a purchaser which appears to be wording that would cover severance taxes paid by the working interest holder. Given the amount of money involved, we suggest legal review on the point of collecting severance taxes. The possibility for a low price differential on Alaskan royalty gas may be eliminated in one of two ways:

(1) legislative action to include the royalty interests taken in kind with that production which is subject to a severance tax, or

(2) a change in the contract which sets the price of Alaskan royalty gas at the highest allowable price plus an adjustment in lieu of a severance tax.

1/ For sale of 2.6 tcf at $0.50 to $1.50 per million Btu assuming one million Btu per Mcf and a 4% severance tax.

IV. USE OF GAS WITHIN ALASKA

16.36

The State of Alaska is permitted to reduce the volumes of gas sold under the contracts. Any reduction may be made on twenty-four months' notice, or up to specified limits on twelve months' notice, provided the gas is to be used for "domestic or industrial" purposes in Alaska.

As presently written, the contracts do not specify whether the withdrawn gas must be for current or anticipated domestic or industrial needs. It is possible that Alaska might predict or foresee a need for natural gas within the State which extends beyond the term of the contract, or an increasing demand for intrastate gas which will eventually exceed the total volume of royalty gas during the term of the contract. We see no contract impediment to a time exchange of royalty gas which might be worked out with the owners of the working interests.

For example, the province of Alberta follows a rule of protecting provincial requirements for a forecast 30-year period before permitting additional interprovincial sales. A similar rule could be applied by Alaska.

As shown in Table IV-1, natural gas consumption in Alaska during 1975 was 66.8 billion cubic feet, none of which came from the North Slope. If the total contracted amount of royalty gas (2.6 trillion cubic feet) were produced uniformly over a 20-year period, the annual volume of royalty gas would be 130 billion cubic feet. Thus, if all additions to intrastate natural gas consumption had to be drawn from the royalty gas in the contracts, then Alaskan gas consumption would have to triple over present levels before all the royalty gas would be withdrawn from the contracts.

Gas utility sales in Alaska grew at an average rate of 12.7% per annum from 1965 to 1975 and at a rate of 12.1% from 1974 to 1975. Total consumption of gas in Alaska rose from

TABLE IV-1

NATURAL GAS CONSUMPTION IN ALASKA

1975

User	Sales by Gas Utilities Bcf 1/	Total Consumption Bcf
Residential	5.6	10.4
Commercial	6.4	8.5
Industrial	-	22.4
Electric Utilities	12.8	19.6
Other	5.9	5.9
Total	30.7	66.8

1/ Bcf = Billions of cubic feet

Sources: U.S. Bureau of Mines, Mineral Industry Surveys; American Gas Association, Gas Facts 1975

42.0 Bcf in 1971 to 66.8 Bcf in 1975 or at an annual rate of 11.6%, as shown in Table IV-2. Growth of the natural gas industry has been from a fairly small base figure, so that a projection of recent rapid growth rates may be unrealistic, at least in areas already well served by gas. However, even if it is assumed that growth continues at the somewhat reduced rate of 6% per annum, Alaska's internal gas consumption would triple in about 18 years. If the slightly faster rate of growth of 10% occurs, consumption will triple in about 11 years. In either case, internal consumption would outstrip the annual volume of royalty gas before the end of the term of the 20-year contract. Moreover, the level of intrastate demand achieved by the end of the contract term could not be sustained by royalty gas from Prudhoe Bay beyond the productive life of that area. However, areas closer to Alaskan gas markets such as the lower Cook inlet may be the source of future growth in natural gas supply.

AMMONIA PRODUCTION

As a part of our economic analysis of the contracts for the sale of royalty gas, we have considered the possibility that Alaska might prefer to export manufactured products which use gas as a feedstock rather than exporting the natural gas itself. The principle argument would be that the value added (wages, salaries, profit) would thereby be retained for the Alaskan economy.

We considered, in particular, industries which are heavily dependent upon natural gas, such as ammonia manufacture. We determined that, if all of the Alaskan royalty gas were devoted to ammonia production, Alaska would then produce about 30% of the present U.S. level of ammonia output. Ammonia production in the U.S., although it is one of the most intensive industrial uses of natural gas, nevertheless consumes only a small fraction (a little over two percent) of total

TABLE IV-2

GROWTH OF NATURAL GAS CONSUMPTION

ALASKA 1971-1975

Use	1971 Bcf 1/	1975 Bcf	Average Annual Rate of Growth
Residential	6.9	10.4	10.3%
Commercial	7.5	8.5	3.1
Industrial	10.6	22.4	18.7
Electric Generation	10.3	19.6	16.1
Other	6.7	5.9	-3.2
Total	42.0	66.8	11.6%

1/ Bcf = Billions of cubic feet

Source: U.S. Bureau of Mines, Mineral Industry Surveys

U.S. natural gas production. The U.S. ammonia market simply could not absorb such a large increment in supply.

Moreover, planned additions to ammonia capacity in the lower 48 states are already quite large, amounting to 3.2 million metric tons per year, or a 22% increase over present capacity. As shown in Table IV-3, principal U.S. markets for ammonia fertilizers are in the Midwest, an area more accessible to ammonia plants in Texas, Louisiana or Alberta than to ammonia plants in Alaska. European markets for nitrogen fertilizer probably could be served more economically from the Persian/Arabian Gulf, and thus may not be a prospective long-run market for ammonia from Alaska.

TABLE IV-3

UNITED STATES NITROGEN FERTILIZER CONSUMPTION

BY GEOGRAPHIC AREA

1974

(In 10^6 Pounds)

	Quantity	Percent of Total
West Coast [1/]	1,301	7.8
Upper Midwest	10,096	60.8
Lower Midwest	3,111	18.8
Atlantic Seaboard	2,084	12.6
Total United States	16,592	100.0

1/ Includes Washington, Oregon, and California

Source: U.S. Department of Agriculture

V. CONCERNS ABOUT CONTRACT AMBIGUITIES

This chapter comments on several specific details in the royalty gas contracts which appear to need clarification. Each point below is keyed to the section of the contract pertinent to the issue. We have suggested possible remedial actions in each case.

1. ARTICLE III (QUANTITY); SECTION 3.7(a):

This section refers to the terms under which the buyer may purchase additional quantities of surplus Alaskan royalty gas in the event that Alaska has previously implemented its option to remove contract gas for intrastate use. Section 3.7(a) continues to be applicable for a period of five years after expiration of the term of the contracts.

The governing price of surplus royalty gas offered to buyer after expiration of the contract and in the event of no other interstate bona fide purchasers is unclear. This section states only that,

> "In the event there are no other interstate bona fide purchasers, the price shall be the price then being paid by Buyer for gas purchased under this Agreement." (Underscoring inserted.)

Contract clarification of the applicable price is needed in the event deliveries have already been completed under the contract and no outside interstate purchasers exist.

2. ARTICLE VI (PRICE); SECTIONS 6.3 - 6.5:

Section 6.4 (deregulation after commencement of first gas deliveries) clearly provides for a price redetermination to occur as outlined in Section 6.5. Section 6.3, however, which provides for an initial price in the event of non-regulation existing at the time of first deliveries does not contain a price redetermination clause. Since Section 6.5 makes specific reference only to Section 6.4, it is unclear that price redetermination will also

occur in the event Section 6.3 is operative. Insertion of a clause in the contracts indicating that a price redetermination will occur in the event Section 6.3 applies is suggested.

3. ARTICLE VI (PRICE):

This Article of the contracts does not address a pricing situation in which the initial gas sales are not subject to F.P.C. regulation but, later in the contract term, become jurisdictional. Such a scenario could occur as a result of (1) judicial appeal of an initial F.P.C. ruling; (2) deregulation of gas prices conducted on a temporary or experimental basis, such as was proposed by President Carter during the election campaign; or (3) Federal action overriding the F.P.C. (e.g., creation of a general price and wage control policy).

TABLE 1

F.P.C. NATIONAL RATE RULINGS

F.P.C. Opinion No.: 699

Date Issued: June 21, 1974

Definitions of "new" gas:

(1) Sales of natural gas in interstate commerce made from wells commenced on or after January 1, 1973.

(2) Sales of natural gas in interstate commerce made pursuant to contracts executed on or after January 1, 1973 for

(a) gas not previously sold in interstate commerce (except under specified F.P.C. certificates); or

(b) where the sales were formerly made pursuant to permanent certificates of unlimited duration under contracts which expired by their own terms on or after January 1, 1973.

Applicable Rate: 42¢/Mcf with 1¢/annual escalation beginning January 1, 1974

F.P.C. Opinion No.: 699-H

Date Issued: December 4, 1974

Definitions of "new" gas:

(1) Sales of natural gas in interstate commerce from a well or wells commenced on or after January 1, 1973.

(2) Sales made pursuant to contracts for the sale of natural gas in interstate commerce

(a) for gas not previously sold in interstate commerce prior to January 1, 1973 (except under specified F.P.C. certificates); or

TABLE 1 (continued)

F.P.C. NATIONAL RATE RULINGS

(b) where such sales are initiated on or after January 1, 1973 provided the sale has not been certificated under the F.P.C.'s optional procedure.

(3) Sales made pursuant to contracts executed prior to or subsequent to the expiration of the term of the prior contract where the sales were formerly made pursuant to permanent certificates of unlimited duration under such prior contracts which expired of their own terms on or after January 1, 1973, or pursuant to contracts executed on or after January 1, 1973, where the prior contract expired by its own terms prior to January 1, 1973.

(4) Gas produced from newly discovered reservoirs located upon acreage previously dedicated to interstate commerce under a contract dated prior to January 1, 1973, shall have the rate determined by the date of reservoir discovery in lieu of the contract date.

Applicable Rate: 50¢/Mcf and 1¢/annual escalation beginning January 1, 1975

F.P.C. Opinion No.: 749

Date Issued: December 31, 1975

Definitions of "old" gas: Sales of natural gas in interstate commerce for resale from a well or wells commenced prior to January 1, 1973.

Applicable Rate: 23.5¢/Mcf prior to July 1, 1976; 29.5¢/Mcf on and after July 1, 1976. (This rate does not supercede existing higher area rates nor other specified F.P.C. established rates.)

TABLE 1 (continued)

F.P.C. NATIONAL RATE RULINGS

F.P.C. Opinion No.:	770
Date Issued:	July 27, 1976
Definitions of "new" gas:	(1) Sales of natural gas in interstate commerce for resale from a well or wells commenced on or after January 1, 1975. (2) The sale is made pursuant to a contract for the sale of natural gas in interstate commerce for gas not previously sold in interstate commerce prior to January 1, 1975 (except under specified F.P.C. certificates), where the sale is initiated on or after January 1, 1975, provided that no certificate for the subject sale has been issued under the optional procedure.
Applicable Rate:	$1.42/Mcf and 1¢/Mcf per quarter commencing October 1, 1976
Definitions of 1973-1974 gas:	(1) Sales of natural gas in interstate commerce for resale made from a well or wells commenced on or after January 1, 1973 and on or before January 1, 1975. (2) The sale is made pursuant to a contract for the sale of natural gas in interstate commerce for gas not previously sold in interstate commerce on or after January 1, 1973 (except under specified F.P.C. certificates), where the sale is initiated before January 1, 1975.
Applicable Rate:	$1.01/Mcf

TABLE 1 (continued)

F.P.C. NATIONAL RATE RULINGS

F.P.C. Opinion No.:	770-A
Date Issued:	November 5, 1976
Definitions of "new" gas:	Sales of natural gas in interstate commerce for resale from a well commenced on or after January 1, 1975.
Applicable Rate:	$1.42/Mcf and 1¢/Mcf per quarter escalation beginning October 1, 1976.
Definitions of 1973-1974 gas:	Sales of natural gas in interstate commerce for resale made from a well commenced on or after January 1, 1973 and prior to January 1, 1975.
Applicable Rate:	93¢/Mcf and 1¢/Mcf annual escalation beginning January 1, 1977

(NOTE: IN BOTH OF THE ABOVE DEFINITIONS, WELL DATE IS DEFINED AS COMMENCEMENT OR SPUD-IN DATE REGARDLESS OF DATE OF COMPLETION OR RECOMPLETION.)

Exhibit 17

UNITED STATES OF AMERICA
FEDERAL POWER COMMISSION

El Paso Alaska Company, et al) Docket No. CP75-96, et al

REPORT TO THE COMMISSION

TO THE COMMISSION:

This is the second report to the Commission on the status of this proceeding. The schedule represented by the Commission to the Congress (attached to the first report dated January 21, 1976) called for the hearings to close by the end of May with an Initial Decision to be issued by September 1, 1976. While there has been some erosion of the schedule in recent weeks to the extent that it now appears that the hearings will continue through late June, it is not anticipated that this will cause the Initial Decision date to be extended. 1/ At this time, the applicants' cases in chief are completed; the key North Slope producers have submitted evidence both on Alaska exploration programs and reserve questions, and on corporate policy and regulatory matters; the answering cases of intervenors to applicants' presentations (except on environmental issues) have been heard; and examination of witnesses supporting the final environmental impact statement of the Department of the Interior is almost completed and that of the Environmental Task Force of the Federal Power Commission will commence next week. Except for the Department of State, which is now in the process of answering interrogatories prepared by the parties, all interested sister agencies and departments have appeared and presented witnesses on issues within their purview. It is anticipated that each interested agency having or intending to have a policy position will have stated it on the record before it closes.

1/ The slippage in the schedule has been caused principally by two factors: first, the inability of the Commission's Environmental Task Force to adhere to dates set for the submission of its evidence; secondly, the principal applicants have continued to modify and refine their applications necessitating the submission of additional evidence, e.g. Gas Arctic's switch to the McKenzie Delta route.

AGO 800678

It is agreed by all active parties that specific placement of financing can only occur after the choice as to the successful applicant has been made. Nor can financing occur, as discussed at length in the prior report to the Commission and more fully below, without definitive sales agreements being in place so that the prospective equity holders (gas purchasers) can arrange financing on the basis of the reserves committed to them. Since the prior report in January, it has become evident both that (1) these contracts will not be entered into before the close of the hearing and (2) a condition subsequent in the certificate requiring that contractual commitments be filed after certification of a route is acceptable to all parties including the Commission's staff. It is expected that the additional time required to review these contracts, the financing plans, and other post-certificate requirements will occur contemperaneously and will be completed within a limited time. Expeditious Commission approval of sales contracts, particularly if most of the terms are spelled out in the transportation certificate, notwithstanding the fact that the contracts are not yet filed, and of the financial arrangements would be expected, and the evidence shows that actual construction of a transportation system would not be delayed if subsequent Commission review were completed by the summer of 1977.

Turning to the substantive issues, there are two principal areas of concern which continue to require attention. These arise, as previously stated, primarily because of the difficulty in arranging financing when the pipeline equity holders are unknown and even if known, would not be able to guarantee either repayment of debt or project completion. As already stated, financing of either transportation system is contingent, in the first instance, upon producer sales contracts being in place so that prospective equity holders can seek firm commitments from the financial community. The key producers' witnesses on questions of corporate policy have unanimously declined thus far,

17.2

however, to give categorical present assurances with respect either to the time frame for execution of sales contracts or for deliveries of gas volumes. While their general attitude as to ultimate sales of their gas reserves is positive, their guarded position at this time is a reflection of their expressed concern respecting certain unsettled aspects of regulatory activities both on the part of the Commission and the Congress (Volumes 122 - 127). Specifically, they individually voiced their dislike of certain recent Commission regulations, some now under review, rejecting certain advance payment agreements and requiring possible application to Alaska natural gas of (1) minimum delivery obligations in producer certificates, (2) abandonment applications stemming from operations arising solely under field unitization agreements, and (3) disclosure by the Commission to their competitors of what they consider proprietory information. Further, they expressed distress that the Commission has not yet embarked upon a proceeding to establish a price for the gas and feared that an early sales contract would lock them into an adverse "cut-off" date either under possible vintage-pricing by the Commission or the possibility of a deregulation statute being enacted by Congress. From a technical point of view, they are apprehensive about selling gas prior to the approval of the unitization and production agreement which is unlikely to be effective prior to the end of 1976. 1/

None of the above-described concerns is based upon a legal inability to enter into sales contracts; they reflect basic policy considerations. Nor can most of the impediments suggested by the producer witnesses for justifying their reluctance to enter into sales contracts upon issuance of a conditional transportation certificate be resolved solely within the four corners of the present proceeding. Only Congress, for example, if it should choose to deregulate natural gas, is empowered to determine in the first instance whether and how it might apply to existing North Slope gas sales contracts. The conditions which are being

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1/ Those producers' witnesses asked essentially supported the concept of the nationwide new gas rate applying to Alaska.

M.3

explored at this time, however, are designed to ensure that the producers enter into such contracts close upon the issuance of the transportation certificate by the Commission. The public interest clearly requires such agreements and it is fully anticipated that the climate will exist, based in part upon review of the producers' positions now displayed on the record, where the producers will be induced to enter voluntarily into timely definitive sales agreements.

The second area of concern is that the financing also cannot occur even if the equity owners are known absent both guarantees of project completion and repayment of the debt. The prospective pipeline equity owners for various reasons would not give these guarantees. Several suggestions requiring Commission approval of cost-of-service tariffs with "all events" provisos, which would have the effect of consumer guarantees to bond holders, have been advanced. Other suggestions have been made that additional credit worthy parties, such as the producers, could be induced to participate as either equity or debt holders. The producers have not as yet warmed up to this suggestion. Various forms of public participation have been suggested, but these are not held out as likely. In fact, the witnesses for the Department of the Treasury indicated that if the private sector was leery of what appeared to Treasury to be a reasonable and attractive certificate, Treasury would be unlikely to recommend committing public money to a venture rejected for business reasons by the private sector. One proposal which is now being briefed by the parties was advanced by El Paso and would permit interstate pipeline purchasers to modify their individual tariffs so as to provide, in effect, for direct consumer guarantee of debt financing. The various state public utilities commissions previously were invited to give their views as to certain tariff questions and the parties have been requested to serve upon them all trial briefs on tariff matters. 1/

1/ Numbers of reponses were received and were copied into the record (Vol. 120, Tr. 19,184 et seq.; Vol. 125, Tr. 19,753).

17.4

A tentative briefing schedule has been adopted although no specific dates have yet been set. Trial briefs on tariff matters by some of the parties are expected this week. Briefs by applicants setting forth the full applications with suggested certificate conditions for implementation will be due about mid-May. Briefs by all parties on the environmental aspects will be due soon after the completion of that aspect of the case. Briefs on all remaining issues will not be due until after the close of the hearing.

As before, the discussion of these procedural and substantive issues is not intended to reflect the complete posture of the record or proceeding, but should serve to highlight the present problems and how they are developing on the record.

Respectfully submitted this 27th day of April 1976.

Nahum Litt

Nahum Litt
Presiding Administrative Law Judge

Copy to all Parties
Copies to all State Utilities Commissions

12:30 - 1775 K St. - 3rd Fl
Rm 310

TO: Senator Radar DATE: February 4, 1977

FROM: Jerry McCutcheon

Exhibit 18

I would like to add to my remarks of yesterday. When we discussed gas prices, I failed to mention the Donovan Shales, that underlie the Appalachian mountains. These shales and other type formations contain 2 quadrillion cubic feet, of which 500 trillion is expected to be recoverable. This is more than twice the proven reserves of the United States. It is expected that the gas can be produced for $3.50 per MCF, which is substantially less than for what Alaska's gas can be delivered.

The El Paso system: During these hearings the El Paso system has been alleged to be able to operate on a volume as low as 2 BCFD. I believe the minimum filing for El Paso is 2.4 BCFD. However, the BLM study calls for 2.5 BCFD rising to 3.5 BCFD which is with a $7 or $8 billion line, which BLM admits is not possible. The gas system will cost $14 to $16 billion and this is admitted by the State Administration. The requirements for the El Paso system far exceed the ability of the Prudhoe Bay reservoir and can only be met at a totally unneccessary sacrifice of oil.

OMAR and the Chamber of Commerce brought to Alaska a Washington gas expert, Mr. John Camp. He is with a lobbying firm which represents the state of Louisiana in Washington for the purpose of trying to keep some gas in Louisiana. Mr. Camp sharply disagreed with OMAR stating that the State of Alaska should keep its gas in the ground and not become involved with an interstate pipeline.

18.1

Mr. Camp added that there is no way, regardless of how much money you spend for studies, that one can project the future growth and demand for in-state gas use. No matter what you project it is always severely underestimated, just as it was done in Louisiana and other states.

I do not believe there will be any further consideration of any gas line system if the State of Alaska will just tell the truth with respect to the reservoir producibility, cost of the gas system, the cost of the delivered gas, decreased demand caused by the higher prices, and the availability of cheaper alternatives.

It is only through practiced dishonesty by the State of Alaska and its representatives that the consideration of the gas line systems is being kept alive.

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Exhibit 19

January 28, 1977

House Special Committee and
Senate Special Committee to
Consider the Sale of Royalty Gas
The Legislature of the State of Alaska
State Capitol
Juneau, Alaska 99811

Gentlemen:

You have requested my review and analysis of the contracts by and between the Commissioner of Natural Resources of the State of Alaska acting pursuant to AS 38.05-.183(d), seller, and Tenneco Alaskan, Inc., El Paso Natural Gas Company and Southern Natural Gas Company, buyers. The contracts in question are each in two parts, one part denominated "General Terms and Conditions," and the other denominated "Royalty Gas Sales Agreement."

I express no opinion on matters relating to title, taxes, or compliance with State contracting requirements. My opinions here offered are limited, as requested, to a legal analysis of the contracts, and an assessment of the merits, and demerits, of the various provisions thereof.

To submit my opinions in these areas, I have reviewed the contracts in question, and a summary of Commissioner Martin's negotiations as furnished to me by the Office of the Attorney General of the State of Alaska. I believe these materials to be sufficient to render the requested analysis, but my comments are necessarily limited to the materials which were available to me for review.

I wish to make clear also that I do not arrogate to myself the formulation or expression of an opinion as to whether the contracts in question should, or should not, be approved by the Legislature. The vote of each member must necessarily be cast in terms of his own appraisal of the contracts, giving due and

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appropriate regard to the constituency which he represents, their wishes and best interests, and his perception of where the interests of the State lie. It would be most presumptuous for me to offer an opinion on a matter so peculiarly within the responsibility of elected representatives, particularly when my exposure to the people, the economy and the planning of the State of Alaska is as limited as it is.

Finally, it must be clearly recognized that an analysis of contracts already negotiated, and an appraisal of whether those contracts are, on balance, "good" or "bad," if undertaken as an abstract proposition, can be most misleading and unfair to the negotiators. A contract takes shape through a process of bargaining, and many provisions may not be precisely as one of the contracting parties would wish. The provisions are forged through negotiation and compromise, and if one gauges the contract only by reading the final contract after the negotiation process has run its course, it might appear that certain agreements have been embodied in the contract which are less than desirable and which should be modified or eliminated. Were one familiar with the negotiation process, however, he might realize that the apparently undesirable provisions were in fact necessary if an agreement was to be reached. I would caution, therefore, against an interpretation of my comments and opinions as critical of the officials who negotiated on behalf of the State.

Having offered these preliminary explanatory comments, let me turn to the contracts themselves.

I append, as Attachment A, a detailed summary of the contracts, section by section. Rather than reiterate this summary, I would prefer to offer my generalized perception of the relative merits and demerits of the contracts in terms of probable benefits and areas of concern. The Committee may wish to explore the concerns which I set forth with the Commissioner of the Department of Natural Resources, for indeed his experience in the negotiation process may well substantiate the view that the contracts as presented to the Legislature, even though containing certain problem areas, do in fact represent the best bargain that could have been struck under all of the attendant circumstances.

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* * * * * * * * *

I would speak first on a positive note, addressing the obvious benefits which accrue to the State under the contracts as submitted to the Legislature for approval. I suggest that the benefits are material and substantial and, specifically, there are the following factors to be considered:

1.

The State has secured an agreement for full reimbursement of all costs related to the State's taking of its gas in kind. (Article II, Sections 2.2 and 2.3.) I consider this to be a significant concession in behalf of the State. When the State takes its gas in kind, it is quite possible that the taking will occur at the point of production, so that all costs incurred downstream from that point, such as for transportation to a processing plant, processing, and redelivery to a pipeline transporter, must be borne by the State in ratio to its percentage of the production taken. I do not believe that anyone can guarantee that the State would not be exposed to claims for substantial costs resulting from the in-kind taking. The royalty sales agreement clearly insulates the State from cost exposure with respect to the initial arrangements necessary to an in-kind taking, whether or not the costs reimbursed to the State by the buyers of the royalty gas are collectable by the buyers in their jurisdictional resale rate structure.

2.

The State has sold only a portion of its Prudhoe Bay royalty gas, and has secured the contractual right to withdraw volumes sold under the contract for Alaska in-state needs. (Article III, Sections 3.1 through 3.6.) If an alternate market for the State's royalty gas develops between the present time and the time when the buyers under the contract are in a position to take delivery, the State may take and dispose of its royalty gas in any manner that it chooses, so long as such taking and/or disposition does not interfere with the State's ability to deliver to the buyers when they are in a position to take. (Section 3.8.) The State is not committed by contract to a warranted volume of gas to be sold and delivered under the contracts, and has no stated minimum delivery obligation. (Section 3.2.)

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I consider these provisions to be extremely favorable to the State. It is prudent to retain a portion of the State's royalty gas even when a decision has been made to sell part of that royalty gas, since holding a portion free of commitment permits negotiation at a later time when operating conditions have been established, and when circumstances may indicate that significantly different contractual arrangements are in order. Thus, sale of 2.6 Tcf under the contracts in question, rather than a sale of all of the State's Prudhoe Bay royalty gas is, in my judgment, proper.

It has, of course, been essential from the outset that the future needs of the State for natural gas for in-state uses must be in some manner accommodated throughout a royalty gas sales arrangement. It would obviously be unacceptable for the State to sell its royalty gas for transportation out of the State without some provision for meeting future natural gas needs within the State. The arrangement worked out in the contracts to accomplish this objective is favorable to the State. The State may withdraw, over time and upon suitable notice, up to 100 percent of the gas contracted for sale under the instant agreements; the rights of withdrawal must, of course, be exercised for the sole purpose of the State meeting the intrastate domestic and industrial needs of the State of Alaska, and the withdrawal is scaled from 25 percent through 100 percent over 20 years; nonetheless, the withdrawal provisions are more favorable than I would have anticipated and they represent a major element of strength in these contracts.

3.

The State has excepted and reserved from the sale, all liquids removed from the State's royalty gas prior to its delivery to the pipeline (Article IV, Section 4.4), and the State has retained processing rights for the recovery of liquefiable hydrocarbons other than methane, whether exercised before or after delivery to the buyer. (Article IX.) If the liquids are not removed from the gas stream so that the liquid content of the gas stream delivered for sale produces a higher than 1,000 Btu per cubic foot average, the State will be compensated for the greater heating content through adjustment of the sales price. (Article VI, Section 6.6.)

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These arrangements for the State to retain the benefits of the liquid content of the gas stream should prove beneficial to the State over the life of gas production from Prudhoe Bay. Liquids and liquid products can provide a significant source of additional revenue to the State if they are sold on the open market and, conversely, if there is need for liquid products in the State (such as a need for propane for its multiple uses, or a need for butane and natural gasoline as feedstocks for petrochemical or other operations), the State is free to direct the liquids and the liquid products to their highest and best use. The inclusion of these provisions in the contract is a distinct plus.

4.

The contract permits State withdrawal from the contract, without penalty, in the event of the occurrence of several different circumstances: If the State is prevented from taking its gas in kind by federal action, the sales agreements shall be void (Article II, Section 2.1); the contracts can be terminated if a decline in production results in nonprofitability to the State (Article VIII); the sales agreements may be terminated by the State if the State so elects following Federal Power Commission certification of an Alaskan gas transportation proposal, except that this right of termination would not exist if the Commission's grant of a certificate is to the El Paso project (Article XI, Section 11.5); and the State may terminate the royalty sales contracts if, by January 1, 1979, all regulatory approvals which the State deems necessary to enable the State to perform its obligations under or receive the benefits of the contract have not been received (Article XI, Section 11.2).

The cumulative effect of these termination options is sufficient, in my opinion, to safeguard the State against reasonably foreseeable adverse developments which might occur. Their inclusion in the contracts is of significant value to the State.

* * * * * * * * *

I must now turn to certain aspects of the contracts which are of concern to me. These relate to the pricing of the State's royalty gas when sold to the buyers under these contracts.

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1. Section 6.1 imposes an upper limit on the price which the state will receive for its royalty gas, and this limitation will be operative unless and until appropriate Federal legislation deregulating Alaska gas is passed. The Section 6.1 limitation, in full, is as follows:

> "In consideration thereof, the price which buyer shall pay seller for gas purchased hereunder shall be determined in accordance with Section 6.2 or Section 6.3 or Section 6.4 or Section 6.5 and shall be subject to the adjustment as provided in Section 6.6; however, the price paid seller for gas which buyer reflects in its rates to jurisdictional customers shall never be higher than the price buyer is permitted to retain in its jurisdictional resale rates so long as such rates are subject to regulation by the Federal Power Commis-mission (or any successor governmental authority having jurisdiction in the premises)."

The underscored proviso is thus given controlling affect, irrespective of the price indicated under Section 6.2 (price fixed at the highest price permitted by the Federal Power Commission to any working interest seller from the Exhibit A reservoirs); irrespective of the price indicated under Section 6.3 (in the event of deregulation at the time of first deliveries, the price is fixed at the level of the highest price being paid by any interstate gas purchaser for gas produced from the Exhibit A leases); irrespective of the price indicated under Section 6.4 (in the event of the cessation of federal regulation after such has once commenced, the price is to be fixed by redetermination and/or arbitration); and irrespective of the price which would result from redetermination in accordance with Section 6.5

The limitation holds as a ceiling on the State's sale price "so long as such rates (buyer's jurisdictional resale rates) are subject to regulation by the Federal Power Commission ...."

It is inescapable that the buyers under these contracts will become transporters of natural gas in interstate commerce, and that they are purchasing gas for resale in interstate commerce. The rates at which the buyers sell for resale will be within the jurisdiction of the Federal Power Commission under the Natural Gas Act, and I know of no foreseeable set of circumstances that would produce legislation, or a Commission decision, changing this result.

Section 6.1 may not be unduly burdensome if legislation is passed which denies the Federal Power Commission the power to refuse recovery of purchased gas costs in an interstate transporter's jurisdictional resale rates, for then it could be argued that the buyers under this contract must necessarily be "permitted to retain" in their jurisdictional resale rates the amounts paid to the State and, therefore, the ceiling limitation in the Section 6.1 proviso would not interfere with operation of the other pricing alternates in the contracts. Such legislative language was employed in the bill which passed the United States

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Senate in October 1975, S. 2310, and the same type of language now finds expression in the most recent deregulation legislation offered in the current Congress by Senators Pearson and Bentsen, S. 256.

I do not think the language of the contracts to be altogether clear, however, that Section 6.1 becomes inoperative in the event of Congressional deregulation. If it is the intent of the contracting parties that "flow through" language in a deregulation bill would effectively eliminate the Section 6.1 proviso, then I would suggest that an appropriate letter be obtained and made a part of the contracts before they become effective.

2. Even if Section 6.1 is clarified as suggested, you must understand that Section 6.1 will still subject the State's royalty sales to FPC rate regulation, and such will continue unless and until the Congress enacts appropriate deregulation legislation.

While the State has uniformly and steadfastly maintained that its sales of royalty gas are not subject to direct regulation by the Federal Power Commission because the State is not a person within the meaning of the Natural Gas Act (and I agree with this position), the State does by these contracts consent to indirect rate regulation by the Commission by conceding that the State's sale price is limited to that amount which the Commission will permit the buyers to retain in their jurisdictional rates.

3. At this time, the State cannot determine its sale price, or anticipated revenues at time of first delivery. Section 6.2 does not yield a present price, for there are no FPC-set rates for Alaska gas at this time. Neither Section 6.3 nor 6.4 yields a present price, for their conditions precedent (deregulation) have not occurred. I am at a loss, therefore, to advise the Committee on the sale price which will be applicable at the time of first delivery. If the status quo prevails through the time for first delivery, I assume -- although the contract is silent on the point -- that the buyers and the State would agree to an interim price which would be paid to the State, subject to refund.

4. You should note that the pricing mechanism agreed to in Article VI results, in every reasonably probable circumstance, in the State's sale price being determined by parties other than the State. If federal regulation continues, or if deregulation legislation is not appropriately drafted, the FPC sets the rate for the State. If deregulation occurs, before or after first delivery, the sales price negotiated by private firms making comparable sales will determine the State's sales price.

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5. I cannot guess what rate the FPC will set for private sales of natural gas from Prudhoe Bay, but the prospects for a relatively low rate -- because the gas is associated and many costs can be allocated to oil, and because the size of this discovery and these reserves may operate to distort initial well-head rates downward -- are not to be ignored. It will, in my judgment, be easier for the FPC to find reasons why a private seller's rate should be low than it would be for the Commission to deny to the State public funds for public needs. Thus, the contract tying arrangement to private firms' prices -- not yet negotiated -- may deprive the State of a strong argument for adequate prices: namely, that State revenues will be public monies devoted to public needs and public uses, and that, therefore, the State's sales rate should not be judged by traditional FPC concerns of windfall profits to private firms.

6. In Article VI, redetermination rights under Section 6.5 are not clearly granted if deregulation occurs prior to first deliveries. Such rights should exist to protect the State adequately over the twenty-year term of these agreements, and should be provided in Section 6.3, or through re-wording of Section 6.5. Incidentally, re-determination <u>downward</u> at the buyer's request, as permitted in Section 6.5, is not frequently seen. If Section 6.5 is modified, revision to eliminate the possibility of price reductions in the future should be explored.

7. Under the pricing scheme in the contracts, the probable mechanism for Federal Power Commission review of the State's royalty sales rate will be either (a) in the various pipeline rate cases where the cost of purchasing gas from the State is submitted to the Commission as a recoverable item by the pipeline in its resale rate structure; or (b) in a producer sales proceeding where one of the Prudhoe Bay working interest owners requests FPC sales authority; or (c) a rule-making procedure to determine as Alaska ceiling rate for producer sales. The State will be forced to seek intervention, and participate forcefully if allowed to intervene, in one or more of these proceedings in order to have an opportunity of making a direct presentation to the FPC on the appropriate rate level for sales by the State.

Are these problems sufficient to condemn the contracts as inprovident? To some -- those whose sole concern is specificity of price and certainty of revenue -- the answer will be "Yes". But that answer may apply too narrow a standard if -- as may well be true -- there are no reasonable pricing alternatives available to the State.

If all prospective pipeline buyers, present and future, would insist on a pricing structure similar to the one in these contracts, then the alternative to rejection of these contracts

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is the alternative of having no contract for the sale of the State's royalty gas. Viewed in this light, the pricing structure before you may be unpalatable, but it may be necessary. If you say "no" to this pricing structure, you may really be saying that the State should not contract at all; that the State should play a less affirmative role in the routing decision; and that the State can strike a better bargain for its gas after the Federal decisional process has run its course.

This choice is yours to make. It requires a broader understanding of the State's goals and needs than I possess, and accordingly, I would be foolish to attempt to recommend a course of action to you. The best I can do is make you aware of the problems, so that your decision will be an informed one.

I would add two footnotes. If these contracts are approved, appropriate deregulation legislation by the Congress becomes terribly important to you. If Alaska gas is deregulated, most of your pricing problems disappear. On the other hand, if deregulation does not occur, the FPC becomes terribly important to you. That agency's pricing regulations will directly impact on your revenues. In the absence of deregulation, the State will be required to become an active, and effective, advocate at the FPC.

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* * * * * * * * *

As a final area of general discussion, I would like to call the Committee's attention to several of the provisions in the contract which I think are significant. I do not classify these provisions as being either "good" or "bad" since, in most instances, one's perception of the provisions will depend upon considerations other than legal analysis.

In Article XI, Section 11.4, it is provided that the Governor of Alaska may give notice to the buyers of his decision to support a project other than the trans-Alaska pipeline, and if the Governor does so, with appropriate notice to the buyers, then the newly selected project will be considered the "pipeline" for the purposes of the contract. The buyers need not concur in this change in the State's official position, and if they do not agree, then they are given the right to terminate the contracts.

Second, the selection by the State of Tenneco and Southern as buyers of a portion of the State's royalty gas brings a promise of support by those two organizations of the trans-Alaska gas pipeline system. The involvement, and support, of these two concerns adds a new element to decisional process in Washington with respect to the selection of the routing of a North Slope gas transmission system.

Third, it should be noted that the contracts grant certain options on State royalty gas which are triggered if the State effects a withdrawal of all or any portion of the gas committed under these contracts in order to satisfy in-State needs. The options are not exercisable unless the gas covered thereby is surplus to the needs of the State, and unless the surplus gas is to be transported to market through the trans-Alaska pipeline system. I do not find the option provisions objectionable, but I felt that they were significant enough to require separate mention.

Finally, the contract does not speak to one element of revenue loss that the State will probably sustain by reason of an in-kind taking. The severance tax payable on the State's royalty gas if the State did not take in kind will probably be lost if the State does take in kind. No treatment of this problem appears in the contract.

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I will stand ready to respond to such questions as the Committee might have during its hearing on February 2, 1977, and if there are any matters contained in this letter or in its attachment which are not clear, I trust that I will have an opportunity to speak to any such problem at that time.

Respectfully submitted,

Rush Moody, Jr.

RM:bw
Attch.

ATTACHMENT "A"

SUMMARY OF MAJOR CONTRACTUAL PROVISIONS

A. "General Terms and Conditions"

Section 1 defines the terms essential to an understanding of the contract. The definitions are standard, and require no comment except to note the definition of the term "domestic and industrial needs of the State of Alaska" as set forth in Section 1.11. This term is defined to mean "those present and projected residential, commercial and industrial uses for gas within Alaska as determined by the Alaska Royalty Oil & Gas Development Advisory Board in accordance with AS 38.05-.183(d)."

This definition is critical to the structure of the royalty gas sale inasmuch as it forms the basis for the State's rights of withdrawal of royalty gas from the contract as set forth in Article III of the various royalty gas sales agreements.

Section 2 delineates the respective responsibilities of buyer and seller for damage or injury occurring in connection with the movement of royalty gas. The State is responsible prior to delivery to the buyers, and the buyers are responsible after receipt of the gas, except that while the gas is being processed by or on behalf of the State, the buyers are not responsible.

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The contract does not fix responsibility, as between buyer and seller, for the processing stage.

Section 3 governs metering of gas sold under the contract; the provisions which essentially require the buyers to install necessary meters to measure accurately the gas purchased under the agreement, but which permit the State to install check meters and otherwise periodically review the accuracy of the purchaser's metering activities, are standard and reasonable. In one respect these provisions are more favorable to the State than might be expected; the contract calls for correction of inaccuracies, when they occur, for a period extending back one-half of the time elapsed since the date of last calibration of the metering equipment. Frequently, gas sales contracts limit the period of time of recalculation, with it being fairly standard that such period is limited to a correction period of two weeks, or at most one month.

Section 4 contains standard provisions relating to the definition of the unit of volume sold.

Section 5 sets forth technical standards for gas measurement, and is standard in the industry.

Section 6, dealing with billing and payment, provides for the rendition of monthly statements, by the 15th day of each

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month, setting forth the amount of gas delivered by the State and purchased by the buyers during the preceding calendar month, and for payment to be made by the 25th day of the calendar month in which the run statement is rendered. These provisions are standard.

Section 7, entitled "Receipt of Available Gas," imposes upon the buyer the obligation to proceed diligently to seek such authorization as required to receive gas then available for delivery by the State. As will be discussed later, the intent of Section 7 with respect to Tenneco Alaskan, Inc. and Southern Natural Gas Company is not altogether clear since neither of these buyers appears to be so situated that an authorization "to receive gas" would be required. Neither of these two buyers is in the present posture of seeking certificates permitting the transportation of royalty gas, or permitting construction of facilities to transport gas in interstate commerce and, accordingly, Section 7 is probably inappropriate in their contracts.

Section 8 contains a standard warranty of title by the State.

Section 9, force majeure, permits either party to the contract to suspend its performance if reasons force majeure supervene. The force majeure provisions are standard, but it is

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interesting to note that, in a case such as this where the State is a contracting party, the State can effectively relieve itself of any obligations under the contract by the imposition of "future rules, regulations, orders, laws or proclamations." The State can thus create a force majeure situation through its own action, and if the effect of force majeure is to require suspension of the State's performance under the contract, the State incurs no liability by reason of nonperformance to the buyers. Conversely, if the State, by future rule, regulation, order, law or proclamation makes it impossible for the buyers to perform, the buyers have no liability for nonperformance to the State.

Section 10 makes the contract subject to all present and future valid laws and valid regulations of the United States, the State of Alaska or any duly constituted agency thereof. This is a standard provision.

Section 11 permits assignment of rights under the contract; it is expressly provided that either buyer or seller may assign its rights under the agreement to a security holder without such security holder incurring personal obligation under the contract, and without such security holder being required to qualify to do business in the State of Alaska.

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Section 12 is not a standard contractual provision normally encountered in gas contracts. Section 12 provides, in essence, that if a producer of gas, of which the State's in-kind royalty gas is a part, enters into a contract of sale which contains provisions more favorable to the seller than the terms and conditions set forth in Sections 3, 5 and 6 of the "General Terms and Conditions," then the State has the option to include such more favorable terms and conditions within this contract "within 90 days after approval by the Federal Power Commission of said working interest owner's contract for the sale of its gas." The limitation of the State's right to move to more favorable terms is, as noted, limited to changes in the sections of the State's contract dealing with metering, measurement, and billing, and since these provisions are fairly well standard, it is doubtful that Section 12 will be of consequence. It should also be noted that if deregulation of new gas occurs, and if Prudhoe Bay gas is included within the definition of new gas so that the producer sales of that gas never become subject to FPC review, then Section 12 becomes meaningless inasmuch as the State would never have a matured right to demand favorable changes in Sections 3, 5 and 6.

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Section 13 contains miscellaneous provisons to aid in the interpretation and application of the contract. The provisions of Section 13 are not remarkable.

B. "Royalty Gas Sales Agreement"

Three separate "Royalty Gas Sales Agreements" have been negotiated, but all are identical in terms, with the exception that Tenneco Alaskan, Inc. is the buyer of 50 percent of the State's royalty gas covered by the total sales transaction, Southern Natural Gas Company is the buyer of 25 percent, and El Paso Natural Gas Company is the buyer of 25 percent. Since all contracts are identical, the following summary of the provisions of the El Paso contract will apply to the others also.

Article I sets forth the mutual promises of buyer and seller each to support actively and seek before appropriate authorities the ultimate selection and implementation of a trans-Alaska gas pipeline system. For purposes of this article, "pipeline" means a large diameter gas pipeline commencing at Prudhoe Bay, crossing Alaska in approximately the same route as the present trans-Alaska pipeline system oil pipeline, and terminating in the Prince William Sound area.

Article II, denominated "seller's royalty gas," covers several matters: Section 2.1 sets forth the State's warranty of

its right to take royalty gas in kind, and its royalty share as being 12-1/2 percent. The leases identified in Exhibit A to the agreement set forth the specific acreage and royalty shares covered by the contract. If the State is prevented by federal action from taking its gas in kind, the gas sales agreement shall be void. [It should be here noted that Exhibit A was not furnished to me for review; I have assumed it to be no more than a listing and description of those State leases from which royalty gas will be sold under this contract.]

Section 2.2 provides that in addition to the sales price provided for elsewhere in the contract, the State will be reimbursed for the State's pro rata share of costs attributable to "the preparation and transportation of gas to be delivered hereunder." These costs are identified as being those costs which the State may incur as a result of its election to take its gas in kind, and which costs would not have been incurred if the State had not elected to take the royalty gas in kind.

Section 2.3 provides, however, that if the buyer is not able to include within its jurisdictional cost of service as determined by the Federal Power Commission, the cost reimbursement provided for in Section 2.2, then the buyer may terminate the gas sales agreement six months after giving notice of termination. If the

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right of termination is exercised, the buyer must nonetheless reimburse the State for those costs identified in Section 2.2 which become due and payable by the State prior to termination.

Article III governs the quantity of gas to be sold under the sales agreement. The structure of this article is as follows:

Section 3.1 establishes the State's agreement to sell 25 percent of seller's royalty gas available at the prescribed delivery points. (The Southern contract also calls for 25 percent of seller's royalty gas, while the Tenneco contract calls for 50 percent of the State's royalty gas.)

Section 3.2 establishes the base volume of gas to be sold by the State and purchased by the buyers during the term of the gas sales agreement. For El Paso, the base volume may be less than, but under no condition shall it be in excess of, 650 Bcf. The same base volume applies in the Southern contract, while the Tenneco contract specifies a maximum base volume of 1,300 Bcf.

Sections 3.3 and 3.4 relate to the right of the State to withdraw from the contract certain volumes to meet the present and future needs of the State. The schedule of reductions is as follows:

From date of first delivery through the fifth anniversary thereof, the State has the right to reduce the

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quantity of royalty gas otherwise available for sale under Section 3.1 by up to and including 25 percent.

Commencing on the fifth anniversary date of first delivery and continuing through the tenth anniversary date thereof, the State has the right to reduce the quantity of royalty gas available for sale under Section 3.1 by up to and including 50 percent.

Commencing on the tenth anniversary date of first delivery and continuing through the 15th anniversary date thereof, the State has the right to reduce the quantity of royalty gas available for sale under Section 3.1 by up to and including 75 percent.

Commencing on the 15th anniversary date of first delivery and continuing until termination of the agreement, the seller has the right to reduce the quantity of royalty gas available for sale under Section 3.1 by up to and including 100 percent.

Reductions by the State of the quantity of royalty gas available for sale and delivery shall not become effective until after 12 months have elapsed from the date that the State gives written notice to the buyers of its desire to reduce deliveries.

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It is further provided that the State may change the percentages set forth above at any time during the term of the gas sales agreement, but such changes cannot become effective prior to the expiration of 24 months following the State's written notice to the buyer of its modification of the percentages.

Section 3.5 limits the State's rights of withdrawal of royalty gas volumes by stating that the rights of the State "shall be for the sole purpose of the State meeting the intrastate domestic and industrial needs of the State of Alaska ...." It will be recalled that the phrase "domestic and industrial needs of the State of Alaska" is specifically defined in the "General Terms and Conditions." The right of the State to withdraw gas from the contract for certain uses is further explained by the following provision in Section 3.5:

> "This provision shall not limit the right to export from the State any products manufactured from said gas."

Section 3.6 requires the State to reduce, pro rata, deliveries to all three purchasing companies in the event that a State decision to withdraw gas from any of the contracts is made.

Section 3.7 has the effect of granting to the buyers an option on State royalty gas other than that produced under the leases identified on Exhibit A to the gas sales agreement. Under

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the provisions of 3.7, if the State in fact withdraws royalty gas to meet State needs and if, during the term of this agreement and five years thereafter, the State has additional royalty gas which is surplus to State needs, and which will be transported by a trans-Alaska pipeline, then the State agrees to offer to sell to the buyers under the provisions of this agreement (except as to price and term) such additional and excess royalty gas. The option is granted to the three purchasers ratably. As to such "option gas," the price to be paid is the highest price available to the State for such gas from any other interstate bona fide purchaser; if there are no other such purchasers, the price for such "option gas" will be the price then being paid under the instant gas sales agreement.

Under Section 3.7(b), an additional right of first refusal is granted to the buyers. If royalty gas becomes available to the state which, in the State's sole discretion, is determined to be surplus to the intrastate domestic and industrial needs of the State of Alaska, the buyers under the instant agreement are given a right of first refusal to purchase additional royalty gas from the State to the extent of one-half times the volume that the State's exercise of its rights of withdrawal under Sections 3.3

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and 3.4 in fact diminishes the amount of gas the buyer would otherwise have purchased and received under the instant agreement.

Section 3.8 permits the State to take and dispose of its royalty gas produced under the leases identified in Exhibit A at any time after the effective date of the instant agreement and prior to the time of first deliveries hereunder; the State may utilize market or otherwise dispose of its royalty gas in any manner it choses, at its own expense, so long as such taking or disposition does not prevent the State from making available for sale to the buyers on the date of first deliveries the quantity of gas committed under the contract.

Section 3.9 commits the State to the burden of advising the buyer at the beginning of each calendar year its best estimate of volumes which will be available under the agreement during each calendar year of the next succeeding five calendar years.

Section 3.10 expresses the agreement of buyer and seller to cooperate in minimizing "any charges levied on gas liquefied and transported from Alaska to the contiguous 48 states."

Section 3.11 provides that if the State exercises its rights of withdrawal of gas from the agreement, then the State will reimburse the buyer for a percentage of any then undepreciated investment made by the buyer in any facilities upstream of the

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pipeline. The percentage of reimbursement is the percentage that the State's reserved gas is of the total gas which otherwise would have been sold to the buyer under the agreement.

Article IV of the royalty gas sales agreement deals with delivery points and delivery pressures. Section 4.1 provides that the State's royalty gas shall be delivered at the point where the working interest owners of the leases make delivery of gas to their purchaser, or at any other point mutually agreed upon by the buyer and seller under this agreement.

Section 4.2 provides that if the State is required to take delivery of its royalty gas at a point upstream from the delivery point determined under Section 4.1, then the buyer under this agreement is required to accept delivery at the point where the State receives its royalty gas.

In Section 4.3, it is provided that gas sold and delivered by the State under this agreement shall be received by the buyers at the same pressure as the pressure the working interest owners deliver their gas to their purchasers, or at the pressure the State receives its gas from the working interest owners if delivery is made upstream of the specified delivery point.

Section 4.4 reserves to the State the right to receive all liquids removed from the gas prior to its delivery to the

19.24

pipeline, whether the liquids are removed before or after delivery of the gas to buyer.

Article V of the royalty gas sales agreement specifies that the gas delivered by the State shall conform to the quality specifications applicable to the gas sold by the working interest owners at the same delivery point.

Article VI of the royalty gas sales agreement is concerned with price. Three alternate methods of determining the sales price are set forth in Sections 6.2, 6.3 and 6.4. Price redetermination rights are set forth in Section 6.5. Irrespective of which section governs the manner of establishing price, the sales price is subject to two important limitations:

Section 6.6 requires that the sales price reflect 1,000 Btu's per cubic foot, and if the heating value of the gas actually delivered is either greater than or less than 1,000 Btu's per cubic foot, then the price will be adjusted upward or downward.

Secondly, and more importantly, Section 6.1 sets forth an absolute upper limit on the price paid to the State. It is there provided that the price paid the State shall never be higher than the price which the buyer is permitted to retain in its jurisdictional

19.25

resale rates "so long as such rates are subject to regulation by the Federal Power Commission ...."

The four alternative methods of pricing are as follows:

Section 6.2 provides that if at the time of first delivery of gas, the price of gas purchased under the contract is subject to FPC regulation because of the Commission's authority to regulate resale rates, then the initial price to be paid shall be the highest rate allowed by the Commission to be paid by any interstate gas purchaser to any working interest owner in the leases identified in Exhibit A under contracts where at least 50 Bcf of gas are sold. Thereafter, the price to be paid would change in accordance with the applicable and governing portions of the rules and regulations of the Federal Power Commission. In the event any producer sells gas from the leases identified in Exhibit A at a price higher than the generally applicable FPC ceiling rates, through utilization of FPC special pricing procedures, then the State sales price would escalate to that higher price. In no instance will the State receive less than the price paid producers for their gas from the same reservoir for same or similar sales in interstate commerce.

Section 6.3 provides that if at the time of first deliveries of gas under the agreement the price of gas sold from the leases

19.26

identified in Exhibit A is not regulated by the FPC, then the initial price for gas delivered under the agreement shall be the highest price being paid by any interstate gas purchaser for gas under contracts of at least 50 Bcf and produced from the leases identified in Exhibit A.

Section 6.4 deals with the eventuality of deregulation at the federal level; if the FPC ceases to exercise jurisdiction over interstate sales for resale after having once commenced jurisdiction, and if deregulation is in such form that it prevents the FPC from excluding the price the buyer pays under this agreement from its cost of service, then the State may elect, by the giving of written notice, to call for redetermination of the sales price as permitted in Section 6.5.

Section 6.5 sets forth redetermination rights of both buyer and seller. Each party has the option to cause the price being paid for gas sold under the agreement to be redetermined every 12 months, such redetermination to be effective on the anniversary of such redetermination. If either party requests redetermination, the parties shall attempt to agree on a new price, and in doing so shall observe the following: The redetermined price shall be the higher of (1) the highest price being paid for gas sold in interstate commerce from Prudhoe Bay of Alaska under a

19.27

contract selling at least 50 Bcf of gas executed in the previous 12 months, or (2) the highest price being paid under a renegotiation or redetermination clause of any contract for gas sold in interstate commerce from the North Slope covering the sale of at least 50 Bcf of gas. If there are no comparable contracts executed in this one year period, or no contracts under which the price has been renegotiated or redetermined, then the parties are to attempt to agree to a new price, but failing this, the matter will be submitted to arbitration as provided in Article VII of the royalty gas sales agreement. In no event shall the redetermined price be less than the price being paid to the State immediately preceding the initial redetermination.

Article VII of the royalty gas sales agreement covers arbitration procedures. Any dispute arising under the agreement can be settled by arbitration if either party requests arbitration. Normal arbitration procedures are set forth, whereby each party names one arbitrator and the two so named select a third. The action of a majority of the board of arbitrators and their decision on matters submitted to them for adjudication shall be final and binding on the parties.

Article VIII of the agreement specifies that the agreement shall become effective upon execution and approval, and shall

19.28

continue for twenty years from the date of first deliveries or until the base volumes of gas set forth in Section 3.2 have been delivered, whichever is earlier. Earlier termination can occur if, for any reason, a decline in production is sustained to the extent that further production of gas would no longer be profitable for the State, or further operation of the transportation facilities would no longer be profitable to the buyer.

Article IX reserves certain rights to the State. The State retains the right to process the gas or have the gas processed before and/or after delivery to buyer for the recovery of liquefiable hydrocarbons other than methane; the State agrees that such processing shall not reduce the heating content of the residue gas below 1,000 Btu's per cubic foot, and the State agrees to reimburse the buyer for all transportation charges, liquefaction charges and regasification charges attributable to volumes removed by processing, including fuel and shrinkage.

Article X of the royalty gas sales agreement specifies the form of notices to be used in those instances where formal notification is required by the agreement.

Article XI specifies certain "conditions precedent." First, the buyer has no obligation to perform any of its undertakings in the agreement, other than its agreement to support the government's

19.29

selection of a trans-Alaska pipeline, unless and until all necessary government approvals for building, construction and operation of the pipeline are granted. The only exception here is that any costs incurred by the State by reason of the State's election to take its royalty in kind shall be reimbursed by the buyer as provided in Section 2.2.

Second, if all necessary regulatory approvals have not been issued and accepted by December 31, 1978, either party to the agreement may thereafter terminate the agreement by giving 10 days written notice.

Third, after approval of the agreement by concurrent resolution of a majority of each house of the Alaska State Legislature, the buyer is to proceed with diligence in the filing and prosecution of such pleadings and applications with the FPC as may be required to obtain all necessary rate, tariff and certificate authorizations related to the buyers' obligations under the agreement.

Fourth, it is provided in Section 11.4 that prior to the time that a Federal Power Commission order granting a certificate of public convenience and necessity to the pipeline becomes final and nonappealable, the Governor of the State may give written notice to the buyer of his decision to support a project other than the trans-Alaska pipeline as defined and identified in the

19.30

agreement. Such notice is not a default by the State under the agreement, but if the buyer decides not to concur in the Governor's change of position, then the buyer may terminate the agreement in its entirety. If the buyer agrees to support the project designated in the Governor's notice, the new project shall be considered the "pipeline," and the agreement remains in force.

Fifth, the royalty gas sales agreement may be terminated by directive of the Governor and service of notice on the buyer if the Federal Power Commission denies the El Paso-Alaska application in Docket No. CP75-96, or if the Commission grants a certificate of public convenience and necessity to a project or system other than the "pipeline" as defined in the agreement.

Finally, it is stipulated that the agreement shall not take effect until approved by concurrent resolution of a majority of each House of the Alaskan Legislature.

Article XII incorporates the general terms and conditions and Exhibit A into the agreement and makes them a part of the agreement for all purposes.

21-a

STATE OF ALABAMA

JERE BEASLEY
LIEUTENANT GOVERNOR
MONTGOMERY
36130

TELEPHONE
AREA CODE 205
832-3492
832-3493

January 14, 1977

Honorable Lowell Thomas, Jr.
Lieutenant Governor
State of Alaska
Pouch "AA" State Capitol Building
Juneau, Alaska 99811

Dear Lowell:

Since the recent announcement by the State of Alaska to sell its surplus royalty natural gas for distribution to the lower 48 states, I have met with officials of Southern Natural Gas Company to discuss this matter. I was pleased to learn of this large new supply source of natural gas that will be available for delivery within the next several years to our part of the nation. This additional gas will be most important to our residential, commercial, and industrial sectors.

As we now find ourselves in the midst of an ominous and deepening natural gas shortage in the lower 48, I am firmly convinced that we must recognize the seriousness of its impact upon the nation's economy as well as to the health and comfort of millions of our citizens. It is incumbent upon all of us in government that we recognize this and act affirmatively to insure that our consumers will have the reassurance of adequate natural gas supplies.

Our nation should not have to depend on imported oil. It stands to reason that the greater the proportion of our total energy supply that domestic natural gas makes up, the lesser the proportion imported oil will make and, therefore, the lesser OPEC leverage on our foreign policy.

21-a.1

Expeditious development of the domestic natural gas reserves of Alaska for transportation to the lower 48 states appears to be our best hope if we are to attain a timely degree of self-sufficiency in our energy needs. Accordingly, I endorse your state's proposal to sell a portion of Alaska's surplus royalty natural gas to Southern Natural Gas Company, the major supplier of natural gas to Alabama.

Our state will support efforts to obtain these new gas supplies for our area of the nation. If we in Alabama can be of assistance as this matter receives further consideration, please let me know.

With best personal regards, I am

Most sincerely,

JERE BEASLEY

JB:cw

TELEGRAM

RCA ALASKA COMMUNICATIONS, INC.
PHONE: 586-6440
JUNEAU, ALASKA 99801

21. b

#

1977 JAN 27 PM 3 57

02021 ANCHORAGE ALASKA 116 01-27 114P AST

PMS SENATOR JOHN RADER CHAIRMAN ROYALTY GAS CONTRACTS
REVIEW COMMITTEE 1139 POUCH V
JUN 99811

JANUARY 27, 1977

BASED UPON PREVIOUS ALASKA LEGISLATIVE HEARINGS HELD LAST YEAR, AND CONSIDERABLE ADDITIONAL INFORMATION ACCUMULATED SINCE THEN, THE ALASKA CHAPTER AGC OF AMERICA, INC. HAS CONTINUALLY SPONSORED AN ALL-ALASKA GAS PIPELINE ROUTE, AND SPECIFICALLY THAT PROPOSAL PRESENTLY CONSIDERED BY EL PASO. IN LIGHT OF THIS, WE BELIEVE THE HEARINGS WHICH ARE TAKING PLACE JANUARY 31 THROUGH FEBRUARY 2 NEXT WEEK WILL CONFIRM OUR ACTIONS WE DO, HOWEVER, URGE THAT YOU ATTEND THESE HEARINGS AND WE INTEND TO HAVE A REPRESENTATIVE DO LIKEWISE IN ORDER THAT WE MAY ALL BE FINALLY ASSURED THAT THE ABOVE DECISIONS WERE SOUND. IN ANY EVENT, WE ALSO URGE YOUR PROMPT DECISION ON THE GOVERNORS ROYALTY GAS ALLOCATION CONTRACT.

GEORGE E. SMITH, MANAGER
ALASKA CHAPTER
ASSOCIATED GENERAL CONTRACTORS

TELEGRAM

RCA ALASKA COMMUNICATIONS, INC.
PHONE: 586-6440
JUNEAU, ALASKA 99801

#

21.6.1

02003 ANCHORAGE AK 151 02-07 943A AST 1977 FEB 7 PM

PMS SENATOR JOHN RADER CHAIRMAN ROYALTY GAS CONTRACTS REVIEW COMMITTEE 334 POUCH V

JUNEAU AK 99811

FEBRUARY 7, 1977

AT THE OUTSET OF YOUR HEARINGS WITH RESPECT TO THE ROYALTY GAS CONTRACTS NEGOTIATED BY THE ADMINISTRATION, WE COMMUNICATED OUR PREVIOUS ACTIONS AND ASKED THAT YOU CAREFULLY OBSERVE AND ANALYZE THE TESTIMONY CONSIDERED, AS WOULD OUR ORGANIZATION. AFTER MUCH TECHNICAL TESTIMONY, WHICH WAS OFTEN CONTRADICTORY, WE WOULD STILL URGE YOU TO SUPPORT AND APPROVE THE GOVERNORS ACTIONS. WE PREDICATE THIS ON THAT TESTIMONY WHICH SEEMED TO BE IN PREPONDERANCE, AS WELL AS PERSONAL ASSURANCES FROM THE ADMINISTRATION OF ITS INTENTIONS. THIS, COUPLED WITH ALASKAS CONGRESSIONAL DELEGATIONS ADVICE, INDICATED IT IS WISE TO SUPPORT SUCH ACTION. WE THEREFORE URGE THAT YOU DO SO AND THEREBY INDICATE TO THE LOWER 48 AND ALL ITS CONGRESSIONAL DELEGATES OUR ALASKAN SOLIDARITY, AS WELL AS OUR INTENTIONS TO FIGHT TO THE LAST-DITCH EFFORTS TO EFFECT AN ALASKAN GAS LINE ROUTE, BEST EPITOMIZED AT THIS TIME IN THE EL PASO PROPOSAL.

GEORGE E. SMITH, MANAGER
ALASKA CHAPTER
ASSOCIATED GENERAL CONTRACTORS

TELEGRAM

RCA ALASKA COMMUNICATIONS, INC.
PHONE: 279-5540
JUNEAU, ALASKA 99801

21-C

1977 JAN 27 PM 9 50

02123 NL ANCHORAGE ALASKA 168 01-27 500P AST

PMS HON JOHN RADER SENATE PRESIDENT

JUN 1222

THE ANCHORAGE CHAMBER OF COMMERCE BOARD OF DIRECTORS WOULD RESPECTFULLY REQUEST THE FOLLOWING RESOLUTION TO BE READ IN OFFICIAL SESSION OF THIS STATE LEGISLATIVE BODY.

" WHEREAS AN ALL ALASKAN GAS PIPELINE WOULD BE IN THE BEST ECONOMIC INTEREST OF THE STATE OF ALASKA AND ITS CITIZENS, WHEREAS THE ANCHORAGE CHAMBER OF COMMERCE IS ON RECORD IN SUPPORT OF AN ALL ALASKAN GAS PIPELINE, WHEREAS, THE ALASKA STATE LEGISLATURE IS PRESENTLY CONSIDERING THE MERITS OF A ROYALTY GAS CONTRACT APPROVED BY THE STATE OIL AND GAS ADVISORY BOARD. WHEREAS, THE EXISTENCE OF A ROYALTY GAS CONTRACT SUPPORTED BY THE PEOPLE OF ALASKA WOULD BE AN AID TOWARDS THE ULTIMATE APPROVAL OF AN ALL ALASKAN GAS PIPELINE NOW

THEREFORE, BE IT RESOLVED THE ANCHORAGE CHAMBER OF COMMERCE WISHES TO GO ON RECORD IN SUPPORT OF A ROYALTY GAS CONTRACT AND RESPECTFULLY URGES THE LEGISLATURE OF THE STATE OF ALASKA TO EXPEDITIOUSLY APPROVE SUCH A CONTRACT BASED ON TERMS WHICH PROVIDE THE GREATEST ADVANTAGES TO THE CITIZENS OF ALASKA.

ROBERT L HARDICK PRESIDENT THE ANCHORAGE CHAMBER OF COMMERCE

TELEGRAM

21-d

RCA ALASKA COMMUNICATIONS, INC.
PHONE: 586-6440
JUNEAU, ALASKA 99801

#

02093 NL ANCHORAGE ALASKA 01-27 600P AST

PMS SEN JOHN RADER DEL

JUN 1214

REF HEARINGS ON SALE OF ROYALTY GAS PERIOD
BENEFITS TO OUR STATE AND ITS CITIZENS INHERENT IN
THE TRANS-ALASKA ROUTE FOR NATURAL GAS
WANTS YOUR SUPPORTS OF THE SALES CONTRACT FOR
ROYALTY GAS NOT NEEDED IN ALASKA AND WHICH
CONTRACTS ARE NOW UNDER CONSIDERATION PERIOD EARLY
LEGISLATIVE APPROVAL WILL DEMONSTRATE SOLID SUPPORT
OF ALASKANS FOR TRANS-ALASKA GAS PROJECT PERIOD IT WILL
ALSO INSURE THAT TENNECO AND SOUTHERN NATURAL
WILL JOIN EL PASO IN THE ALL OUT NATIONAL
CAMPAIGN TO OBTAIN CERTIFICATE TO AUTHORIZE
THE ALL AMERICAN GAS TRANSPORT SYSTEM PERIOD

AL SWALLING POUCH 7012 ANCHORAGE ALASKA 99510

77 JAN 27 PM 9 10

21-e

04106 SANFRANCISCO CA 115 01-27 345P PST

PMS THE HONORABLE JOHN RADER

1145

SENATE PRESIDENT

ALASKAN STATE LEGISLATURE

POUCH V

JUNEAU AK 99811

DEAR SENATOR RADER:

THANK YOU FOR INVITING MY COMMENTS REGARDING PRUDHOE BAY ROYALTY SALES AGREEMENTS. AS IT IS NOT POSSIBLE FOR ME TO ATTEND THE HEARINGS BEGINNING JANUARY 31, I WOULD APPRECIATE YOUR CONSIDERATION OF THIS SHORT WRITTEN COMMENT: PACIFIC GAS AND ELECTRIC COMPANY URGES THE SPECIAL SENATE COMMITTEE TO CONSIDER PROVIDING THAT, IF THE FPC, THE PRESIDENT AND CONGRESS SHOULD SELECT A PROJECT OTHER THAN THE EL PASO TRANSALASKA PROJECT TO MOVE PRUDHOE BAY GAS TO THE LOWER 48 STATES, THE PRESENTLY PROPOSED GAS SALES AGREEMENTS WOULD TERMINATE AND THE STATE WOULD THEN BE FREE TO NEGOTIATE ALSO WITH COMPANIES WHO ARE CURRENTLY SUPPORTING ONE OF THE OTHER PROJECTS.

THANK YOU FOR YOUR KIND INVITATION.

BEST REGARDS,

JOHN A SPROUL

SENIOR VICE PRESIDENT

AGO 800722

2-022216E030 01/30/77 ICS IPMRNCZ CSP AHGB
9163223690 MGM TDRN SACRAMENTO CA 542 01-30 0740P EST

EXHIBIT # 21-f

HONORABLE JOHN RADER
SENATE PRESIDENT
ALASKA STATE STATE LEGISLATURE
POUCH V
JUNEAU AK 99811

YOUR LETTER TO TONY KLINE, THE GOVERNOR'S LEGAL SECRETARY, HAS BEEN FORWARDED TO ME FOR COMMENT. I URGE THE ALASKAN STATE LEGISLATURE NOT TO APPROVE THE GAS ROYALTY SALES AGREEMENTS BETWEEN THE STATE OF ALASKA AND THREE FIRMS. CALIFORNIA CAN NOT AFFORD TO RELY ON LIQUEFIED NATURAL GAS (LMG AND EL PASO PROJECT FOR OVER NINETY PERCENT OF THE STATE'S GAS SUPPLY LMG DELIVERY TECHNOLOGY IS PROVEN FOR SMALE SCALE DELIVERIES BUT NOT FOR THE LARGE SCALE (GREATER THAN 3.2 BCF/DAY) DELIVERIES PROPOSED FOR CALIFORNIA.

IF THE ONE LMG TERMINAL CALIFORNIA ISLIKELY TO PROVE OR TO BE TEMPORARILY CLOSED DOWN DUE TO AN EQUIPMENT MALFUNCTION, TRESSLE DAMAGE OR EARTHQUAKE, THE STATE OF CALIFORNIA COULD FACE MAJOR DISRUPTIONS IN ITS GAS SUPPLY DELIVERY SYSTEM. THE POTENTIAL DISRUPTIONS ARE DISCRIBED IN THE RESOURCE PLANNING ASSOCIATES STUDY BEING SENT UNDER SEPARATE COVER.

FOR THIS AND OTHER REASONS CALIFORNIA SUPPORTS AN OVERLAND PIPELINE DELIVERY SYSTEM FOR NORTH SLOPE NATURAL GAS WITH A DIRECT DELIVERY SYSTEM TO THE WEST COAST. A COPY OF THE ENERGY COMMISSION POLICY RESOLUTION AND PUC BRIEF WILL ALSO BE SENT UNDER SEPARATE COVER.

THERE IS ALSO STRONG EVIDENCE TO SUGGEST THAT OVERLAND PIPELINE SYSTEM WOULD YIELD MUCH LOWER TRANSPORTATION COSTS TO THE CUSTOMERS AND HENCE MUCH HIGHER NATURAL GAS ROYALTIES FOR THE STATE OF ALASKA AND HIGHER WELLHEAD VALUES FOR NORTH SLOPE PRODUCERS.

WE THEREFORE URGE YOU TO CONSIDER THE VALUE OF THE HIGHER WELLHEAD PRICE TO THE STATE AGAINST THE VALUE OF A LIQUEFACTION TERMINAL.

CALIFORNIA OFFICIALS ARE SENSITIVE TO ALASKA'S WISH TO PROVIDE ITS CITIZENS WITH JOBS AND ECONOMIC DEVELOPMENT OPPORTUNITIES. ARRANGEMENTS OF THE OVERLAND PIPELINE PROPOSALS TO BE ESTABLISHED THAT WOULD NOT DEPRIVE SOUTHERN ALASKA FROM SUPPLIES OF NATURAL GAS. THE ALCAN HIGHWAY PROPOSAL WILL DELIVER GAS TO SOUTHERN PARTS OF ALASKA AND COULD PROVIDE THE SAME VOLUME OF GAS AND DEVELOPMENT OPPORTUNITIES AS EL PASO'S PROPOSAL. ARCTIC GASES PROPOSAL COULD ALSO BE PERMITTEDPIN A MANNER TO ENSURE DELIVERIES OF GAS TO SOUTH ALASKA IN QUANTITIES SUFFICIENT FOR ECONOMIC DEVELOPMENT. THIS COULD BE ACCOMPLISHED BY REQUIRING THAT NORTH SLOPE GAS PRODUCERS PURCHASE OR EXCHANGE SOUTH ALASKAN NATURAL

RCA Mailgram®

21.f.1

GAS WHICH WOULD REMAIN IN SOUTH ALASKA IN EXCHANGE FOR NORTH SLOPE ROYALTY GAS. THE RESULTANT TRANSPORTATION COST SAVINGS WOULD BENEFIT ALL PARTIES.

THERE IS ONE OTHER IMPORTANT FACTOR THE ALASKAN LEGISLATURE SHOULD CONSIDER BEFORE APPROVING THE PROPOSED ROYALTY SALES AGREEMENTS. THE CALIFORNIA LEGISLATURE MAY CONSIDER THE ESTABLISHMENT OF A CALIFORNIA STATE GAS PURCHASING AUTHORITY WHICH WOULD ENABLE CALIFORNIA TO PURCHASE ALASKA'S ROYALTY GAS DIRECTLY WITHOUT FEDERAL POWER COMMISSION APPROVAL OR PRICE REGULATION. THE POSSIBILITIES AS ALASKA BENEFITING FROM THIS ARRANGEMENT (THROUGH HIGHER ROYALTIES) AND OF CALIFORNIA ESTABLISHING SUCH AN AUTHORITY SIGNIFICANTLY DIMINISH AS THE STATE OF ALASKA AND OTHER NORTH SLOPE PRODUCERS SIGN THESE "OPEN ENDED/UNKNOWN PRICE" CONTRACTS.

THE ENERGY FUTURES OF THE STATE OF CALIFORNIA AND ALASKA ARE INTIMATELY TIED TO ONE ANOTHER WITH REGARD TO OIL AS WELL AS GAS. WE ARE GRATEFUL FOR THE OPPORTUNITY TO RESPOND TO YOUR INQUIRY AND LOOK FORWARD TO SPIRIT OF CONTINUING COOPERATION.

PLEASE ENTER THIS MAILGRAM AND MATERIALS BEING SEND UNDER SEPARATE COVER INTO THE OFFICIAL RECORDS OF YOUR PROCEEDINGS.

RICHARD L MAULLIN CHAIRMAN
CALIFORNIA STATE ENERGY COMMISSION
1111 HOWE AVE
SACRAMENTO CA 95825

1947 EST

MGMCOMP MGM

Greater Fairbanks

CHAMBER OF COMMERCE

550 First Avenue
FAIRBANKS
99701

Member
U. S. Chamber of Commerce
Alaska State Chamber of Commerce
Pacific Northwest Trade Ass'n.
National Better Business Bureau

Exhibit 21-9

January 24, 1977

Dear

At the regular scheduled meeting of January 24, the Board of Directors of the Greater Fairbanks Chamber of Commmerce unanimously supported the Governor's proposal for the sale of the state's royalty gas.

We urge you to support the Governor's proposal as written and ratify it as soon as possible as to avoid delay in the pipeline route decision.

In the future we hope that you would consider a gas separation plant in the Fairbanks area.

Sincerely,

Mrs. Jeanne Wilson
President

JW/sh

Exhibit 21-h

GEORGE W. EASLEY COMPANY
1577 C STREET • SUITE 105 • ANCHORAGE, ALASKA 99501 • DIAL 907/276-7915

January 31, 1977

Honorable John Rader
President of the Senate
Alaska State Legislature
Pouch V
Juneau, AK 99811

Dear Senator Rader:

Thank you for your kind invitation to participate in the hearings before the Special Senate Royalty Gas Review Committee.

I have had the opportunity to review the proposed contracts and I had looked forward to offering testimony relating to them. Unfortunately, the press of business necessitates that I remain in Anchorage at the time hearings will be held in Juneau.

It would be appreciated, however, if you would record my recommendation for swift approval of the proposed contracts.

Very truly yours,

George W. Easley
President

GWE:vmd

AGO 800726

21-i

TELEGRAM

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RCA ALASKA COMMUNICATIONS, INC.
PHONE: 586-6440
JUNEAU, ALASKA 99801 1977 FEB 2 AM 10 32

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2-022343E033 02/02/77

ICS IPMBNGZ CSP

3135352099 TDBN DETROIT MI 28 02-02 1243P EST

PMS SENATOR JOHN L RADER ALASKAN STATE LEGISLATURE, DLR
050
JUNO AK 99311

THIS IS FROM JAMES T JEFFERSON ENTERPRISES INCORPORATED 14864
MMENDOTA DETROIT MICHIGAN 48238 3135352099 YES I ADVOCATE THE SALE
OF GAS AND OIL MY COMPANY WANTS A PORTION

JAMES T JEFFERSON

1244 EST

IPMAFUA AHG

AGO 800727

Exhibit 22

OFFICE OF THE GOVERNOR

Honorable Jay S. Hammond
Governor
State of Alaska
Pouch A
Juneau, Alaska 99811

Frances A. Ulmer
Legislative Assistant
Office of the Governor
Pouch A
Juneau, Alaska 99811

ALASKA DELEGATION IN CONGRESS

Honorable Ted Stevens
United States Senate
411 Russell Building
Washington, D.C. 20510

Honorable Mike Gravel
United States Senate
3317 Dirksen Senate Office Bldg.
Washington, D.C. 30510

Honorable Donald E. Young
House of Representatives
1210 Longworth House Office Building
Washington, D.C. 30515

MAILING LIST FOR ROYALTY GAS REVIEW COMMITTEE

22.1

Mr. George Easley
1577 C. Street
Suite 105
Anchorage, Alaska 99510

Mr. Robert Hufman
Golden Valley Electric Association
758 Illinois Street
Fairbanks, Alaska 99701

Mr. James F. Palin
Copper Valley Electric Association
Incorporated
P.O. Box 45
Glennallen, Alaska 99588

Mr. Philip J. Matthew
Valdez Petrochemical Industries, Inc.
Box 336
Valdez, Alaska 99686

Mr. Howard J. Grey
Moening-Grey & Associates, Inc.
715 L Street, Suite 8
Anchorage, Alaska 99501

Mr. Duane Free
U.S. International Energy Corp.
450 South 9th East, Suite 302
Salt Lake City, Utah 84102

Mr. Richard J. Downey
Tesoro-Alaskan Petroleum Corp.
3380 C Street
Box 6272
Anchorage, Alaska 99502

Mr. E. P. (Al) Vanderveer
Koch Oil Company
P.O. Box 6088
Station D
Calgary Alberta, Canada

Mr. Dan M. Krausse
Energy Company of Alaska
1200 One Energy Square
Dallas, Texas 75206

22.2

Mr. Ronald T. Miller, President
Northwest Natural Gas Company
200 Southwest Market Street
Suite 300
Portland, Oregon 97201

Mr. James A. Thorpe
Washington Natural Gas Company
815 Mercer Street
P.O. Box 1869
Seattle, Washington 98111

Mr. Mike Whitehead
Office of the Governor
Pouch A
Juneau, Alaska 99811

Mr. Bruce Monroe
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130 Seward Street - Suite 314
Juneau, Alaska 99801

Mr. Herbert Berkowitz
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Phillips Petroleum
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Mr. Phil Holdsworth
1009 Mendenhall Apartments
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Mr. Mike Holland
El Paso Alaska Company
Pouch 7009
Anchorage, Alaska 99510

Mr. Robert V. West, Jr.
Tesoro Petroleum Corp.
8700 Tesoro Drive
San Antonio, Texas 78286

OIL COMPANIES MAILING LIST

22.3

Mr. William H. Seaman
Vice President
Southern California Edison
Company
2244 Walnut Grove Avenue
Rosemead, California 91770

Mr. G. H. Shipley
Consultant
Coastal States Gas Corporation
Five Greenway Plaza East
Houston, Texas 77001

Mr. Morris L. Lowman
Marathon Oil Company
Box 2380
Anchorage, Alaska 99510

Mr. P.F. McAndrews
Standard Oil Company of
California Western
Operations, Inc.
P.O. Box 7-839
Anchorage, Alaska 99510

Mobil Oil Corporation
P.O. Box 5444
Denver, Colorado 80217

Mr. Ivan Jaques
Petrolane
1200 Whitney Road
Anchorage, Alaska 99501

Mr. C. Burglin
Oil & Gas Lease Broker
P.O. Box 131
Fairbanks, Alaska 99701

GAS COMPANIES MAILING LIST

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Transco Companies
P.O. Box 1396
Houston, Texas 77001

Mr. A.E. Bone, President
UGI Corporation
Box 858
Valley Forge, Pennsylvania 19842

Mr. David H. Rainey
Director
State Governmental Affairs
El Paso Natural Gas Company
El Paso, Texas 79978

Travis H. Petty
P.O. Box 2185
Houston, Texas 77001

Mr. A. Baca
Northern Natural Gas
Company
2223 Dodge Street
Omaha, Nebraska 68102

Mr. R. W. Lindgren
Vice President-Energy
Resources
Natural Gas Pipeline
Company of America
122 South Michigan Avenue
Chicago, Illinois 60603

Mr. John A. Sproul
Vice President-Gas Supply
Pacific Gas and Electric
Company
245 Market Street
San Francisco, California 94106

Mr. James K. Curry
Manager of Exploration and
Production
Pan Eastern Exploration
Company
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Houston, Texas 77005

Mr. Richard E. Terry
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Mr. Harry L. Lepape
Assistant to the Chairman
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720 West Eighth Street
Los Angeles, California 90017

Mr. Hugh H. Morgan, Jr.
Vice President-Pipeline Affairs
Southern Natural Gas Company
P.O. Box 2563
Birmingham, Alabama 35202

Mr. John M. Van Dyck
Vice President
Gas Supply
Southern Natural Gas
Company
P.O. Box 1513
Houston, Texas 77001

Mr. Robert C. Thomas
Vice President
Tennessee Gas Transmission
Chamber of Commerce Building
P.O. Box 2511
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Alaska State Legislature Exhibit 23

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House of Representatives

Joint Hearings with the Senate Committee to Consider
the Sale of Royalty Gas January 31, 1977 - February 7, 1977

Invitations to testify:

I. Newspaper Advertisements (copy attached)

Anchorage Daily News	1/28/77 - 1/29/77
Anchorage Times	1/28/77 - 1/29/77
Fairbanks Daily News-Miner	1/27/77 - 1/28/77

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January 31, 1977 - February 7, 1977

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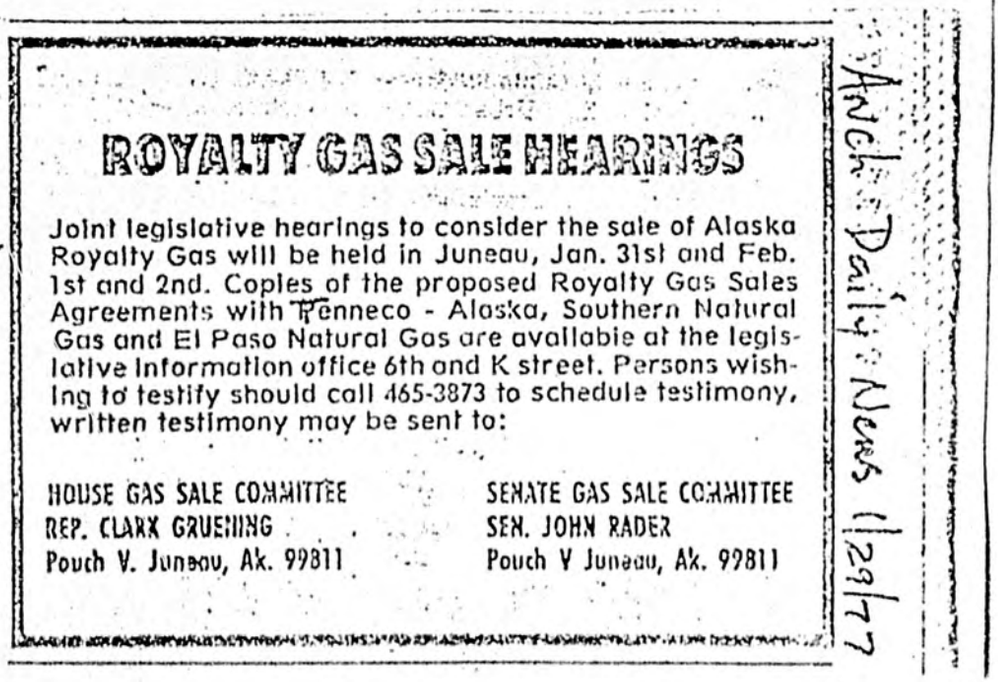
Exhibit 24



ROYALTY GAS SALE HEARINGS

Joint legislative hearings to consider the sale of Alaska Royalty Gas will be held in Juneau, Jan. 31st and Feb. 1st and 2nd. Copies of the proposed Royalty Gas Sales Agreements with Tenneco - Alaska, Southern Natural Gas and El Paso Natural Gas are available at the legislative information office 6th and K street. Persons wishing to testify should call 465-3873 to schedule testimony, written testimony may be sent to:

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Anch. Daily News 1/29/77

Exhibit 25

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ANALYSIS OF PRUDHOE BAY ROYALTY NATURAL GAS DEMAND and THE PROPOSED PRUDHOE BAY ROYALTY NATURAL GAS SALE

BY

Kristina M. O'Connor
and
Patrick L. Dobey

January 1977

A Study for the Alaska Royalty Oil and Gas Development Advisory Board

Chairman
Guy Martin, Commissioner
Department of Natural Resources

Executive Director
Donald Wold

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Analysis and Results	2
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Introduction and Summary

It is probable that Prudhoe Bay's vast natural gas supplies will begin to flow southward in 1982. Alaskans believe that an all-Alaskan gas pipeline is the only satisfactory transportation method for this gas with the availability of the gas for in-state use being a major consideration. A sale of Royalty gas has been proposed that offers the opportunity to use Prudhoe Royalty gas in the state. This analysis considers the implications of that sale. Previous state-wide natural gas demand studies have shown that the Cook Inlet area can be satisfied by existing commitments and other energy supplies. There is a good probability commercial, residential and light industrial use of the royalty gas along the Alaskan natural gas corridor will occur. We have compared this corridor use against the gas take-back provisions of the proposed gas sales contract. Results indicate that the proposed contract will satisfy potential in-state gas volumes required, and that sufficient flexibility is allowed to provide natural gas supplies when needed.

Previous reports by the Department of Natural Resources have been used as the basis for this study. A reference list is included on the last page of this report, and it is suggested that detailed questions on natural gas demand be answered by consulting these previous studies, especially the report entitled "Projected Alaskan Royalty Gas Production and its Relationship to Projected Natural Gas Demand" by P.L. Dobey, et al.

ANALYSIS AND RESULTS 25.3

The three key factors in this analysis are the amount of royalty Natural Gas available through the pipeline, the estimated demand for Royalty Gas in Alaska and the contractural procedures for recalling the Royalty natural gas needed for in state use. A discussion of these factors follows.

Royalty Gas Supply

Neither the preliminary nor final rates of gas production from Prudhoe Bay have been set by the State. The figures included in these contracts do not offset the setting of those rates, but are based for the purposes of the sales, on reasonable expectations of what those rates might be. The initial rates will be set by State law prior to gas production, and readjusted as necessary based on production history. Buyers under these contracts will simply have to accept whatever rates are set, but for purposes of putting a ceiling on the commitment, some assumptions were agreed upon.

The agreed assumptions include an initial rate of 2.0 B.C.F./day increasing over a period of time to 3.2 B.C.F./day. Commitment of a maximum total of 2.6 trillion cubic feet for these contracts equals an average gross sales rate of 2.85 billion cubic feet per day over 20 years. It also represents the maximum royalty gas available from 20.8 trillion cubic feet of the total reserve. The State estimates the total reserve slightly higher than industry. Its figure for the

25.4

Prudhoe Oil Pool reserve in the sale area is 31.2 trillion cubic feet with a royalty reserve in the sale area of approximately 3.9 trillion cubic feet. Thus although 100% of our royalty production is committed for 20 years, it represents only about 66 percent of the State's total royalty gas reserve. If the penalty section in the contract ever becomes operative, the penalty gas would come from this reserve or from other gas on the North Slope not yet in production and not directly committed to this contract.

The estimates on reservoir performance are based on no production history. The degree of accuracy under these conditions is low and provision must be made for actual production data which might require changes in rates for optimum recoveries. The 2.85 B.C.F. average is thought to be a reasonable maximum based on what is known now and one which will permit some flexibility in case of error. It was arrived at by assuming a maximum rate of 2 B.C.F. for a period of five years and a rate of 3.2 B.C.F./day for the remaining 15 years of the contract. This would assume that five years of sales would be necessary to reasonably establish the best way to operate the reservoir ultimately and that these data indicate a higher rate can be justified by performance data. For the purpose of this analysis we have chosen 2.0 B.C.F. per day as a likely and conservative actual pipeline thruput.

Demand for Natural Gas

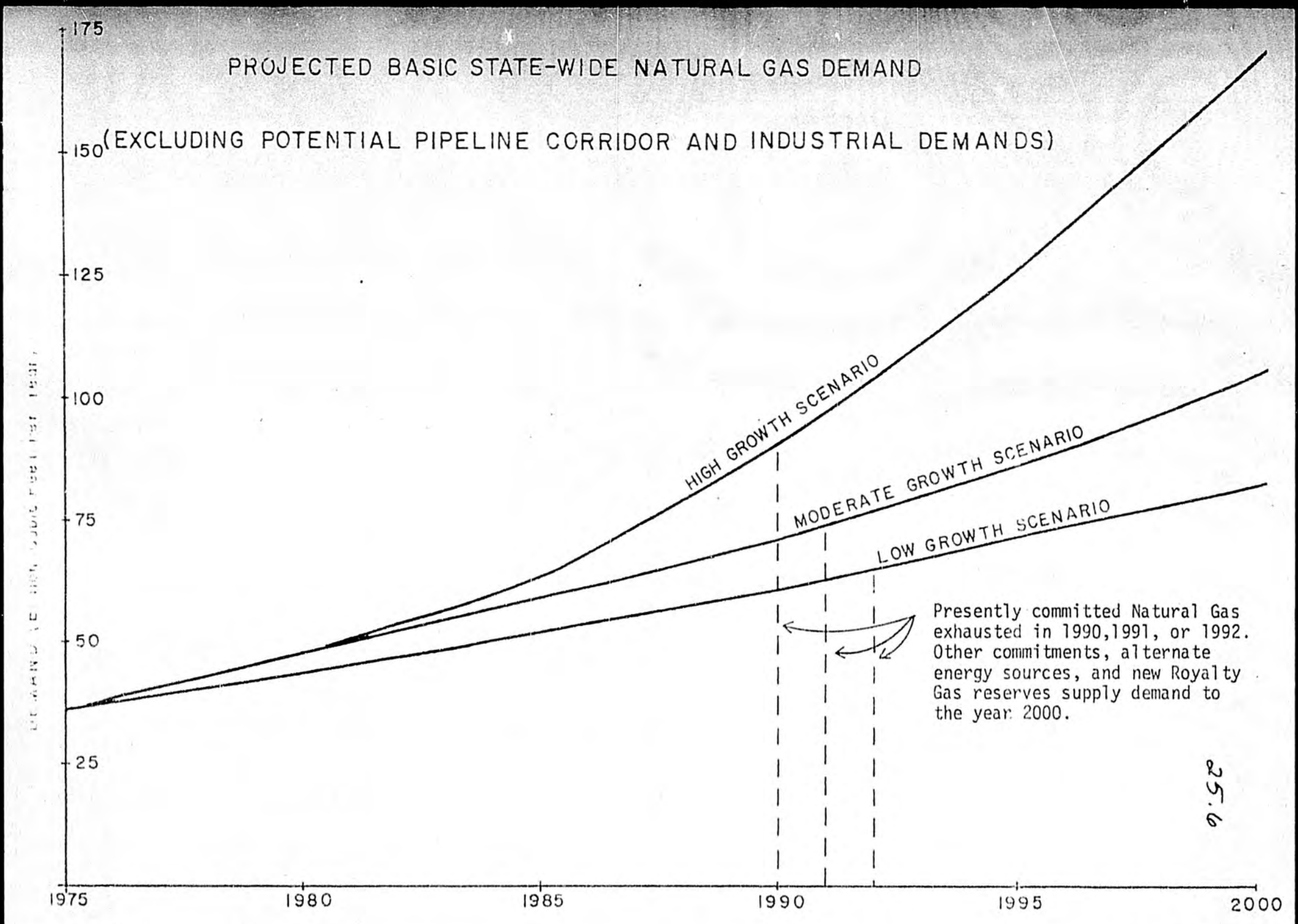
Demand is defined in the report as that amount of natural gas necessary

25.5

to provide the residential-commercial needs of the State. Basic demand relies only upon population growth and does not include potential demand resulting from the Alaskan gas pipeline corridor or industrial uses. Current natural gas consumption, upon which the basic demand is projected, occurs almost exclusively in the Upper Cook Inlet area and is supplied by the Upper Cook Inlet gas fields.

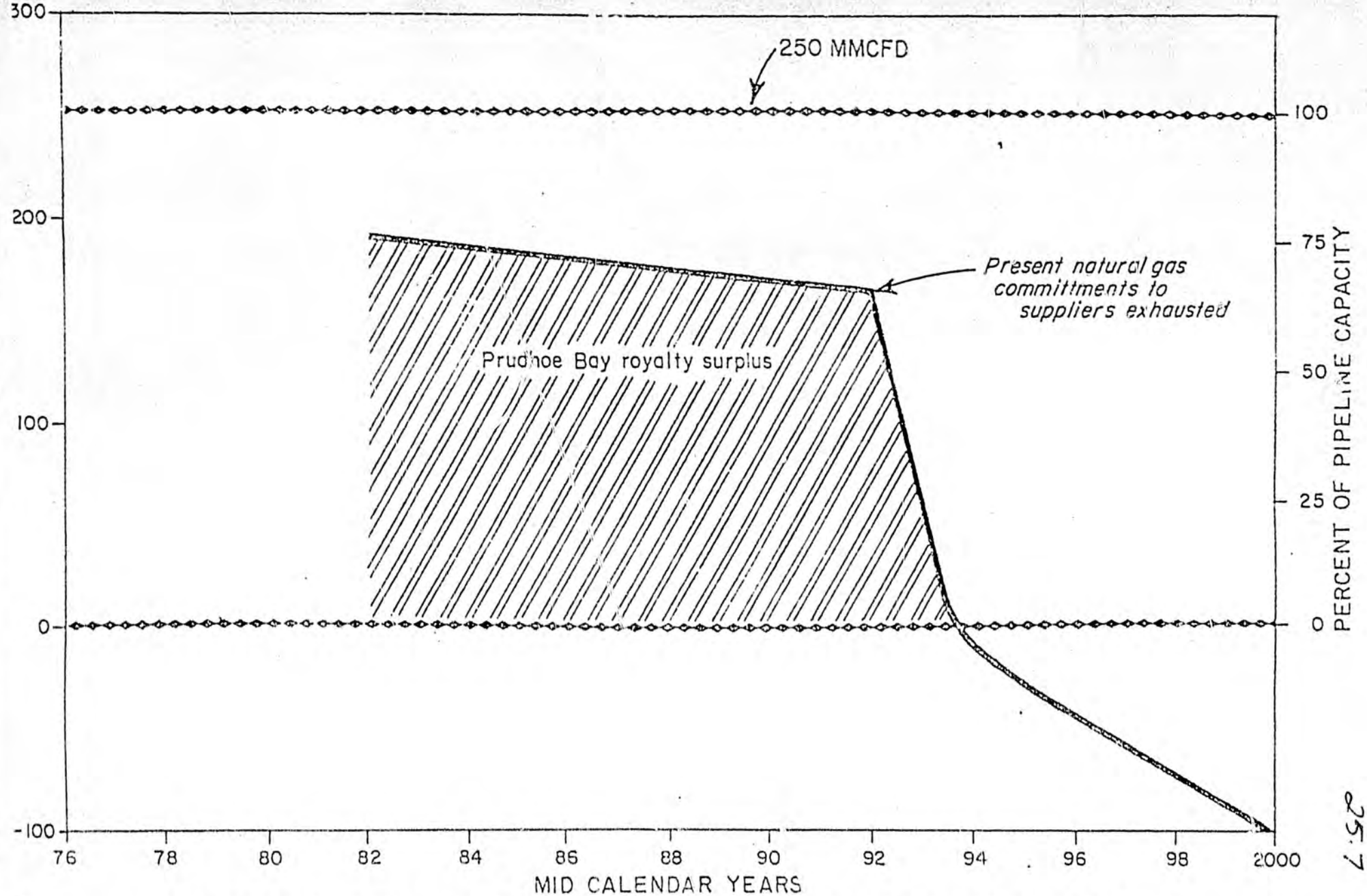
Low, moderate, and high growth scenarios were used to predict future basic demand. The most likely state-wide demand curve from each scenario is shown on Figure 1. Presently committed non-royalty natural gas assures a plentiful energy supply until the year 1992, 1991, and 1990 using the low, moderate and high growth scenarios, respectively. Alternative energy sources, such as coal and hydroelectric power, can supply up to about 70% of that demand, and other commitments and new royalty gas reserves can supply the remaining 30%. This is illustrated on Figure 2, which shows the effects of alternative energy sources and potential industrial consumption upon the most likely moderate growth scenario.

It has also been assumed in this report that the corridor demand will be met form Prudhoe Bay Pipeline Royalty gas, a very conservative assumption, since other supplies of gas may be available. We selected 1982 as a probable time for the beginning of Prudhoe Bay Natural gas production.



AGO 800762

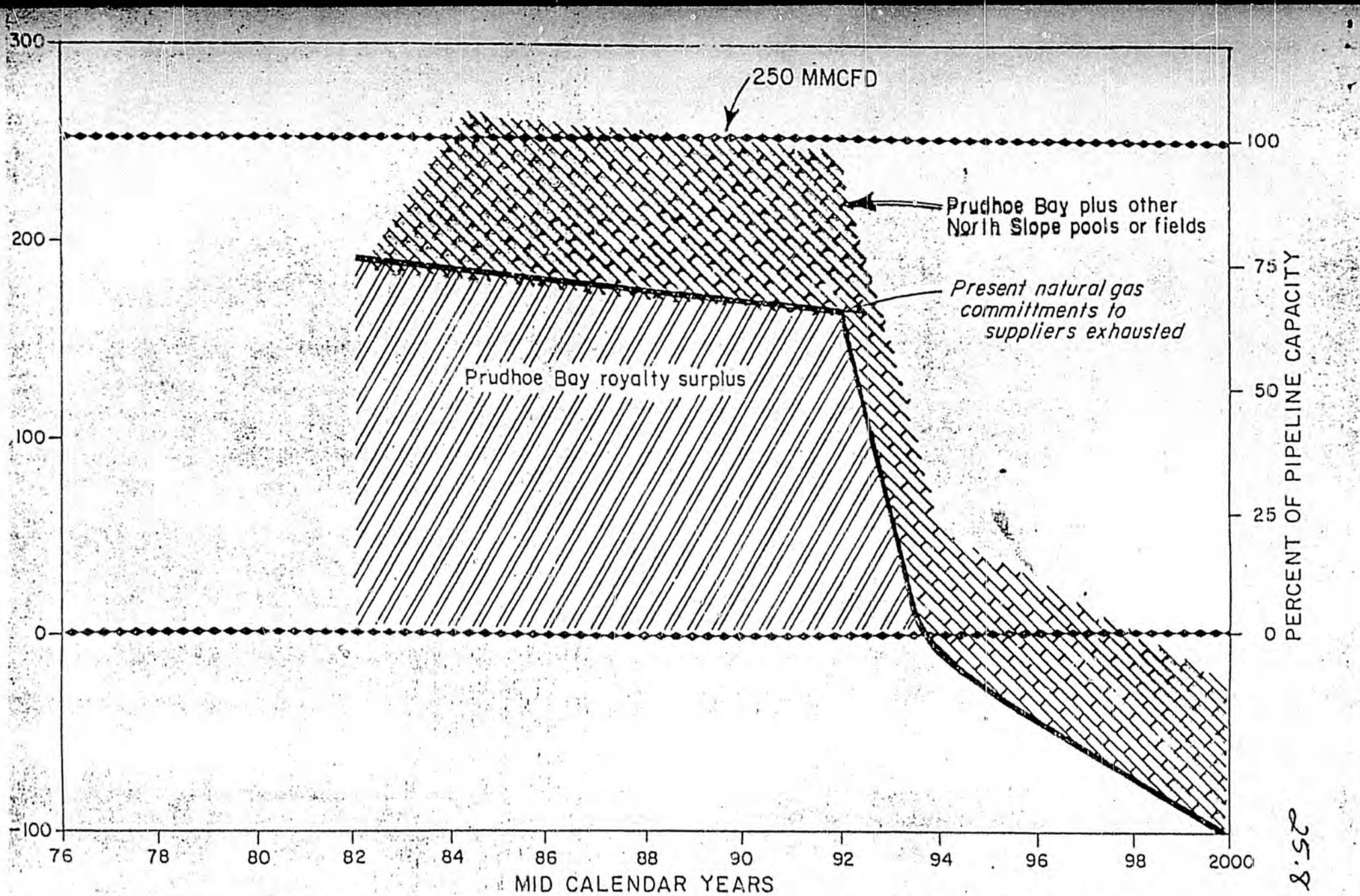
FIGURE 1



AGO 800763

PRUDHOE BAY ROYALTY GAS AVERAGE DAILY SURPLUS MOST LIKELY CASE AT 2.0 BCF/DAY PIPELINE THRUPUT

FIGURE 2

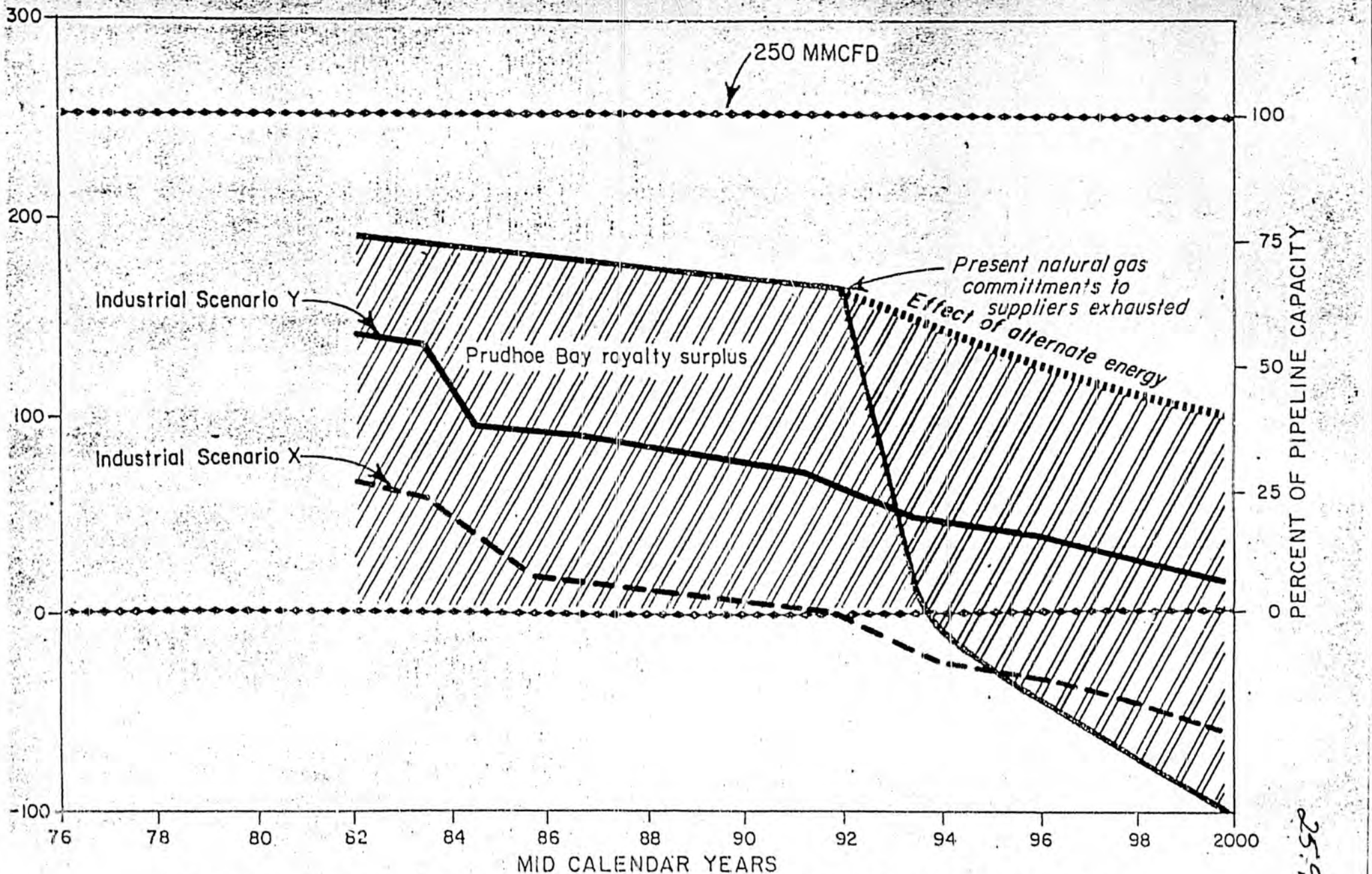


25-8

PRUDHOE BAY ROYALTY GAS AVERAGE DAILY SURPLUS MOST LIKELY CASE AT 2.0 BCF/DAY PIPELINE THRUPUT

FIGURE 2

AGO 800764



AGO 800765

PRUDHOE BAY ROYALTY GAS AVERAGE DAILY SURPLUS MOST LIKELY CASE AT 2.0 BCF/DAY PIPELINE THRUPUT

FIGURE 2

25.10

Royalty Gas Sales Agreement

To protect the State's interest and provide the flexibility which may be needed to adjust the amount of gas surplus to State needs to meet changing conditions, there is a provision in the gas sales agreement for the State to recall a specified amount of its gas on the date of initial delivery and percentage increases at five year intervals. These percentages may be changed upon 24 months prior written notice. During each 5 year period the amount of gas recalled can be changed up to the total percentage allowed for that period upon 12 months prior written notice. The State will make the judgement of the amount of gas to be recalled based upon the in-state uses which develop and an on-going analysis of future requirements. We have assumed only residential, commercial and light industrial requirements, but using moderate projections, there should be surplus capacity for heavy industrial uses, also.

It is our belief that this provision affords ample protection to possible future gas users in the State. For example, assume that someone wants to build an Ammonia-Urea Plant requiring 60 million cubic feet of gas per day. Design, permits and construction of such a plant will require 3 to 4 years before gas delivery to the plant. This time lag gives ample time for the State's recall provision to be put into effect. Similarly, the decision to install a gas-fired turbine generator in a town along the pipeline, will require 18 months to 30 months from date of order to date of startup. The volume of gas (about 10 MMCFD)

25.11

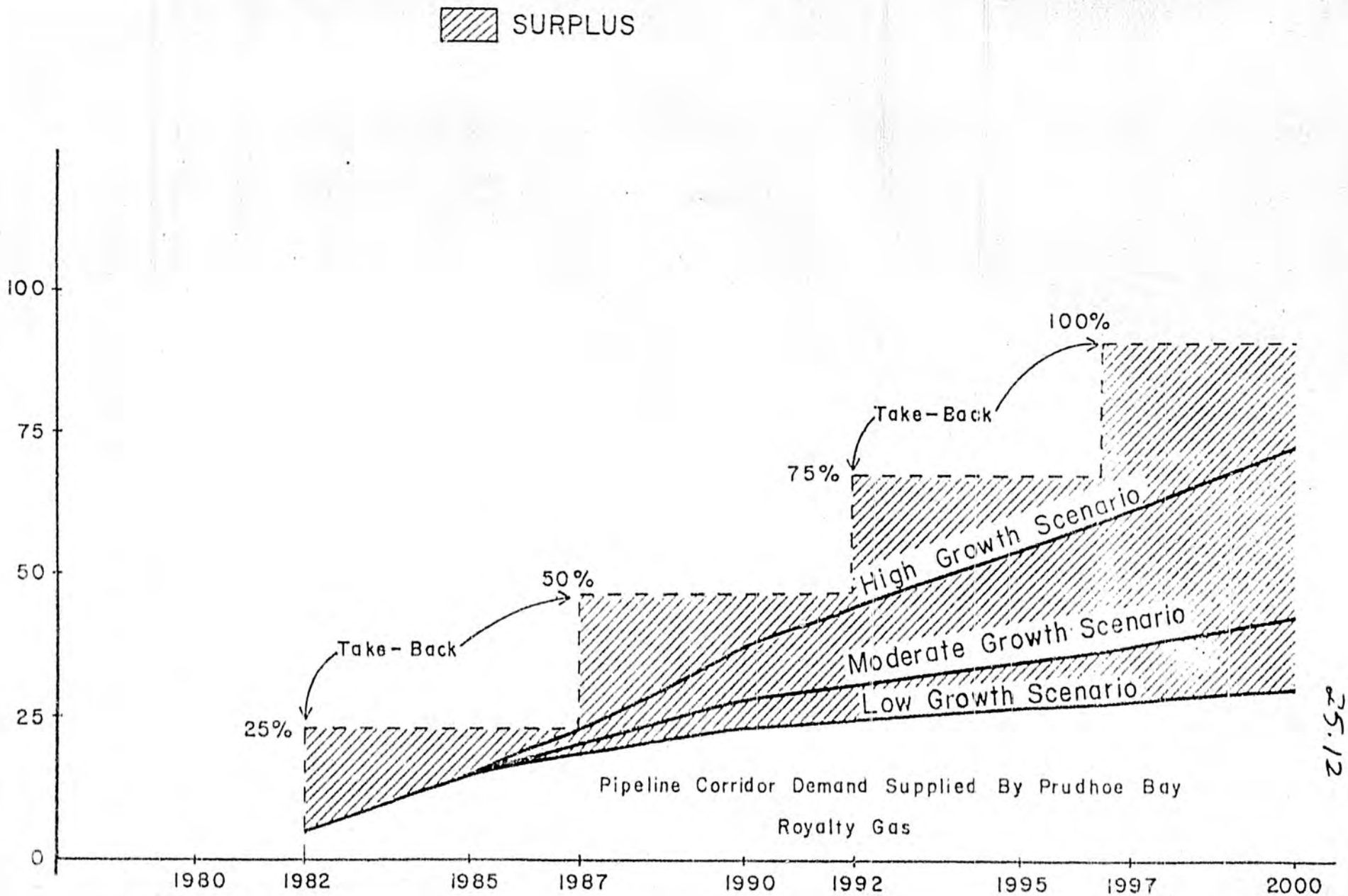
necessary to operate this generator would be accomodated by the 12 months notice period of the recall provision. An on-going demand analysis will insure that timely and appropriate take-back notice is given and that proper amounts of natural gas are available. The Division of Minerals and Energy Management will carry this responsibility.

Figure 3 illustrates the low, moderate and high growth residential-commercial corridor demands with the maximum take-back steps described in the Sales Agreement. The hatchered area represents the gas which can be taken back under the terms of the contract and which is in excess of projected demand. All of the hatchered area above the low scenario curve is the surplus obtained by recalling the maximum percentages, 25%, 50%, 75% and 100%, in each progressive five-year increment. Note that the high growth scenario still falls within the take-back surplus area, and the margin of "safety" appears to increase with time.

Table I,"Pipeline Corridor Demand and possible take-back steps," summarizes the results of this analysis. Assuming a thruput of two billion cubic feet of natural gas per day, the 25%, 50%, 75% and 100% take-back steps are shown with the corresponding quantities of Royalty gas taken back for in-state use. The low, medium, and high natural gas demand scenarios are shown in billions of cubic feet of gas needed per year. This projected gas demand is then listed as a percent of the total royalty production and as a percent of the maximum allowable take-back during a five year period. In all cases at least 6% of the total royalty gas production may be required by the pipeline corridor

PROJECTED ALASKAN PIPELINE CORRIDOR DEMAND

FOR PRUDHOE BAY NATURAL GAS AND MAXIMUM TAKE-BACK STEPS



AGO 800768

FIGURE 3

25.13

consumers in the first year of the contract. This is about 22% of the allowed amount which is 25% of royalty production. The maximum anount of take-back required occurs in the year 2000 of the high growth scenario. At this time about 80% of the royalty production may be necessary to meet corridor demand. The greatest percent of take-back (about 91%) may occur in the year 1996 of the high scenario.

Total pipeline corridor demand for Royalty gas may range from zero to 740.2 billion cubic feet compared with take-back privileges which could total over one trillion cubic feet under the terms of the contract.

The important result of this analysis is that the flexibility built into the proposed gas contract should be adequate to handle our anticipated future needs. Actual natural gas use will vary considerably with time and circumstances, but a reasonable monitoring program can assure the availability of supplies at the appropriate time.

25.14

References

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Exhibit 26

(s) *Short title.* This section may be cited as the Geothermal Resources Act.
(am §§ 40, 41 ch 127 SLA 1974)

Effect of amendment.
The 1974 amendment substituted "AS 41.08.020" for "AS 41.07.020" near the middle of subsection (b) (1) and "AS 41.08.040" for "AS 41.07.040" at the end of subsection (b) (2) and deleted "of 1971" from the end of subsection (s).

As the rest of the section was not affected by the amendment, it is not set out.

Legislative committee report.
For report on ch. 127, SLA 1974 (SCSHB 817 am S), see 1974 House Journal, p. 657.

Sec. 38.05.182. Royalty on natural resources. Any royalty provided for in §§ 135 — 181 of this chapter may be taken in kind rather than in money if the commissioner, with the consent of the Alaska Royalty Oil and Gas Development Advisory Board, determines that the taking in kind would be in the best interest of the state. The consent of the board is required only with respect to oil and gas royalty-in-kind under § 183 of this chapter. (§ 1 ch 56 SLA 1970; am § 7 ch 71 SLA 1971; am § 1 ch 9 SSSLA 1974; am § 5 ch 218 SLA 1976)

Effect of amendments. — The 1974 amendment substituted "if the commissioner, with the consent of the board, determines" for "at the discretion of the commissioner if he determines" near the middle of the first sentence and added the second sentence.

The 1976 amendment substituted "Alaska Royalty Oil and Gas Development Advisory Board" for "board" in the first sentence.

Sec. 38.05.183. Sale of royalty. (a) The sale, exchange or other disposal of a mineral obtained by the state as a royalty under § 182 of this chapter, or the sale, exchange or other disposal in whole or in part of a right to receive future mineral production under a state lease under this chapter, shall be by competitive bid and the sale, exchange or other disposal made to the highest responsible bidder, except that competitive bidding is not required when the commissioner, with the prior written approval of the Alaska Royalty Oil and Gas Development Advisory Board where applicable, determines that the best interest of the state does not require it or that no competition exists.

(b) When competitive bids are required, the commissioner, with the prior written approval of the Alaska Royalty Oil and Gas Development Advisory Board, may reject all bids if he determines that because of the amount of the bids, the lack of responsibility on the part of the bidders, or for reasons consistent with the criteria set out in AS 38.06.070, the acceptance of the bids would not be in the best interest of the state.

(c) If the commissioner determines that a sale, exchange or other disposal of a mineral obtained by the state as a royalty under § 182 of this chapter or of a right to receive future mineral production under a state lease under this chapter shall be made otherwise than by

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competitive bid, and the Alaska Royalty Oil and Gas Development Advisory Board where applicable has approved that determination, the commissioner shall make public in writing the specific findings and conclusions upon which that determination is based.

(d) Oil or gas taken in kind by the state as its royalty share may not be sold or otherwise disposed of for export from the state until the commissioner with the approval of the Alaska Royalty Oil and Gas Development Advisory Board determines that the royalty-in-kind oil or gas is surplus to the present and projected intrastate domestic and industrial needs. The commissioner shall make public, in writing, the specific findings and reasons on which his determination is based and shall, within 10 days of the convening of a regular session of the legislature, submit a report showing the immediate and long-range domestic and industrial needs of the state for oil and gas and an analysis of how these needs are to be met. (§ 1 ch 56 SLA 1970; am § 3 ch 9 SSSLA 1974)

Effect of amendment. — The 1974 amendment rewrote this section.

Sec. 38.05.184. Limitation on oil and gas leases in certain areas, and reacquisition of leases. (a) The legislature finds that Kachemak Bay is an area of extraordinary abundance and diversity of marine life that has provided, and will continue to provide in the future, a basis for one of the state's most important commercial fisheries; that recent information discloses that even minute quantities of oil released into the marine environment may be harmful to the larval forms of crabs and other marine life and that the existence of gyral currents within the bay may increase the likelihood of oil coming into contact with these valuable commercial fish and shellfish species; and that therefore oil and gas development in the bay, at this time, presents an undue hazard to this valuable state renewable resource.

(b) No additional oil or gas leases may be issued by the Department of Natural Resources or any other state agency for the exploration for or the development or production of oil and gas on state-owned land and waters seaward of the mean higher high water line, beginning at Anchor Point; then around the perimeter of Kachemak Bay, to Point Pogibshi; then west to the three mile limit of state land and waters; then north to a point three miles west of Anchor Point; then east to the mean higher high water line of Anchor Point, the point of beginning.

(c) The commissioner of natural resources may enter into negotiations to reacquire by purchase in the name of the state, title to or accountable interests in oil or gas leases within the boundaries described in (b) of this section which were issued before June 4, 1976.

(d) In lieu of cash payment for a negotiated purchase of a leasehold interest, the commissioner may authorize a credit of the purchase price plus interest at the rate prescribed by AS 09.30.070 to be granted the

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26.2

public interest, or migration and spawning of fish in which there is a public interest.
(am § 4 ch 117 SLA 1976)

Effect of amendment. — The 1976 amendment added paragraphs (22) and (23).

As the rest of the section was not affected by the amendment, it is not set out.

Editor's note. — Section 1, ch. 117, SLA 1976, provides: "It is the intent of this Act to implement the provisions of art. VIII, sec. 14, Alaska State Constitution, relating to access to the navigable or public waters of the state."

Applied in Moore v. State, Sup. Ct. Op. No. 1284 (File Nos. 2551, 2587), 553 P.2d 8 (1976).

Chapter 06. Alaska Royalty Oil and Gas Development Advisory Board.

Section	Section
10. Purpose	40. Powers
20. Establishment	50. Board approval required
25. Membership	55. Action by legislature
30. Compensation; per diem, travel expenses	60. Confidentiality
35. Meetings, rules, quorum, votes required; conflict of interest	70. Criteria
	80. Definitions

Sec. 38.06.010. Purpose. It is the purpose of this chapter to facilitate the wise development of Alaska's oil and gas royalty interests by providing means and procedures for sales, exchanges or other disposition of those interests in ways calculated to promote private economic growth consistent with applicable environmental standards and public fiscal stability, and in accordance with AS 38.05.183. (§ 2 ch 9 SSSLA 1974)

Sec. 38.06.020. Establishment. There is established in the Department of Natural Resources the Alaska Royalty Oil and Gas Development Advisory Board. (§ 2 ch 9 SSSLA 1974)

Sec. 38.06.025. Membership. The board consists of the commissioner of natural resources, who is chairman, the commissioner of revenue, and three public members. Each of the public members shall possess experience in petroleum-related fields in such areas as exploration, development, production and economics, and shall be appointed by the governor to serve at his pleasure for three-year staggered terms and confirmed by a vote of a majority of the members of the legislature in joint sesssion. The public members may not be state officers or employees. A public member, upon the expiration of his term, shall continue to hold office until his successor is appointed and qualifies. Vacancies in public membership shall be filled in the same manner as original appointment. An appointee to fill a vacancy shall hold office for the balance of the term for which his predecessor on the board was appointed. A vacancy in board membership does not impair the authority of a quorum of the board members to exercise all the powers and duties of the board. (§ 2 ch 9 SSSLA 1974; am § 8 ch 207 SLA 1975)

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Effect of amendment. — The 1975 amendment, effective July 1, 1975, substituted "commissioner of revenue" for "commissioner of economic development" in the first sentence.

Sec. 38.06.030. Compensation; per diem, travel expenses. Members of the board are in the exempt service under AS 39.25.110 and shall receive per diem and travel allowances as provided by law for other boards and commissions. (§ 2 ch 9 SSSLA 1974)

Sec. 38.06.035. Meetings, rules, quorum, votes required; conflict of interest. (a) The board shall prescribe its own rules of procedure. It shall meet at a time and place determined by the chairman, and at other times and places as the chairman, or a majority of the board members, considers necessary. A quorum is a majority of the members of the board. The votes of the board members shall be recorded. Effective action to carry out the powers granted under this chapter requires the affirmative vote of a majority of the board members. No board member may, with respect to a matter before the board, vote for or on behalf of another member of the board.

(b) No member of the board may act upon a matter in which his relationship with any person creates a conflict of interest. No board member may have an official connection with or hold stock or securities in, or have a pecuniary interest in, a corporation, company or association engaged in the production or transportation of oil or gas. (§ 2 ch 9 SSSLA 1974)

Sec. 38.06.040. Powers. The board has the power to

(1) direct the commissioner of natural resources to solicit inquiries, development plans or bids from persons for the sale, exchange or other disposal of oil or gas or both obtained by the state as a royalty under AS 38.05.182, or for the sale, exchange or other disposal in whole or part of rights to receive future oil or gas production or both under a state lease, subject to terms and conditions established by the board;

(2) examine proposed sales, exchanges or other disposals of oil or gas or both obtained by the state as a royalty under AS 38.05.182, or of rights to receive future oil or gas production or both under a state lease, for the purpose of approving or disapproving the proposed sale, exchange or other disposal;

(3) hire an executive director, consultants expert in technical, economic or other relevant professions and other persons as necessary to assist the board in the exercise of its powers;

(4) promulgate regulations under the Administrative Procedure Act (AS 44.62) that are necessary or appropriate in the exercise of its powers; and

(5) take whatever other actions are reasonably necessary in the furtherance of the purposes of this chapter. (§ 2 ch 9 SSSLA 1974)

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Sec. 38.06.050. Board approval required. (a) No sale, exchange, encumbrance, or other disposition of oil or gas or of the rights or waiver of the rights to receive future production of royalty oil or gas may be made by the commissioner of natural resources under AS 38.05.183 without the prior written approval of the board.

(b) Bids or applications for the purchase of royalty oil or gas may not be rejected by the commissioner of natural resources without the prior written approval of the board.

(c) Competitive bidding in a sale, exchange or other disposition described in (a) of this section may not be waived by the commissioner of natural resources under AS 38.05.183 without the prior written approval of the board.

(d) The board may require conditions relating to the sale, delivery, transportation, or refining or processing within the state to be included by the commissioner of natural resources in the offer of and sale by competitive bidding of oil or gas obtained by the state as royalty under AS 38.05.182. (§ 2 ch 9 SSSLA 1974)

Sec. 38.06.055. Action by legislature. (a) In addition to the approval by the board required under § 50 of this chapter, no sale, exchange or other disposition of oil or gas or of the rights or waiver of the rights to receive future production of royalty oil or gas may be made by the commissioner of natural resources under AS 38.05.183 without the prior approval of the legislature by a concurrent resolution concurred in by a majority of the members of each house.

(b) Until July 1, 1975, contracts for the sale of state-owned royalty gas or oil that specify the sale and delivery of not more than 400 barrels of crude oil per day or not more than 460 barrels of natural gas liquids per day or not more than 2,400 Mcf of natural gas per day may be executed without ratification by the legislature. (§ 2 ch 9 SSSLA 1974)

Sec. 38.06.060. Confidentiality. Notwithstanding AS 09.25.110 — 09.25.120, the board may provide by regulation for the confidentiality of those documents and records in its possession or control which contain confidential business or marketing information the protection of which is essential to the person who has submitted them to the board or in the judgment of the board is essential to the best interest of the state. Such confidentiality, however, shall not preclude the proper review by the legislature. (§ 2 ch 9 SSSLA 1974)

Sec. 38.06.070. Criteria. (a) In the exercise of its powers under § 40(1) — (2) and § 50 of this chapter the board shall consider

(1) the revenue needs and projected fiscal condition of the state;

(2) the existence and extent of present and projected local and regional needs for oil and gas products and by-products, the effect of state or federal commodity allocation requirements which might be applicable to those products and by-products, and the priorities among competing needs;

AGO 800776

(3) the desirability of localized capital investment, increased payroll, secondary development and other possible effects of the sale, exchange or other disposition of oil and gas or both;

(4) the projected social impacts of the transaction;

(5) the projected additional costs and responsibilities which could be imposed upon the state and affected political subdivisions by development related to the transaction;

(6) the existence of specific local or regional labor or consumption markets or both which should be met by the transaction;

(7) the projected positive and negative environmental effects related to the transaction; and

(8) the projected effects of the proposed transaction upon existing private commercial enterprise and patterns of investments.

(b) When it is economically feasible, the board may require, as a condition of the sale of oil or gas obtained by the state as royalty, that the oil or gas be refined or processed in the state and may, when it is feasible and in the best interests of the state to do so, provide for processing or refining of the oil or gas under a contract entered into by competitive bidding before the sale of the oil or gas. (§ 2 ch 9 SSSLA 1974)

Sec. 38.06.080. Definitions. In this chapter

(1) "board" means the Alaska Royalty Oil and Gas Development Advisory Board; and

(2) "state lease" means an oil and gas lease on state land. (§ 2 ch 9 SSSLA 1974)

Chapter 35. Right-of-Way Leasing Act.

Section

10. Legislative declaration of policy
20. Grant of right-of-way lease
30. Abandonment, reduction or impairment of service of pipeline
40. Temporary or emergency service or temporary abandonment, reduction or impairment of service by lessee
50. Applications for right-of-way leases
60. [Repealed]
70. Notice of application
80. Analysis and public hearing
100. Decision on application
110. Term of lease
120. Covenants required to be included in lease
130. Right-of-way easements or leases acquired from others
140. Payment of rental and costs
150 — 160. [Repealed]
170. Forfeiture of lease
180. Suits to enjoin or recover damages for defaults
190. Application of the Administrative Procedure Act
200. Judicial review of decisions of commissioner on application
205. Lease savings clause
210. Delegation of commissioner's authority
220. Continued operation of certain carriers
225. Binding effect of covenants
230. Definitions

AGO 800777

Exhibit 27-a

24 JAN 77 2: 59

TELEGRAM
RCA Alaska Communications, Inc.

#

02048 TDA VALDEZ ALASKA 20 01-24 150P AST

PMS OMAR 278-9615

~~BOX 516~~ 2119 630 W. 4th Ste 200

ANCH 995-~~1001~~

(THE CITY OF VALDEZ) URGES PROMPT APPROVAL OF THE ROYALTY GAS CONTRACT TO ASSURE SUCCESS OF THE TRANSALASKA GAS PIPELINE.

(LYNN CHRYSTAL MAYOR OF VALDEZ)

TELEGRAM
RCA Alaska Communications, Inc.

27-6

27 JAN 77 3:3 03

#

02066 TDA VALDEZ ALASKA 21 01-27 147P AST

PMS O M A R 2501

630 WEST 4TH SUITE 200

ANCH 99501

URGE PTOMPT APPROVAL OF ROYALTY GAS CONTRACTS TO ASSURE

SUCCESS OF TRANS ALASKA PIPELINE

(BARNEY NEYRING) PO BOX 850 VALDEZ AK 99686

AGO 800779

27 JAN 77 3:04

TELEGRAM
RCA Alaska Communications, Inc.

27-C

#

02068 TDA VALDEZ ALASKA 13 01-27 230P AST

PMS O M-A R 2504

630 WEST 4 AVE RM 200

ANCH

URGE PROMPT APPROVAL OF ROYALTY GAS CONTRACT

TO ASSURE SUCCESS OF TRANSALASKA PIPELINE

C W ELLIS VALDEZ AIRPORT TERMINAL VALDEZ AK

#

MG

AGO 800780

27-d

@JV
02063 NL TDA HOMER ALASKA 50 01-24 250P AST
PMS REP LEO RHODE
JUN
URGE PROMPT APPROVAL OF ROYALTY GAS CONTRACTS TO
ASSURE SUCCESS OF TRANS ALASKA GAS PIPELINE
JAMES C MANLEY

#CJV
02064 NL TDA HOMER ALASKA 50 01-24 250P AST
PMS SENATOR CLEM TILLION
JUN
URGE PROMPT APPROVAL OF ROYALTY GAS CONTRACTS TO
ASSURE SUCCESS OF TRANS ALASKA GAS PIPELINE
JAMES C MANLEY

#

TELEGRAM

RCA Alaska Communications, Inc.

27-e

23 JAN 77 8:26

02014 TDA VALDEZ AK 30 01-28 801A AST

PMS OMAR 2546

630 WEST 4 ST SUITE 200

ANCHORAGE AK 99501

THE FOLLOWING TELEGRAM WAS SENT TO SENATOR JALMAR KERTTULA

AND REPRESENTATIVE KEITH SPECKING

QUOTE URGENT URGE PROMPT APPROVAL OF ROYALTY GAS CONTRACT

TO INSURE SUCCESS OF TRANSALASKA PIPELINE UNQUOTE

MR AND MRS ERVIN MICHAEL

27-f

Greater Anchorage
CHAMBER of COMMERCE

Crossroads of the Air World

January 26, 1977

Be it Resolved by The Anchorage Chamber of Commerce:

Whereas, an all Alaskan gas pipeline would be in best economic interests of the State of Alaska and its citizens, and;

Whereas, The Anchorage Chamber of Commerce is on record in support of an all Alaska gas pipeline, and;

Whereas, the Alaska State Legislature is presently considering the merits of a royalty gas contract approved by the State Oil and Gas Advisory Board and,

Whereas, the existence of a Royalty Gas contract supported by the people of Alaska would be an aid toward the ultimate approval of an all Alaskan gas pipeline;

Now, therefore, Be it Resolved.

The Anchorage Chamber of Commerce wishes to go on record in support of a Royalty gas contract and respectfully urges the Legislature of the State of Alaska to expiditiously approve such a contract, based on terms which provide the greatest advantages to the citizens of Alaska.

Copies of this resolution shall be forwarded to: The Honorable John Rader, President of the Senate; The Honorable Hugh Malone, Speaker of the House, and to all Senators and Representatives of the Legislature.

AGO 800783

27 JAN 77 5:49

TELEGRAM
RCA Alaska Communications, Inc.

27-9

#

02085 NL TDA VALDEZ ALASKA 50 01-27 412P AST

PMS OMAR

2515

630 WEST FOURTH SUITE 200

ANCH

URGE PROMPT APPROVAL OF ROYALTY GAS CONTRACTS TO ASSURE

SUCCESS OF TRANS ALASKA PIPELINE

(PAUL AND ELLEN FOSTER 835-2296 VALDEZ ALASKA)

MJ

AGO 800784

Greater Fairbanks
CHAMBER OF COMMERCE

550 First Avenue
FAIRBANKS
ALASKA 99701

Member:
U. S. Chamber of Commerce
Alaska State Chamber of Commerce
Pacific Northwest Trade Ass'n.
National Better Business Bureau

January 24, 1977

27-h

Dear

At the regular scheduled meeting of January 24, the Board of Directors of the Greater Fairbanks Chamber of Commmerce unanimously supported the Governor's proposal for the sale of the state's royalty gas.

We urge you to support the Governor's proposal as written and ratify it as soon as possible as to avoid delay in the pipeline route decision.

In the future we hope that you would consider a gas separation plant in the Fairbanks area.

Sincerely,

Mrs. Jeanne Wilson
President

JW/sh

The GOLDEN HEART City 49th

AGO 800785

FEDERAL POWER COMMISSION

28

NEWS RELEASE

WASHINGTON, D.C. 20426

Exhibit 28

IMMEDIATE RELEASE
FEBRUARY 1, 1977 No. 22868
Docket Nos. CP75-96, et al.
Alaskan Arctic Pipeline Company, et al.

FPC JUDGE RECOMMENDS APPROVAL OF ARCTIC GAS' $8.5 BILLION ALASKAN GAS PROJECT

Federal Power Commission Administrative Law Judge Nahum Litt today recommended approval of an $8.5 billion trans-Canada pipeline system proposed by an Arctic Gas Study Group to bring large volumes of Alaskan natural gas to lower 48 U.S. markets.

Judge Litt in his 430-page decision found the proposal superior in almost every respect to two competing applications, by El Paso Alaska Company and Alcan Pipeline Company (see fact sheet, FPC release No. 22869, for details of all three proposals).

Arctic's project, the largest private undertaking in the country's history, will make more gas available sooner, result in less impact on the environment, at less cost to the consumer than either of the competing proposals, Judge Litt concluded. It would be built during the winter seasons, employing 2,400 at its peak, and initially carrying from 2 to 2.5 billion cubic feet of gas daily beginning in 1982 or 1983.

This initial decision is the first step in FPC consideration of the matter. The full Commission will now review the action of the Administrative Law Judge under the special procedures established under the Alaska Natural Gas Transportation Act of 1976. An FPC recommendation regarding the transportation system will be submitted to the President by May 1, 1977.

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In a separate order issued concurrently with Judge Litt's decision, the Commission noticed suspension of the Natural Gas Act proceedings, established further procedures for Commission review and responded to earlier procedural petitions by Arctic Gas and El Paso. The Commission said that the procedures adopted will give parties adequate opportunity to rebut factual matters while enabling it to discharge expeditiously its duties under that Act.

Hearings on the proposals began May 5, 1975, and continued almost uninterrupted until November 1976. An official inspection was made in August 1976 of the sites of the proposed major facilities and pipeline routes of all three applicants. The record consists of 253 volumes of transcripts and about 1,000 exhibits. The second-stage proceeding is not likely to begin before early 1978, and construction would not begin before late 1978 or '79. The second-stage proceeding would address producer sales contracts and again review rates, marketability, financeability and other matters.

The transportation cost per million btu's for the Alaskan Arctic gas in the fifth year of operation, based upon unescalated 1975 data, will be about $1.60, compared to $2.15 for El Paso's proposal and $1.91 for Alcan.

Judge Litt recommended rolled-in pricing, where all the pipelines' customers help pay for the project gas, but cited one witness' conclusion that gas marketed through the Alaskan Arctic project will be competitive whether priced incrementally or rolled in.

Making a number of assumptions, the average rolled-in price at the city gate would be $1.50 per thousand cubic feet, based on a field price of $1 per thousand cubic feet. On an incremental basis, meaning only those consumers who actually receive the gas pay for it, the average price will be $2.41. These prices are substantially lower than the price of fuel oil and electricity for all metropolitan areas except California and New York, where there is parity with fuel oil, Judge Litt said.

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Even with a 20 percent construction cost overrun, which is not improbable, Judge Litt said, the Arctic Gas deliveries are still economically competitive, while the El Paso project gas would be only marginally so.

Alaska's North Slope encompasses an 80,000-square-mile area extending about 600 miles from the Canadian border up to the Arctic Ocean. Exploration there has only begun, but Judge Litt said all parties agree that proved saleable reserves are around 22 trillion cubic feet.

Most of the proved reserves on the North Slope are in the Prudhoe Bay field, discovered in 1968. Those reserves are the largest yet discovered on the North American continent, representing about 10 percent of proven 1975 U.S. natural gas reserves and more than a year's supply for all U.S. consumers.

The applications were filed prematurely from any rational regulatory point of view, Judge Litt said, and the Commission's determination to try the cases without an essential ingredient represents a regulatory boldness normally not seen. The important missing ingredient was sales contracts by any of the 13 producers who hold interest in Prudhoe Bay reserves. Their failure to sign sales contracts was a chief impediment throughout the hearings, Judge Litt said, since many things depend on the amount of gas available, such as the size of the pipeline, financing, and marketability.

The Commission, with some misgivings, set the applications for hearing without the sales agreements because the national interest demanded expedited consideration, Judge Litt said. The only conclusion possible, he stated, is that for the producers the national interest "lies somewhere below their own economic interest. The producers, like G.B. Shaw's dinner-time companion, have a price at which they would sell their 'service,' and all their protestations to the contrary cannot hide that they are mainly dickering over price," Judge Litt said.

However, he continued, the lack of sales contracts was not fatal to the case since there is little dispute over the

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recoverable reserves at Prudhoe Bay. There is no such agreement on the size of the Mackenzie Delta reserves though, which are critical since the Arctic Gas proposal is directly dependent on delivery of at least 1 billion cubic feet a day the first year of operation. The Mackenzie Delta, located in Canada's Northwest Territories, is 15,000 square miles in size. There are benefits of building one project to transport both Canadian and U.S. gas rather than two separate transportation systems, he said, not the least of which is fewer environmental effects.

Judge Litt rejected Alaska's claim that the FPC does not have jurisdiction over the Alaska gas because the State is performing those activities within the state which Congress wanted regulated. The Commission clearly has full jurisdiction over producer wellhead sales in interstate commerce, transport of the gas within Alaska, and transport and sale within the lower 48 states, Judge Litt said.

The Arctic Gas proposal calls for over 4,000 miles of pipeline extending from Prudhoe Bay through Alaska and Canada to termination points in the lower 48. The 48-inch line to be built between Prudhoe Bay and Caroline Junction in Alberta will be the largest ever used to transport gas, and the operating pressure used to force the gas through the pipeline will exceed the thrust of any line now in existence in North America. The projects would all be built using known technology, with adaptation or "scale-up" as necessary to improve that which is known, such as construction of chilled gas pipelines in permafrost (ground that is frozen year-round), or fabricating a ditching or snow-making machine larger than any built before.

Arctic Gas' heavy reliance on winter construction, it was argued, subjects it to billion-dollar risks if construction is delayed. Arctic has made clear its willingness to incur additional costs to avoid delay, Judge Litt pointed out, but maintains it will not be necessary. All in all, he continued, there is little reason to believe Arctic Gas will not be able to meet its logistic build-up schedule prefatory to each winter construction season. It plans to barge most of its equipment and supplies to stockpile sites before the construction begins, with air support as needed. Although Arctic contemplates six years between certification and

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commencement of flow, actual construction would not begin until the winter of the fourth year.

Judge Litt said that, as to the environmental effect of the proposed projects, seldom has a decision-making body been favored with so substantial a body of salient information on which to draw in reaching a decision. The staffs of the FPC and the Department of Interior each wrote detailed environmental impact statements assessing the "worst case" risks of all three proposals and numerous alternatives. In addition, reports were filed by the parties and voluminous evidence submitted by numerous expert witnesses.

The most significant environmental concern as expressed through testimony was Arctic's crossing of the 14,000-square-mile Alaskan Wildlife Range. The line would cross the entire Range in an east-west direction, with about 2,650 acres permanently dedicated to it. Most of that acreage is right-of-way, however, which would be revegetated.

The Range is part of a large ecosystem, Judge Litt said some of which has not been substantially despoiled by man. Its protection from significant degradation is therefore important and has been so considered by all parties, he said. He accepted, however, Arctic's belief that the impact will be small, of limited duration and not disruptive of even a small area. Judge Litt pointed out that the Range, while remote, is not unimpacted by man, who will continue to use the area regardless of whether a pipeline is approved or not. In addition, he noted, the Range is not legally designated as a "wilderness area" and there is therefore no legal impediment to authorizing a pipeline across it.

It is clearly in the public interest to exploit hydrocarbon reserves in the Range, Judge Litt said, and unless prohibited by Congress, incursion into the Range for this purpose must be considered a virtual certainty. The Arctic Gas project then becomes a benefit because it lessens the environmental cost of attaching the reserves, he said.

A primary environmental concern of the cross-Mackenzie Delta route in Canada was effect on migratory snow geese. Mitigative construction measures can greatly reduce the impact, Judge Litt said. Aircraft overflights, the most

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serious hazard, will be kept well below the least acceptable rate of one every two hours. Judge Litt said, however, that while the FPC can consider the impacts of the pipeline on the MacKenzie Delta, two Canadian tribunals must also rule on the issue, with ultimate authority to deny, license or condition as they see fit.

Judge Litt rejected the argument that Arctic's knowledge of the environmental effects along its proposed route is woefully deficient. The research effort Arctic has made is impressive, he said, and its specific knowledge of the fauna and flora exceeds that held by its competitors.

Another key environmental criticism of Arctic's proposal is its alleged inability to build snow roads when needed in an environmentally acceptable manner or to build a pipeline from them in winter conditions of extreme cold and long periods of darkness. Judge Litt found that the snow road plan is both feasible and effective and can be accomplished with a minimum of environmental harm.

The 915 miles of snow road and work pad will be built in sensitive permafrost using snow collected by snow fencing, harvesting from frozen lakes, or manufactured snow using standard ski-slope technology. Timing is the critical element, he noted. Snow fences would be erected in October, and construction would begin in late October or early November as soon as five to ten miles of snow road is completed.

The State of Alaska's position on environmental matters clearly has been influenced by economic considerations, Judge Litt stated. The simple fact is, he continued, that the State wants to encourage industrial development in central Alaska and supported the El Paso proposal on economic grounds, bargaining with pipeline purchasers of its royalty gas to release portions of that interstate supply for future intrastate industrial use.

The State embarked early on upon a course designed to maximize the economic benefits it would derive, Judge Litt stated. "This laudable goal for Alaskans, unfortunately, is not always consistent with the public interest of all the people of the U.S.," he said. Besides the fact that the state's

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use of Alaskan gas is speculative at best, Judge Litt stated, there is also a serious question of whether industrial gas use would be compatible with federal natural gas end use policy or environmental sensitivities.

Judge Litt acknowledged that Alaska's views are entitled to substantial weight even where the evidentiary showing may be ambiguous. However, he said, the great bulk, if not all, the Prudhoe Bay gas will be marketed in the contiguous U.S., and those consumers will be paying the costs. The economic ills of a particular state are not a valid consideration in determining pipeline rates or route selection, he said, and this policy has been upheld by the Commission and the courts.

Arctic Gas' pipeline, because it is large-diameter and uses extra-high compression, will use less fuel than the other two proposals--6.87 percent for Arctic gas compared to 11.96 for El Paso. Since gas consumers must pay for the gas consumed as fuel, their unit costs will be lower, Judge Litt said. The annual fuel saving by using the Arctic system exceeds residential consumption in each of a large number of states, he noted.

The Arctic Gas system also has more flexibility and expansibility should volumes exceed those expected. It can handle up to 4.5 billion cubic feet daily with additional compression, and if even more capacity is necessary, looping (new lines paralleling existing ones), would "be a work of joy," Judge Litt said.

The FPC staff contended the west leg of the Arctic Gas system is not the most economic way of moving the gas to those market areas. That leg, as proposed by Arctic Gas, would deliver 659 million cubic feet daily, or roughly 30 percent of total initial flow, to a point on the Idaho-British Columbia border, for delivery to west coast markets. The FPC staff proposed that delivery could be accomplished by using idle western pipeline capacity it expected to result from future declining Canadian gas imports, or by displacement of gas westward using existing pipeline systems.

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Judge Litt said the staff's alternative must be rejected because he does not believe its pessimistic outlook for Canadian gas imports will be fulfilled. Without this occurring, he said, there would be no true saving to consumers. Recent reports issued by the Canadian government contain a considerably more favorable appraisal of its ability to continue exports at present levels. Any curtailments which might occur in the late 1970's or early 1980's should prove temporary, he said, in light of frontier gas which may become available then.

The existence of a nationwide gas shortage is uncontested, Judge Litt said, with the nine interstate pipelines comprising the Arctic Gas group projecting their total supplies will fall short of requirements by 26 percent in 1985. These companies, which marketed about a third of total gas production in the lower 48 in 1975, sell in a substantial majority of the lower 48 states but principally California, Ohio, Michigan, Illinois, Minnesota, New York and Pennsylvania. Without both Alaskan gas and other gas supplies, their 1985 requirements in priorities 1 and 2 cannot be met, Judge Litt said.

While Canada's National Energy Board is considering the proposals, Judge Litt said there is much dispute on political issues such as whether the NEB will act impartially in a timely fashion for U.S interests, and whether it will allow U.S. and Canadian Mackenzie Delta gas to be transported through the same system.

These political considerations are principally the prerogative of the President, Judge Litt emphasized; the FPC does not make foreign policy for the U.S. However, he said he must assume that the decision to be made by the Canadian government will be made by rational men viewing the pros and cons of the proposals on a wide range of criteria, just as it is assumed rational men here will make the decision.

Given the present state of world energy resources, he stated, it can be assumed that more rapid development of known and substantial resources is as important to Canada

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as to the U.S., and that a time frame for delivering known supplies late into the 1980's is not likely to be a winning position.

Judge Litt agreed with Arctic Gas' contention that a joint project through Canada is not dependent on a U.S.-Canadian treaty. The normal and long-standing relationship of almost 200 years between the two countries is more than a sufficient basis for assuming stability and rational treatment of a mutually beneficial business enterprise. "Even if it is assumed that a Canadian government would come to power predisposed to act unreasonably, such imprudence could be countered with equally unsavory activities on the part of the U.S.," Judge Litt said.

The overwhelming benefit to Alaska will be royalty gas payments and severance taxes. Any of the proposals would net the state a minimum $135.5 million a year, totalling several billion dollars over the next several decades. The bottom line for the state's development is how it spends those billions, Judge Litt said. Those policies will determine the ultimate socio-economic effect of the project.

There was consensus by the Commission staff, the most populous consuming states which took an active interest, and an array of pipelines and distributors serving huge sections of the country that Arctic Gas' proposal would serve their best interests. However, El Paso's proposal is viable and, if Arctic Gas is unable to accept a certificate, El Paso's proposal, with modifications, would also meet the public convenience and necessity, Judge Litt said. The chief problem with the El Paso project is its lack of flexibility and credibility as presented, he continued. It would need at least 9 cryogenic ships, rather than 8, to provide reliable transportation; five rather than four liquefied natural gas storage tanks, and seven, not six, liquefaction trains at Gravina Point in Alaska. While El Paso proposed locating its California terminal at Point Conception, Judge Litt said all the evidence points to Oxnard as the preferred location.

El Paso, primarily through its lawyers, "has made a silk purse out of a sow's ear," Judge Litt said. It has done

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little intermediate design work and its design, while impressive on paper, has no particular backup by core samples or even general site-specific work anywhere along its actual route.

As to Alcan, Judge Litt said the record does not support even the possibility that a certificate could be granted it. Its design is clearly neither efficient nor economic since the pipeline is undersized. Its 3-year phased-in construction schedule is not credible, he said, and judging from the FPC staff's evaluation, the proposed summer construction cannot be accomplished without unacceptable environmental impact, primarily degradation of ice-rich permafrost.

All the major participants in this mammoth undertaking, "in the vernacular, 'have their hand out,'" Judge Litt said. They all want top dollar, creating serious questions of marketability and in turn, financeability. Alaska may again seek to increase its severance tax on hydrocarbons from 4 to 10 percent; the pipelines want consumer guarantees to repay their equity investment but still seek a rate of return of from 15 to 17 percent; the producers' failure to sign sales contracts indicates where their concern lies.

Only a limitation on the field price of the gas to reflect its intrinsic market value and a reduction on investment returns to reflect limitations on risk can bring these projects "in from the cold," Judge Litt concluded. A field price of $1.00 per thousand cubic feet is about the upper limit, he said: a field price established by contract or otherwise at a level much higher will sink the project, because the delivered cost of the gas would be so high the high-priority consumers which constitute the market would turn to other energy supplies.

The financial plan prepared by Arctic Gas does not outstrip the capacity of any of these markets and is generally feasible, Judge Litt found. He concluded, however, that the magnitude of the capital investment is such that the gas transmission company sponsors cannot provide the institutional lenders with the security necessary to warrant financing. There must be reliance upon both the consumer and the taxpayer to guarantee that the project will be

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completed and that debt service will be secure during any sustained outages.

Legislation to perfect tracking of rates to the consumer level and to approve U.S. Treasury participation is necessary if the project is to be built, Judge Litt concluded. He made the following recommendations: consumer participation in guarantees on capital costs, but only for the debt service; the equity holder should accept the usual risk of equity investment; and the federal government should entertain an insurance or completion guarantee arrangement to facilitate raising project debt capital at a more reasonable cost.

-FPC-

For further information
call 275-4006 (Area Code 202) DC-E

FEDERAL POWER COMMISSION

NEWS RELEASE

WASHINGTON, D.C. 20426

Exhibit 29

IMMEDIATE RELEASE
February 1, 1977
El Paso Alaska Company, et al.
Docket No. CP75-96, et al.

No. 22869
(accompanies FPC
Release No. 22868)

ALASKAN NATURAL GAS FACT SHEET

This Federal Power Commission prodeeding involves three competing projects proposing significantly different approaches to delivering natural gas from the Prudhoe Bay Area of Alaska's North Slope to markets in the lower 48 states. The 200-square mile Prudhoe Bay Field is estimated to contain 22.5 trillion cubic feet in proven reserves of natural gas.

The FPC is to make a recommendation to the President on the selection of a transporation route for the gas by May 1, 1977, under the Alaska Natural Gas Transportation Act of 1976 (Public Law No. 94-586), passed by Congress October 1, 1976, and signed into law by the President October 22.

The three projects pending before the Commission are:

⊗ Alaskan Arctic Gas Pipeline Company (CP74-239, et al.) -- This project involves the construction of about 3,300 miles of new pipeline and 875 miles of looped (connected and parallel to existing lines) pipeline. The pipeline, ranging in diameter from 30 to 48 inches, would pick up United States reserves in Prudhoe Bay, Alaska, and Canadian reserves in the Mackenzie Delta, Northwest Territories, and proceed to Caroline Junction, Alberta, where the system would divide, with one leg extending into the Pacific Northwest down to California, and the other crossing the U.S. border into Montana and southeast into Illinois. Gas would move to eastern markets by displacement. This project includes transmission facilities proposed by several other Canadian and American companies -- Canadian Arctic Gas Pipeline Limited, Alberta Natural Gas Company Limited, Pacific Gas Transmission Company, Pacific Gas and Electric Company, and Northern Border Pipeline Company.

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The project facilities are designed to initially transport 2.25 billion cubic feet of gas daily to U. S. markets and will cost an estimated $5.9 billion (based on filed July 1975 estimates of gas allocated to U.S. markets).

⊗ El Paso Alaska Company (CP75-96) -- This company would build an 809-mile 42-inch pipeline from Prudhoe Bay along the Alyeska oil pipeline corridor to a liquefaction facility at Point Gravina on the south coast of Alaska. The liquefied natural gas would be transported across water by a fleet of 11 cryogenic tankers 1,900 nautical miles to Point Conception, California, where it would be regasified. Gas would flow to midwest and east markets by displacement. The project is estimated to cost $6.54 billion (based on July 1975 estimates) and would be capable of delivering an estimated 2.4 billion cubic feet of gas per day.

⊗ Alcan Pipeline Company (CP76-433) and Northwest Pipeline Corporation, along with several Canadian companies (Foothills Pipe Lines Ltd., Westcoast Transmission Company Limited, Alberta Gas Trunk Line Limited), propose construction of about 3,000 miles of new pipeline and 1,600 miles of looped pipeline (paralleling the other line). The pipeline, ranging in diameter from 30 to 48 inches, would pick up Prudhoe Bay reserves and follow the Alyeska oil pipeline route as far as Delta Junction, Alaska, and from there would parallel the Alcan Highway to a connection with Canadian pipelines in British Columbia and Alberta, where the system would split the gas between western U.S. and midwest U.S. shippers. Gas would also flow to the east by displacement. This system would have a capacity of approximately 2.4 billion cubic feet per day and would deliver gas both into the Pacific Northwest and across a route similar to the Arctic Gas project extending from northeastern Montana into Illinois. The proposed project will cost an estimated $6.28 billion (as filed).

An associated, although independent project, Maple Leaf, will be built to deliver Canadian reserves from the Mackenzie Delta to Southern Canadian markets.

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Chronology

March 21, 1974 - Alaskan Arctic Gas Pipeline Company application filed.

September 24, 1974 - El Paso Alaska Company application filed.

January 23, 1975 - FPC order consolidating both applications (in Docket No. CP75-96, et al.).

April 7, 1975 - Hearings began before FPC Administrative Law Judge Nahum Litt.

November 21, 1975 - FPC staff Draft Environmental Impact Statement issued.

April 7, 1976 - Final Environmental Impact Statement issued.

July 9, 1976 - Alcan Pipeline Company and Northwest Pipeline Corporation application filed.

September 1976 - Supplemental Final Environmental Impact Statement issued.

November 12, 1976 - Hearings concluded. (There were a total of 253 days of hearings resulting in 44,458 pages of transcript together with numerous exhibits.)

December 7, 1976 - Final Position Brief of the Commission Staff issued.

December 14, 1976 - FPC issued Order No. 558 prescribing procedures pursuant to the Alaska Natural Gas Transportation Act of 1976.

February 1, 1977 - Initial decision issued by Judge Litt.

March 1, 1977 - Briefs on exceptions to the Judge's decision to be filed by FPC staff and all parties in the proceeding. (Replies to the exceptions will not be permitted.)

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May 1, 1977 - The Federal Power Commission to make its recommendation to the President.

September 1, 1977 - The President to make his recommendation to Congress. He may postpone his decision until up to December 1, at his discretion.

Sixty days after the President's recommendation, Congress may enact a joint resolution. The Alaskan Natural Gas Transportation Act of 1976 (in section 8) provides dates for further executive and legislative review, if necessary.

Maps of the three proposed Alaskan natural gas transportation systems accompany this fact sheet.

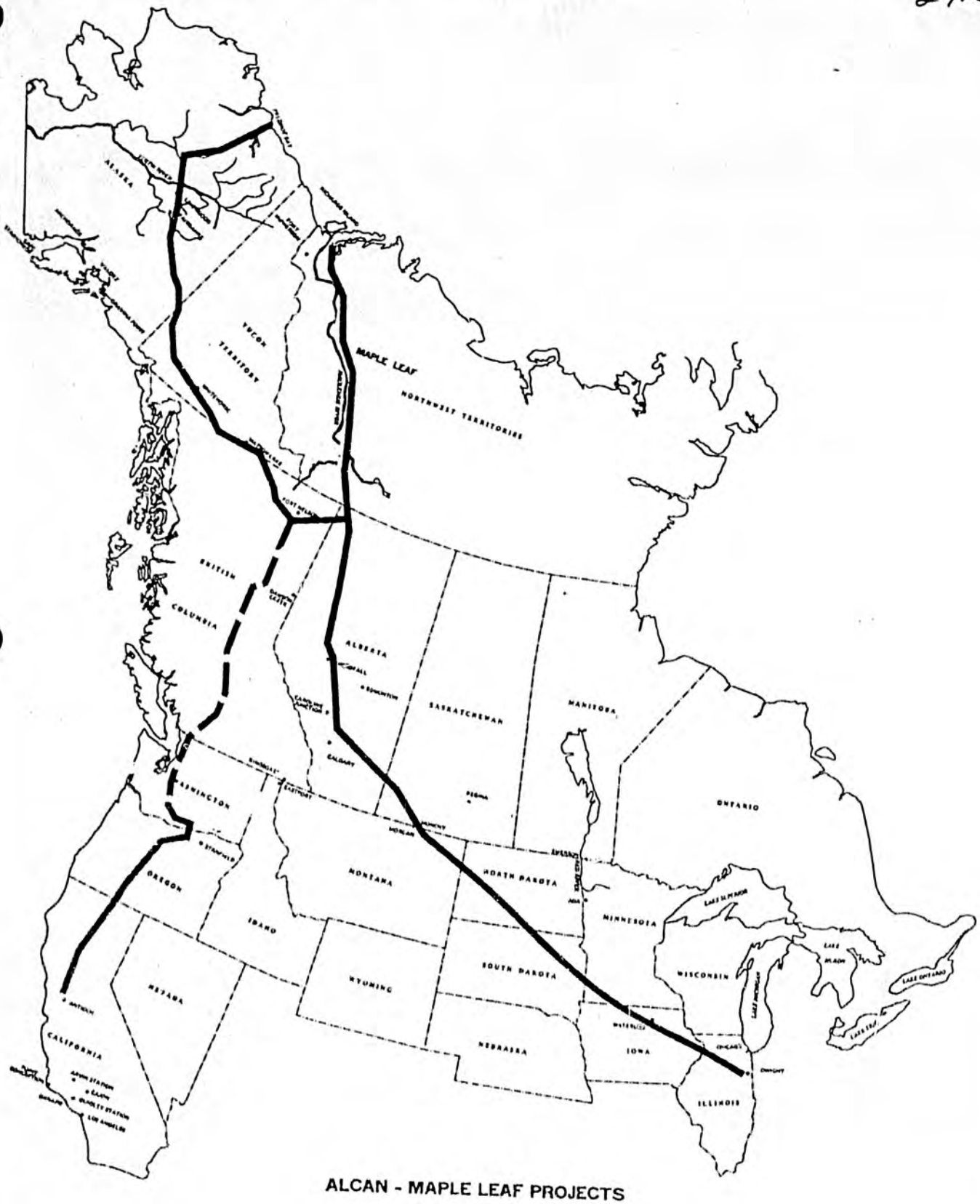
- FPC -

For further information
call 275-4006 (Area Code 202) DC-E

AGO 800800

ARCTIC GAS PROJECT

EL PASO ALASKA PROJECT



ALCAN - MAPLE LEAF PROJECTS

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RUTH A. M. SCHMIDT, PH. D.
GEOLOGIST
1040 C STREET
ANCHORAGE, ALASKA 99501

Exhibit 30

30 January 1977

House Special Committee on Royalty Gas Sale
ATT: Representative Clark Gruening
Pouch V, Juneau Alaska 99810

Dear Representative Gruening:

I have been asked to express my thoughts on the proposed El Paso natural gas pipeline route vs. the proposed Alcan route.

I am most disturbed by the State's position of giving premature support to the El Paso-LNG tanker route for Alaskan gas. The additional not-too-subtle royalty gas sale plug for that route should make the legislators give pause and further consideration before approval, if any.

Several points should be most carefully examined, in light of the extensive lobbying effort of the industry that stands to profit greatly by this. The route El Paso proposes involves additional intrusion upon wilderness areas, in the extension from Brown Creek to tidewater at Point Gravina. And Point Gravina additionally is in a highly active seismic zone. I need not remind many of you that this area was suddenly elevated about four feet during the 1964 earthquake, nor of the dangers of seismic sea waves in Prince William Sound to onshore facilities. Think of the additional safeguards that must be built into any sensitive structure to conform to seismic building codes.

The further expenditure of energy and time to convert the natural gas to LNG, plus the energy and time in reconverting back to natural gas, at a still unnamed port, MUST be considered. It has been reported that as much as 6.85% will be lost in liquifaction and ocean transportation.

Think as well of the materiel necessary to construct not one, but two terminals, which will cause further delay in marketing the gas. Materiel such as steel that already is in short supply. Will it require more steel for terminals and tankers than for a pipeline?

To keep my discussion to land usage for a bit, the Alcan route does not require any significant alignment and cutting through the wilderness. It utilizes areas already 'developed', not only in Alaska, but also in Canada. It would not require any conversion and reconversion of natural gas to LNG and back again. It would utilize pipelines, many of which in Canada and the conterminous United States are already in place. And, it avoids the high seismic zones.

If this route were in existence now, think of how the suffering East and Midwestern States could avail themselves of needed supply. But if they had to rely on conversion to LNG, transport by tanker, and reconversion to natural gas, ALL BEFORE the gas could AGAIN enter a pipeline to be

transported to the East --- well, how would you regard your fellow citizens of another state who made you -- what was that bumper sticker- "... freeze in the dark"..?

I do not have at hand the figures for conversion, but it does cost more. More money, more time, more energy ---at a time when the nation MUST be practising energy conservation.

So far my thrust has been to the land. Can we consider the sea? Presently the media is covering the great tanker debate, and is finally reporting many of the tanker accidents, spilling oil: fuel oil, crude oil, heating oil, into the sea. It is not my intention to remind you of the devastation of oil spills upon marine life and renewable food sources, though I would like to point out the difference in amount of oil lost by a pipeline leak, even a 48" pipeline, to that lost in any of the recent tanker accidents. The large 48" TAPS line has check valves which would limit a spill at most to less than 300,000 gallons. (Alyeska's reported figure 5000 bbls., or 210,000 gals.) Compare this to recent media reported losses at sea, and in harbors.

It is my intention to call your attention to the present controversy about the oil tanker traffic. Consider the additional navigational hazards posed by adding more large vessels to the sea routes south and west from Alaska. Vessels that require great distances to stop. To turn around, to maneuver. Vessels that will require additional highly trained crews. All this to be added to the oil tanker fleet, freight traffic of barges, hydrotrains, the ferries, cruise ships. Nor should we forget the fishing industry of Prince William Sound and the Alexander Archipelago, an industry that historically has provided large portions of Alaska's jobs and income.

Have you ever seen the ARCTIC TOKYO or its sister ship slow down in Kachemak Bay before a pilot can board it to take it to Nikiski? Watch it some time, before you think it can be easily maneuvered. Now have it try to avoid another ship. What about accidents? Consider again, the great loss of a non-replaceable, non-renewable source of energy from a tanker, super or smaller, LNG or oil, vs. a pipeline leak.

I am not going to bring up other harmful environmental effects, such as thermal pollution.

But I do wish to express my strong support for carefully considering a route that has minimum environmental impact, that requires less energy in its facets to construct, and <u>STILL</u> is providing most advantages of an All-Alaska route.

Respectfully,

Ruth A. M. Schmidt

Ruth A. M. Schmidt, ATPG 352

Exhibit 31

STATE OF ALABAMA
HOUSE OF REPRESENTATIVES

MONTGOMERY
36104

JOHN W. PEMBERTON
CLERK

February 1, 1977

Honorable Lieutenant Governor
Honorable Speaker of the House
The Legislature of the State of Alaska
Juneau, Alaska 99801

Gentlemen:

On February 1, 1977, H. J. R. 5, which was introduced in the House of Representatives by the Speaker Pro Tem, the Honorable Bobby Tom Crowe, was passed without any controversy. The resolution was passed by the Senate with no descension and subsequently signed by the Governor of the State of Alabama. When the Governor signed the resolution, the office of the Secretary of State had closed for the day and as a result there was no act number given to the H. J. R. The office of the Secretary of State will be open at 8:00 a.m. on Wednesday, February 2, 1977 at which time H. J. R. 5 will be given an act of number 1 of the 1977 legislature.

The legislature is very much concerned about the events occurring in the State of Alabama and are very hopeful that the resolution passed by them will be of some assistance whereby the Legislature of the great State of Alaska will help us in the problem that confronts us with regards to a shortage of natural gas.

RECEIVED
FEB
Lieutenant Gov.
State of A

Very truly yours,

John W. Pemberton

JWP/csf

RECEIVED
FEB 1 1977
Lieutenant Governor

AGO 800806

State of Alabama

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House of Representatives

MONTGOMERY, ALABAMA

Resolution

H.J.R. 5

By Mr. Crowe

WHEREAS, the Lower 48 United States are experiencing a dire need for natural gas, the impact of which is causing serious economic and citizen hardships; and

WHEREAS, the vast discovery of natural gas in the Prudhoe Bay Field on the North Slope of Alaska will offer a new supply source that could improve the requirements of our residential, commercial and industrial sectors; and

WHEREAS, Southern Natural Gas Company, the major supplier of natural gas to the State of Alabama, has negotiated a contract with the State of Alaska for the purchase of a significant quantity of the royalty natural gas from Alaska; and

WHEREAS, under the terms of the contract between Southern Natural Gas Company and the State of Alaska, approximately 650 billion cubic feet of natural gas would be delivered to our area of the country over a period of twenty years; and

WHEREAS, this contract must be approved by the Legislature of the State of Alaska; now therefore

BE IT RESOLVED BY THE LEGISLATURE OF ALABAMA, BOTH HOUSES THEREOF CONCURRING, That the State of Alabama urges the Legislature of our sister state, the State of Alaska, to lend its approval to this contract and to take the necessary steps to the end that the contract will be ratified and the natural gas can be expeditiously transported for use by our citizens and industries.

BE IT FURTHER RESOLVED, That copies of this resolution be forwarded by the Clerk of the House to the Governor and Lieutenant Governor of the State of Alaska, to the Congressional Delegation from the State of Alaska and to the Congressional Delegation from the State of Alabama.

AGO 800807

Exhibit 32

State of Mississippi

Evelyn Gandy
Lieutenant Governor

Jackson

February 3, 1977

The Honorable Lowell Thomas, Jr.
Lieutenant Governor
State of Alaska
Pouch "AA"
Juneau, Alaska 99811

Dear Governor Thomas:

Our growing concern about the severe shortage of natural gas has been greatly increased as a result of the unprecedented cold weather we have experienced this winter. We believe that positive action must be taken if this situation is to be improved and serious consideration must be given to ways by which adequate gas supplies will be available to our people.

The above situation brings to our attention the proposal by your State to sell a portion of its royalty natural gas to Southern Natural Gas Company which delivers a substantial amount of natural gas for use by the consumers in Mississippi. This additional supply for use in our area would mean much in helping Mississippi avoid a more serious and acute shortage of natural gas in future years.

The accelerated development and transportation of the natural gas from the Prudhoe Bay Field of Alaska to the lower forty-eight states appears to be absolutely necessary, and I hope Alaska's proposal to sell a portion of its royalty natural gas to Southern Natural Gas Company will be given serious and favorable consideration.

With kindest regards and best wishes, I am

Sincerely yours,

Evelyn Gandy

Evelyn Gandy
Lieutenant Governor

EG/nl

RECEIVED
Lieutenant Governor

AGO 800808

Exhibit 33

Alaska
STATE CHAMBER of COMMERCE
~~308 National Bank of Alaska Building~~ 310 Second St.
Juneau, Alaska 99801
Phone 586-2323

File

February 7, 1977

TO: Senator John L. Radar, Chairman
Representative Clark Gruening, Chairman
All Committee Members of the Joint Committee
of Alaska Royalty Gas

FROM: Don Dickey

Because joint hearings on the State's Royalty Gas contracts have stretched out considerably longer than anticipated, I did not request to testify but have chosen to submit our position on this important matter in writing.

The Alaska State Chamber of Commerce supports the Royalty Gas contracts arranged by the Administration with the three companies who have agreed to distribute Alaska's gas: El Paso Gas Co., Southern Gas Co., and Tenneco.

I would remind the Committee that these contracts are the result of strong statewide pressure from the public and requests by the last legislature for the Administration to act and find a market for the State's 1/8th Royalty Gas. It appears to us that these contracts will, as Commissioner of Natural Resources, Guy Martin, pointed out accomplish at least three things:

1. Alaska gets a good price for the gas.
2. We get interstate protection of our gas with the unique "Take Back" provision if needed.
3. Alaska gains needed outside support by developing a team of promoters for an All-Alaska Line.

Now, some witnesses claim we could have gotten a higher price for our gas if we would have put it up to competitive bid, or as some suggest, wait for the hope that the Federal government will deregulate gas.

33.1

We recognize there is a climate in Washington that makes it appear possible that deregulation may soon occur. However, I would remind you that in spite of frequent major attempts in the past, the price freeze on gas has stood since the F.P.C. put it in effect well over 22 years ago, in 1954. So waiting is merely a delay technique and gains nothing since the contract specifically protects the State regardless of whether gas is regulated or unregulated.

Some claim Alaska could have obtained a higher price by open bidding which is possible, but is it probable. Testifying before your Committee last Friday, Dr. Carl Swanson, Executive Vice President of Jensen and Associates, Inc. of Boston, commented: "I believe the prospects of obtaining a higher price are highly unlikely. Even if the El Paso route isn't approved, the State is protected." Where were all these interested companies when the Gas Royalty Board was meeting and openly discussing prospects to contract for its gas?

Also, what price tag can we realistically place on the contract provision that insures the three companies will conduct an outside lobbying effort in support of an All-Alaska Line? While the success of their effort can not be guaranteed, the fact is they don't obtain our gas if the decision is for another line. The three companies share a common goal with Alaska.

This week we heard Federal Law Judge Nathun Litt rule in favor of the Arctic Gas project. Next month the Federal Power Commission is to render its route choice recommendation to the President. Now is the time for Alaska to act to get a strong outside lobbying effort in support of an All-Alaska Gas Line - with the needed jobs, economic contribution, and added taxes it will bring Alaska and her people. To delay is to turn our back on the facts and deny any favorable consideration of the All-Alaska Line. We think the effort must be made.

It has been suggested that an overland route is superior to liquifying the gas and shipping it to the West Coast in tankers because of the uncertainty of moving LNG. Alaska has the greatest amount of experience in shipping LNG of any state in the nation. Just this week, Rear Admiral Hayes of the 17th Coast Guard District, publicly commented: "Over the last six years our nation has experienced the transfer of 252 LNG tankers in U.S. waters, and of these, 210 occured in Alaska."

Let me point out that this record was accomplished without any major accidents and gives us a wealth of experience in this method of transportation that will prove useable for the future.

After listening to a week of expert testimony, as your Committee members have, it appears that with a majority of Alaskans favoring an All-Alaska Line then we must unite as one voice in support of the committment and launch a national lobbying effort to seek its final approval now.

I hope this letter will be made part of the record of the hearings and appreciate this opportunity to present our views.

Sincerely,

Don Dickey

Don Dickey
President

DD:rh

RESOLUTION NO.: 76-1117-13

Exhibit 34

STATE OF CALIFORNIA

State Energy Resources
Conservation and Development Commission

RESOLUTION

WHEREAS the California Public Utilities Commission has been directed by recent state legislation (SB 2008) to "represent the united interests" of (state agencies) in federal regulatory energy proceedings and to consult with state agencies, specifically the ERCDC (Section 5401 of the Public Utilities Code); and

WHEREAS the ERCDC staff has prepared or in preparation comprehensive reports designed to identify emerging trends related to energy supply, demand, and conservation and public health and safety factors pursuant to Section 25309 (the Warren-Alquist Act) "to provide the basis for state policy and actions in relation thereto"; and

WHEREAS ERCDC staff has acquired and analyzed information in order to ascertain future energy problems and uncertainties including:

(a) The production of Alaskan North Slope oil and its projected use in the State;

(b) Impacts of petroleum price increases and projected conservation measures on the demand for energy and indirect effects on the need for offshore oil development and Alaskan oil delivery into the State;

(c) Potential shipments of Alaskan oil through the State;

(d) The impact on the State of national energy policies including Project Independence and its successors;

(e) Implications of natural gas decision making for California in accordance with Section 25005.5 of the Public Resources Code (SB 1479); and

34.1

WHEREAS the CPUC, in consultation with the Governor's Office of Planning and Research and ERCDC staff, has established procedures for consultation with other state agencies in federal energy proceedings; and

WHEREAS the CPUC will file a final brief in the El Paso Alaska case by November 30, 1976, which will set forth a statement of policy, based upon the record before the FPC, of other state agencies (CPUC telegram, October 28, 1976);

THEREFORE BE IT RESOLVED that the General Counsel's Office, in coordination with the Executive Director and Commission staff, shall recommend to the Commission appropriate responses to CPUC's request for assistance and to have evidence, expert witness(es), and statements of policy prepared when appropriate for the following federal regulatory energy proceedings (described in depth in attachments) pursuant to the ERCDC's consultation responsibilities according to the provisions of SB 2008:

1. El Paso Alaska Company, FPC Docket No. CP75-96, et al.;
2. Pacific Indonesia LNG Company, FPC Docket No. CP75-160, et al.;
3. El Paso Natural Gas Company, FPC Docket No. CP75-362;
4. Proposed Rulemaking for Approved States' Coastal Zone Management Program, FPC Docket No. RM76-38;
5. Request for Rulemaking on LNG Site Selection Criteria, FPC Docket No. RM76-13;
6. Pacific Alaska LNG Company, FPC Docket No. CP75-140;

34.2

BE IT FURTHER RESOLVED that all statements of policy representing the position of the Energy Resources Conservation and Development Commission in any of the above federal energy regulatory proceedings be submitted on the Energy Commission's consent calendar and approved before they shall be officially represented as a Commission position;

BE IT FURTHER RESOLVED that the Energy Commission makes the following Alaskan North Slope natural gas policy findings, and respectfully requests the California Public Utilities Commission to include these findings and the attached policy statement in its final brief in the El Paso/Alaska case and consider them in the development and approval of CPUC's own final arguments:

1) That California will require at least one liquefied natural gas (LNG) regasification marine terminal in the early 1980;s;

2) "Until the risks inherent in liquefied natural gas terminal operations can be sufficiently identified and overcome and such terminals are found to be consistent with the health and safety of nearby human populations, terminals shall be built only at sites remote from human population concentrations. Other unrelated development in the vicinity of a liquefied natural gas terminal site which is remote from human population concentrations shall be prohibited. At such time as liquefied natural gas marine terminal operations are found consistent with public safety, terminal ties only in developed or industrialized port areas may be approved." (California Public Resources Code, Section 30261(b).)

34.3

3) That given the current state of knowledge concerning LNG safety, the proposed Oxnard and Los Angeles LNG terminal sites should not, at the present time, be considered "remote from human populations concentrations";

4) That the State of California has a law and a process (the California Coastal Act, SB 1277) for resolving LNG-related land use, environmental, and safety questions and for issuing coastal permits for LNG terminals;

5) That it would be inappropriate for California to advocate a specific remote site (on or offshore) until such time as the state has completed its environmental impact, supply contingency, and seismic and LNG safety studies;

6) That certification of an overland natural gas pipeline system is in California's and the national interest, in part because diversification of supply sources minimizes risks and enhances the reliability of energy delivery systems; and

7) That, however, if the Federal Power Commission should approve the El Paso Alaska proposal and must, therefore, select one of the three proposed California sites in the El Paso/Alaska proceeding, it should tentatively approve a site subject to:

   a. Permit approval by the State Coastal Commission and review by the State Seismic Safety Commission;

34.4

b. Strict permit conditions which prohibit unrelated secondary (or induced) industrial and residential development adjacent to the site or within a "fire hazard" radius of the site; and

c. Completion and evaluation, including public hearings of the expanded alternate site analysis for the Point Conception EIR.

34.5

THEREFORE BE IT RESOLVED that the Energy Resources Conservation and Development Commission finds that an overland pipeline delivery system for natural gas from Alaska's North Slope including a western leg for direct delivery to California should be selected by the Federal Power Commission which most closely incorporates the following characteristics:

1) Earliest possible completion date;
2) Lowest cost of service;
3) Least environmental impact particularly including impact on sensitive wildlife areas;
4) Provides access to the largest deliverable natural gas supplies;
5) Relies on proven pipeline construction techniques;
6) Maximizes the use of existing rights-of-way;
7) Provides an acceptable financing plan requiring the least possible governmental subsidies;
8) Provides the most direct delivery system for California;
9) Enjoys the committed support of both the United States and Canadian governments;
10) Pro[illegible]des the greatest incentives for maintaining continued access to Canadian gas already contracted with California consumers.

34.6

WHEREAS the final decision on the choice of systems for delivering Alaskan North Slope (and Canadian) natural gas to the lower 48 states will be made by the President with Congressional concurrence in the second half of 1977;

BE IT RESOLVED that the SERCDC directs the staff to prepare issue papers in support of hearings to be held by the CERCDC during the 1st quarter of calendar year 1977. The purpose of the hearings shall be to enable the Commission to take a definitive position in favor of one or the other of the overland gas transportation routes for North Slope gas and to communicate such findings to the President and the Congress.

Dated: November 17, 1976

STATE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT COMMISSION

Richard L. Maullin
Chairman

ENERGY COMMISSION POLICY STATEMENT
EL PASO/ALASKA CASE:

The Energy Commission contends that the CPUC acted prematurely in choosing Oxnard as the preferable site for the El Paso/Alaska project for the following reasons:

1. The public safety factor regarding the proposed facilities at Point Conception, Oxnard and Los Angeles Harbor is still undetermined. The risk assessment studies prepared by Science Applications, Inc. (SAI) for all three facilities and submitted for the record by Western Terminal as Exhibits WL-51, WL-52, and WL-53 were based on preliminary data and anticipated design (Tr. 25178). The SAI studies were published in December 1975, and do not fully reflect certain critical engineering details and design progress. For example, seismic analysis for the Oxnard marine facility was completed in July 1976, and the related gimbal joint study was completed in September 1976.

2. Disagreement exists between the FPC staff and SAI regarding the behavior of LNG vapor clouds and other key risk determinants, such as marine vessel traffic. Attention is directed to a letter from the FPC staff to Western Terminal, dated October 26, 1976, in Western LNG Terminal Company, Docket No. CP75-83-2, requesting additional information as to 21 technical points relating to the SAI risk assessment studies and models and assumptions upon which those studies were based. The information requested in this letter indicates that several important areas relating to public safety remain unanswered.

3. Witnesses for Western Terminal stated that they were convinced "internally" that the proposed facilities "presented no undue hazard to the public" and that SAI's risk assessment studies were performed primarily for "defense in permit proceedings", and for the purpose of "convincing the public" (Tr. 24959). Witnesses for SAI stated that no changes in design or operations were suggested because "the risks were extremely low and therefore there was no reason to suggest any changes in the design". Western Terminal did not produce "internal" studies or documents which led them to the conviction that the facilities were acceptably safe, prior to completion of the SAI risk assessment studies. Therefore, the SAI work must be treated as an advocacy document until such time as technical review by qualified, independent peers has established its scientific validity. This review process has only just begun. SAI's conclusions and methods have not been shown to enjoy general acceptance in the scientific community, and they have not been accepted or relied upon by any identifiable authority other than Western Terminal.

34.8

4. Contingency planning appears woefully inadequate to assure public safety in the event of a major safety incident, however unlikely.

5. Pre-permitting safety review must be regarded as preliminary and inconclusive. For example, the review conducted for the FPC by the National Bureau of Standards was only a preliminary step; many critical issues were not and could not be addressed because of the preliminary status of engineering work. Other problem areas were identified but, based on information and belief, responses were left open-ended. It has not been adequately established that safety monitoring in the post-permitting phase, from final design through construction and operation, will be adequately provided for. The recently enacted California Coastal Act (California Public Resources Code, Section 30000, et seq.) will require positive findings that any LNG facility proposed for siting in a populated area is consistent with public safety. The California Coastal Commission intends to exercise this responsibility.

6. Additional studies are being conducted within California, regarding all three of the proposed sites for LNG regasification facilities. A preference for any site would be premature, until these studies are completed. For example, the City of Oxnard recently issued a Draft Environmental Impact Report (EIR) regarding Western Terminal's proposed facility at Oxnard. The first public hearing regarding the Draft EIR was held on November 4, 1976. A Final EIR for the project is required by the California Environmental Quality Act (California Public Resources Code, Section 21000, et seq.) prior to the issuance of any local or state permits. Also, from a public policy point of view, completion of the State EIR process appears indispensable to a decision as to the acceptability of Oxnard as a site for a LNG regasification facility.

   At this point, it should be noted that in preparing its Draft EIR, the City of Oxnard had an independent safety study performed. It refused to rely on the SAI risk assessment study to establish the safety of the proposed facility at Oxnard. Based on information and belief, a Final EIR for the Oxnard facility will be certified in March or April, 1977. The Final EIR for the Oxnard facilities will be submitted to the FPC as soon as it has been certified.

   The preparation of an EIR for the proposed Point Conception site has recently begun. The reason for the delay has been Western Terminal's failure to file the necessary applications with the County of Santa Barbara until just recently. As stated above, with respect to the Oxnard EIR, completion of the State EIR process is indispensable to a decision regarding the acceptability of Point Conception as a site for a LNG regasification facility.

34.9

By Order dated May 19, 1976, the Federal Power Commission denied petitions by the CPUC and the County of Santa Barbara for local hearings regarding the proposed LNG facilities at Los Angeles Harbor, Oxnard and Point Conception. At the same time, it has granted requests for local hearings at other sites in the lower 48 states, e.g., Everett, Massachusetts. After the Commission has denied the requests of state and local agencies for local hearings in California, it would be premature for California to endorse any site until the various State EIR processes have been completed. After the Oxnard and Point Conception EIRs have been subject to local public hearings and local exposure, there will be a better indication as to which site, if any is more acceptable for a LNG facility. Also, until the Oxnard and Point Conception EIRs have had such local exposure, it seems premature to argue, as the CPUC did, that the possibility of injunctive action is more likely at Point Conception than at the other for proposed locations.

The issue of seismic safety is presently under detailed technical review by the California Seismic Safety Commission (Seismic Safety Commission). The Seismic Safety Commission expects to issue an official report regarding each of three proposed sites by the end of 1976.1/ Design data presented to this Commission in the El Paso/Alaska, Pacific Indonesia and Pacific Alaska proceedings has been preliminary in many respects. For example, important studies relating to the design of the trestle at Oxnard were only completed in September 1976. These studies have not been submitted for the record in either the El Paso/Alaska or Pacific Indonesia proceedings. Until the Seismic Safety Commission has completed its study as to the proposed sites at Point Conception, Oxnard and Los Angeles Harbor, judgment as to the seismic issues should be reserved.

The Energy Commission is preparing a study relating to the issues of reliability of the proposed LNG regasification facilities. The study will be completed by the end of 1976 and will be available for presentation in the Pacific Indonesia and/or Pacific Alaska proceedings.

1/ It should also be noted that the U.S. Navy, acting through its Naval Facilities Engineering Command, has actively participated in technical discussions relating to seismic issues with respect to both the Los Angeles Harbor and Oxnard sites. Based on information and belief, the Navy has intervened in the Pacific Indonesia and Pacific Alaska proceedings because of the proximity of major naval facilities to both Oxnard and Los Angeles Harbor. In its recent comments on the Draft EIS for the Pacific Alaska project, the Navy agreed with the Commission Staff's conclusion that "the LNG terminal facilities should not be constructed at the proposed Los Angeles site in view of the seismic problem, the shipping congestion in Los Angeles Harbor and the resulting threat to a highly populated area.

34.16

7. The California Coastal Act includes a strong presumption in favor of remote siting, with the burden of proof on the applicant to establish safety. The above-described EIRs for Oxnard and Point Conception will be a vital element of state decision-making for all state permitting agencies, particularly the Coastal Commission and State Lands Commission, with respect to both safety and environmental issues. Since the County of Santa Barbara has not adopted the Commission staff's Final EIS in the El Paso/Alaska proceeding, it would be inappropriate to base a site preference on the Commission staff's environmental analysis which downgrades Point Conception.

Based on the foregoing, the Energy Commission submits that if this Commission (Federal Power Commission) recommends approval of the El Paso/Alaska project, it should approve siting of the El Paso/Alaska project at a remote site consistent with the California Coastal Act and the California Environmental Quality Act. The proposed sites at Los Angeles Harbor and Oxnard are not remote. Point Conception or some other remote site, on or offshore, should be approved by the FPC subject to the condition that a permit be obtained from the California Coastal Commission. The Federal Power Commission should take cognizance of the California Resources Agency's concerns on the environmental issues at each of the proposed sites.

If the El Paso/Alaska project is not certificated, the Energy Commission would recommend siting a facility at Point Conception or some other remote location (either onshore or offshore) for both the Pacific Alaska and Pacific Indonesia projects, until the unanswered safety questions are resolved by the appropriate California agency. These recommendations are without prejudice to the possible siting of a facility at Oxnard, depending on the development of the record on the Pacific Indonesia proceeding.

Exhibit 35

SOHIO PIPE LINE COMPANY

BP BUILDING, 3111 "C" STREET
ANCHORAGE, ALASKA

TELEPHONE: (907) 274-2955

GOVERNMENT AND PUBLIC AFFAIRS DEPARTMENT

MAIL: P.O. BOX 4-2329
ANCHORAGE, ALASKA 99509

February 3, 1977

Honorable John L. Rader
ALASKA STATE SENATE
Pouch V
State Capitol Building
Juneau, Alaska 99811

The agreement between SOHIO and Columbia Gas covering our Purdhoe Bay gas reserves was discussed at the Joint Committee hearings on February 1, 1977. It became apparent to me that there were several misunderstandings regarding our agreement and to clear up those misunderstandings we are enclosing a copy of our Mr. Spahr's letter to you dated March 10, 1976. This letter gives a good summary of the transaction and the reasons for making such an agreement in 1971.

We are anxious for the Legislature to have a correct understanding of this transaction and would be willing to appear before an appropriate committee to expand on the enclosed letter if you deem it desirable.

I plan to return to Juneau on Wednesday, February 9.

K. E. Showalter

K. E. Showalter

KES:ft

Enclosure

cc: R. M. Donaldson

35.1

SOHIO THE STANDARD OIL COMPANY

MIDLAND BUILDING, CLEVELAND, OHIO 44115

March 10, 1976

CHARLES E. SPAHR
CHAIRMAN

The Honorable John L. Rader, Chairman
Gas Pipeline Impact Committee
Alaska State Capital
State Capitol Building
Pouch V
Juneau, Alaska 99801

Dear Senator Rader:

I know that you are working hard for a gas pipeline that would be built from Prudhoe Bay south through Alaska, possibly along much of the right-of-way for the Trans Alaska Pipeline now under construction. I also understand your hope that Sohio could be able to support such a gas pipeline by committing its Prudhoe Bay gas to the proposed pipeline.

On February 19th in our response to questions you had asked on behalf of the Gas Pipeline Impact Committee we indicated that Sohio had entered into a Preliminary Gas Agreement with Columbia Gas dated August 3, 1971 covering our Alaskan gas. This agreement is still in effect and I expect that it will remain in effect. It gives Columbia Gas control of the ultimate disposition of the gas, subject to appropriate federal and state regulations and subject to Sohio and Columbia Gas reaching a final agreement on the price of the gas.

Our agreement with Columbia Gas is probably not fully understood by many in Alaska and elsewhere, and in fact, is a little bit complicated. It did serve as an important part of the early financing of the development of Sohio Prudhoe leases. I think your committee might find it useful to have a summary of what our agreement with Columbia Gas is all about and that's the purpose of this letter.

The Preliminary Gas Agreement covers all of Sohio's Alaskan gas except that which may be used for field purposes. The State of Alaska's royalty gas from our leases will be included unless the State elects to take its royalty in kind. In addition gas attributable to BP's net profits royalty interest in our leases will be included unless BP elects to take its royalty in kind. The agreement further provides that either Sohio or Columbia Gas may cause the other to enter into negotiations looking toward the signing of a regular gas purchase and sales contract of the type appended to the Preliminary Agreement as an exhibit. A regular agreement has not been signed nor have the negotiations started because there are

35.2

still too many unknowns at this time with respect to the gas. These include how much gas Sohio will have available for sale, the rate the gas will be produced and when the production will start.

In order to get this right to negotiate for our gas, Columbia Gas was willing to pay us an advance of $175 million as long as we used the money to develop our Prudhoe Bay leases. Sohio received the money in 1971, 1974, and 1975 and has used it for this purpose. Columbia Gas needed some assurance of getting its money back within a reasonable number of years. Since the timing of gas production was so uncertain, Sohio agreed it would repay the $175 million advance in Prudhoe Bay oil after the field started producing. This advance and the repayment were provided for in a document called an Agreement for Sale and Purchase of Crude Oil. In effect, Columbia has bought $175 million worth of oil for future delivery and paid for it in advance. When Columbia sells the oil it gets from us and receives an amount equal to the advance plus interest, the oil agreement will be at an end. Columbia has appointed Sohio as its agent to sell this oil on its behalf. In summary, Columbia Gas has loaned Sohio $175 million to get the right to negotiate for the purchase of Sohio's Prudhoe Bay gas.

Both the Preliminary Gas Agreement and the Agreement for Sale and Purchase of Crude Oil are lengthy documents but if you want copies, I will be glad to send them to you.

Further background on these agreements might also be helpful. Our agreement with Columbia Gas was the first to be entered into with respect to Prudhoe Bay gas and many have asked us why we did this as early as 1971. I think the step we took was a good one, particularly in view of the financing problems we had at the time. When Sohio acquired its oil and gas interests in Alaska from BP in 1970, it recognized that the development costs of the field and the cost of building an oil pipeline across the State of Alaska, together with tankers to move the oil to the lower 48 states, would be a monumental physical and financial task. This was particularly true because Sohio was, and is, relatively small when compared to the size of this development. Consequently, as soon as the BP transaction had been agreed upon, we undertook to study every possible source of funds that was available to Sohio for this development. In making these studies, we kept in mind our need to preserve as much of our normal borrowing power as we could for the tremendous capital requirements of the oil pipeline once that project commenced.

We knew Sohio now had large oil and gas reserves in Alaska and that such reserves would have a sizable loan value as a source of development money, if they were located in the lower 48 states near transportation facilities.

36.3

We talked to banks about loans which would, in effect, be secured by a pledge of future production from these reserves. We met with no success. The oil pipeline project had been stopped by the courts, and the banks told us, in effect, that they would not loan money on a non-recourse basis against these reserves. The banks said that until the pipe started to go into the ground, non-recourse loans supported solely by these reserves would not be made. Additional credit would have to be pledged. They could not take the risk of loaning money solely against the reserves and then find that the pipeline would never be built. Unfortunately, all during this time inflation and environmental constraints were increasing the development costs by leaps and bounds.

Faced with this situation, Sohio conceived and entered into the agreements with Columbia Gas. In return for agreeing to negotiate with Columbia for our gas, we were able in effect to use part of Columbia's borrowing power to supplement our own. By getting the money from Columbia we were able to carry on a continuous drilling program at Prudhoe during years when some owners stopped drilling completely.

With this perspective and the fact that Columbia Gas will probably be the company determining and arranging for the transportation of this gas, I don't think Sohio should make any statements that could be interpreted as a commitment to any particular gas pipeline project. This would be contrary to the spirit of our agreements with Columbia Gas. This is also consistent with the Statement of Position we filed with the Federal Power Commission in April, 1975.

The State of Alaska and Sohio do have a mutual interest in seeing a pipeline to transport Prudhoe Bay gas. We hope that the current process involving all the interested parties and evaluating the alternative proposals will result in the selection of the project that is best for everyone. Your committee's proceedings will add to this record. Whether or not the matter is finally resolved in the Congress remains to be seen, but we all hope for an early determination.

One other matter ought to be mentioned here. Though I am not thoroughly familiar with the arrangements other companies have made with respect to their Prudhoe gas, I believe that some made agreements which provided for advances to be made by the gas companies with the provision that if such advances did not become part of the rate base of the gas company, the agreement would not be effective. Our agreement with Columbia Gas has no such provision.

Sincerely,

C. E. Spahr

CES:el

Exhibit #36

February 7, 1977

Senator John Rader
Representative Clark Gruening
Joint Gas Pipeline Committee
State Capitol, Pouch V
Juneau, Alaska 99801

Gentlemen:

I think serious consideration should be given to a "fallback" position by the state prior to ratification of the state's royalty gas sale contracts. The contracts are well-bargained, and at one point last year, might have significantly furthered Alaska's chances for an all-Alaska line. That time has passed.

The only reason for the sale is political support. It is too late to mount any significant campaign to effect the eventual gas-line decision in my estimation. The train has already left the station.

After this winter, the gas-hungry Mid-West would never allow this major project to end up anywhere than their own backyards. No amount of convincing could prove that North Slope gas can be delivered to the Mid-West any more economically than a direct pipeline. El Paso can deliver gas to California competitively - but not the Mid-West.

So the options remaining are Gas Arctic or Northwest - barring a Canadian veto. I suggest attention be paid to: 1) trading Alaskan royalty gas for gas liquids; 2) passing legislation barring the gas liquids from leaving Alaska unprocessed; 3) attempting to gain industry support for either running a small diameter liquids line to Fairbanks, or processing the liquids on the North Slope.

Reasoning: 1) Gas could go to Mid-West where it is desperately needed, with Alaska's full support;

2) Alaska would profit from liquids: a) they could be most efficiently distributed to Alaska's sparse and scattered population as a heating/energy source; b) they are the building-block of several petrochemical applications that could support Alaska's industrial and employment needs.

I think it is time to reassess the state's position to a more realistic one, and seek maximum benefit from that.

Thank you for hearing me.

Sincerely,

Eric Eckholm
1028 East 11th Avenue
Anchorage, Alaska 99501

cc: Gregg Erickson
Guy Martin
Bob LeResche
John Greely

EE/kb

Anch.
Exhibit #37

TELEGRAM

RCA ALASKA COMMUNICATIONS, INC
PHONE: 586-6440
JUNEAU, ALASKA 99801

#

02 01 S ANCHORAGE ALASKA 45 02-09 1107A AST

PMS SENATOR JOHN RADER

JUN 534

PLEASE MAKE THE FOLLOWING PART OF THE RECORD.

ANCHORAGE ASSEMBLY BY UNANIMOUS VOTE URGES FAVORABLE CONSIDERATION OF HCR 11, 12, 13 (SCR 3, 4, 5) APPROVING SALE OF ALASKA SURPLUS ROYALTY GAS TO TENECO ALASKA, INC. SOUTHERN NATURAL GAS CO. AND EL PASO NATURAL GAS CO.

DAVE ROSE CHAIRMAN

1977 FEB 9 PM 1 53

#

TELEGRAM

RCA ALASKA COMMUNICATIONS, IN
PHONE: 58[illegible]
JUNEAU, ALA[illegible]

19002 POM CORDOVA ALASKA 15 02-09 1100A AST

PMS SEN JOHN RADER CHAIRMAN SPECIAL SENATE GAS

544

CONTRACT REVIEW COMMITTEE

Exhibit #38

JUN

URGE PROMPT FAVORABLE COMMITTEE REPORTING OUT OF

ROYALTY GAS CONTRACTS TO SUPPORT TRANSALASKAN PIPELINE.

DOUG BECHTEL PRESIDENT CORDOVA CHAMBER OF COMMERCE

#

/

O+G Suppo

TELEGRAM

Exhibit #39

RCA ALASKA COMMUNICATIONS, INC.
PHONE: 586-6440
JUNEAU, ALASKA 99801

1977 FEB 7 PM 4 24

WH 0/088 JUNEAU ALASKA 34 02-07 400P PST

PMS JOHN RADER 355

POUCH V JUNEAU AK

PLEASE APPROVE CONTRACTS SO EL PASO CAN GET TO WORK WITH THEIR NEW PARTNERS. WE FEEL STRONGLY THAT THIS IS BEST FOR ALASKA

RON MOORE

LEVANCE FORSYTHE

LES REYNOLDS

RICHARD J SEARS

JOHN BERGGREN

TERI YOUNG

1977 FEB 10 PM 12 21

#

22011 ANCHORAGE ALASKA 57 02-10 900A AST

Exhibit #40

PMS SENATOR JOHN RADER

JUN 664

HOME BUILDERS OF ALASKA HAVE STRONGLY SUPPORTED THE TRANS-ALASKA GAS PIPELINE PROJECT AND BELIEVE SALES OF SURPLUS ROYALTY GAS WILL HELP ACHIEVE ITS ULTIMATE APPROVAL AT NATIONAL LEVEL. LEGISLATIVE APPROVAL OF SALES CONTRACT WILL ALSO HELP ALASKA KEEP CONTROL OF ITS ROYALTY GAS. WE URGE APPROVAL, AT THE EARLIEST POSSIBLE TIME AND REQUEST YOU VOTE AFFIRMATIVELY

F W CATALANO PRESIDENT HOME BUILDERS ASSOCIATION OF ALASKA

Exhibit # 41

CITY OF CORDOVA

Phone: (907) 424-3237
or 424-3238

Box 1210
CORDOVA, ALASKA 99574

Reply to:

"The Friendly City"

February 10, 1977

Senator John Rader
Pouch V
Juneau, Alaska

Dear Senator Rader:

With the F.P.C. deadline for its recommendation on the Gas Pipeline set for May 1977, it is important for Alaska to speak with a unified voice for an all-American route.

Your timely approval of the proposed gas royalty contracts, after due consideration, will enhance this effort by allying us with influential parties Outside.

We urge your approval.

Sincerely,

Axel "Bud" Janson

Axel (Bud) Janson
Vice-Mayor

Exhibit #42

R E S O L U T I O N

WHEREAS, a trans-Alaska gas pipeline would be in the best interest of the State of Alaska and its citizens; and,

WHEREAS, the Juneau Chamber of Commerce is on record in support of a trans-Alaska gas pipeline; and,

WHEREAS, the Alaska State Legislature is presently considering the merits of royalty gas contracts approved by the Royalty Oil and Gas Development Advisory Board; and,

WHEREAS, the existence of royalty gas contracts supported by the people would aid toward the ultimate approval of a trans-Alaska gas pipeline:

NOW, THEREFORE, BE IT RESOLVED, the Juneau Chamber of Commerce wishes to go on record in support of the royalty gas contracts and respectfully urges the Legislature of the State of Alaska to expeditiously approve such contracts.

Approved this 15th day of February, 1977.

Signed:

Dave Cummings
President
Juneau Chamber of Commerce

ATTEST:

Nicki Bouchee

Exhibit # 43

1977 FEB 11 PM 4 30

TELEGRAM

ALASKA COMMUNICATIONS, INC
PHONE: 586-6440
JUNEAU, ALASKA 99801

CJ

12024 FAIRBANS ALASKA 103 02-11 1130A AST

PMS JOHN RADER
833
JUN

IT IS CLEAR TO US THAT THE CONSENSUS OF THE TESTIMONY BEFORE THE SPECIAL GAS CONTRACT REVIEW COMMITTEE THIS WEEK IN JUNEAU, PROVED THAT THE ROYALTY GAS CONTRACT WILL ADEQUATELY PROTECT ALASKAS INTERESTS AT THE SAME TIME HAVING A SUBSTANCIAL INFLUENCE ON THE GAS PIPELINE ROUTING DECISION WE THEREFORE URGE YOU TO GIVE THE ROYALTY GAS CONTRACTS EARLY AND FAVORABLE CONSIDERATION

FAIRBANKS CLINIC
ABRAM H CANNON MD
GARY L WALKUP MD
GLEN W STRAATSMA MD
JAMES N BERTELSON MD
H JAMES JORDAN MD
JOSEPH M REBAR MD
ROBERT D HANEK MD
JOSEPH K JOHNSON MD
DONALD A DENNESON ADMINISTRATOR

Exhibit #44

El Paso ALASKA COMPANY

POUCH 7009
ANCHORAGE, ALASKA 99510
PHONE: 907-279-6502

February 8, 1977

The Honorable John Rader
The Honorable Clark Gruening
Chairmen
Legislative Royalty Gas Contract
Review Committees
Pouch V
Juneau, Alaska 99811

Gentlemen,

During El Paso Alaska Company's presentation before your committees last week, we were asked to furnish several items of additional information subsequent to the close of the hearings. Such is the purpose of this letter.

Senator Huber requested information respecting the expected composition and LPG content of the gas stream, both before and after processing at Prudhoe Bay. This data is given in Attachment #1 hereto for both 2.0 bcf and 2.5 bcf daily delivery volumes into the proposed gas pipeline.

Senator Croft inquired as to the reasons for abandonment of the El Paso-Distrigas-NIGC LNG project. Attachment #2 is a brief description of that project, and includes an explanation of the various reasons for its present inactive status.

Senator Croft also asked whether El Paso had conducted its own analysis of the reserves and deliverability of the Prudhoe Bay reservoir. We have done so, and a copy of such analysis is appended as Attachment #3. This same document was submitted to the Federal Power Commission as part of El Paso's presentation at Docket No. CP75-96. The direct testimony of Mr. A. M. Derrick, sponsoring witness for the reservoir study, is also included.

I believe the information in the attachments will be fully responsive to the foregoing inquiries. However, if anything further is needed, please let me know.

Best regards.

Sincerely,

EL PASO ALASKA COMPANY

Michael C. Holland
Assistant to the Vice President

Enclosures

44.1

PRUDHOE BAY NATURAL GAS
COMPOSITION AND LPG CONTENT

The attached table illustrates the composition and LPG (liquefied petroleum gas) content for Prudhoe Bay natural gas both before and after field processing on the North Slope, and for both 2.0 Bcfd (billions of cubic feet daily) and 2.5 Bcfd volumes of delivery into the gas pipeline. The "heavier" components of the processed gas stream, which could not be carried in the gas pipeline due to potential condensation problems, are shown as being transported by the oil pipeline.

The field gas composition information was provided by ARCO. The field processing facilities were designed to treat the gas for CO_2 removal, dehydrate the gas to maintain an acceptable gas hydrocarbon dewpoint (thus preventing liquid condensation in the gas line).

The gas pipeline is, in effect, loaded to cpacity with LPG's in accordance with its design operating pressure and temperature. The need to "spill over" some of the heavier hydrocarbaons into the oil line arises from the inability of the gas line to accept all of the available LPG's without condensation (and its attendant problems) occurring.

Table I (2.0 BCFD Case)

	a) Field Inlet		b) Pipeline Gas		c) NGL to Alyeska	
		LPG Content		LPG Content		LPG Content
	Mole %	BBL/day	Mole %	BBL/day	Mole %	BBL/day
N_2	.65	-	.735	-	-	-
CO_2	12.63	-	1.030	-	-	-
C_1	73.64	-	86.081	-	-	-
C_2	6.67	106,548	7.759	98,522	1.60	625
C_3	3.51	57,604	3.976	51,983	4.04	1,619
iC_4	.63	12,236	0.155	2,406	18.85	8,982
nC_4	1.15	21,602	0.194	2,902	37.46	17,201
iC_5	.33	7,142	0.025	437	11.65	6,211
nC_5	.40	8,398	0.021	363	14.12	7,452
C_6+	.39	9,003	0.006	128	12.28	8,253
Total	100.00	222,534	100.000	156,740	100.00	50,342

Table II (2.5 BCFD Case)

	a) Field Inlet		b) Pipeline Gas		c) NGL to Alyeska	
		LPG Content		LPG Content		LPG Content
	Mole %	BBL/day	Mole %	BBL/day	Mole %	BBL/day
N_2	.65	-	.753	-	-	-
CO_2	12.63	-	1.030	-	-	-
C_1	73.64	-	86.081	-	-	-
C_2	6.67	133,185	7.759	123,152	1.60	781
C_3	3.51	72,005	3.976	64,979	4.04	2,024
iC_4	.63	15,295	0.155	3,007	18.85	11,227
nC_4	1.15	27,003	0.194	3,627	37.46	21,501
iC_5	.33	8,927	0.025	546	11.65	7,764
nC_5	.40	10,498	0.021	454	14.12	9,315
C_6+	.39	11,254	0.006	160	12.28	10,316
Total	100.00	278,167	100.000	195,925	100.00	62,928

PARS (IRAN) LNG PROJECT

Since mid-1973, subsidiaries of the El Paso Company have negotiated with the National Iranian Gas Company (NIGC), an Iranian government-owned company, for a share of Iran's potentially large gas reserves in the Persian Gulf. These negotiations have been conducted in partnership with Distrigas, S.A., and Sopex Belge, S.A., both Belgian companies.

The original project concept was to produce natural gas in Iran, pipeline the gas through Iran and Turkey, and liquefy the gas at a port on the Mediterranean Coast for ocean transportation to Europe and the United States. As initial studies progressed, the participants developed another concept which would locate all land-based facilities in Iran and ship the LNG through the Suez Canal to the United States and Europe. Production from the LNG facilities, to be located near Mianlu on the Persian Gulf Coast, is to be shared equally by the United States and Europe. The studies have contemplated a project which would produce in Iran a total of 2.0 billion standard cubic feet per day of natural gas in the form of LNG for 25 years. NIGC has stated that this quantity could be increased to 3.0 billion standard cubic feet per day of LNG depending on the amount of reserves ultimately proven for the Pars structures.

Project Organization

In December, 1974, the participants agreed on several principles which would form the basis for initial evaluation of the project. This agreement set forth the ownership basis (50% NIGC, 25% Distrigas, 25% El Paso), the prices of alternative fuels in the marketplace against which Iranian LNG

44.4

must compete, and the basis for future engineering studies. The first feasibility studies conducted by Fluor Engineers and Constructors, Inc., were completed in mid-1976.

The Pars LNG Carrier Fleet

The LNG carrier fleet has been sized to deliver one billion standard cubic feet of natural gas per day in the form of LNG, to both Zeebrugge, Belgium, and to a terminal in the Chesapeake Bay area in the United States. The size of the LNG carriers was limited to the restrictions imposed by the dimensions of the Suez Canal. One-way shipping distances are approximately 8,300 nautical miles for the U.S. route and 6,200 nautical miles for the European route. Twenty-one 185,000 cubic meter ships comprise the integrated LNG carrier fleet required for the project.

Land-Based Facilities

Iranian Facilities

The source of natural gas for this project is located in the general Kangan area of southwestern Iran. The gas field under consideration for the project is the offshore Pars Structure gas field. Based on preliminary results from an exploration drilling program now in progress, reserves are presently estimated at 150 trillion cubic feet.

The production gas will be collected in an offshore gathering system including 32 gas wells, eight production platforms, and a submarine pipeline system to transport gas to shore. From shore, a 50-mile, 48-inch diameter pipeline will transport the gas to the liquefaction plant near Mianlu, Iran.

44.5

A gas treating plant is required to remove carbon dioxide, hydrogen sulfide and moisture from the gas before liquefaction. The natural gas liquefaction is carried out in six identical parallel liquefaction trains. The LNG plant facilities are entirely self-sufficient, including all utilities, office buildings, safety, maintenance, and laboratory needs.

U. S. Receiving and Vaporization Facilities

Receiving terminals and vaporization facilities will be required in the United States and Europe. El Paso is planning a terminal facility to be located on the U.S. East Coast to receive, store, and revaporize Iranian LNG.

Project Costs

Total capital investment for the Pars LNG Project is estimated to be approximately $8.0 billion based on late-1975 costs. This estimate includes allowances for funds used during construction, return on equity during construction and owner's costs, but excludes receiving terminal costs.

Capital Cost Summary -- Billions of Dollars

Gas Production & Gas Gathering	$1.1
Pipeline, LNG Plant & Terminal	2.6
Integrated LNG Carrier Fleet	4.3
TOTAL	$8.0

Project Schedule

It is estimated that shipments from the Pars LNG Project will commence about five years after project certification by the FPC. The LNG plant will be completed and produce at full design rate six years after the project initiation date.

44.4

Future Project Development

The feasibility studies completed in 1976 indicate substantially higher costs for the Pars LNG Project over those contemplated at the time the project was conceived. On the other hand, the prices of alternative fuels in Europe and the United States have not increased correspondingly. Under these circumstances, the project does not appear to be economically feasible at the present time with the present structure. Numerous other alternatives are presently being explored with the expectation that the project will materialize at some future date.

Press reports indicate that the Iranian government is presently considering several major internal gas consumption programs including petrochemicals development and gas reinjection into crude oil fields with declining production. These alternative uses for natural gas, coupled with Iran's long shipping distance from LNG markets in the U.S., Europe, and Japan, will ultimately influence the timing and extent of Iran's commitments to export LNG.

Attachment

Docket No. CP75-_____

44.7

EXHIBIT H

TOTAL GAS SUPPLY DATA

Application of

EL PASO ALASKA COMPANY

AGO 800843

Docket No. CP75-___
Exhibit H

44.8

EL PASO ALASKA COMPANY

Total Gas Supply

Table of Contents

Description	Tab Number
Discussion of the North Slope Prudhoe Bay Field and Potential Alaska Petroleum Resources	
Statistical Data	1
Reservoir and Volumetric Data	1
Summary of In-Place Hydrocarbons and 25 Year Recovery	1
Forecast of Oil and Gas Production	1
Maps, Cross Sections, Geologic Section	2

EL PASO ALASKA COMPANY

Total Gas Supply

Discussion of the North Slope Prudhoe Bay Field and Potential Alaska Petroleum Resources

The discovery of Prudhoe Bay Field has signaled the prospects for a new and sustained era of petroleum exploration and development in Alaska. As the giant of all American fields it has fulfilled the prophecy of vast petroleum resources in a land that encompasses an area larger than the combined areas of the four most prolific producing states in the lower 48 states.

North America's largest field, Prudhoe Bay, was discovered in 1968 above the Arctic Circle on Alaska's remote and barren North Slope. It lies approximately 200 miles east of Point Barrow and 640 miles north of Anchorage. This hydrocarbon giant, covering over 200 square miles, is estimated to contain, in-place, 13.4 trillion cubic feet of solution gas, 21.7 trillion cubic feet of associated gas and 19.4 billion barrels of oil and condensate as shown in Schedule No. 3. It has opened a vast new petroleum frontier for a nation with decreasing production and increasing requirements.

The primary reservoir in the Prudhoe Bay Field is the Sadlerochit Formation of Triassic Age. The Sadlerochit Reservoir is approximately 600 feet thick except in the east part where it thins to approximately 300 feet. Generally, the formation can lithologically be divided into three depositional zones; an upper zone of primarily fine to medium grained sandstone with occasional thin layers of shale, siltstone or conglomerate, a middle zone of primarily conglomerate and course grained sand with high concentrations of pyrite and siderite, and a lower sandstone zone that becomes increasingly silty and shaly toward its base.

Accumulation of oil and gas is controlled by a westward plunging faulted anticline truncated on the northeast flank. The limits of production are defined on the north by a major down to the north fault; on the west by an oil-water contact and probable faulting; on the south by an oil-water contact; and on the east by truncation. The gas-oil and oil-water contacts vary slightly across the field; however, they generally lie at approximately -8578 feet and -9008 feet, respectively. Minor vertical faults, with 50 feet to 200 feet of throw, occur within the field but are believed to be non-sealing. Due to complex structure and poorer reservoir quality on the west side, the field was divided into the main area and the west area. The main area comprises approximately 98 percent of the oil and gas reserves.

EL PASO ALASKA COMPANY

Total Gas Supply

Discussion of the North Slope Prudhoe Bay Field
and Potential Alaska Petroleum Resources
(Continued)

Reservoir and volumetric data, Schedule No. 2, for the Prudhoe Bay Field were obtained by analyzing and making comprehensive studies of all released data, published material and contact with industry sources. Production for the main area was scheduled utilizing a three-dimensional computer model and is shown in Schedule No. 4. The production forecast shows a relatively gradual build-up of gas production to approximately 4 billion cubic feet per day in the tenth year of operation after the start of oil production. This level of gas production is maintained for a period of 14 years with declining volumes thereafter. For the twenty-five year period shown, 29.2 trillion cubic feet of gas and 6.7 billion barrels of oil are estimated to be recovered.

The reservoir data and scheduled production contained in this application are for the Prudhoe Bay Sadlerochit Reservoir only. Hydrocarbon potential has been established in the shallower Kuparuk River and deeper Lisburne Formations; however, future development will be necessary to delineate the extent of these reservoirs and establish their producing capabilities.

Alaska has many thick sedimentary basins located throughout its boundaries. The Trans-Alaska Gas Project would bring into market's reach gas reserves expected to be associated with these highly potential sedimentary provinces. These huge and thick basinal areas are located in very favorable geologic settings and contain hundreds of thousands of cubic miles of stratigraphy representing Paleozoic to recent sediments. Surface studies and very limited drilling have found the presence of abundant organic material, surface hydrocarbon seeps, oil shales and subsurface shows. All the essentials necessary for petroliferous provinces are present except adequate drilling and testing. Indications are highly favorable that many of the potential sedimentary provinces will primarily develop as gas provinces.

Docket No. CP75-___
Exhibit H
Schedule 1
Page 1 of 1

EL PASO ALASKA COMPANY

Total Gas Supply

Statistical Data
Prudhoe Bay (Sadlerochit) Field
North Slope, Alaska

Line No.	(a)	(b)
1	Reservoir	Sadlerochit
2	Type Gas	Dissolved and Associated
3	Reserve Estimation Method	Volumetric
4	Average Depth, Feet	8500
5	Date of Discovery	1968
6	Ultimate Wells	400
7	Wells at January 1, 1974	88

Docket No. CP75-___
Exhibit H
Schedule 2
Page 1 of 1

EL PASO ALASKA COMPANY

Total Gas Supply

Reservoir and Volumetric Data
Prudhoe Bay (Sadlerochit) Field

Line No.	(a)	Main Area		West Area	
		Oil Zone (b)	Gas Zone (c)	Oil Zone (d)	Gas Zone (e)
	RESERVOIR DATA				
1.	Average Porosity, Percent	21	23	17	20
2.	Interstitial Water Saturation, Percent	30	20	57	50
3.	Reservoir Temperature, °F.	200	192	200	199
4.	Initial Reservoir Pressure, psia	4,409	4,307	4,431	4,325
5.	Specific Gravity of Gas (Air = 1.0)		0.840		0.840
6.	Deviation Factor (Z) Initial Conditions		0.878		0.878
7.	Initial Solution GOR, Cubic Ft./Bbl.	720		650	
8.	Original Reservoir Volume Factor	1.40		1.38	
9.	Original Oil in Place, Bbls./Acre Foot	814.6		410.9	
10.	Original Gas in Place, Mcf/Acre Foot		2,128.8		1,149.5
11.	Original Condensate in Place, Bbls./MMcf		34.4		34.4
	VOLUMETRIC DATA				
12.	Acres	116,810	59,260	16,060	4,140
13.	Acre Feet	22,334,300	10,161,300	1,302,500	108,800

AGD 800848

Docket No. CP75-___
Exhibit H
Schedule 3
Page 1 of 1

EL PASO ALASKA COMPANY

Total Gas Supply

Summary of In Place Oil, Condensate and
Gas and Recovery for 25 Year Period
Prudhoe Bay (Sadlerochit) Field

Oil and Condensate Volumes in Billion Barrels

Line No.	(a)	In Place			Recovery for 25 Year Period		
		Main Area (b)	West Area (c)	Total (d)	Main Area (e)	West Area (f)	Total (g)
1.	Oil	18.2	0.5	18.7	6.6	0.1	6.7
2.	Condensate	0.7	Neg.	0.7	---	---	1/
3.	Total	18.9	0.5	19.4	6.6	0.1	6.7

Gas Volumes in Trillion Cubic Feet at 14.73 psia and 60° F.

		In Place			Recovery for 25 Year Period
		Solution	Associated	Total	Total
4.	Main Area	13.1	21.6	34.7	29.1
5.	West Area	0.3	0.1	0.4	0.1
6.	Total	13.4	21.7	35.1	29.2

1/ Not Scheduled.

AGO 800849

44.13

EL PASO ALASKA COMPANY

Total Gas Supply

Forecast of Oil and Gas Production
Prudhoe Bay (Sadlerochit) Field
North Slope, Alaska

Volumes at 14.73 psia and 60° F.

Year	Oil Production, MBbls/D			Wellhead Gas Production, MMcf/D			Gas Available to Pipeline, MMcf/D
	Main Area	West Area	Total	Main Area	West Area	Total	
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
1	1,191	--	1,191	828	--	828	1/
2	1,190	--	1,190	800	--	800	1/
3	1,190	--	1,190	801	--	801	1/
4	1,501	--	1,501	2,061	--	2,061	1,649
5	1,499	--	1,499	2,195	--	2,195	1,756
6	1,497	--	1,497	2,497	--	2,497	1,998
7	1,490	--	1,490	3,187	--	3,187	2,550
8	1,377	15	1,392	3,805	10	3,815	3,052
9	1,214	15	1,229	3,821	10	3,831	3,065
10	1,021	15	1,036	4,091	10	4,101	3,281
11	829	15	844	3,977	11	3,988	3,190
12	677	15	692	4,026	11	4,037	3,230
13	567	15	582	4,084	11	4,095	3,276
14	478	15	493	3,912	11	3,923	3,138
15	409	15	424	3,980	12	3,992	3,194
16	342	15	357	3,974	12	3,986	3,189
17	274	15	289	3,987	12	3,999	3,199
18	232	15	247	4,020	13	4,033	3,226
19	204	15	219	3,971	13	3,984	3,187
20	185	15	200	3,999	14	4,013	3,210
21	166	15	181	3,962	14	3,976	3,181
22	163	15	178	3,927	15	3,942	3,154
23	149	14	163	4,029	15	4,044	3,235
24	117	12	129	3,294	19	3,313	2,650
25	89	11	100	2,606	20	2,626	2,101
Production for 25 Year Period:							
Oil, Billion Bbls.	6.6	0.1	6.7				
Gas, Trillion Cu. Ft.				29.9	0.1	30.0	25.3

1/ Gas injected.

UNITED STATES OF AMERICA

44.15

Before the

FEDERAL POWER COMMISSION

El Paso Alaska Company, *et al.*) Docket Nos. CP75-96, *et al.*
(Phase I)

Prepared Direct Testimony

of

A. M. Derrick

Q. Please state your name and business address.

A. A. M. Derrick, Post Office Box 1492, El Paso, Texas 79978.

Q. By whom are you employed and in what capacity?

A. I am employed by El Paso Natural Gas Company in the capacity of Vice President.

Q. What is your educational background?

A. I have a Bachelor of Science degree in petroleum engineering from the University of Texas and a Master of Science degree in petroleum engineering from the University of Houston.

Q. Are you a member of any professional organizations?

A. Yes, I am a member of the Society of Petroleum Engineers of the American Institute of Mining and Metallurgical Engineers, the Society of Petroleum Evaluation Engineers, and the American Association of Petroleum Geologists. I am a registered Professional Engineer in the State of Texas.

Q. What was your professional experience prior to joining El Paso Natural?

A. After serving as an engineering officer in the United States Navy during World War II, I joined Stanolind Oil and Gas Company, now Amoco Production Company, in June, 1947. I first performed various field and office duties in Stanolind's production department; later I was assigned to reservoir engineering work. In the latter capacity, I worked in Stanolind's field offices in Pampa and Wink, Texas, and in its general office in Tulsa, Oklahoma. Shortly prior to leaving Stanolind to join El Paso Natural, I was in charge of reservoir engineering in Stanolind's West Texas district office in Midland.

Q. What has been the nature of your professional experience with El Paso Natural?

A. I joined El Paso Natural in 1953 as a Senior Petroleum Engineer and became Manager of the Company's Reservoir Engineering Department in 1960. I remained in that capacity until 1966, at which time I was elected an Assistant Vice President. I was elected Vice President in May, 1972.

Q. What is the nature of your present responsibilities?

A. I am responsible for and direct the activities of various departments in the Company's gas supply and gas marketing functions.

Q. Mr. Derrick, will you briefly summarize each of the Company functions that you are responsible for?

A. The gas supply function is administered through the activities of the Gas Purchases Department, Reservoir Engineering Department and Proration Department, each having the responsibilities to continually study and evaluate the gas supplies available to El Paso Natural under both gas purchase agreements and company-owned leaseholds. Such responsibilities include the negotiation of gas purchase agreements, administration of the state proration rules and regulations including the day-to-day determinations of gas supply availability in meeting the Company's daily operations gas delivery requirements and the determination of future availability and uses.

The gas marketing function is administered through the Gas Marketing and Customer Relations Department and the State Governmental Affairs Department. The Gas Marketing Department's primary responsibility is to continually monitor and evaluate El Paso Natural's system-wide gas requirements of its customers. Such responsibility also includes the day-to-day coordination with the operating divisions of the Company in rendering such services. These responsibilities further include the forecasting of future requirements of El Paso Natural's customers which is used by all departments in the Company in projecting the future actions affecting their areas of responsibility. Additionally, customer relations and state governmental affairs are conducted as an integral part of the overall gas marketing function.

Q. Mr. Derrick, what is the purpose of your testimony in these proceedings?

A. I am presenting testimony and exhibits respecting the projected availability of gas from the Prudhoe Bay Field of Alaska. Gas to be produced from that field is the gas proposed in these proceedings to be transported by El Paso Alaska to markets in Alaska and to the Lower 48 States. I am also presenting testimony and exhibits respecting the projected availability of gas, for the years 1982 through 1985, from the sources presently dedicated to El Paso Natural's

existing pipeline system. Such projections were utilized by Mr. A. H. Carameros in preparing the evidentiary showing that he will make in these proceedings respecting El Paso Natural's role in transporting the Alaskan gas in the Lower 48 States.

Q. What exhibits are you sponsoring?

A. I am sponsoring Exhibit EP- _____ (AMD-1) and Exhibit EP- _____ (AMD-2).

Q. Would you please describe Exhibit EP- _____ (AMD-1)?

A. Exhibit EP- _____ (AMD-1) is comprised of five schedules and maps and diagrams designated Figures 1 through 10 included under Tab 2 of Exhibit H to El Paso Alaska's original application at Docket No. CP75-96. Schedule 1 contains a general discussion of the North Slope Prudhoe Bay Field and Potential Alaska Petroleum Resources. Schedule 2 sets forth various Statistical Data for the Prudhoe Bay Field and Schedule 3 reflects Reservoir and Volumetric Data for the Prudhoe Bay Field. Schedule 4 contains a Summary of In-Place Hydrocarbons and 28-year Recovery from the Prudhoe Bay Field and Schedule 5 contains a Forecast of Oil and Gas Production. The information and data contained in the schedules form the basis for my proposed direct testimony as it relates to Alaskan reserves.

Q. Would you please describe Exhibit EP- _____ (AMD-2)?

A. Exhibit EP- _____ (AMD-2) consists of the three page schedule included under the tab designated "Supply Data" in Exhibit Z-3 to Volume I of El Paso Alaska's First Supplement to Docket No. CP75-96, filed March 3, 1975. The data reflected on such schedule, as I shall describe in my testimony, has been utilized in preparing the illustrative case studies respecting the transportation concept for the Lower 48 States.

Q. Mr. Derrick, would you please describe the Prudhoe Bay Field as presented in Exhibit EP- _____ (AMD-1)?

A. The Prudhoe Bay Field, largest field on the North American continent, is located on Alaska's North Slope near the Beaufort Sea. Figure 1 of Exhibit EP- _____ (AMD-1) is an index map of the State of Alaska depicting the location of Prudhoe Bay Field, prominent geographical features and the proposed Trans-Alaska gas pipeline route. As illustrated in red, the proposed gas line would run from the Beaufort sea coast south to a terminus north of the town of Cordova on Prince William Sound. The Prudhoe Bay Field lies, as shown in Figure 1 of Exhibit EP- _____ (AMD-1), approximately 200 miles east of Point Barrow and approximately 640 miles north of the City of Anchorage, Alaska.

Q. When was the Prudhoe Bay Field discovered?

A. The field was discovered in 1968 when Atlantic Richfield drilled and completed the No. 1 Prudhoe Bay State well. 44.18

Q. Mr. Derrick, please describe briefly the general geology of the Prudhoe Bay Field.

A. The Prudhoe Bay Field is a westward plunging faulted anticline truncated on the northeast flank. Minor inferred type faults with approximately 50 to 200 feet of throw have been interpreted in the field.

Q. What is the formation in the Prudhoe Bay Field that is reflected in Exhibit EP-_____ (AMD-1)?

A. The Prudhoe Bay Field data is limited to the sandstone unit of the Ivishak Member of the Sadlerochit Formation. In my testimony and exhibits it is referred to, for the sake of simplicity, as the Sadlerochit Formation. Figure 6 of Exhibit EP-_____ (AMD-1) is a generalized stratigraphic column of Prudhoe Bay Field. The stratigraphy represented is of a generalized nature and not definable at any specific location. As noted, the scale on the right side of Figure 6 represents average cumulative thickness and not drilled depth. Hydrocarbon potential has been established for several other formations; however, future exploration will be necessary to define the areal extent and producing capabilities of these reservoirs.

Q. Mr. Derrick, will you briefly describe the lithology of the Sadlerochit Reservoir.

A. The Sadlerochit, varying in gross thickness from approximately 300 feet to 600 feet, lithologically consists of fine to coarse grained sandstones, conglomerates, siltstones and occasional thin layers of shale.

Q. In your evaluation of the Prudhoe Bay Field did you consider all wells completed to date to be in one reservoir?

A. No. Due to the complexity of the structure and poorer reservoir quality on the western end of the field, the reservoir was divided into the large Main Area and the small West Area as shown in Figure 2 of Exhibit EP-_____ (AMD-1). Separate reservoir data is given for each area in Schedule 3 of Exhibit EP-_____ (AMD-1). On Figure 2 the subsurface Sadlerochit Reservoir is projected on the surficial map. Shown are the location of wells, the areas of computed reserve, as defined by structure and stratigraphy, and the areal limits of the Prudhoe Oil Pool as defined by the Alaska Oil and Gas Conservation Committee. The illustrative colors and symbols are explained in the legend. That Committee's oil pool limits encompass a larger area than El Paso Natural's computed reserve limit because the Committee includes the Shublik formation and Sag River sandstone within

its pool boundaries, whereas limits of computed reserves shown on Figure 2 of Exhibit EP-_____ (AMD-1) represent only the Sadlerochit Formation.

Q. What is the basic fluid makeup of the Prudhoe Bay Field Reservoir?

A. The fluid columns in both the Main Area and West Area are the classical water aquifer overlain by trapped liquid hydrocarbons capped with an associated gas column. The three generalized cross sections, Figures 3, 4 and 5 of Exhibit EP-_____ (AMD-1) represent pictorial vertical views east-west, north-south and northwest-southeast across the Prudhoe Bay-Sadlerochit Fields. Each figure has a cross section index map for location purposes, a subsea vertical scale for depth reference and a horizontal scale at the bottom. Graphically the fluid zones are shown in different colors. Faults and fluid contacts are appropriately labeled.

Q. What method was employed in estimating the reserves for the Prudhoe Bay Field?

A. The volumetric method.

Q. Did you also employ the performance method?

A. No. Due to the absence of transportation facilities from the Prudhoe Bay Field, no wells have been produced except for very minor production utilized in field operations; therefore, a performance study was precluded.

Q. Please describe how the areal limits of the Prudhoe Bay Field were established.

A. A subsurface structural geologic map was interpreted on the top of the Sadlerochit Formation utilizing tops correlated from available well logs. The gas/oil contact, where present, was established in each well by overlaying the Sonic or Formation Density Log with the Sidewell Neutron Log. Where present, the oil/water contact was established in each well from drill stem tests and/or Resistivity Logs. Although the fluid contacts varied slightly across the field the gas/oil contact was generally found at -8578' and the oil/water at -9008'. These limiting features were depicted on the structure map. A geologic study resulted in the interpreted minor faults and the truncated zone to the northeast thus further delineating the areal limits of the Sadlerochit Reservoir. The major seismic delineated fault formed the northern boundary.

Q. Now, after establishing the areal extent of the field, how was the net effective pay determined for the Sadlerochit Formation?

A. A comparison was made between available logs and limited core description in the well histories. The appropriate net effective gas pay and net effective oil pay were determined from the Formation Density

Log for each well. It should be noted that a majority of the wells in the Prudhoe Bay Field were directionally drilled, therefore, in these wells measured pay thicknesses were adjusted to true vertical net pay thickness.

Q. Mr. Derrick, how were the net pays utilized?

A. The net pays were utilized to construct isopach maps of the net gas sand and the net oil sand within the reservoir limits established by the structure map. The isopach maps were then planimetered and the reservoir volumes, in acre feet, were calculated for the gas cap and the oil zone.

Q. Mr. Derrick, how were the porosities and water saturations determined?

A. The porosities for the gas cap and for the oil zone were determined from the Formation Density Log. The average weighted bulk density was calculated for the gas interval and oil interval in each well. Then utilizing Schlumberger's empirical chart, the respective porosities for each well were obtained. The gas and oil porosities shown represent weighted averages. The water saturations are estimated based on limited log analysis, the Iso-water saturation maps from the State of Alaska's In Place Volumetric Determination of Reservoir Fluids-Sadlerochit Formation-Prudhoe Bay Field Report of June 1974 and discussions with an operator.

Q. How were the applicable reservoir temperature and pressure calculated?

A. From data presented in the Prudhoe Bay Field Rules Hearing held February 9, 1971, before the Alaska Oil and Gas Conservation Committee, and contained in Order No. 98 and drill stem test information, the respective gradients were calculated for temperture and pressure.

Q. How were the initial gas/oil ratio and reservoir volume factor obtained?

A. Reservoir fluid analysis data were presented in the State of Alaska's Prudhoe Bay Field Rules Hearing, and reflected in Order No. 98. From these data, the gas/oil ratio and original reservoir volume factor for various depths were determined.

Q. Mr. Derrick, how were the specific gas gravity and deviation factor calculated?

A. The specific gas gravity and deviation factor were calculated utilizing data that were obtained from State of Alaska records, well histories and logs.

Q. From what source did you obtain the condensate-gas ratio?

A. The condensate-gas ratio was obtained from the State of Alaska's In Place Volumetric Determination of Reservoir Fluids-Sadlerochit Formation-Prudhoe Bay Field report published in June, 1974.

Q. Please describe the methods and techniques used to prepare the pipeline gas supply availability forecast shown on Schedule 5 of Exhibit EP-_____ (AMD-1)?

A. The scheduling in the main area was performed using a three-dimensional, three phase reservoir simulation model. The reservoir was divided into one square mile blocks each having six 90' layers. The productive capability of each block was estimated based on number of wells and thickness of net productive interval. Gas well spacing was assumed to be 320 acres and ultimate oil well spacing was 160 acres. Edge locations were developed as realistically as possible with one, two, or three wells depending primarily on net oil pay and proximity to the gas/oil or water/oil contacts. A layer by layer, block by block fluid saturation, pressure, and productivity was computed in order to maximize oil production and schedule gas production consistent with the capacity of the facilities.

Q. How was the productivity of a particular block determined?

A. The net pay for each block was determined from an isopach map. It was assumed that the middle of the oil column would be perforated to determine the producing interval. The average productivity index was determined and used with the number of wells assigned to a block to calculate the total productivity.

Q. What variables were used to describe each block?

A. Each block was described with porosity, horizontal and vertical permeability, water saturation and, of course, depth. Additionally, gas/oil contacts and water/oil contacts, relative permeability data, capillary pressure data and fluid property curves were basic to the simulation.

Q. How did you handle the apparent change in oil properties with depth?

A. We used three separate tables of fluid properties to describe the oil. The program then calculates by interpolation the PVT properties throughout the reservoir.

Q. How were the porosities and permeabilities determined for the model?

A. The porosity was determined from iso-porosity maps for the oil zone and for the gas cap. The average permeability for the gas cap and oil zone was determined from records obtained from the Alaska Oil and Gas Conservation Committee.

Q. How many oil wells are included in your simulation model?

44.22

A. We assumed that 397 oil wells would be drilled in 135 productive blocks.

Q. At what rates did you schedule oil and gas production?

A. As shown on Schedule 5 of Exhibit EP-_____ (AMD-1), oil production was scheduled at approximately 1.2 million barrels of oil per day in the first three years, increasing to 1.5 million barrels per day the fourth year, and thereafter, for as long as the reservoir was capable of producing at this rate. During the first three years of oil production the gas production amounted to approximately 800 MMcf/d.

With respect to field gas production it was assumed that during the fourth year 1566 MMcf/d would be produced. The production rate would increase to approximately 4100 MMcf/d in the sixth year which, after deducting for plant shrinkage, will utilize the full capacity of the proposed Trans-Alaska Gas Project facilities.

Q. What disposition was made with the gas produced during the first three years of oil production?

A. All of the residue gas resulting from the oil production during the first three years was injected into the gas cap.

Q. In scheduling production from this field, was water produced, and if so, what disposition was made with the produced water?

A. Initially, there was very little water production, however, over the scheduled period water production increased. The produced water was injected into the reservoir in down-dip wells.

Q. During the scheduling of production from this reservoir did you monitor the expansion of the gas cap?

A. Yes, during the production period the saturations in the grid blocks were monitored and indicated increasing gas saturation in the oil blocks and expansion of the gas cap.

Q. What is shown in Figures 7, 8 and 9 of Exhibit EP-_____ (AMD-1)?

A. Figures 7, 8 and 9 are related to oil and gas producing areas in the State of Alaska. Figure 7, a map of the State of Alaska, shows the location of the two presently producing areas--the Arctic North Slope Area located in the northern part of Alaska and the Cook Inlet Basin Area located in southern Alaska. Figure 8 and Figure 9 are expanded scale maps of the Arctic North Slope area and Cook Inlet Basin, respectively, that were outlined on Figure 7. Oil fields, in yellow, and gas fields in red, as designated by the State of Alaska are shown on Figures 8 and 9. Additionally, the North Slope Area, Figure 8, outlines the Naval Petroleum Reserve No. 4 and the Arctic National Wildlife Reserve.

Q. Mr. Derrick, would you please explain Figure 10, the last figure in Exhibit EP- (AMD-1)?

A. Figure 10 is a map of Alaska showing the provinces or basins designated by the State to have oil and gas potential but relatively unexplored. The potential of each area is based on very limited drilling, surface geology and/or geophysical data. Various graphic patterns delineate each appropriately labeled potential Basin or Province. Superimposed on Figure 10 is the proposed Trans-Alaska Gas Pipeline route.

Q. Mr. Derrick, would you please summarize the results of your study of the Prudhoe Bay Field?

A. The Prudhoe Bay Field, covering over 200 square miles, is estimated to contain, in-place, 13.4 trillion cubic feet of solution gas, 21.7 trillion cubic feet of associated gas and 19.4 billion barrels of oil and condensate as shown in Schedule 4. The production forecast shows a build-up of the annual average day gas production to the pipeline average day design capacity of 3.3 billion cubic feet per day in the sixth year of operation after the start of oil production. This level of gas production is maintained for a period of 16 years with declining volumes thereafter. For the twenty-eight year period shown, 30.4 trillion cubic feet of gas and 6.8 billion barrels of oil are estimated to be recovered.

The tapping of the Prudhoe Bay Field has opened a vast new petroleum frontier for the nation at a time when it is experiencing decreasing production and increasing energy requirements.

Q. Mr. Derrick would you please explain Exhibit EP- (AMD-2)?

A. Exhibit EP- (AMD-2) is a forecast of gas supply available to El Paso Natural from presently dedicated sources for the years 1982 through 1985. Such data is contained under the tab denominated "Supply Data" in Exhibit Z-3 of Volume I of El Paso Alaska's First Supplement to Docket No. CP75-96.

El Paso Natural derives its gas supply from three major gas producing areas, the Anadarko Basin area of Texas and Oklahoma, the Permian Basin area of west Texas and southeast New Mexico, which includes the Delaware-Val Verde Basins, and the San Juan Basin area of northwest New Mexico, Colorado, Arizona and Utah. This gas supply forecast is based on gas reserves shown in El Paso Natural's 1973 Form 15 report to the Federal Power Commission, updated to reflect new supply dedication through July of 1974. The volumes indicated represent the gross annual average day and gross year end monthly average day volume of gas estimated to be available from each source of supply for each of the years 1982 through 1985. Such supply availabilities after appropriate reductions for company gas use, shrinkage and losses, were used in the preparation of the market data reflected in Exhibit EP- (MKO'T-1) through EP- (MKO'T-7) and were used in the illustrative Case studies presented by Mr. A. H. Carameros in these proceedings.

Q. Mr. Derrick, will you please explain the procedures which are used to reduce the gross supply availability projections to obtain net volumes of gas available for sale?

A. At my direction, and principally in coordination with the Gas Supply and Marketing Departments, each individual source of supply is adjusted to exclude those volumes of gas used for field fuel, shrinkage and losses, which are unavailable for sales, in order to arrive at the total system supply available for mainline fuel use and for sales. This adjusted supply is further reduced by the estimated mainline fuel requirements determined by the Engineering Department. As explained in detail by El Paso Alaska's witness, Mr. M. K. O'Toole, the Gas Marketing Department allocates the remaining total volume to determine the gas available for sale at each delivery point on El Paso Natural's system. The allocated gas sales volumes by delivery point are then furnished to the Engineering Department for use in their design studies. Such net sales volumes were used by El Paso Alaska's witness, Mr. A. H. Carameros, in preparing the illustrative design operation of El Paso Natural's pipeline system when transporting certain volumes of Alaskan gas to other existing pipelines located in the Anadarko Basin and Gulf Coast areas.

Q. Mr. Derrick, does this conclude your prepared direct testimony?

A. Yes.

44.25

STATE OF TEXAS)
)
COUNTY OF EL PASO)

A. M. DERRICK, being first duly sworn, on oath, says that he is the A. M. Derrick identified in the foregoing prepared direct testimony; that he caused to be prepared such testimony; that the answers appearing therein are true to the best of his knowledge and belief; and that if asked the questions appearing therein, his answers thereto would, under oath, be the same.

A. M. Derrick

SUBSCRIBED AND SWORN TO before me, the undersigned authority, on this 22nd day of March, 1975.

Janis E. Kuhn
Notary Public in and for
El Paso County, Texas
My Commission Expires June 1, 1975

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ORIGINAL

Update and Restatement of Alpetco's October 15, 1977 Proposal for the Purchase of Alaska State Royalty Crude Oil and Construction of a Petrochemical Facility in Alaska

February 7, 1978

ALASKA PETROCHEMICAL COMPANY
601 West 5th Avenue
Anchorage, Alaska 99501

AGO 560361

ALASKA PETROCHEMICAL COMPANY

601 WEST 5TH AVE., SUITE 320
ANCHORAGE, ALASKA 99501

P. O. BOX 6554
HOUSTON, TEXAS 77005

February 7, 1978

State of Alaska
Department of Natural Resources
Royalty Oil and Gas Development Advisory Board
323 East Fourth Street
Anchorage, AK 99501

Attention: Dr. Robert E. LeResche, Chairman

Dear Chairman LeResche,

Attached is an Update and Restatement of Alaska Petrochemical Copmany's proposal to purchase Alaska's royalty crude oil. It updates our earlier proposal by summarizing changes that have been made as a result of discussions and negotiations with various interested parties in Alaska, including representatives of the Department of Natural Resources, consultants to the State of Alaska, and residents in areas where the facility will be located. The update also amplifies other key issues including marketing and Alpetco's business plan.

Following are the major revisions and amplifications to our proposal:

Relating to contractual and financial matters:

1. No risk to the State of Alaska.

2. No subsidy to Alpetco. Actually, Alpetco will pay a premium for the oil by establishing a charitable fund for the benefit of all Alaskans.

3. Definite and substantial benchmarks to measure progress within reasonable time. Among other key benchmarks is Alpetco's $10 million commitment in the first 18 months.

4. Financing the project. Alpetco and its financial advisors have developed a comprehensive financial plan to provide for all phases of the project, including equity and workable sales contract forms.

Relating to project implementation, including marketing and joint venture considerations:

5. Additional marketing information, including participation by major U.S. chemical companies.

6. Strong expressions of interest by Japanese trading companies and government leaders despite recent Alaskan newspaper stories to the contrary.

7. Alternative configurations for the petrochemical plant. Several alternative product output cases are shown for illustrative purposes.

8. Experienced executive management. Alpetco will hire proven senior executives from positions in the chemical industry to fill key positions in Alpetco.

9. Employment of Chem Systems Inc. Alpetco is working closely with Chem Systems, a firm of petrochemical marketing and technical experts highly respected throughout the industry.

10. Summary of business plan implementation.

Relating to raw materials and alternative feedstocks:

11. Consideration of coal and natural gas liquids. Alpetco will incorporate these forms of energy into its plant operations, if possible.

12. Reconsideration of plant location. Alpetco is reconsidering Valdez and possibly other locations in addition to the Kenai Peninsula.

13. Chem Systems Inc.'s responses to Commissioner LeResche's request for an analysis of "Alaska Versus Middle East Petrochemical Projects".

It is our considered opinion that the royalty oil contract must be first awarded in order to obtain sales contracts, and that the State must award the royalty oil contract now if anything is ever to be done to add value to the royalty crude oil in Alaska, because of time passage and the State's credibility.

Alaska Petrochemical Company recognizes that its program is the most ambitious of the proposals submitted to the State. We believe that our business plan is sound and that selection of our proposal will result in the State of Alaska receiving

maximum benefits from its royalty oil, and without risk to the State.

We look forward to working together with the Royalty Board and with representatives of State and local government to build our proposed petrochemical facility in Alaska.

Sincerely yours,

O. Charles Honig

O. Charles Honig
Chairman

OCH:dk

cc: Don Wold (20 copies)
Joe Moore

Exhibits:

I. Additional letters from Alpetco's financial advisors

II. Letters from Japanese industrial and government leaders

III. Qualifications of Chem Systems Inc.

IV. Chem Systems Inc.'s critique of Alpetco's proposal, dated January 13, 1978

1. No Risk to the State of Alaska.

Alpetco's contract draft (Section 2.2 "Initiation of First Delivery") provides that Alpetco shall not purchase any royalty crude oil until it has obtained financing commitments for $1.5 billion toward the construction of the petrochemical facility. This contract language protects the State by ensuring that Alpetco does not purchase any royalty oil until the petrochemical project is "put together" with sales contracts and construction financing in place.

Alpetco's proposal is more ambitious than the three other proposals being considered since it offers all Alaskans significantly greater benefits with no risk. Even if the project were not to be completed, Alaska would still have its asset: the royalty oil.

Alpetco's October 15, 1977 submission provided for royalty oil sales to Alpetco shortly after contract approval; this provision has been dropped.

2. No Subsidy to Alpetco.

Alpetco is not asking for any subsidies from the State of Alaska. The Company proposes to pay the price per barrel for the royalty crude oil that the State would have received had it taken the oil "in value". Alpetco has agreed with the State's negotiators to pay additional costs that the State may incur as a result of selling the

oil to Alpetco that it would not have incurred had the State taken its oil "in kind".

In addition to not asking for any subsidy from the State, Alpetco has agreed to establish the Alaska Endowment Trust for the purpose of furthering social, educational and environmental conditions in the State of Alaska.

The Alaska Endowment Trust shall be established under the terms of a trust instrument approved by the Governor of Alaska and the Trust shall be administered by a Board of Trustees unaffiliated with Alpetco. Alpetco has agreed to contribute 5% of its net after-tax profits to the Trust beginning in the eleventh year after completion of the petrochemical facility.

3. Definite and Substantial Benchmarks to Measure Progress Within Reasonable Time.

To assure performance, Alpetco has agreed to establish rigorous benchmark actions in its contract with the State which provide that if actions are not completed by Alpetco within the appropriate specified time period, the State shall have the right to terminate the contract. The benchmarks require that Alpetco spend specific amounts by certain dates as follows:

$2.0 million within six months of contract approval;

$3.0 million within twelve months of contract approval;

$10.0 million within eighteen months of contract approval.

Within eighteen months, the Company must have taken the following actions:

1. Negotiate sale terms with prospective customers and draft contracts for the sale of products from the facility.

2. Enter contracts for the sale of at least 70% of the product output from the facility.

3. Obtain written commitments for at least $1.5 billion toward construction of the facility.

4. Obtain commitments for interim financing for the construction of the facility.

5. Complete and file an Environmental Impact Assessment on the facility.

6. Complete and file all material state and federal permit applications.

7. Complete plant design and optimization necessary to obtain a definitive project cost estimate.

After the eighteen month benchmark, there are additional benchmarkes in the form of dollar expenditures or commitments to make expenditures. These benchmarks are spaced every twelve months through seventy-two months and require the expenditure or commitment of funds as follows:

$100 million within 24 months;

$600 million within 36 months;

$1,000 million within 48 months;

$1,200 million within 60 months; and

$1,500 million within 72 months.

4. Financing the Project

Alpetco has been advised by its financial advisors that they believe the proposed project can be financed.

The firms have provided letters to Alpetco stating the conditions under which the project can be financed using project financing techniques; furthermore, Alpetco's co-investment bankers have stated that they believe that equity to support the project can be obtained if necessary. Letters from Alpetco's financial advisors are included in Exhibit I.

Early in its involvement in the competition to purchase Alaska's royalty crude oil, Alpetco retained the services of Kuhn Loeb & Co. Incorporated (now Lehman Brothers, Kuhn Loeb Incorporated following a merger of Kuhn Loeb with Lehman Brothers in December, 1977) and E. F. Hutton & Company Inc. to advise the company in the structuring and procurement of long-term financing for the project. These firms are among the largest investment banking firms in the U.S. and each is thoroughly experienced in international investment banking and project financing of the type appropriate for this project. Chemical Bank (New York) is advising Alpetco with regard to commercial bank financing and will act as lead bank for Alpetco in arranging interim construction financing and other short term borrowing requirements. Chemical Bank is a major New York bank with experience in managing major bank credits similar to the credits contemplated in the Alpetco project.

Project Financing

Alpetco's financing plan is based on matching Alpetco's long-term crude oil purchase contract with long-term sales contracts for products made in the petrochemical facility. Essentially these two sets of contracts guarantee lenders that monies borrowed to finance the project will be repaid. This is called "project financing" and is a commonly used method of financing large scale natural resource projects.

Equity

While Alpetco's financial advisors believe that this project can be 100% project financed (with debt securities), the advisors have informed Alpetco that they believe that equity funds "in amounts sufficient to support the anticipated financial structure of the Complex" can be raised for the project, subject to usual conditions at the time of issue. (See letter from investment bankers dated December 12, 1977 in Exhibit I.)

Short Term Funds

Necessary short term and construction funds for the project will be provided by Chemical Bank and a group of major U.S. banks headed by Chemical. Officers of Chemical Bank have already discussed this project with a group of lenders for the project and each of these banks has

indicated to Chemical its interest in participating in the banking group being formed to loan funds to Alpetco.

Product Purchase Contracts

Alpetco has been advised that in order to satisfy lenders' requirements, sales contracts used as guarantees for project financings must be irrevocable and at a minimum provide for debt service (interest payment and principal repayment) even if for some reason the facility does not produce products for delivery to purchasers.

Alpetco's financial advisors have stated that (see letter dated January 27, 1978 in Exhibit I) these irrevocable long-term sales contracts would provide for two pricing elements including a fixed or minimum payment to be made regardless of the level of output delivered and sold to the buyer(s) as well as a variable payment which would be dependent on the amount and value of output delivered and sold to the buyer(s). It is contemplated that the sales contracts would be the element which secures the lenders and specifies that in any event and under all circumstances an amount will be paid by the buyer(s) which is sufficient to support the mandatory principal and interest payments on the indebtedness incurred by the project.

Project financing and irrevocable sales contracts which are designed to provide for debt service requirements are not uncommon and are considered very appropriate for this project.

5. Additional marketing information, including participation by major U.S. chemical companies.

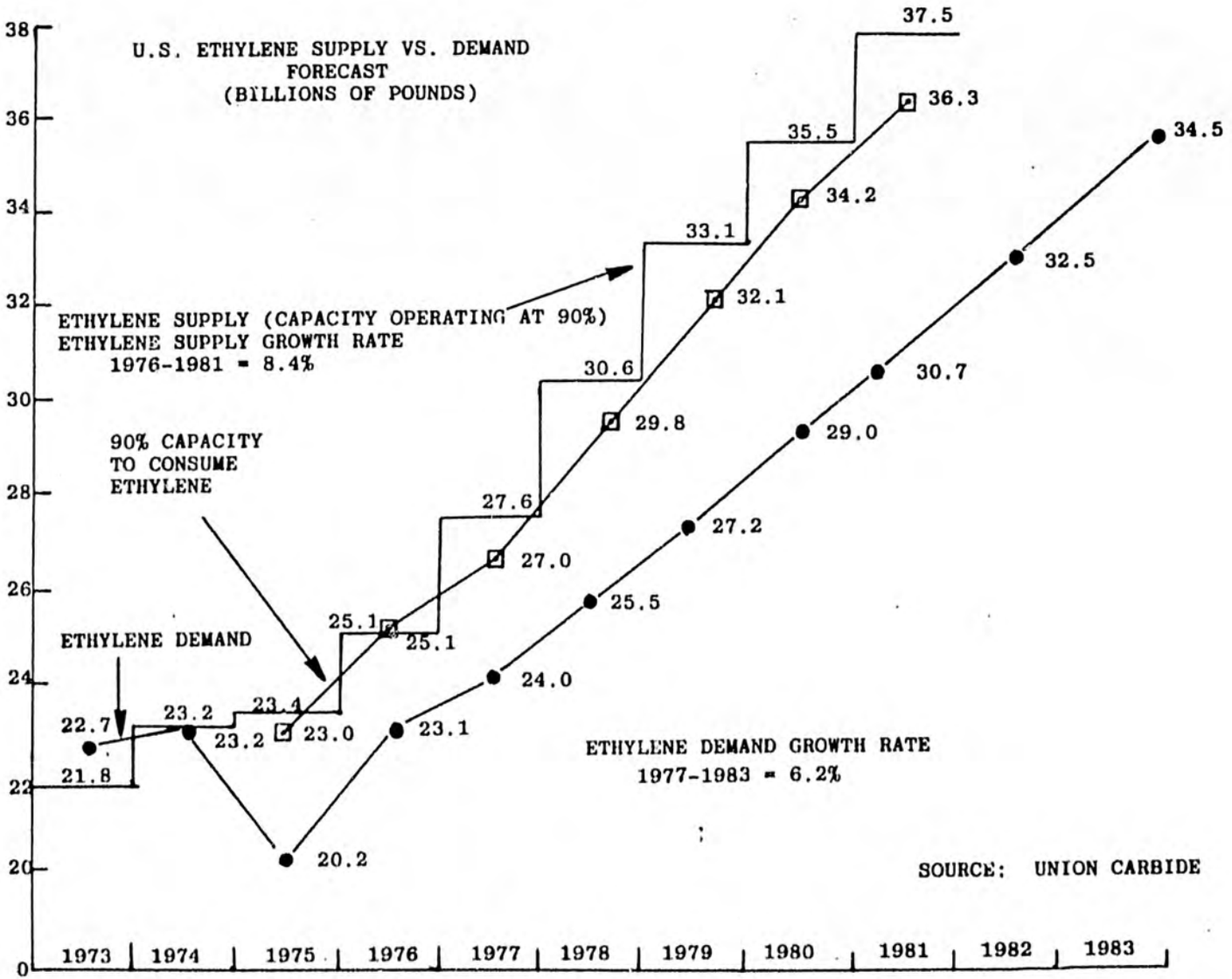
Studies of the U.S. West Coast market by Chem Systems and others have shown that by 1985, this market will require the equivalent of the output of three world-size olefins plants. However, as of this date no such facility is in operation or even in active planning to serve the growing West Coast market. The market for polyethylene, styrene, and cumene on the West Coast is particularly strong, due to a large number of plastics fabricators and wood processing plants in that region. Several U.S. companies have indicated to Alpetco that they have substantial interest in serving their customers from an Alaskan project, as compared to shipping petrochemicals (principally by rail) from the Gulf Coast or other areas in the U.S. The quantities of products being discussed with U.S. chemical companies are substantial and also include exports to South America, the Far East and some products for the Western Canadian market.

Supply and Demand for Petrochemicals

The long term outlook for the period of time relevant to this project is that there will be substantial demand from about 1985 on for products on the West Coast and in Pacific Rim markets which could be manufactured in Alaska.

World demand for petrochemicals is expected to continue to grow at a substantial rate over the next two decades. For example, Chem Systems' published forecasts show that U.S. ethylene demand in 1990 is expected to be about 52 billion pounds, versus projected 1985 effective capacity of 44 billion pounds. While there are several ethylene plants presently under construction or in various planning stages in the U.S., Alpetco and its advisors know of no projects yet approved in the U.S. which are scheduled for completion beyond 1985. Japan's 1990 ethylene demand should reach 18 billion pounds, requiring about 4 billion pounds of new capacity between 1985 and 1990. Japan's export and trading company requirements are in addition to that. Thus, a considerable amount of new ethylene (olefins) capacity will be required by both the U.S. and Japan. These projections (by Chem Systems) are based on relative conservative growth estimates, which are required for facilities planning. While there is currently ample capacity in both countries to serve markets through the end of the 1970's, petrochemical demand growth requires the addition of a great deal of new capacity in the 1980's. It is appropriate that Alaska, which has a proven supply of crude oil, should participate in the world petrochemical business.

The following chart, recently published by Union Carbide, shows installed ethylene capacity of 27.6 billion


U.S. ETHYLENE SUPPLY VS. DEMAND
FORECAST
(BILLIONS OF POUNDS)
ETHYLENE SUPPLY (CAPACITY OPERATING AT 90%)
ETHYLENE SUPPLY GROWTH RATE
1976-1981 = 8.4%
90% CAPACITY
TO CONSUME
ETHYLENE
ETHYLENE DEMAND
ETHYLENE DEMAND GROWTH RATE
1977-1983 = 6.2%
SOURCE: UNION CARBIDE
38
36
34
32
30
28
26
24
22
20
0
1973
1974
1975
1976
1977
1978
1979
1980
1981
1982
1983
21.8
22.7
23.2
23.2
23.4
23.0
25.1
25.1
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27.6
29.8
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37.5
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24.0
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pounds in 1977 rising to 37.5 billion pounds per year in 1981, a growth rate of about 8%.

Chem Systems projects ethylene demand to rise to 40 billion pounds in 1985 and 52.9 billion pounds in 1990. There is, therefore, a requirement for approximately 15 billion pounds of additional ethylene capacity in the U.S. between 1981 and 1990.

Ethylene demand on the West Coast is estimated by Chem Systems to reach 2.43 billion pounds (8.2% of total U.S. demand) in 1980. This demand is projected to reach 3.45 billion pounds in 1985 and 5.0 billion pounds in 1990, indicating a requirement of three world scale ethylene plants on the West Coast to supply this increased market by the mid 1980's.

Alpetco's Petrochemical Marketing Plan

Alpetco's marketing activities are directed in two major areas: (1) U.S. chemical companies who are either presently engaged in selling a substantial quantity of petrochemical products in the West Coast market or who desire to enter the West Coast market, and (2) Japanese chemical and trading companies who have long-term petrochemical requirements commencing in the mid 1980's. Discussions by Alpetco have indicated a very substantial level of interest by both U.S. and Japanese firms in the Alaskan project.

In its January 13 report on the Alpetco project, Chem Systems stated:

> "We believe that the markets being solicited by Alpetco would, starting in the mid-1980's, be able to absorb sufficient amount of such petrochemicals as polyethylene, polypropylene, butadiene, styrene and cumene to achieve a classical petrochemical refinery configuration in Alaska, though recognizing that the specific product mix and the total amount of petrochemicals may not necessarily be the same as shown on the current flowscheme."

Alpetco does not expect to independently market its products to end users or to compete with those companies who do supply products to end users. Sales of products to ultimate users are normally made by large chemical companies who have established market shares and sales organizations. Alpetco intends to be a supplier to chemical companies which presently market products. Most major chemical companies not only make products in their own facilities or facilities in which they are joint owners or operators, but these companies also purchase products from other manufacturers such as Alpetco.

Possible Participation by Major Chemical Companies

Many major petrochemical complexes involve ownership of certain facilities in the complex by various parties. Joint venture or other partnership arrangements are common in the chemical industry and are definitely contemplated by Alpetco. Such joint ownership in parts of the complex such as aromatics, olefins or derivatives plants would

result in broader based support for development of the project in Alaska and would provide additional means of obtaining experienced executive management and staff personnel for the project. Several major U.S. and foreign companies presently active in the chemical industry in West Coast and Pacific Rim markets have indicated strong interest in participating in the project through joint ownership of certain facilities or through other participation in the project. They are prepared to enter into discussions with Alpetco following the award of the royalty oil contract. Alpetco is confident that participation by leading firms experienced in joint ownership, construction, start up and operations of large petrochemical facilities will greatly enhance the benefits of this facility for Alaskans.

6. Strong expressions of interest by Japanese trading companies and government leaders.

Alpetco's extensive discussions with government and petrochemical industry leaders in Japan are very encouraging, despite recent reports in Alaskan newspapers to the contrary. Alpetco, Chem Systems and Brown & Root, Inc., have developed strong interest on the part of the Japanese, as evidenced by nine letters listed in Exhibit II from very senior government and industry leaders in Japan who represent the heirarcy of Japanese leaders with whom Alpetco will work in the implementation of this project. The interest on the part of the Japanese encompasses a number of facets, including:

a. Supplying future Japanese markets with petrochemical products based on a politically secure Alaskan feedstock source;

b. Supplying the Japanese export market. This market will be increasingly difficult to supply from inside Japan due to problems of siting new facilities;

c. Supplying world-wide materials requirements of large Japanese trading companies;

d. The desire of the Japanese government to achieve a better overall balance of trade with the U.S.;

e. Japanese interest in investing surplus U.S. dollars in a major U.S. project; and

f. Japanese interest in investing in projects in Alaska which will lead to increased trading relations with Alaska.

Obviously not every Japanese chemical company will want to do business with Alpetco. Because of short-term over capacity in certain petrochemicals in Japan for domestic consumption, many companies do not have need of additional supplies at the present time; however, the broader outlook of the Japanese government and industry leaders suggests very strong interest in providing for the long-term requirements of the Japanese economy. Substantial requirements in Japan must be provided for beginning in the mid-1980's and it is this fact that most interests the Japanese leaders with whom Alpetco has met. Several Japanese groups are presently discussing projects with oil-rich but less politically stable governments than Alaska. For objective comment on these projects versus Alaska see Exhibit IV.

It is understandable how one who spends a brief amount of time studying the Japanese market situation or in hurried talks with Japanese whose interests are not well served by this project could gain an impression which does not reflect the potential and depth of interest which Alpetco has determined exists in Japan.

Alpetco believes that the opportunities for participation by Japanese companies in the Alpetco project are very good. Japanese interests have stated that they wish to commence negotiations with Alpetco as soon as Alpetco is selected by the State of Alaska. Understandably, the Japanese government will not become more definitive in negotiations without first receiving a "signal" from Washington. Also understandably, Washington will not send such a "signal" to Japan until the State of Alaska chooses Alpetco.

7. Alternate Configurations for Petrochemical Plant

In planning its proposal, Alpetco examined a wide range of fuel and petrochemical products which could be produced from 150,000 barrels per day of North Slope crude oil. Configurations for the complex thus ranged from a standard fuels products refinery to one producing maximum petrochemical products (after allowing for up to 30,000 barrels per day of fuels products for consumption in the local Alaskan market). Alpetco's analysis shows that an Alaska project using royalty crude oil as its

principal feedstock looks more economically attractive the more high value-added products are produced. Accordingly, Alpetco focused its efforts on production and market cases which would primarily produce high value-added petrochemical products. These products have market prices equivalent to a range of $20 to $70 per barrel compared to feedstock cost of approximately $11.50 and market prices of $14 to $20 per barrel for fuels products.

The purpose behind the generation of a number of alternative facilities configurations product cases was to allow Alpetco to evaluate the economics of these cases and to enable Alpetco to discuss specific petrochemical product manufacturing schemes with potential joint venture partners and future customers or marketing partners. The terms of Alpetco's proposed contract with the State of Alaska require Alpetco to determine a final product configuration by the end of eighteen months after contract approval.

The table on the following page lists the products from five alternate cases among those configurations which Alpetco has considered.

The first column, labeled Proposal (HE-1), is that presented as an illustration in Alpetco's proposal of October 15, 1977. This case produces approximately 49% (by weight) petrochemicals from the crude oil processed. This configuration would require two world-scale sized olefins steam crackers, and multi-train world-scale size units for some of the derivative chemicals plants.

ALTERNATE PRODUCT MIXES

		Proposal (HE-1)	LE-1	LE-2	HE-2	LE-3
Crude	MBPCD	150	150	150	150	100
Products						
Fuels Prouducts (Gaso, Jet, Diesel, etc.)	MM gal/yr	460	1000	630	520	290
Ethylene Plant	Billion lbs/yr	2.4	1.2	1.4	2.4	1.2
Chemical Products (Wt.% Crude)		49%	31%	40%	49%	46%
Benzene	MM gal/yr	157	36	100	130	36
Toluene	MM gal/yr	229	85	100	85	60
Xylenes	MM gal/yr	252	204	250	250	190
Ethylene Glycol	MM gal/yr	138	-	-	70	-
Butadiene	MM lbs/yr	(320)*	200	230	350	200
Polyethylene	MM lbs/yr	1433	900	1050	1600	900
Polypropylene	MM lbs/yr	1193	400	400	600	400
Ethylbenzene	MM lbs/yr	-	-	-	900	-
Styrene	MM lbs/yr	-	800	1000	-	800
Cumene	MM lbs/yr	-	560	800	540	540
Acrylonitrile	MM lbs/yr	-	-	-	350	-
Sulfur	MM lbs/yr	110	120	120	120	80
Percent Petrochemicals of Crude Oil		49%	31%	40%	49%	45%

*Not specifically listed in original Proposal

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The next column, labeled Case LE-1, is a relatively low conversion case. It uses only one olefins unit, with a capacity of 1.2 billion pounds per year, and produces about 31% (by weight) petrochemicals. However, this case shows more of the aromatics being converted to derivatives rather than being sold as commodity chemicals (i.e., benzene, toluene, xylenes). Styrene manufactured in this case is a product of particular interest to the U.S. West Coast and Japanese markets.

The third column, labeled Case LE-2, uses one olefins plant of slightly larger size than Case LE-1, with a capacity of 1.4 billion pounds per year of ethylene. This case increases petrochemicals production to about 40% (by weight) with larger outputs of all petrochemical products than Case LE-1, and all derivatives plants also with single train world-scale sized units.

The fourth column, labeled Case HE-2, is similar to Case HE-1 (Column 1) in having two world scale ethylene plants. It produces all the products of Cases 1 and 2, but substantially decreases ethylene glycol and polypropylene production, while adding another product, acrylonitrile. This product would be produced form a portion of the propylene plus ammonia, which we believe could be purchased from an existing producer in the Kenai area. Another characteristic of this case involves making ethylbenzene rather than styrene production. Total petrochemical products are, as in the Case HE-1, about 49% (by weight) of crude oil processed.

The last column, labeled LE-3, illustrates one case of what could be made if crude runs were reduced to 100,000 barrels per day in a complex having a 1.2 billion pound per year ethylene plant. In this case, fuel products have been reduced to maintain a high output of petrochemicals, 45% (by weight) of crude oil processed.

These five cases are only a few of an almost limitless number of product mixes which are all technically feasible, many of which may be economically viable. The markets to be served, including flexibility to meet reasonable variations in demand for each product, will finally determine the product mix for which the complex will be designed.

When there are two or more similar plants, or trains within a plant, it is normally most practical and most economical to schedule their completion in sequence. Construction timing is usually related to growth in the product market and to growth in skills of the plant operating personnel. This is contemplated by Alpetco for cases where more than one plant would be built for market reasons.

As a generalization, the higher the percentage of petrochemicals, the more economically viable is the project, until a certain optimum is reached. Higher selling prices per barrel enable the project to support the attendant higher Alaska facilities and operating costs and still earn a satisfactory rate of return on capital employed.

While it is premature to determine precisely what rate of return the project should earn until the final configuration is determined and engineered, Alpetco and its advisors expect this project to demonstrate a rate of return on capital employed of approximately 20 percent (before taxes) over the life of the project, assuming constant dollars, and a rate of return substantially higher assuming current (inflated) dollars.

Inflation is expected to play a positive role in the economics of the Alpetco project. While it is generally expected that actual costs to complete the project in future years will exceed current costs because of year to year inflation, once the project is complete, indebtedness incurred in constructing the facility will be repaid in future years using then current (inflated) dollars for debt repayment. In addition, it is expected that operating costs (including feedstock costs) will increase at a rate somewhat less rapidly than product selling prices; hence there will be a gradual favorable increase in profit margins over the life of the project. Alpetco has used a constant 1977 dollar analysis to develop proforma economics over the life of the project. When analyzed in current, or inflated, dollars over the same time period, the economics of the project are improved.

It should also be noted that 1977 petrochemical prices upon which Alpetco's constant dollar financial

projections are based are considered "depressed" in that they are yielding a lower than normal return to newer producers at this time. This is traditional for the petrochemical industry, which has always experienced supply-demand and pricing cycles. Thus, prices are expected to rise for economic reasons in addition to general inflation.

8. Experienced Executive Management

One of the first steps Alpetco will take after selection by the State is to hire a seasoned petrochemical chief executive to head up the day-to-day activities of the company, including marketing, project planning, and supervision of engineering and construction and, later, operations of the complex. Several candidates for this position have already been identified. Alpetco expects such a chief executive to be presently employed as the number one or two executive in a major U.S. chemical company. It would be unreasonable to expect that someone with the qualifications for this position would leave his present employment to assume responsibilities with Alpetco before Alpetco is selected by the State. Once Alpetco is selected, however, we believe that the project will be a very attractive opportunity for a senior chemical company executive. In addition, Alpetco will hire a nucleus administrative and operating staff from the petrochemical

industry to work alongside this chief executive. Alpetco will also continue to work closely with Chem Systems Inc. as its principal experts. Other experts in such areas as marketing, environmental planning, project management assistance and other functions will be retained as necessary for completion of specific tasks. Reliance on consultants will lessen as more permanent staff is added.

Consultants to be utilized by Alpetco will be selected among firms that have had extensive experience in refinery and petrochemical areas, including the planning and implementation of similar large scale facilities in the U.S. and abroad.

Brown & Root, Inc., Alpetco's project manager, has already assigned a Project Manager and other key personnel to this project and is standing by to fully staff the project as soon as the Alpetco contract is approved in Alaska.

9. Employment of Chem Systems Inc.

In December, 1977, Alpetco retained Chem Systems Inc., an international petrochemical consulting organization, to work in the development of this project. Chem Systems' participation in the Alpetco project presently includes analysis of international and domestic markets for petrochemical products and conceptual business and technical planning, including design of alternative facilities configurations.

Chem Systems' clients include almost all the world's leading oil and chemical companies, as well as several national governments. The firm is experienced in every phase of petrochemical project development and has been actively involved in the organization and implementation of world-scale projects in the United States, Middle East, South America, and the Far East.

Since retained by Alpetco, Chem Systems has had a large staff assigned to Alpetco's project. It's president has met with the State's technical consultants, Alpetco's financial advisors, and petrochemical company managers. Chem Systems prepared a written analysis of Alpetco's proposal, and discussed it in detail with the Commissioner of Natural Resources. See Exhibit IV.

Chem Systems' experience in dealing with world markets for petrochemical products and with Japanese petrochemical interests makes its role in the Alpetco project particularly important.

A summary of Chem Systems' qualifications is included as Exhibit III.

10. Summary of Business Plan Implementation

There are a number of steps which will be taken to implement the Alpetco project. Many of these steps must be taken sequentially and some may be taken concurrently

with other steps at certain stages.

Chem Systems and Alpetco's management have worked to ensure that Alpetco's contract with the State contains reasonable and attainable benchmarks and that the project is scheduled and portrayed to the public realistically. There is a great deal of hard work to be done to complete the task of developing a large scale project; however, Alpetco and its advisors are confident that the resources are in place to implement the project properly and efficiently.

As a means of summarizing Alpetco's business plan and its implementation, the key aspects of Alpetco's business plan are viewed as follows:

Starting Point: Notification that State of Alaska agrees with the contractual terms and notifies Alpetco that it will sign the contract so that Alpetco is "in business".

As a first step, Alpetco plans to hire a seasoned petrochemical executive to head up the day-to-day activities of the company, including marketing, project planning, and supervision of the construction and, later, operations of the complex. Several candidates for this position have already been identified. In addition, Alpetco plans to hire a nucleus operating staff to work alongside this executive.

In the early stages of the project, Alpetco plans to utilize outside consulting services to a substantial degree in such areas as marketing, environmental planning, project planning, project management assistance and other functions. Reliance on consultants will lessen as more permanent staff is added.

The consultants to be utilized by Alpetco will be selected among firms that have had extensive experience in the refinery and petrochemical area, including the planning and implementation of similar large-scale facilitles.

Alpetco will now be in a position to approach companies regarding product offtake and including the possibility of joint venture participation. Many of these companies have already been contacted but understandably were not willing to enter into serious discussions and negotiations, since it was not clear that Alpetco would be the successful bidder for the royalty crude oil.

Alpetco plans to use a flexible approach in discussions and subsequent negotiations with U.S. and Japanese companies. This flexibility will include:

- Types and amounts of products to be manufactured
- Geographic areas selected for markets
- Business format and ownership pattern for individual parts of the total complex

In item 7 of this update, Alpetco has presented a number of possible cases for petrochemical plant configurations, i.e., cases indicating a wide range of product types and amounts. There are, however, a number of guiding factors and constraints that will shape the final configuration of the complex to a considerable extent. A number of these are listed below:

1. The olefins plant will be at least the size of the currently largest well-operable single train plant of modern design, i.e., between 1.0 and 1.5 billion pounds per year of ethylene. If sufficient demand is found to exist, two ethylene plants will be planned, but these would be constructed in a phased manner as appears appropriate.

2. Since olefins plants using distillate feedstocks produce large quantities of propylene, butylenes, butadiene, and benzene, all of these materials will be marketed, either as direct product streams (example: butadiene), or as petrochemical derivatives.

3. Since North Slope crude oil is an excellent source of BTX (benzene, toluene, xylene) aromatics, a large aromatics facility will be planned and constructed, including a reformer, extraction unit, appropriate fractionation, etc.

4. Since polyolefin resins can readily be shipped and require large quantities of ethylene and propylene, they are obvious petrochemical derivatives to produce in Alaska. Liquid products that move readily in world trade at this time and that can be made directly without need for other raw materials will be favored as other petrochemical derivatives. Thus, ethylbenzene, styrene, cumene, and ethylene glycol are more obvious products than vinyl cloride or PVC, for example, since the latter requires production of chlorine and by-product caustic marketing. While some

consideration will be given to such alternatives, Alpetco prefers to keep the complex as simple as possible. Another possibility is to produce acrylonitrile using propylene from the project plus ammonia purchased from a producer at Kenai.

5. Finally, in developing a final product slate, Alpetco will obviously be governed, to a considerable extent, by the needs of the world market and, more particularly, the markets in the Pacific Basin in the 1980's, with particular reference to the U.S. West Coast and to Japan. In serving these markets, which effectively means serving the needs of downstream petrochemical plants and plastics fabricators, consideration must be given to making the types of products that can be delivered over ocean supply lines (as compared to products more appropriate to "across-the-fence" delivery). This latter consideration will also affect the types of derivatives more likely to fit an Alaskan location. Many petrochemicals are currently shipped across the Pacific and Atlantic Ocean and from Europe and North America to South America, and the Alpetco project's marketing plan is based on this world trade aspect of the petrochemicals business.

Facilities of the Alpetco complex can effectively be broken down into four parts as follows:

1. Basic plant infrastructure, docks, offsites.

2. Crude and fuels processing facilities.

3. Basic petrochemicals plants, primarily including the cracker for production of olefins and the reformer and associated facilities for the production of aromatics.

4. Petrochemicals derivatives plants, such as individual facilities for producing high and low density polyethylene, ethylbenzene, cumene, styrene, etc.

Under Alpetco's current planning, it would consider participation by other companies in the ownership and operation of plants in category 4, and, possibly, in category 3.

Most likely, this would be in the form of joint ventures, with the percentages of ownership left subject to negotiations. The incentive for Alpetco to bring companies into such joint venture arrangements would be to have them act as marketing partners for the individual products, if this works out to be mutually advantageous. Another advantage would be to add technical experience in the operation of these plants.

The incentive for the other companies participating would be to gain access to a long-term secure supply of petrochemical feedstocks and to participate in the profits of downstream plants in Alaska.

Implementation Program

Planning for the four parts of the Alpetco complex (see above) can proceed sequentially and, to some extent, separately. Thus, a substantial part of the plant infrastructure, offsites facilities, and the crude processing unit, i.e., items 1 and 2, can start being planned in a relatively definitive manner at an early stage and the selection of specific technology choices can be started. Item 3, the olefins and aromatics facilities, must await the result of marketing discussions and negotiations and final derivatives plant sections, but planning for olefins and aromatics facilities can be started in a preliminary manner almost immediately, the main uncertainty being the final size of these facilities. Planning for part 4, the

derivatives units, must await finalization of marketing and possible joint venture negotiations.

The following sequence of events is, therefore, envisaged:

Phase I - Discussions with a number of companies regarding product offtake and possible interest in joint ventures. This phase would also include separate market studies by Alpetco covering supply-demand in targeted domestic and foreign (e.g., Japanese) markets for a number of the most likely derivatives.

Based on these discussions and initial negotiations, a series of alternate design cases would be developed, investments estimated, and likely product selling prices derived. This information would then be available for more detailed discussions and negotiations in Phase II.

The design of part of the basic infrastructure would meanwhile be initiated in accordance with the overall required timetable.

Phase II - Intensification of marketing negotiations and negotiation of the joint venture agreements (where indicated as being beneficial to the project).

Drafting of contractual agreements covering product offtake and joint ventures will take place during this period, thus allowing appropriate progress to be made for obtaining the required financing. During this period, Alpetco's financial advisors would be brought into the marketing and joint venture negotiations, where appropriate.

The design of the olefins and aromatics plants would be commenced during this period in order to provide more definitive cost information for the purpose of arriving at likely product transfer prices to the derivatives plants.

Phase III - Finalization of derivatives product slate and plant sizes, selection of marketing partners and finalization of joint venture agreements and marketing contracts, selection of licensors for technology to be utilized in olefins and aromatics plants and in derivatives units.

The design of the derivatives plants would be commenced during this period.

Construction of a number of Part 1 and 2 facilities would be commenced during this period.

The above schedule is keyed into Alpetco's contractual commitments with the State of Alaska regarding marketing and project financing. It is believed that this schedule is realistic and can be appropriately implemented.

Alpetco plans to bring the complex onstream in stages over a sufficient period of elapsed time to ensure proper planning and supervision over the initial operations of each facility. Such an implementation schedule is typical of most new or major expansion petrochemical projects and is realistic considering the scope of this project in Alaska.

11. Consideration of Coal and Natural Gas Liquids

Coal

Petrochemical complexes are relatively high energy users, both in terms of steam and electricity requirements. In the case of most petrochemical complexes, power needs and steam requirements are provided by unaffiliated independent utility companies. The Alpetco proposal is currently based on self-sufficient operation in that fuels needs for steam and electrical power generation are fulfilled internally through use of fuel streams not converted to petrochemicals. However, consideration is being given to the following alternative possibilities which could both improve the economics of the project and provide a basis for other users of the utilities:

1. Cooperation with a new, independent local utility which would produce steam and power for Alpetco's needs in an energy sufficient manner (e.g., a cogeneration facility) and which would provide service when and if needed to other customers.

2. Use of local coal to produce steam and power for Alpetco's requirements. This could be done by the new utility mentioned above or by Alpetco if the concept of cooperation with a utility does not materialize. If, prior to final design of the petrochemical complex utility requirements, local coal can be shown to be available prior to startup of the facility, then coal could be used for a large portion of the steam and electric requirements.

Natural Gas Liquids

Alpteco's studies indicate that in the mid-1980's 50,000 barrels per day or more of liquid petroleum gases (LPG) can be commingled with North Slope crude oil and shipped in the trans Alaska pipeline to Valdez since by that time LPG injection into the field will probably be discontinued. By the early 1990's, if crude oil production has declined, as expected, up to 100,000 barrels per day of LPG could be sent down the crude pipeline, since the line would then have adequate capacity for this material. To the extent that such LPG's can be economically separated at Valdez, they would be excellent feedstocks for producing ethylene and propylene.

Alpetco has also analyzed production of ethylene and propylene from ethane and propane extracted from the proposed natural gas pipeline, beginning in the mid-1980's. While delivery of ethane and propane appears to be technically feasible, the proposition of liquids extraction in inland Alaska does not presently appear to be of great interest for the following reasons:

1. Ethane/propane mixtures produce primarily ethylene, with only minor amounts of propylene and no aromatics. Thus, the range of petrochemicals that could be produced from cracking ethane/propane mixtures is far more limited than the range of products possible under Alpetco's crude oil feedstock plan.

2. The economics of building an olefins and petrochemicals derivatives plant along the proposed gas pipeline are not as favorable as construction of such facilities at tidewater because of higher inland construction costs and logistical problems coupled with higher shipping costs for getting finished product to markets.

3. Depending on the North Slope wellhead gas price, it is likely that extracted ethane could be a more expensive feedstock for petrochemicals than North Slope crude oil. In this respect, it should be noted that the Battelle study (August 1977) arrived at relatively unfavorable economics for producing petrochemicals from North Slope gas liquids.

Although the proposed design of Alpetco's olefins unit is based on cracking several feedstocks produced from North Slope crude oil, consideration is being given to cracking North Slope gas liquids, should these feedstocks become available. In effect, Alpetco plans to design at least a part of the cracking furnaces to handle light hydrocarbons (e.g., ethane, propane, butane). This can be readily accomplished at only a very modest increase in capital cost.

There are many imponderables regarding the availability of North Slope gas liquids and the economics of converting these petrochemicals. Among the questions for which answers are not known at this time are:

1. The wellhead cost of gas at the North Slope and the consequent cost of gas liquids extracted from this gas.

2. The allowable price of North Slope gas in the lower 48 states (including allowable roll-in provisions) and the effect of this price on the economics of gas liquids extraction from pipeline gas in Alaska.

3. The design of the gas pipeline (e.g., pressure level, required dryness of the gas), and the amount of gas liquids that will be contained and, therefore, theoretically extractable.

4. The requirements for gas liquids to supply fuel needs at Prudhoe Bay and elsewhere, and for reinjection to maintain reservoir pressure.

5. To Alpetco's knowledge, the disposition of the non-royalty share natural gas liquids has not been determined. The State's one-eighth share of gas liquids which would be sent down the gas pipeline is expected to be insufficient to provide sole feedstock to a petrochemical facility.

12. Reconsideration of Plant Location.

Alpetco's draft contract includes a provision which requires Alpetco to notify the State of its final selection of site location within six months after the approval of the contract by the Legislature. This notification will be accompanied or preceded by various site studies and the final site must be approved by the Commissioner of Natural Resources.

Final determination of the location of Alpetco's petrochemical facility is not possible until a much more detailed analysis is conducted by Alpetco's engineers. In addition to considerations of the project's impact on the local community or region, other factors also must be studied including land availability, site soil and water conditions, proximity to the trans Alaska pipeline, feasibility of establishing port facilities nearby, various environmental considerations, infrastructure development and costs and climate considerations.

Alpetco is presently considering two general locations as its preferred site for the facility. These are the Valdez area and the central coastal area of the Kenai Peninsula near Wildwood Military Reservation. Until Alpetco is selected by the State of Alaska it is not practical to commence detailed and costly studies of specific locations nor to begin negotiations to acquire such property for the facility. Alpetco, its project manager and local Alaska consultants are prepared to commence these studies immediately upon being awarded the royalty oil contract.

13. ALASKAN VERSUS MIDDLE EAST PETROCHEMICAL PROJECTS

In considering proposals for the use of the State of Alaska's royalty share of North Slope crude oil, the question has been raised as to how an Alaskan project can be competitive with a Middle East project in which the host country may "give away", or at least discount, its feedstock and which project, despite such discounts, may neverthless be uneconomical. This memorandum tries to place into perspective several major factors, which most influence competitiveness between Alaska and Middle East locations.

I. Feedstock Values

A. Natural Gas Liquids (NGL).

1. In North Africa (Algeria and Libya), there is an immense availability of natural gas. The projects being built are to liquify this gas (LNG) for sale to the U.S.A. and Western Europe. All other projects being discussed are based on the NGL feedstock having a value equivalent to the LNG netback price (in $/MM BTU), which is substantially higher than the value of gas in locations where it would otherwise be flared. An ethane cracker and associated ethylene derivatives plants are being constructed in Skikda, Algeria.

2. In Kuwait, there is no surplus natural gas because oil fields there require that most of the associated gas produced be reinjected and there is already substantial gas use in the country. The natural gas liquids (NGL's) recovered compete with liquid products from crude oil for local energy use. These crude oil products in turn are valued at their netback prices in Kuwait based on market prices for bulk sales in Rotterdam.

3. In Iraq, the only project being built to use NGL's is an ethylene steam cracker and derivative plants at Basrah. The output of this facility is intended for domestic consumption. No price has been set, but this is not really relevant because these products are not intended for world markets. A study has been awarded to a Japanese group to determine a rational gas price. There is thought to be considerable gas available for future projects.

4. In Saudi Arabia, which is different, there are large quantities of gas that are not needed for reinjection in the oil producing fields, and Saudi Arabia cannot compete in LNG sales because of its much longer shipping distance to major markets. Even so, its gas processing and extraction costs place a value estimated at 40¢/million BTU on NGL, and transportation to an industrial site will add about another 10¢/million BTU. To our knowledge, no price basis for gas or NGL has been set either for feedstock or power generation. Rather, Saudi Arabia, through its agency, Saudia Arabian Basic Industries Corporation, will own the electric power generating plants and will share in the ownership to varying degrees in an olefins cracker and derivative plants. No details have been publicized, but it is believed that end-product plants will all have marketing contracts based on marketing prices (less discounts to the seller) with profits derived to be split through complex negotiated arrangements. Nevertheless, it is a reasonable inference to assume that NGL can be put into these projects by Saudi Arabia at a value substantially below that of crude oil.

The situation in the United Arab Emirates (e.g., Abu Dhabi and Qatar) is generally similar to Saudi Arabia.

B. Petroleum Liquid Feedstocks

Large petroleum refineries exist in Saudi Arabia, Kuwait, Iraq, etc., which currently market petroleum fractions. To our knowledge all

planning for petrochemical projects using liquid petroleum feedstocks are based on pricing calculated from netback prices in European markets, usually Rotterdam. A good example of this is the Kuwaiti aromatics project, which is in advanced planning.

II. Project Construction Costs

It is usual practice to compare investment costs to similar investments on the United States Gulf Coast (USGC). A petrochemical complex even if built from "grass roots" on the USGC will usually require less associated investment than a Middle East (or Alaskan) location because of the much higher developed Gulf Coast infrastructure (roadways, railways, pipelines, public utilities, housing, schools, etc.). In addition, remote locations usually have higher equipment transportation costs, and overall lower labor productivity (wage rates plus work efficiency). The total of all these cost differences is summed up as a "location factor" by which USGC cost is multiplied.

A. Saudi Arabia - Kuwait

If U.S.A. or European plants could just be duplicated in Saudi Arabia or Kuwait, it is estimated they would cost 1.3 to 1.5 times USGC. Experience has shown, however, that actual projects cost 1.7 to 1.8 times USGC in Saudi Arabia. Recent estimates for projects not yet built suggest that the more experienced contractors may be able, with good planning, to reduce this factor to 1.60 to 1.65 using extensive modular construction and worldwide equipment procurement. This factor becomes considerably higher, however, when complete towns and local infrastructures must be built.

B. Alaska

Discussion with U.S.A. contractors experienced in Alaska, shows a fairly wide range of expectation for new projects. Our best judgment is that in

the Kenai area project cost will be 1.35 to 1.5 times USGC. Maximum use of modular construction and lowest cost equipment procurement might reduce costs a little more. Costs in a more northern or inland location will be higher, estimates ranging from 1.5 to 2.0. This range exceeds the costs believed to have been incurred for the recently completed North Pole Refinery. However, the North Pole facility is of much smaller scale and is much less complex than a world scale grass roots petrochemical facility.

III. Transportation to Markets

The rational markets for Middle East projects are Western Europe, Africa, and Southeast Asia. For Alaska, the rational market is the Pacific Basin (including U.S. and Canadian West Coast, Japan, Philippines, and Southeast Asia). Transportation cost, expressed as $ per pound, is a function principally of the volume in each shipment and the distance shipped plus costs in the harbors at both ends. Harbor costs in the Middle East have been high due to limited dock space. However, for future projects of comparable size, the most dominant cost factor should be the distance shipped.

Alaska is closer to all Pacific Basin markets than are Middle East locations, except that Southeast Asia is roughly equal.

It is also germaine to note that transportation cost from Alaska to the U.S. West Coast should be lower than from the U.S. Gulf Coast, which requires shipment either by railroad or via the Panama Canal.

IV. Project Financing

1. Saudi Arabia and Kuwait are wealthy nations which have offered long-term loans at low interest rates to prospective joint venture partners in petrochemical projects. No details have been released, but it is widely assumed that interest rates will be approximately one-half

the work market level, and that over 80 percent of total project financing is available to qualified partners.

2. The other Middle East countries do not have excess capital available to support joint venture projects, or even all their own projects. Each project will depend upon the joint venture partners' own ability to raise investment funds.

V. Petrochemicals Projects Status

Every Middle East country has investigated petrochemicals projects. Chem Systems' best estimate of project status is that despite the announcements and studies made for major projects, only the following ethylene-based complexes are likely to be in operation by the mid to late 1980's.

1. Shell Oil at Jubail, Saudi Arabia with a world scale size olefins steam cracker based on ethane feedstock. Exxon is another likely partner in this venture, owning part of the olefins plant and a derivative chemical plant.

2 Mobil at Yenbu, Saudi Arabia has a much less developed olefins plant complex. It must not be ignored, but is not firm at this time.

3. CdF Chimie in Qatar will have a smaller than world scale olefins project (250,000 metric tons per year).

4. Iraq will have an olefins project primarily for domestic consumption.

5. The ethylene complex in Skikda, Algeria, is based on a small (120,000 metric tons per year plant) ethylene plant with products for local North African consumption.

6. The Japan-Iran petrochemical complex may be partly in operation in the late 1980's.

All other projects (e.g., in Libya, Nigeria, Egypt, etc.) appear to be dormant.

Conclusions

From the foregoing analysis, it can be concluded that:

1 An ethane cracker in Saudi Arabia has potential competitive advantages of discounted feedstock and fuel plus lower financing costs compared to Alaska. This is offset by higher project construction costs and equal or higher transportation costs to expected market areas.

2. No other Middle East petrochemical project is likely to have a significant advantage over Alaska.

3. With the forecast growth in demand for olefins products by the mid to late 1980's, the probability of two or three new world scale size plants in the Middle East will not saturate the world market. There is room for one or more world size plants in Alaska.

4. Thus, the answer to the specific question raised in the Introduction is that only Saudi Arabia and the United Arab Emirates can readily discount their feedstocks, that on this basis, and with the help of low interest loans, two or three projects are now proceeding, but that the impact of these projects on world markets will be very small, and should not hinder an Alaskan project.

EXHIBIT I

Additional letters from Alpetco's Financial Advisors:

1. Letter from co-investment bankers dated December 12, 1977 concerning equity funds for the project.

2. Letter from co-investment bankers dated January 26, 1978 concerning terms for contracts for sale of products from the project.

December 12, 1977

Kuhn Loeb & Co. Incorporated
40 Wall Street
New York, New York 10005

E. F. Hutton & Company Inc.
One Battery Park Plaza
New York, New York 10004

Mr. John D. Barbour, Sr.
Mr. O. Charles Honig
Alaska Petrochemical Company
P.O. Box 6554
Houston, Texas 77005

Dear Sirs:

This is to confirm to you our opinion that upon your being awarded the contract for Alaska's North Slope royalty crude oil and subject to your signing definitive irrevocable long-term take-or-pay contracts with purchasers of the output of the Alpetco Complex that are satisfactory to you and to our two firms, and to economic and market conditions at the time, we believe we can raise equity funds for The Alpetco Complex in amounts sufficient to support the anticipated financial structure of The Complex.

W. Richard Burgh
Kuhn Loeb & Co. Incorporated

John M. Vickers
E. F. Hutton & Company Inc.

AGO 560406

Lehman Brothers Kuhn Loeb
Incorporated
40 Wall Street
New York, New York 10005

E. F. Hutton & Company Inc.
One Battery Park Plaza
New York, New York 10004

January 26, 1978

Mr. O. Charles Honig
Mr. John D. Barbour, Sr.
Alaska Petrochemical Company
P. O. Box 6554
Houston, Texas 77005

Dear Sirs:

We understand that Alaska Petrochemical Company (Alpetco) is continuing to negotiate with the State of Alaska for a long-term contract to purchase up to 150,000 barrels per day of the State's North Slope royalty crude oil for a period of twenty-five years. We also understand that Alpetco, if it is awarded the contract, intends to construct and operate a petrochemical refinery complex (the Complex) in Alaska and that the facility would utilize the royalty crude oil as a feedstock to produce refined fuel products for consumption in Alaska as well as a broad range of high value-added petrochemical products.

We are aware of the size and scope of the project under consideration and of Alpetco's desire to finance the Complex on a "project financing" basis including a plan of financing whereby the lenders rely on the economics of the project itself and indirect credit supports from purchasers of products to assure the timely payment of interest and principal.

As financial advisors, we have worked with you over the past months studying the feasibility of financing this project on a long-term basis. In a letter addressed to you dated December 5, 1977, we set forth the steps necessary for securing the financing which we, together with you, have agreed to undertake immediately upon being awarded the contract for the royalty crude oil and stated our view that in order to command the attention, interest and commitment from the various sources of financing for projects of this nature, it is mandatory that you be awarded the contract prior to the undertaking of these steps.

In this respect, you have requested our views of the general nature and terms of the irrevocable long-term contracts which would be required to secure the long-term financing for the Complex.

Irrevocable long-term contracts for the sale of the output are often used in project financings. The terms and conditions of the contracts in this instance would be negotiated at arms' length between Alpetco and buyer(s) of the production of the facility. The agreed-upon purchase price of the product to be sold to the buyer(s), as specified in the contract, would provide for two pricing components including a fixed or minimum payment to be made regardless of the level of output delivered and sold to the buyer(s) as well as a variable payment which is dependent on the amount and value of output delivered and sold to the buyer(s) and which would be based on a pricing formula related to prevailing world market price levels and feedstock costs.

Under this arrangement the fixed payment would be the element which secures the lenders and specifies that in any event and under all circumstances an amount will be paid by the buyer(s) which is sufficient to support the mandatory principal and interest payments on the indebtedness incurred by the project.

It is our view that such a pricing mechanism within an irrevocable long-term contract is general practice in project financings, and we believe that Alpetco could utilize such a pricing formula in its sales contracts to secure the long-term lenders to the Complex.

Sincerely yours,

LEHMAN BROTHERS KUHN LOEB
INCORPORATED

By _____
Managing Director

E. F. HUTTON & COMPANY INC.

By _____
Executive Vice President

EXHIBIT II

List of letters from Japanese industrial and government leaders:

1. Senator Kazuo Tamaki, Member of the House of Councillors (Upper House); Member of Parliamentary Group for Energy.

2. Representative Tatsuo Tanaka, Member of House of Representatives (Lower House); Former Minister of MITI; Chairman of Oil Problems Study Council.

3. Dr. Souchi Matsune, Chairman of Committee on Energy of the Keidandren (Japanese Federation of Economic Organizations).

4. Hajime Yamamoto, Chairman of the Board of Directors, The Osaka Petrochemical Union.

5. Kenzo Obata, Chairman of the Board, Sekisui Group of Companies.

6. Kenzo Shibata, President, Sekisui Chemical Company, Ltd.

7. Toshio Iijima, Director and General Manager, Chemical Administration Division, Mitsui & Company, Ltd.

8. S. Mitomi, Director and General Manager, International Department, Marubeni Corporation.

9. Mitsuo Ueda, President, Nissho-Iwai Company, Ltd.

Exhibit III

Qualifications of Chem Systems, Inc.

Chem Systems Inc. provides services to the gas, oil refining and petrochemical industries. Its professional personnel are predominantly chemical engineers supported by economists, and all have many years of experience in these industries.

The company was founded in 1964 primarily as a consulting firm, but has greatly expanded its activities to provide most of the functions and services required for conceiving, planning and implementing new projects. This includes laboratory research and development, market research and other commercial development functions, feasibility and project planning studies, process engineering, computer applications and project management.

Fully integrated consulting offices are in New York, Houston, London and Paris. Offices are also maintained in Beirut, Munich and Sao Paulo, Brazil.

Chem Systems' clients include almost all the world's leading oil and chemical companies, as well as several national governments. The firm has been active in both the industrialized countries of the world, as well as in a number of developing areas, such as the Middle East, Africa and South America.

Confidentiality precludes identification of particular project clients; however, included below is the general scope of work performed by Chem Systems and a partial list of clients.

1. Basic Petrochemicals

The Hydrocarbon Planning Group has carried out extensive technical and economic evaluations dealing with the manufacture of basic petrochemicals from natural gas, light hydrocarbon and petroleum derived feedstocks. This work has ranged from initial planning studies and feasibility evaluations through detailed computer simulation of projects and plant

troubleshooting and debottlenecking.

Chem Systems is thoroughly familiar with the technical and economic aspects of the production of ethylene, propylene, aromatics, C_4's and the related chemical and fuel products produced in steam cracking. The firm has carried out many chemical refinery studies concerned with optimizing the chemicals/fuels interface.

The group has also carried out many technical and planning studies covering hydrogen, ammonia, methanol and carbon black production from natural gas and liquid feedstocks.

2. Petrochemical Intermediates and Products

Chem Systems' experience in petrochemical intermediates has involved market and technology investigation, as well as feasibility study work of the major monomers, polymers, synthetic fibers, the hydrocarbon, aromatic and oxygenated solvents, and the important elastomers. Detailed marketing studies have been, and continue to be, carried out on a global basis for most chemical products important in world trade. The firm publishes a leading industry marketing research and analysis service for client companies.

3. Corporate Planning and Diversification

Over the last five years, Chem Systems has carried out numerous corporate planning studies for large and medium-sized companies in the petrochemical and energy field. Examples are given below:

- Five-year corporate plan for a plastics company
- Strategic study of the world aromatics business
- Long range planning study for the chemical subsidiary of a major oil company
- Feasibility study of an olefins joint venture in the Ohio River Valley
- Project studies for several companies with large natural gas or gas liquids resources, including:
  - Northern Natural Gas (Northern Petrochemical)
  - El Paso Products Company

- Marathon Oil
- Texaco
- Trintoc (Trinidad)
- Aramco

Client List

Chem Systems' clients include the major oil and chemical companies in the United States, Western Europe, Japan, Africa and the Mid-East.

A partial listing will illustrate the range of the firm's most recent clients:

AKZO
Allied Chemical Corporation
American Cyanamid
Amoco Chemicals
Atlantic Richfield
Bayer A.G.
Chevron Chemical Corporation
Continental Oil
Dow Chemical Co.
Du Pont
ELF
Exxon Corporation
Gulf Chemical Co.
Hess Oil
Nigeria
Marathon Oil Co.
Mitsubishi Petrochemical
Monsanto
Olin Corporation
PASA (Petroquimica Argentina S.A.)
Petroquimica Columbiana S.A.
PROGIL
Rohm & Haas
Sonatrach
OPEC
PCI (Kuwait)
Shell Chemical Co.
Sohio
Solvey e Cie
SNPA

Specific Project Experience

Chem Systems' relevant project experience in planning petrochemical complexes may be summarized as follows:

1. Feedstock and Chemical Raw Materials

- Interrelationships between raw materials (gas and crude oil) availability and price and petrochemical feedstocks (ethane, propane, butane, naptha and gas oil).
- Changes in competing markets for refinery and gas liquids products.

- Supply/demand projections for feedstocks and petrochemicals.
- Changes in by-product evaluations for petrochemical projects.
- Projected prices for petrochemicals related to crude and natural gas liquids prices.
- Changes in pricing mechanisms for refinery and petrochemical products.
- The impact of Government policies on the above evaluations.
- The impact of offshore or Canadian Petrochemical projects.
- The effect of energy prices and availability on the competitiveness between various petrochemicals, i.e., ethylene vs. propylene.
- Projected changes in refinery processing and the impact on petrochemicals.

2. Market Analysis and Trends for Chemical Intermediates and End Products

- Competitive technology.
- Analysis of marketing activities and production economics of competing companies.
- Future market growth for end-use products.
- The impact of new product developments.

3. Economic Considerations

- Profitability of energy projects vs. integrated petrochemical projects.
- Changes in end-use patterns of chemicals as reflected by the energy crisis and subsequent dislocations in the economy.
- The effects of multinationalism.

4. Detailed Process Economics

- Investments
- Operating Costs
- Inflation Effects
- Site location
- Definition of process and offshore units

- LP simulations
- Optimization

5. Technology

- Refineries -- specific process units
- Petrochemical plant -- yield. flow sheeting, heat balances, etc.
- Downstream processing
- Project management

6. A Global Market Study for Selected Petrochemicals, Plastics and Elastomers: A study prepared for an Iranian joint venture. The study identified target markets on a world-wide basis for such products as HDPE, SBR and PBR Rubbers, ethylene glycol, styrene, o-xylene, and p-xylene among others to be produced in a proposed Iranian venture. The study included determination of pricing for the products on an F.O.B. Iranian basis. The time period was 1979-1988. The market evaluation was based upon a comprehensive investigation of petrochemical trends in both major producing, consuming and developing nations. Extensive field work was done in some 15 countries.

7. A Global Market Study for Aromatics: A study prepared for a Kuwaiti Joint Venture. The study identified world markets for benzene, p-xylene, o-xylene and phthalic anhydride to be produced in Kuwait as part of a naphtha reforming project. The study included price determinations, supply/demand balances, and identification of competing projects. Field work was carried out in Western Europe, Africa and the Far East.

8. The World Market for Selected Olefin Derivatives: A study prepared for Petrochemical Industries Company, Kuwait. The study is limited to products considered feasible for the world market: 1) liquid ethylene, 2) HDPE, 3) LDPE, 4) ethylene glycol, 5) styrene, 6) vinyl chloride and 7) acrylonitrile. Within the report each product is considered worldwide in terms of producer's capacity, the plant location, supply/demand balance in industrialized countries, trade and marketing (industry structure, product range and distribution). AGO 560414

9. Petrochemical Feedstocks and Derivatives Availability and Pricing: 1975-1985. A study for a major Japanese Petrochemical Producer. This was a feasibility study that evaluates new petrochemical manufacturing ventures in the Middle East and the potential exportation of products from the Mid-East to the United States, Canada and Western Europe. Examined in depth are current and projected prices and availability of feedstocks and derivatives in these countries.

10. Chemical Raw Materials for Nylon Manufacture: A study of the supply, demand and pricing in Eastern Canada. This study was specifically concerned with an appraisal of the supply, demand and probable pricing of petrochemicals utilized for manufacture of nylon 6/6 fiber polymer. Some of the petrochemicals evaluated were cyclohexane, butadiene, propylene, ammonia, acrylonitrile, natural gas and hydrogen. Since a large part of the appraisal was dependent upon cost of production economic analyses, considerable effort was devoted to forecasting the availability and pricing of basic hydrocarbon feedstocks in the U.S., Canada and Western Europe.

11. The South American Chemical Industry: Opportunities for Investment -- A Multiple Subscriber Study. The purpose of this study was to examine present and historical consumption patterns in the chemical industry, and develop future chemical and petrochemical demand patterns. The public and private sector interface was examined and potential investment opportunities through 1975-76 were indicated. The countries analyzed included Venezuela, Columbia, Brazil, Argentina, Chile and Peru. The general economic and political backgrounds of these areas are also considered within the study.

12. Planning of a Petrochemical Complex for Petroquimica Argentina. This report covered a feasibility study for a new 200,000 MTPA ethylene plant based upon naphtha feedstock. Included were economic

studies for setting the design basis, detailed financial analysis, contractor evaluations and market studies for petrochemicals and derivatives including styrene, SBR and PBR rubbers.

13. Other Planning and Feasibility Studies -- Latin America.

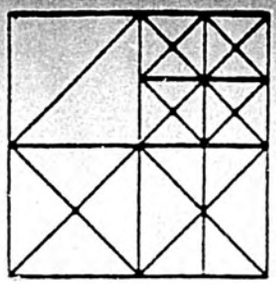
- Economic Studies for Petroquimica Uniao in Brazil
- Acrylonitrile Feasibility study in Venezuela for IVP
- Multi-purpose resin plant in Brazil
- VCM and PVC venture for Petroquimica Colombiana
- A Maleic Anhydride project for Sharmex-Mexico
- A specific world market study for ammonia, methanol and LNG based on natural gas discovered in Colombia.

14. Strategic Considerations for Planning Business Relationships with Oil Rich Nations. This report evaluates opportunities for a specific company to establish an international base for its high volume chemical business. Included is an examination of the feasibility of investment in a hydrocarbons rich country, with the prime goal being the marketing of products in a hydrocarbon lean region.

15. The Canadian Petrochemical Industry -- Multiple Subscriber. This study examines in detail the future of the Canadian petrochemical industry. Some of the factors considered were demand for petrochemical intermediates, potential foreign markets for Canadian products; availability and cost of indigenous natural gas, gas liquids, and crude oil derived feedstocks; availability and cost of manpower, capital, technology and other resources required for petrochemical production; and the attitude and policies of the petrochemical producers.

EXHIBIT IV

Chem Systems Inc.'s critique of Alpetco's proposal dated January 13, 1978.



ALPETCO PETROCHEMICAL REFINERY PROJECT

CHEM SYSTEMS INC.
747 Third Avenue
New York, NY 10017

January 13, 1978

AGO 560418

ALPETCO PETROCHEMICAL REFINERY PROJECT

At the request of the principal shareholders of Alaska Petrochemical Company, we have reviewed (a) the documents describing their proposed project for a petrochemical refinery in Alaska, and (b) a number of comments on this project attributed to the firm of Bonner and Moore, as appeared in two articles in the January 4, 1978 issues of The Anchorage Times, and The Anchorage Daily News. This brief report represents our views regarding the proposed Alpetco project and comments published in the referenced newspaper articles.

Chem Systems Inc., has, over the last ten years or more, carried out a large number of refinery and petrochemical studies. Our firm has been engaged by many of the world's largest oil and chemical companies, as well as by agencies of several oil-rich countries contemplating world-scale petrochemical complexes. We have also carried out numerous market studies for fuels and petrochemicals projects, as well as feasibility studies and technical evaluations, and we have participated in the commercial realization of many major petrochemical plants. As a result of our specialized activities in the refining and petrochemical field, Chem Systems has gained a reputation of being expert technical, economic, and marketing consultants for such projects, including assistance to major oil companies, government agencies of OPEC nations planning petrochemical projects, proposed joint ventures in petrochemicals, etc. Chem Systems is also experienced in Japanese chemical supply-demand issues. The Alpetco project falls well within the range of our company's consulting expertise.

REVIEW OF ALPETCO PROJECT

The project's objective is to purchase 90 percent of Alaska's royalty crude oil up to a limit of 150,000 BPCD for a period of 25 years, and to process that crude oil in facilities, to be newly constructed in Alaska,

primarily into petrochemicals for export to Pacific Basin markets, including the lower 48 states. A relatively small proportion of product (about 30,000 BPCD) would be refined into conventional fuel products for use in Alaska. The proposal also expresses a preference for a plant location in the Kenai area. The proposal's economic basis requires "project financing"; that is, financing for both investment and working capital would be essentially 100 percent with little or no equity capital contributed by Alpetco. Another condition is that there is assumed to be no natural gas available for purchase, nor any electric power. Hence, the facility built must be self-sufficient for its energy requirements.

1. General Processing Scheme

The flowsheet in the proposal represents a petrochemical refinery that will produce fuels and petrochemical derivatives. The relative amount of chemicals versus fuels products is relatively high but is within the range of cases studied for other such projects. It is realistic from the standpoint of being able to build process units of proven technology to accommodate this product mix. The principals of Alpetco have stated to us that the specific product mix and plant configuration is only illustrative in that it represents one case, i.e., one possible such mix and configuration (see also below). The final configuration of processing units may vary considerably from that shown, while still producing petrochemicals. The process units used in the flowsheet in the illustrative case in the proposal are based on work carried out by the respected engineering-construction firm of Brown & Root and check closely with what Chem Systems would recommend for achieving the product mix shown in the proposal.

Our preliminary check of Brown & Root's work on the flowsheet material and energy balances, as available to Chem Systems, showed the following:

(a) The information presented, including that obtained in our discussions with Brown & Root staff members, is typical of

that available at this stage of project development. However, it should in no way be considered an optimized or finalized proposal, and Alpetco recognizes this to be only an illustrative case among a number of possible cases.

(b) The sequence of process units from crude unit through desulfurization, hydrocracking, catalytic reforming, steam cracking for olefins, and derivative plants to produce polyethylene and polypropylene can be constructed using proven technologies. They can also be expected to produce approximately the volume of end products shown by Brown & Root.

(c) The Brown & Root heat and energy balance clearly has not been optimized, although when checked by CSI in the same preliminary fashion, our results do not differ substantially from those of Brown & Root. CSI is confident that a more rigorous optimization would use substantially less fuel for the two purposes of process heat input and generating electric power. This improvement will make the project more economical by producing more product for sale.

2. Project Cost Estimate

We have made an independent quick check of Brown & Root's estimate for the onsite and offsite portions of the project as depicted in the illustrative configuration and agree reasonably well with their numbers on a Gulf Coast basis. We have insufficient experience regarding construction costs in Alaska to check Brown & Root's estimate of 2.5 billion dollars on an Alaska basis, which assumes a substantial amount of Japanese equipment purchases and "modular" construction methods. On this basis, their estimate would result in a plant cost in Alaska bearing a closer relationship to Gulf Coast costs than is normally assumed by a number of major contractors.

It is almost impossible to develop a detailed estimate for this type of project at this stage. For upper limitations on financial planning and for careful analysis of production costs, Chem Systems believes that, as the project progresses, more definition and better capital estimates will be required, as would be normal during the course of any project development.

Separately from the above, and referring to Article IX of the draft agreement between ALPETCO and the STATE OF ALASKA's Department of Natural Resources, we confirm that regardless of the specific final configuration of Alpetco's petrochemical refinery, in terms of ultimate product quantities and amounts (i.e., product mix), an expenditure of more than 1.5 billion dollars will be required to construct a plant of this special type, including the required offsite facilities.

3. Product Marketing (Incl. Contractual & Financing Considerations)

Since the lighter fuels products from the Alpetco facility (i.e., gasoline, jet fuel, diesel fuel) are required by the State of Alaska, we will comment only on the petrochemical products.

The Alpetco facility is scheduled to be on stream in the mid-1980's. Alpetco's marketing plan involves sale of roughly half of the petrochemical output in Japan and the other half in the United States (largely the West Coast) and in other countries in the Pacific Basin (e.g., Indonesia, the Philippines, Hong Kong, Malaysia, West Coast of Latin America, etc.). Alpetco recognizes that, while they have conducted extensive discussions with companies and government agencies regarding the project, they can only finalize their marketing plans when they are in a position of being able to make definitive project plans as well as detailed engineering studies, estimates, and product cost projections. Our comments should be viewed in the context of this aspect of the marketing plans for a new petrochemical complex.

World demand for petrochemicals is expected to continue to grow at a fairly substantial rate over the next two decades. For example, U.S. ethylene demand in 1990 is expected to be about 52 billion pounds, versus projected 1985 effective capacity of 44 billion pounds. Japan's 1990 ethylene demand should reach 18 billion pounds, requiring about 4 billion pounds of new capacity between 1985 and 1990. Thus, a considerable amount of new ethylene capacity will be required by both countries.

We believe that the markets being solicited by Alpetco would, starting in the mid-1980's, be able to absorb sufficient amount of such petrochemicals as polyethylene, polypropylene, butadiene, styrene and cumene to achieve a classical petrochemical refinery configuration in Alaska, though recognizing that the specific product mix and the total amount of petrochemicals may not necessarily be the same as shown on the current flowscheme. Our opinion regarding the marketability of these products is based on (a) Currently unsatisfied West Coast markets, which continue to grow at a substantial rate with no major production of olefins and olefin derivatives practiced or currently planned in this area, (b) Discussions, reported to us, which have been held by Alpetco's principals with high officials of the Japanese government, which give Alpetco strong reason to believe that Japanese interests fully intend to take half or more of the petrochemical products from the proposed complex and to market these in Japan and elsewhere, and (c) The growing world market for petrochemicals, in general, including the less developed countries.

It is our opinion that as a result of market and project optimization studies, as well as discussions and contract negotiations subsequent to signature of an agreement regarding the royalty crude oil, Alpetco may find that it will be preferable to market smaller quantities of polyolefins and ethylene glycol and, instead to substitute certain other petrochemicals (e.g., cumene and styrene). This appears to be consistent with Alpetco's own planning.

In connection with the Japanese interest in the Alpetco project, it is relevant to note that Japanese companies, acting with their central government planning agencies, have made similar long-term commitments in the past, when in Japan's view these commitments provide economic, political, logistic, or security of supply benefits. Examples of long term financing include LNG supply from Alaska and Indonesia, Iron ore projects in Australia, Peru, and Brazil, and coal mining projects (e.g., a Canadian project involving a 15 year supply contract).

4. Crude Oil Supply

Alpetco's proposal is based on obtaining 150,000 BPCD of North Slope crude oil. CSI understands that the contract will call for the right to 90 percent of royalty oil available from the North Slope or future discoveries up to 150,000 BPCD. We understand that the State of Alaska has not asserted its ability to deliver any minimum volume either in any years or on average over the 25 year contract period.

There has been considerable controversy over the amount of oil the North Slope fields will produce, and whether or not all the associated gas produced will be needed for reinjection to "drive" the field. CSI has no expertise in assessing the long range production capability of the North Slope field or in predicting the potentially discoverable oil.

If it were known that less than 150,000 BPCD of royalty oil were available, and that of the order of 150,000 BPCD were necessary for an economic facility, it seems reasonable that the deficit could be obtained under long term contract from other producers of North Slope crude oil. The likely amount of royalty oil available, the price and terms of alternate crude oil supply, and any relationship this volume might bear to commitment by Alpetco to invest in facilities in Alaska, will, according to Alpetco, be examined in more depth, if Alpetco is selected and this project proceeds. Depending on the above, as well as the finalization of the marketing of the products, an evaluation of the project with a lesser quantity of crude oil feedstocks may become necessary.

A very positive aspect of this project, as far as Alpetco's position as a long term supplier of petrochemicals is concerned, is the assured availability of crude oil in sufficient quantities.

Chem Systems' forecasts show 6-7 percent per annum growth in petrochemicals products, and 2-3 percent in oil fuels products in the 1990's. Thus, petrochemicals will require an increasing percentage of domestic petroleum cuts. Demand for refinery feedstocks for the production of olefins is estimated to increase from 200,000 B/D in 1976 to 1,800,000 B/D by 1990, while refinery crude runs should increase from 13.4 to 20.1 MM BPCD. From an increase in crude runs of 6.7 MM BPCD over this period, 1.6 MM BPCD will have to be earmarked for olefins. This will make it difficult to meet both the demand for fuels and petrochemicals. Accordingly, a petrochemical project having an assured feedstock supply would be in an advantageous position, particularly vis-a-vis its long term customers. This, of course, also explains one reason for the Japanese interest in the Alpetco project.

5. Location Factors

The specific site at which a plant is located influences the cost of construction, cost of operation, and transportation costs of crude oil and products. Alpetco's proposal expresses a preference for a site on the Kenai peninsula, but leaves its final selection to be made during its project development program. The experience in Kenai with present plants, with proven requirements for "winterization", and with construction and operating personnel, should all lead to lower construction and operating costs, than for other potential Alaskan locations.

Chem Systems has also examined Alpetco's plans for bulk movement of crude and products in new, appropriately sized, foreign flag and U.S. flag vessels. These plans were developed by Seatrain, which has direct

current experience and expertise. Until the project's product mix and destinations are better developed, firm conclusions on relative transportation costs cannot be drawn. However, it seems likely that if the costs developed by Seatrain, which appear reasonable, can be obtained, transportation costs associated with a Kenai location should not detract from developing the project.

6. Economic Viability of Alpetco Project

Alpetco made available to Chem Systems its computer model on the project and the various runs made on the project. Our review of the model, i.e., the basis of calculations made, inherent assumptions, etc., indicates that the model accurately calculates and prepares representative statements.

As part our of review, we have recalculated the revenues, costs, year-by-year cash flows, and debt repayment schedules, based on the current product mix and plant configuration and using Chem Systems' own data base for world petrochemical prices, which are lower in some cases than Alpetco's prices. This review has confirmed that the Alpetco basis of project financing appears viable, provided that certain of Alpetco's assumptions can be validated during the next 18 months, when the company will negotiate contracts for product offtake. The most important point concerns product prices. It is impossible at this time to judge whether potential customers will agree to take products from Alpetco at world market prices (less any transportation cost differential) as has been assumed in all the economic projections for the Alpetco plant. While petrochemical prices are depressed at this time, many sources feel that the late 1980's will see the start of a petroleum shortage and that demand for chemicals will have caught up with capacity. As stated before, availability of petrochemicals from a facility having a secure feedstock supply may well be a very desirable "selling point" for a project in the late 1980's and 1990's.

We also believe, based on our experience with projects of this type, that some of the potential marketing partners may wish to enter into joint ventures on some of the derivatives projects. This may well facilitate negotiation of sound marketing contracts at mutually agreeable prices.

While we have not had any direct contact with the Japanese regarding this project, it is well known that Japan is attempting to protect its future by making deals or participating in offshore projects. Japan's petrochemical industry is suffering from severe environmental problems and, as a matter of stated policy, is planning to depend on offshore capacity for some of its future growth (viz. Japanese activities in the Middle East, Singapore, Alberta, etc.). Japanese trading companies market on a worldwide basis and would, in our judgment, be very interested in marketing products from Alaska.

According to information available from Alpetco, the company has strong reason to believe that it may obtain Japanese backing for this project in a number of ways, including product offtake, financing, etc. Assuming this to be the case, Alpetco would find it considerably easier to sign marketing and/or joint venture agreements covering other markets during the time period allowed under the draft contract with the State of Alaska.

The economic viability of the Alpetco project cannot be finally determined until offtake contracts have been negotiated, a final product mix is determined, plant design is optimized and a detailed estimate prepared covering the installed cost of the entire project, and financing basis secured. We can say, however, that the planning and engineering studies carried out by Alpetco are adequate for this stage of project development. The company should be able to approach potential market outlets and marketing partners with a sound project proposal, including the flexibility to alter the ultimate design of the petrochemical refinery facility.

It should be noted that all of Alpetco's financial projections have been stated in 1977 dollars without allowance for any inflation. Since this is a long term venture, the effects of inflation are expected to be significant. Our preliminary check using Chem Systems' own forecasts of inflation rates on construction costs, operating costs, and crude oil and product prices, improves the economic viability. In simplest terms, the total dollar margin between sales revenue and operating costs becomes larger in inflated dollars versus the costs of investment in facilities which are largely fixed in less inflated dollars.

COMMENTS ON ISSUES RAISED IN THE NEWSPAPER ARTICLES, ATTRIBUTED TO BONNER AND MOORE

1. "Low Chance Of Success For Project"

This type of general remark is not a specific criticism and therefore cannot be refuted with hard facts. We can say, however, that many petrochemical refinery projects have historically been proposed and only some have gone through. Quite recently, one such announced project on the Gulf Coast by Du Pont and Arco "fell through", while another by Monsanto and Conoco went ahead. The success for an Alaskan petrochemical refinery would be due to a combination of favorable factors, including assured raw materials supply, product pricing, and acceptance by product offtakers. We do not believe it is helpful to project odds for likelihood of success for any project of this type.

2. "Alpetco's Principals Had No Previous Petrochemical Experience"

While this statement is, in general, correct, we do not believe this to be a valid criticism of the project at this stage. Alpetco plans to secure on a permanent basis, a senior staff with a great deal of experience in projects of this kind. The process and construction contractors engaged to design and build the plant would be the same types

of companies that have successfully built similar plants. Moreover, we would anticipate, as stated earlier, that one or more major petrochemical companies could, if desired by Alpetco, become joint venture partners in some of the petrochemical plants, thus adding technical experience to the venture.

Over the last ten to fifteen years, a number of companies have built new grass roots petrochemical facilities without any previous such experience, in many cases with considerable success (Examples: Northern Petrochemical, a subsidiary of Northern Natural Gas Company, SAGA Petrochemical in Norway.)

3. Use of Natural Gas Liquids or Natural Gas

In both articles, there are references to the possible use of natural gas and/or natural gas liquids for an Alaskan petrochemical project. This also appears to be the basis for the comment regarding a potential location near Fairbanks, where the proposed ALCAN line would conceivably provide a source of natural gas and gas liquids, the latter presumably via extraction of ethane.

While gas liquids, such as propane, or propane-ethane mixtures are well suited for the production of ethylene, the most important first-stage petrochemical, it is far from obvious that such feedstocks will be available in Alaska at the right place, time and cost.

- If a natural gas pipeline is built, we believe that most of the gas liquids will undoubtedly be removed at Prudhoe Bay to make it possible to transport the gas in an unheated pipeline without condensation in the line. Thus, in order to market the liquids, it would probably be necessary to ship the gas liquids removed there in a separate line to southern Alaska or to build a petrochemical plant on the North Slope.

- The extraction of ethane in the Fairbanks area appears to have little merit. The State's one-eighth share of the gas would contain insufficient gas liquids for a world scale ethylene plant. Moreover, if reasonable assumptions are made regarding the value of extracted ethane at Fairbanks, this material (projected to have a value of about $2.50 per million BTU in 1975 dollars) would have no economic advantage over cracking petroleum feedstocks in a coastal Southern Alaska location, considering also the serious transportation problem for products shipped from landlocked Fairbanks to the coast.

For these reasons, we believe there is insufficient basis to plan for production of olefins from the North Slope gas liquids. Should the situation change at a later point, the cracking furnaces proposed by Alpetco could be designed at modest extra cost to allow cracking gas liquids at a later date.

4. Likelihood For "Take-or-Pay" Contracts

Established practices in the petrochemical industry call for "requirements" contracts with periodic price redeterminations, based on market price or an agreed formula of some kind. "Long term" contracts are frequently limited to a period of five to eight years. The Alpetco project, however, is a relatively unique situation and in the proposed contract between ALPETCO and the STATE OF ALASKA, Alpetco must "enter contracts for the sale of at least seventy percent (70%) of the product output from the Petrochemical facility". Chem Systems believes that the proposal made by Alpetco is reasonable, i.e., that it will attempt to place 70 percent of the plant output within 18 months, which can be extended to 24 months. Whether Alpetco will succeed in this endeavor cannot reasonably be evaluated in terms of "long odds" or "likely

success". As mentioned in earlier sections of this report, we believe that the keys to this project will be found in (a) the willingness of Japanese interests to support the marketing and, directly or indirectly, the financing efforts for the project, and (b) the ability of Alpetco to move product to the U.S. West Coast market, which, by 1985, should be able to support the equivalent of two or three world scale olefins plants.

5. "Alpetco's Willingness To Operate On A Very Low Rate of Return On Small Equity"

While the illustrative financial model included in the Alpetco proposal of October 15th indicated a capital structure of essentially 100 percent debt financing, this is not normal practice in the U.S.A., except for certain "off balance sheet" projects, such as those using "lease back financing", Nevertheless, it is certainly possible to put a deal of this kind together. Alpetco's financial advisors, including two of the largest U.S. investment firms and a major multinational U.S. bank, have spelled out the conditions under which they believe Alpetco's financing could be handled. Alpetco has received a letter from its investment bankers stating that, subject to certain conditions, "we believe we can raise equity funds for the ALPETCO COMPLEX in amounts sufficient to support the anticipated financial structure of the COMPLEX". Chem Systems has met with representatives of these financial institutions and confirms their support of the financing mechanism of the Alpetco project.

It is our experience that some equity is usually required for projects of this kind. We believe that Alpetco and its financial advisers recognize this, and, as indicated above, have provided for this, if necessary. In view of the high amount of proposed debt financing, the return on a small percentage of equity would then undoubtedly be quite high, not "very low", again assuming that Alpetco can meet the marketing and sales price criteria assumed in the current projections.

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JOINT HEARING

HOUSE SPECIAL COMMITTEE ON ROYALTY

OIL AND GAS

AND

SENATE RESOURCES COMMITTEE

FEBRUARY 15 and 16, 1978

AGO 800862

Northwest Officials

John McMillian - Chief Executive Officer

Jim Allen - Vice President - Finance, Northwest

Morris Thompson - Vice President, Northwest

Jack Bachman - General Counsel, Northwest

Carl Bornmann - Attorney - Cahill, Gordon and Reindal of New York

Walter Lubanco - Partner, Managing Director, Lehman Bros., Kuhn, Loeb, Inc. of New York

Neil Eisner - Associate, Lehman Bros., etc.

Jay Hellstrom - Vice President, First Boston Corporation

Mike Stanfield - Vice President, Loeb, Rhoades, Hornblower and Company of New York

Howard Cann - Vice President, Bank of America, San Francisco

***

FERC Officials

John Adger

Phil Essley - Technical expert

Bob Anderson - Economist

Ned Hengerer - Attorney

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CHAIRMAN MILES: We will call this Joint Hearing to order. This is the Ninth Hearing of the Senate Resources Committee and the House Special Committee on Oil and Gas. We are very pleased to have Mr. McMillian of Northwest Pipeline with us. He has brought along a number of his experts in various fields. This meeting is purely informational and its partly in response to _____ with the representatives of Northwest Pipeline to begin hashing out what decisions they feel we have to make. And we also get our opinions _____. It is my understanding that in Mr. McMillian's presentation that he is going to dicuss the current situation with the Alcan Pipeline and then a number of financial matters. Following his presentation he and his staff will be available for questions and answers. If it is acceptable to the committee I think that we should proceed along the lines of having Mr. McMillian make his statement and then the Committee pose questions and take it from there.

SENATOR RADER: Mr. Chairman, yesterday during the Joint Session Senator Stevens, in his address to us, did discuss very briefly the pipeline situation and we did not have time yesterday to take questions from the Senator and to get his indepth thoughts on that matter. Several of the Legislators mentioned that to me after the session and I contacted Senator Stevens and asked him if he would take this opportunity to discuss with the Legislators here and particularly this

Committee, his views from the national point of view relating to the financing of the pipeline or anything related. I therefore would very much appreciate it if you could extend to him, I know that he doesn't want to take more than just a few minutes but he has agreed to make himself available for questioning from the Committee. I therefore would move, Mr. Chairman, that the State would ask the Senator to speak out of order and proceed with him at this time.

SENATOR STEVENS: Thank you very much, Mr. Chairman. I don't have any prepared statement for today. I appreciate the statement that Senator Rader has made and would elaborate just for a couple of minutes on the statement that I made. I am aware of the general outline of the proposal that Mr. McMillian is bringing to you and I particularly refer to the bottom, literally the bottom. I'm glad to see that it is the bottom line. That the ultimate backing for the State's participation will be revenues generated from the project. This has been the position that we have taken from the beginning, those of us that have been in Washington, concerning this project that the State should be willing to take a risk along with all others who would benefit from the project, but that the risk should be limited to the potential revenues that we could derive from the completion of the project.

As I mentioned to Senator Radar last night, I think that it is important to keep in mind the position that we

are in with regard to financing this project. There are other matters that are pending before the Legislature that I'm not intimately familiar with in terms of detail but I have read in terms of the general subject matter. I think that it would have an impact on the financing of this pipeline also. One of those that I read is the proposal as I understand it to bury the taxation laws as it would apply to the producers of the North Slope oil. From my point of view and from what I know about the financial community and the problems of financing the gas pipeline, I think that a change in the rules of the game now, the change of the basic laws of the State as it applies to those who took the risks on the oil pipeline to change our State corporate tax income tax laws would be a signal to the financial community that the same thing could happen if the gas pipeline is financed. Whether we like it or not it takes a tremendous amount of before tax income to have after tax income to amount to CAPITAL formation. I checked with my office this morning. We anticipate in Congress a need for about $400 billion of capital in the total energy field in the next decade. Of that we can expect about 10% to be new capital that is generated and generally the rest of the shifting capital that will have be attracted to investment in the oil and gas industry. I think that if you look at Alaska, Alaska needs a minimum of $400 billion in the next ten years just to keep with the projects that we already know are

going to go ahead. This gas pipeline the gas conditioning plant, the liquid hydrocarbon extractions plant that will be associated with the gas pipeline, the petrochemical plant and the financing of the off shore developments plus we have the additional energy demands such as the Susitna Dam and the extention and completion of the drilling and the production mechanisms for Prudhoe Bay and the area north of Prudhoe Bay in terms of Buford Sea. What I'm saying to you is that from where I sit it looks to me like the State of Alaska is going to require about 25%, at least, of the capital when we have the capability of forming a new capital just for this pipeline alone but we are going to need 10% of all of the money that this country can _____ for oil and gas development in the next decade. In this state with 500,000 people competing with the nation with 220,000,000 people. I would urge you and again I don't know the details of your legislation. I tried to point out in my address yesterday and I'm going to stop now and see if you have any questions Senator Rader or anyone else. My point is that we need stability. We need to give the financial world the total picture of Alaska as a mature entity, financially and from the point of legislation of Legislation and if we had legislation now that comes along and is looked upon, whether rightly or wrongly gentlemen, it is looked upon as being punitive legislation for those who appear to be making more money than we anticipated in

the beginning, it is going to deter financing of this gas pipeline and the other things that we need money for. I urge you to consider the impact on the outside that I was mentioning. We, too, are getting a great deal more money out of the oil and gas business than we anticipated. I remember the first time that we looked at this Alaska oil pipeline we were talking about $3.00 to $4.00 barrel oil. Our profits have gone up, their profits have gone up. They need that after tax profit for capital formation to go on further in our development and I believe that we should be very wary of legislation that could be termed discriminatory legislation as far as the energy picture is concerned. If I have accumulated your thoughts again Senator I appreciate the invitation and I appreciate your courtesy on the rest of you as well for listening to me. If you have any questions I will be pleased to answer them. I'm sure that you are looking forward to hearing from Mr. McMillian.

CHAIRMAN MILES: Thank you Senator Stevens. Any questions for Senator Stevens?

SENATOR HUBER: Yes, Senator Stevens are you aware that the testimony that we received from _____ in the Wall Street _____ in reference to the financing of the Alaska pipeline when they testified at open meetings we had here in Juneau, and I was carrying this _____ that every bit of the financing is figured on the basis that the company had a

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continuing liability for 9.4% Alaska corporate income tax. And that presently the oil companies will realize only a 2 3/4% to a 2 1/2% liability from the Alaska income tax when an Alaska corporation has the liability of 9.4% and that the financial community in every case had considered a 9.4% corporate income tax. And that the bill that you said that you said you are not familar with, none of them, calls for carrying Alaska's income tax over 9.4%. Have you taken this into account in making this recommendation to us?

SENATOR STEVENS: Yes I have and I think that again I say that I don't know the specifics of your bill. But what you're talking about is the apportionment of interstate income and that's a highly contested area of taxation in the nation and we are doing our best to assure that the monies that are actually earned in Alaska are fairly taxed in Alaska. But it is my understanding that the variations and the percentages that you mentioned are related to that apportionment of income. All of the $14.00 of the barral of oil that is delivered, whether it is in the gulf or in California, wherever its delivered, ultimately and sold, the first sale, all of that money was not earned in the State of Alaska. I think that this is one of the big problems that we have to make certain that we have a fair apportionment of that income to the State and as I understand it we're battling constantly as you know, to make certain that the charges are

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fair as we back price that oil from the first point of first sale to the wellhead where we get our 1/8 because we're trying to protect the wellhead value, as you know, and we have worked together, the members of Legislature, the State Government and the three of us in Washington, on that subject. But I don't think we ought to confuss that with what I am saying, and I hope that you won't. I'm saying that there is a stability factor as far as the concept, and I'm trying to ask you to look at the big picture as far as the future of the State is concerned.

If you change the laws even if that discrimination exists, If you change the laws so that Wall Street and the financial world looks at it as discriminatory taxation and the net result is to delay a $10,000,000 gas pipeline or a $4,000,000 gas conditioning plant or a $4,000,000 liquid hydrocarbon installation then I tell you that we have lost the forest for the trees, and I'm urging you to look at the problem that we have. Now all of us have spent a great deal of time in the last year, Don Young, Senator Gravel and I, in going to New York to visit with those people who are handling the financial decisions of large capital in this country. And we are trying to convince them that we are a stable mature society, that we can handle the investment of this kind of money in a short period of time. What you people do has a great deal more to prove that we are right

with Mr. McMillian and his people who have come on say, as far as this project is concerned. Their looking to you to say what is the business climate, what is the investment climate for Alaska. That's my position and I hope that you understand. I'm not arguing about the fact and you can draw your conclusions, I can draw mine from the apportionment problem of income. But from the point of view of the broad picture of how Alaska is viewed in the financial world, I hope that you will see what I am trying to say.

SENATOR HUBER: Mr. Senator, I hope that Alaska's changes propose income tax structure are not being construed in Washington and elsewhere as an attempts to raise it. But we have not getting a fair apportionment of this price and we have been working very hard to try to get fair apportionment and I hope that you will work with us on that and _____.

SENATOR STEVENS: Let me tell you again, whether you are right or wrong and I haven't come down to determine that. Whether you are right or wrong if you change these tax laws so that they are so interpreted this year they will have an impact on it. Let me point out to you that the energy bill that is coming out of conference has a provision in it which says that State severance taxes are in addition to the first sale price for gas limited to the extent that the State collected severance taxes on April 20, 1977. We believe that date will be changed to at least this date of January in 1978.

But when we inquired where it came from the people on the Conference Committee told thats to prevent Alaska from raising its taxes anymore in terms of severance tax. I'm not talking to you just about the financial world. I tried to talk to you yesterday about the way that Congress is preceeding this State of some 400-500 thousand people in terms of what they consider to be our masive income already from oil and gas projected and now we're saying that we want more taxes. We are trying also to deal, John, with the BC people. Mike Gravel and I just spent time in New Orleans dealing with the BC people on trying to get them to be non discriminatory with their taxation on our gas pipeline if it goes through BC. I'm sure you know that the provisions that currently is in effect limits the taxation to $30,000,000 or the taxes that would be derived from the State of Alaska as tax laws. So they built right into the agreement that if we raise taxes, BC and Yukon Territory and the rest of them can raise taxes. We are be preceived, John, as moving to fast in terms of wanting to increase our income from these projects. And again I'm not arguing whether you are right or wrong, I'm asking you to see it from where we see it in terms of what the reactions are outside to what we are doing with regard to our tax law.

SENATOR HUBER: Senator I'm afraid that that is perceived as your suggestions and although I realize your position and I appreciate the job that you are doing in New York for us,

FOR INSTANCE, A REMARK regarding the severance tax on gas. For so many years we haven't raised it any so it no longer coincides with severance tax on an energy basis. We held back because we didn't want to increase the taxes on our essential industry thats supplies natural gas to southcentral Alaska. So now Alaska _____ and now it is perceived to be lost after we didn't raise it for years and years. If your advise is for us to stand still and agree to wait by Congress or anybody else I can't see it then.

SENATOR STEVENS: Well if you call it that, John, you just have to call it that. I'm saying to you that we can look forward to a construction period of the gas pipeline, of a gas conditioning plant, of all these other facilities. We can have a stable construction industry related to the oil and gas industry with a smooth flow of investment capital to bring that about. Or we can be perceived as wanting to change the tax laws every year and slow down the flow of that capital and interupt and have peaks and dives in our construction and our employment picture. You're going to have to make up your mind, I'm not sitting where you are now. You are going to have to make up your mind what you think is right about it. As far as the severance tax is concerned, again that is already done. The Conference Committee has limited the severance taxes that may be added

to the wellhead price of gas to the severance taxes that were charged by laws already in effect. And specifically it came about because of the increase of the Alaska severance taxes. I'm not saying that it was right of wrong, I'm just saying that they have said we have drawn the line from now on its a stable act to increase the severance taxes, it comes out of the wellhead price. It is not in addition to the wellhead price as far as the consumers of the United States are concerned. So it's just a signal. You can read the handwriting on the wall, the next thing is going to be a question as to whether their severance taxes are deductable. That fight went on between the Province of Alberta and the Federal Government in Canada and I would urge you to study it because the Province of Alberta had to back up. And we could get ourselves in that position, John, and I hope that you don't get us in that position because I think the net result will be that there will be an increasing anomosity towards this state not only from the Congress but from Wall Street.

CHAIRMAN MILES: Thank you. Senator Butrovich.

SENATOR BUTROVICH: ... (indiscernible) You know a short time ago I read an article in one of the _____ byline or dateline or whatever you call it, concerning labor on the pipeline. It's a pretty tough article as far as hiring in Canada. It went to some length to say that portions

of the line in Canada would be done by Canadian laborers and I noticed in your statement of Mr. McMillian's that something to the effect that Alaskans would be given preference. This is supposed to be raised in discussion of the oil line. There is a lot of people who work on that oil line and have no special qualifications in fact the hardest work that some of them did was ... (indiscernible). And if we are going to have that kind of a job on the gas pipeline I want Alaskans to enjoy it not the Canadians. If they are going to be tough enough _____ _____ then perhaps the article didn't speak for the NORTHWEST but it apparently spoke for the feeling that must exist in Alberta and I feel the same way. I don't know how you feel about that.

SENATOR STEVENS: John, I feel the same way that you do about that and Senator Gravel and I at the meeting with the Canadian members of Parliament discussed that at length. As a matter of fact that subject took up more time in our joint meeting then any other subject between our two countrys. It is the so called question of Canadian content. And I don't think that Mr. McMillian and his people really have much control over this now because this is a bill that is standing before the Canadian Parliament and the Canadian Parliament has indicated that Canadian content is going to be a condition of the approval of the legislation to allow this pipeline right of way to go through their country and that content, John, has been set a 90%. We argued long and hard about

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that concept of Canadian content and how it impacted on us. I reminded the Canadians that the first material that came in for the oil pipeline where the Canadian built Atco camp that came into Fairbanks. You will recall that, as a matter of fact I think you had a conversation with me about it at the time and its a very difficult problem to handle. That is another government, another national government and they have got legislation pending before their national congress, their Parliament which we don't agree with and we are having a very tough time getting changes made in it. But again that hasn't got anything to do with the financing of the pipeline, John.

SENATOR BUTROVICH: Yes it does.

SENATOR STEVENS: It does in the sense of our approval of it but it doesn't in the sense that the support or lack of support of investors in the pipeline. That's what I mean.

SENATOR BUTROVICH: Senator Stevens ... (Indiscernible). You mentioned 90%. Were you told told by 90% of Canadian labor in Canada.

SENATOR STEVENS: Now this is going to shock you but they say that 90% of all good services, labor, material, equipment will be of Canadian origin on the part of the pipeline that goes through Canada.

SENATOR BUTROVICH: Well I can't argue with that. (Indiscernible) I just don't want them telling us how trying to run this government for us.

SENATOR STEVENS: Oh no, on our side its going to be 97%+ U.S. and in Alaska I hope that it will be 100% Alaskan. We are talking about the portion going through Canada when we're talking about Canadian content. We are not talking about the portion in Alaska or the portion south of the Canadian border. But going through Canada their in effect insisting upon Canadian hire as we insisted upon Alaskan hire. Their insistant on Candian contracts as we insist on Alaska contractors. But we were telling them that fair share that it should not be so inclusive that the people of ours who have the experience in construction and that the welders, for instance, should be excluded from Canada when they have the experience and we allowed such people in our construction of the oil pipeline.

SENATOR BUTROVICH: Mr. Chairman, that is one of the things that concerns me and the others, IS the petrochemical plant. I don't want to get down the road and then get across the Canadian border and then try to set the petrochemical plant. I want to have that petrochemical plant on our side of the border.

SENATOR STEVENS: I do too, and that is what we are talking about is taking those liquid hydrocarbons out of it and we had better be able to get the money to build it and we had better be able to have the people associated with it who have the confidence to get that kind of money because, John, you are talking 3+ billion dollars to take the heavy

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and medium heavy liquid hydrocarbons out of that gas before its transported. It means a great deal _____ to do it. That propane and that butane and gasoline and we need that in this state and I think that everybody understand what we are trying to do.

SENATOR BUTROVICH: ... (Indiscernible). If we are going to be a partner in this we want some kind of barginning with. We want to go in there and say we want Alaska labor and Alaskan support on the line. Then we are going to try real hard to get the petrochemical plant on the Alaska side of the border. In other words we are not just going to be good guys and say in order to get a line we're going to join up with them and be partners because there are other people also who can build the line. It just so happens that at the present time that Northwest was going to do it. (Indiscernible).

SENATOR STEVENS: I hear you John.

CHAIRMAN MILES: Senator Stevens, do you imply that if [illegible] CHANGE [illegible] TAX LAWS IT WOULD CREATE [illegible] certain amount of uncertainity. Is it converse to say that the major financial endeavors by ... (Indiscernible). Are we also, committing to locking ourselves in forever and ever ... (Indiscernible).

SENATOR STEVENS: Well I don't think so Mr. Chairman. It's a good point though. Again I'm not saying that you should change the tax, I think that if you change the tax laws in a manner that they are preceived to be discriminatory, whether

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they are or not. That is the impact, there is going to be an impact on the financial world if it is perceived to be discriminatory. I think that you will find that the people who analyze State actions are fairly objective even though they have got a different perspective. They are looking at the alternatives for the investment of limited supplies of capital and if you had to make that decision you would put that capital where the assurance of repayment was greatest. That's the difference of perspective. But as far as the commitment for this line, if we take an action to commit a portion of our future revenues that we would derive only if the line is completed and the gas is sold, then we are taking a risk of a portion of the profits we may make as a State, as an owner of the gas. That gas price is going to rise over the time between now and the time when this pipeline is completed. I have every reason to believe our income, our profits as a State from the sale of this gas at 1/8 royalty is going to go up as much or more than the oil prices have gone up in the past. It's a very limited quantity of gas we have in the world today and this is a valuable resource. So what we are doing is that we are saying we would take a risk along with the company and the investors to the extent that we might derive a profit and no more. And as a matter of fact they are not asking us to risk even all of that. They are saying, though that our State of Alaska's financial

risk will be limited to the revenues that we would derive from the project itself. That to me is a very fair saying and to answer your question directly, yes. If we take that step the financial world is going to say that the State of Alaska has confidence in this project. And that is going to make a great deal of difference in terms of the financial world.

SENATOR SUMNER: I think that without question, without debate one of the primary, maybe the primary issue before the _____ as you probably know is the jobs and the jobs opportunity. Certainly every gubernatorial candidate, including the incumbent, has locked that as their number one attack issue. And it seems to me that this might be an appropriate time to discuss the investment in this pipeline, this proposed pipeline to the Alaskan's jobs. There has been to much lip service given to the term "Alaska Hire, Local Hire" we have beat that to death. But down at the bottom line at the problem line [illegible] Alaskans and on what weight can we use, to see that that comes about. And again comments along that line, I would like you to address that question.

SENATOR STEVENS: Bill, there is no question as we have dealt with this project through consideration in Congress that all three of us who represent Alaska in Washington has said time and time again we support the Alaska Hire Law, we believe

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that it has been interpreted in court as being fair and we want to see it followed in terms of the gas pipeline. I have every reason to believe that this line is committed to Alaska hire. I think that Mr. McMillian will tell you that today and will answer your questions about it. It is again something that there is no question about its need in this State. I'm sure that we support your same approach to that. Thank you very much for your courtesy gentlemen. Mr. President I hope that I've met your request.

JOHN MCMILLIAN: Thank you Mr. Chairman. Mr. Jim Allen, Vice President in Charge of Finances with Northwest Alaska on my right, Mr. Walter Lubanco is a Managing Partner with Leman Comro of New York City, our Financial Advisor. We also have other parties here that will be willing and able to answer questions and would you like to introduce everybody by name.

_____: This is Carl Bornmann from Cahill-Gorden. Mr. Collen from Bank America, State Health Managing Director and First Boston Canadian Financial Advisor. Niel Eisner, also with Union, Mike Stanfield with Labrose, and Jack Bachman our Financial Advisor.

MCMILLIAN: Jack Bachman is a General Council with Northwest Alaska. Thank you Mr. Chairman. I'm John McMillian, I'm Chairman and Chief Executive Officer of Northwest Alaskan Pipeline Company. As you know, our company, which was formally Alcan Pipeline has been selected by the President

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of the United States, with approval of Congress, to design, construct and operate the Alaska segment of the Alaska Highway Project. I'm pleased to be here with you today and to have the opportunity to report on the status of our progress and to discuss ways in which we can work together to assure its success.

Since I was last in Alaska several parts of development have taken place, both in Canada and the United States. Federal, State and Provincial Governments are continuing to demonstrate their commitment to the project by organizing to expedite for the projects completion. On December 16, 1977 the Federal Energy Regulatory Commission, FERC, issued Conditional Certificates of Public Convenience and Necessity to the Northwest Alaskan Pipeline Company, Northern Border Pipeline Company, Pacific Gas Transmission Company, thereby clearing way for us to move forward with our scheduled planning, design and engineering work. For example, our GS geotechnical exploration program which will involve a great deal of field work in Alaska is scheduled to begin on March 1, 1978. Plans are also underway for full scale frost heave tests near Fairbanks and pipe burst tests in Northeastern Alberta. These two programs which will begin late this year and early 1979 will be carried out in corporation with the U.S. and Canadian government agencies. U.S. federal agencies have commenced working together in order to develop the

necessary plan that will allow for timely permitting and monitoring the construction. FERC has created a new Alaska Gas Project Office to facilitate the entire certification process and named John B. Adger, Jr. as Director. Mr. Adger's function is to assist in expediting the project by gathering necessary information required by the Commission to rule upon future applications for permanent certification. He will also represent the Department of Energy on the Executive Policy Board.

Also, over the last two months we have had a series of very positive meetings with Governor Jay Hammond and other officials of the State of Alaska. Our discussions have centered around such issues as the Alaskan Local Hire, use of North Slope haul roads, and of course the possibility of State participation in the financing of our project. We're pleased and encouraged by the cooperative spirited and demonstrated by the State of Alaska and its officials. On the Canadian side a bill similary to the Alaska Natural Gas Act was introduced in the Canadian Parliament on February 3, 1978. This bill is to provide for the approval and centralization of authority necessary to permit the project to go forward. We feel like this bill is a positive bill. This is similar to our Alaska Natural Gas Bill and we see no conflicts today in the proposed bill that is now before Parliament. Further more, Prime Minister Lougheed Lawheed

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has indicated the provincial government of Alberta is interested in participating in the financing of the project from the Canadian point of view. We think this is very important. The Heritage Fund of Alberta now has over $4,000,000. It also shows that the Canadian's are confident in the project. It also shows that the Canadians are confident that this is a good investment for their Heritage Fund. Concurrently with the government efforts, our company is moving forward to organizing a partnership group that will form the foundation for the equity financing of the Alaskan segment. In that regard I'm pleased to announce the final negotiations are currently underway with a number of U.S. gas transmission companies and we expect to announce the formation of this partnership within the next few weeks.

Let me talk about one of the main subjects that brings us all together and that's financing. I would like to outline briefly why we want and need your support. The benefits to Alaska and their people that your support would produce, and the opportunity for investment by the State which would permit the State to realize the same return that all the other investors will receive. The need for Alaska participation, the capital for our project will be raised on a project financing basis. That is, the project will be financed on its own merits and stand as an independent entity. The service for the projects debt and the return on its equity investors will be provided by the cash flow

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generated by the project. This financing concept is different from that employed in connection with the Alyeska Crude Oil Line. Financing strength for the U.S. gas transmissions companies that will participate in the project does not match that of the major oil companies involved with the crude line and therefore requires a fund to be raised for a gas pipeline on a project financing basis. Successful utilization of this financing approach will be achieved by demonstrating the economical viability of the project. We are very confident that this can be done. Because the private capital markets must provide most the financing it will be necessary to erase any doubts that may possibly exist and in turn generate a continued interest in our project. This can be accomplished best through and working with and education of the financial community and also through your active and early commitment to participate in this project. The education process is already underway. A team of project managers and financial advisors are conducting a series of meeting with representatives of major financial institutions that focus on many of the significant differences between our project and the Alyeska line. These include such viable factors as existance of a haul road to the North Slope to provide access to the project, the existence of a work pad that will be utilized wherever possible, the existence of camp facilities, and fewer major river crossings, including the now operating Yukon River Bridge will accommodate

the gas pipeline.

In otherwords, a basis infrastructure already exists. Major facilities now in place will simplify the preparation for construction of a gas pipeline. The construction requirements will also be simplified. For example, the refrigerated barried gas pipeline will need substantial fewer miles of insulation compared with the hot oil line. Also most of the gas line will be barried compared with about half of the oil pipeline. Consequently the problems of providing structural support for the line and the frequency of going from above ground to below ground loads are avoided. Construction experience is also a very important factor. A number of pipeline contractors have benefited from the oil line experience and are prepared to apply that knowledge to our project. This experience will materially improve the effeciency and should reduce the construction costs. Arctic construction experience as to equipment men and arctic knowhow and background is very important for the cost estimates. We have this information in Alaska data base at hand now. These are but a few examples of the striking difference that will help us in the planning and construction of the system. The initial results of our educational and in working with other parties indicate that we are on right track. However, we must now submit to the financial community tangible evidence of Alaska's conviction that our project is economically sound and its construction funda-

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mentally different from the Alaskan line. Alaska's participation would demonstrate that you have recognized the difference between our project and Alyeska's. Moreover, responsive and effective governmental involvement will help keep our project on schedule and insures timely completion. Alaska's financial participation will not only serve to reassure the financial community but it will also add an important element to the success of this project.

Finally, given the various substantial benefits of our projects will provide Alaska and the support that was suggested for in the El Paso Project. A negative response from Alaska would seriously hinder our efforts to develop confidence in the project in capital markets. We believe the benefits to Alaska are very important. Let us now briefly review some of these benefits to Alaska and their people that would derive from a timely completion of our gas line. These benefits can be classified as direct economical and employment benefits, indirect economical and employment benefits and developmental benefits. According to our estimates Alaska will receive the following direct economical benefits. Approximately $10 billion in royalty in income over a 25 year period. Approximately $7 billion in serverance taxes over 25 years and approximately $1 billion from other taxes including advalorem and income taxes. Total royalties in taxes including taxes in connections with the gas processing

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plant as well as corporate income taxes related to the sale of gas will substantially exceed $20 billion for this project. It should be noted that these are only minimal benefits estimates and they are based on the production of 2 billion cubic feet of gas per day at a wellhead price of $1.45 per thousand cubic feet exculated at 6% per year.

Now as to the direct employment benefits. During the construction of the project from 1979 to 1982 the number of jobs created will range from 1,300 to more than 10,000. The project is committed to hiring qualified Alaskans and after its completion the project will employ a permanent staff in Alaska. Indirect economical benefits include the various other services necessary to support the project. These services will provide Alaska with additional employment and revenues stemming from housing, communication, transportation and so forth. Also all the benefits directly and indirectly related to the project will be multiplied as they circulate throughout the Alaskan economy.

With respect to developmental benefits, our project that not only delivers the Prudhoe Bay gas to lower 48 market, it creates an energy gas corridor to the North Slope of Alaska. We believe that this will stimulate further exploration and development of Alaska's natural gas. We also believe that the gas available in the North Slope is one to two fold from that gas that is now available and our

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system will allow for the distribution of Prudhoe Bay gas to Alaskan communities along the pipeline route thus providing an energy supply for future industrial development. In summary, we believe that our project generates substantial and continual economical benefits for Alaska. For providing early financial support for the project Alaska would accelerate the realization of these benefits. I think that it is important if the project is not built none of these benefits will be realized by the State. Alaska can help. Before discussing how Alaska can support the project let me state the position of the current administration in Washington, D.C. and that is that no major energy project will be financed on the basis of federal guarantees. This includes LNG projects, co-gasification projects, SNG projects, nuclear project as well as our gas pipeline.

As mentioned prevously funds for the project will be raised on a project financing basis. Our general financing plan visualizes a committed pool of capital sufficiently large to assure all investors and lenders that there are sufficient funds to complete this project. The committed pool of capital would consist of approximately 25% equity, 75% debt. Most of the equity components of this pool will be invested by the gas transmission companies. However, we welcome equity participation by the State of Alaska as well as her citizens, native regional corporations, and other

organizations. Most of the projects debt financing will be provided by the capital markets, principaly banks, insurance companies, however we expect that the major project beneficiaries will also participate in this segment of the financing. Now to get to more specific items the project encourage Alaska financial suppcrt in the order and magnitude of $1.2 to $1.4 billion. This commitments would include purchase of both debt and equity and is consistant with support that was suggested by the State for the El Paso project and adjusted for inflation. Alaska's commitment would be limited to a fixed amount. Alaska will receive a rate of interest on its debt purchased and a return in equity investment identical to those received by other investors. Alaska's committment will not be binding until all the capital necessary to insure the completion of the project has been committed. The ultimate backing for Alaska's financial participation will be revenues generated from this project, including gas royalties, Alaskan taxes, internal backing could come from a number of different sources. The projects financial and legal advisors are examining the alternatives and we hope to discuss these with you in further meetings.

We hope that by appearing here today we have helped bring about a better understanding of the economical and employment benefits of our project that will occur to the State of Alaska and its people. We are looking forward to corporating with you during this session and to achieve a

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form of participation in our project that will be to our mutual benefit and assist the projects timely completion. Finally, on behalf of all of us who are working on the project, I wish to thank you for this opportunity to meet with you today and at this time myself and my colleages would be willing to try to answer your questions. I thank you very much.

MELAND: Yes Mr. Chairman. This is a question that perhaps only a Legislator from Southeastern Alaska would ask. But during the years when we have been discussing the El Paso project and the old Alcan project it was rumored or mentioned several times I think that there was a possibility of a spur line down through Southeastern Alaska to Haines. Is that idea now dead or is there still a possibility that there could be a spur line down the existing gas line corridor that is already there and if it would be built what benefit would it give to Southeastern Alaska?

MCMILLIAN: You are addressing the spur that would go along the old Haines pipeline right of way to that area. That concept is not dead. We did some initial studies, very priliminary nature to determine the volumes of gas that could be transported through the existing system and I don't have these studies with me but I know that by using the existing systems you could transport usable volumes of gas for industry and communities along that route. I had all the facts and figures but I

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don't have them with me. We have given that various parties in the State and I will be glad to furnish to you that information. Yes that is a viable option.

?? Miles: Mr. McMillian there has been regular repeated efforts to the alleged financial commitments that the State made to El Paso that came up in Senator Jackson's report and the President's report. You mentioned a couple times in your speach that your Financial Advisor Bob Rose has mentioned in communications with him. I think it has to be clarified, the State of Alaska, or at least the Legislature of Alaska, passed an appropriation to study the possible financial participation in the El Paso project. That didn't indicate that, or did it NEGATE any possible commitment but there is a fine distinction that definitly has to be made that since we have a appropriation to study the financial participation of capital in the project. Do you have any comments on that?

MCMILLIAN: Yes, I realize what you say and I realize that it requires your approval before anything of that magnitude or substance could be official. But irregardless of that a letter was filed with the FBC during the preceedings that indicated that $900,000,000 would be available to support that project and in that context of the hearing was looked upon by parties as being there as a commitment. We argued at the time but this has been picked up by the President in

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his report, it's been picked up by other reports as you mention and is now looked upon, and we have kind of painted into a box on this issue because it is looked at by the financial communities, the federal government, as an indication of a commitment from Alaska and if we do not have the same degree of confidence in this project does this mean that Alaska does not want a gas line, or this gas line? And these questions we have to answer and that is why we are here today to try to work out a working relationship with you.

Miles: Thank you, I just did want to clarify that point.

MCMILLIAN: Yes I understand that.

SENATOR HUBER: Yes Mr. Chairman, thank you. Do I understand from what I have heard today that there is a particular problem in financing the gas pipeline, particularly in Alberta? Is it likely to fail there, is there something wrong there? Or did I get that wrong?

MCMILLIAN: No sir, I didn't think that at all. I was trying to just indicate the opposite. I think that we have had an indication from the Provincial Government of Alberta that they would be willing to participate in the financing of the project which we think is a very positive move and we think that this gives out a lot of credibility to the project and so I didn't mean to indicate that at all. If I did I'm sorry.

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SENATOR HUBER: Well if I may continue. Why I am confused about it is there any problem with the private sector being willing to finance the Alberta portion of the line?

MCMILLIAN: No, would you like to address this, my Financial Advisor. We don't think so.

BOB ROSE: The problem I think with respect to Canada is uniquely handled by the representative of First Boston and he is most intimatly familiar with what is going on in Alberta, but I think that the exact opposite conclusion could be drawn from Mr. McMillian's statement and Jay would you like to address yourself to that.

JAY HELSTROM: No, I would emphasis that there is a spirit of cooperation on this pipeline between the participants and the parties of the interested two governments. But in the final analysis, you look at a pipeline from beginning to end as one entity and it would have to be financed on that basis. Even though there will be different jurisdictions and different legal _____ as it applies to the two sectors. But in the final analysis, its U.S. gas being delivered to U.S. markets the strength of which in the economic process will to able to force the raising of the equity in the sum of roughly $10 billion in this project. And if anything I think in the both business and regulatory sense in Canada its very much in step with that in the United States.

SENATOR HUBER: Well Mr. Chairman my reason for going into this is alluded to an _____ and then Senator

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Stevens had just told that the problem that Alberta has with attracting capital and then I learned from your testimony of course, that they have $4 billion in their Heritage Fund, I wish we could be so lucky, and that they were figuring on investing it. I wondered if there was a problem.

MCMILLIAN: Tell me what you are referring to exactly. I don't understand.

SENATOR HUBER: Well I believe that Senator Stevens when he was talking to us, indicated that the investment community is no longer willing to invest in Alberta and I wondered if you were supporting that, and you were not.

MCMILLIAN: Let me, if I may, say that was not the case at all that the Province of Alberta and the project and companies in the Province have been quite active in raising capital. A point and case can be made as to their own petrochemical complex which I'm sure you are aware of raising funds in not only the banking market but perhaps more importantly in the long term institutions markets in both Canada and in the United States during 1975, 1976 and 1977. There is a very good environment for investment of marketable securities in both ongoing companies in a new start projects in the Province of Alberta and I don't think in any way one could interpret comments made by Senator Stevens or comments made by Mr. McMillian to infer the investment community could be perceived negative in the Province of Alberta or the pipeline foothills.

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SENATOR HUBER: And then Mr. Chairman, I would just like to pursue this just a little bit further. Is Alberta then differently perceived by people in regard to financing of the gas line than Alaska is? Are we taxing more than Alberta? Are we putting an undue burden on you that Alberta doesn't, and if so I would like it explained?

MCMILLIAN: Well we studied your proposed taxing and basis of every segment through Alaska, B.C., and Alberta. I think Alaska was nearly two fold greater than the next highest tax basis and that was B.C. Alberta again was about one half of what they had the tax basis on the pipeline that B.C. had. So Alberta does have one of the lowest tax bases of any segment of this line that would be constructed.

SENATOR HUBER: Does that have any effect on the amount of the line that is in Alaska in comparison to the amount that is Alberta?

MCMILLIAN: No, this is on a per unit basis.

SENATOR HUBER: Would you say then, Mr. Chairman if you will bear with me just a little longer, that it would be a safe bet to say that maybe we should investigate our tax policies in Alaska and pattern them a little more closely after Alberta?

MCMILLIAN: I think that the reason the American and the Canadian negotiating team on their treaty agreement, the Canadians insisted on using the Alaskan tax basis and they felt like they were adequately protected since you did have a higher tax basis on some of these on the pipeline. And that was

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one of the conditions that the Canadians put on the negotiations between us. Now, however you want to look at that you may. But that was a Canadian requirement.

SENATOR SUMNER: One of the areas I concentrate on and drive hard so that we have no misunderstanding in the areas of employment and employment opportunities. In an attempt to maximize the opportunities for Alaskans. One of the things that I would like to know is if you have other than embrasing that it will be one of the areas of priority for you. Have you at this time assigned anyone to come up with a specific plan of how that will come about? In otherwords, it will take some planning and some effort on your part rather then just saying that we will give preference to Alaskans if they are at the right place at the right time. And specifically, I am concerned about identifying some of the job needs that the pipeline will have and ultimatly generate a plan that might share in the training of those persons so that they are at least available. Would you comment in regards to how far along?

MCMILLIAN: I would really like to, because we don't mean to be critical in any way of Alyeska. Alyeska had a first time through tough project and the experience gained by them has been very helpful to us and I believe allows for us to do things that we wouldn't be able to do if that experience had not been there. One of the things and one of the real advan-

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tages that we have is a proper planning time on this project and this is a massive planning effort of some $200,000,000 that will be spent over the next two years on just planning, engineering and such matters, that you have decribed and so we do have, to answer your direct question, we do have administrative people, we have labor relation people that are making surveys, they are making inquires, that are working on this we are also using consultants on this and basically if we can plan ahead, if we can train ahead of time, its to our economical advantage to use Alaskans where they're here and happy, rather than transporting other people up here that we would have to move, go through the training period from Oklahoma or Texas that are not familiar with these conditions. It's to our economical advantage, we think its to the best advantage to the State and these are our objectives and we are going to do it.

SENATOR SUMNER: I further think that it is to a tax base advantage as well because invariably if we don't meet this need up front in a direct approach we have to do a mop service and that usually means taxes. And I would like to invite you, the Senate through the President of the Senate had charged the committee that I chair with the responsibility of maximizing employment opportunities. I would like to be included as early as possible on any efforts that you are conducting along that line.

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MCMILLIAN: Yes sir, we would be glad to have our people come and visit directly with you and we will have them in touch with you. We appreciate the opportunity.

Bennett: Thank you Mr. Chairman. Mr. McMillian in your prepared text here you state that Alaska will receive a rate of interest on its debt purchases and a return on its equity investment identical to those received by any other investor. While we have the gentlemen here with the financial backing, I'm wondering what sort of an interest rate, or what sort of a return, just a ballpark situation assuming that we go on this project. What will we be looking at as far as the return?

MCMILLIAN: I will let Mr. Lubanco answer that question.

WALTER LUBANCO: Obviously the instruments that are being sold, are going to be sold in accordance with the market conditions at that time. However, all the calculations included in our financial projections indicate an interest rate of approximately 10% on the debt and a return of investment on the equity in the ballpark of 15%. So if you want parameters in which to work I think they're reasonably good numbers. The point that we are making however, is that Alaska will be receiving exactly the same thing that other investors are going to have whose sole purpose of investing in this project is the rate of return on their money that is in competition with other opportunities for investment Alaska will be granted that opportunity, if you will, addition to will

get the other _____ benefits that Mr. McMillian referred to.

SENATOR HUBER: I have one more on Alaska hire ... (Indiscernible). Are you committed to effective Alaska hire to the point of being willing to negotiate with the State of Alaska without asking for extra concessions for that negotiation during your right of way leasing negotiations with the State to enter into such agreements for Alaska hire based upon their proprietary rights as a property owner in negotiating the leasing as distinct from their right as a regulatory body? This is where we fell down in being able to enforce the requirement for Alyeska. Our hindsight is better that our foresight, and are you willing to do this?

CHAIRMAN MILES: I'd like to interject a bit. I'm not trying to answer for him but it seems that that's one arena that we need to sit down and negotiate and that is why I invited him to participate and I would be glad to have you participate in those hearings and maybe address that point at that time. But it seems to me that there is a whole better parameter to be established in terms of the Alaska hire and how to enforce it and I didn't want to try to get it off in one _____.

?? LaBarco: I think that it would be perfectly profitable to have Mr. McMillian comment. He can't answer in negotiation itemizing...

HUBER: Before he answers Mr. Chairman. I know that both Senator Sumner and I have this concern and recently during

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the royalty oil sales meeting every single bidder on royalty oil and the State of Alaska's Department of Natural Resources all committed themselves towards that agreement based upon proprietary rights. And I'm asking you only in principle, are you willing to negotiate in that way?

MCMILLIAN: I'm not prepared to negotiate these details of labor agreements of that type of right of way agreements because I'm not really an expert on those items, but in principle yes, we are willing to work with you in every way possible to optimize the Alaskan labor content to the maximum possible degree because we believe that it is to our benefit as well as your benefit to do so. And so the answer is yes, we will sit down and work with you in principle and try to work out the details we can to optimize this for both of us.

HUBER: The issue then Mr. Chairman comes down to the agreement difference between under proprietary rights and doing it under regulatory rights. That is where we fell down before. If you have any reservations on that, I would sure like to hear about them.

MCMILLIAN: Well, I don't really understand the difference between I mean you are out of my kind of field or area.

HUBER: The State of Alaska as a property owner in negotiating its right of way lease with you for the right to cross the state property. It's perfectly within its right as a property owner to require you to achieve certain things that cannot

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due constitutionally under their regulatory powers. That is what I am talking about and its a hard point right to the subject.

MCMILLIAN: Well, I'm sure we'll have our negotiations along those lines and we stated to you in principle what we are willing and I think that it is very fair and open and we plan to be that way.

HUBLER: I think that this call came from the Philadelphia plant... Thank you Mr. Chairman.

(REST OF TAPE INAUDIBLE).

MCMILLIAN: It would mean that if we didn't have it at this time it would mean that the final design, the final cost factor would not be properly defined until those issues were. In our engineering scheduling to meet first gas in delivery of a 1-1-83 which was still at that date to meet those definate design criteria will be needed about the middle of the year, June or July.

Kelly: There is some suggestion also of those talking about moving our capital and funding part of that by general obligation bond issues and part of it from general fund expenditures and I think that alot of people have a lot of good ideas about that. You suggested that something less than $900,000,000 share might jeopardize the state in their general obligation bond. (Indiscernible). Do you feel that, does your bank financial advisor feel that being involved

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with you would retract from the ability of the State bond to carry out corporate _____ of normal ordinary governmental functions.

MCMILLIAN: I would say that the project would stand on its own but I'd let Mr. Lubanco respond.

LUBANCO: I think what Mr. McMillian is suggesting, what we have suggested in our rather informal meetings, is obviously the State has other problems for which we are not a _____ to as you. And what we are suggesting is that we at the earliest pratical moment establish formal or informal committees so that we can better understand your capital requirements and further we can structure a method whereby your participation in the pipeline would be consistent with that which we said. That is ultimatly your monies will come from the proceeds received as a result of the construction of the pipeline. Now I think, obviously, you cannot continue to borrow and continue to have the same credit rating. There is something that has to give and I do not, with any definition, where that is.

Roden: You're initial suggestion is not that we use general obligation ~~funds~~ bonds?

MCMILLIAN: That's correct.

LUBANCO: We think that as a result of our studies of your statutes and as a result of our understanding that we are reasonably optimistic that a method of financing can be provided whereby your general credit is not called _____. As we suggested

there is a possibility of using the natural gas in sight of additional security of the bond. All of these things are areas where we have to have further discussion with you in order to come to a definitive conclusion. But we are optimistic that this can be done.

Miles: (Indiscernible). Pool of funds, all-events tariff

MCMILLIAN: Until completion from the time the first gas flows through the project in effect this would be an _____.

Miles: In that case would we be equally liable as well as for the series of cost overrun... (Indiscernible).

LUBANCO: Mr. Chairman as Mr. McMillian described this project is being financed on the basis of its standing alone. We will not be able to raise any funds over and above the founders money, if you will. That is the basic pipeline distribution companies referred, the transmission companies that are involved in this project, with third party money unless we can convince them that that pool of funds is sufficient to complete the pipeline. Accordingly, it is taken down, every time investor money, and that would by definition include the State of Alaska. We have to insure the investors that the funds already expended, together with existing commitments at that time are sufficient to complete the pipeline. We're asking the State of Alaska for a fixed commitment and your commitment together with all of the other fixed commitments that we will have obtained, would

be sufficient to assure any reasonable man that we have enough funds to complete the project.

Miles: So... (Indiscernible) So everybody else is in the same position?

LUBANCO: Overruns has to be defined. We are going to raise enough money, we may not use it all, but we are going to raise enough money to ensure the investors to the extent that is reasonably called for, that the pipeline will be completed on the basis of all that have been committed for. Am I answering your question? What further can I say on the subject?

Miles: (Question Indiscernible).

LUBANCO: You are paying for the cost of the project. And you are taking a risk to be sure by investing that fund but you are taking a risk no greater than all the other people who are investing in it and there will be presumably in the area of $10 billion in investments involved.

SENATOR BUTROVICH: (Question Indiscernible).

LUBANCO: We are giving you the option. If you would like to participate we would welcome you.

SENATOR BUTROVICH: (Question Indiscernible).

LUBANCO: If they put up their money they would. If they pay for it they would.

SENATOR BUTROVICH: (Question Indiscernible).

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MCMILLIAN: Yes sir. There could be a market established, and public issue made. We have that flexibility built into the plan.

SENATOR BUTROVICH: (Indiscernible)

MCMILLIAN: Yes sir. You'll have stock certificates, you'll have a _____ estimate just like everybody else has with the same protection requirements that everybody else has.

SENATOR BUTROVICH: (Indiscernible)

MCMILLIAN: You are prefered by you rare position.

SENATOR BUTROVICH: (Indiscernible)

LUBANCO: Well lets take your numbers. The way we would plan it would be attempt to get commitments of $20 billion so that we will only spend $10 billion and so therefore not call upon the $10. The exact definition of our cushion, if you will, has not yet been decided. But the best of all possible worlds would be for us to have commitments over and above the amount actually expended for the pipeline. Naturally if you would exculate to a percentage you just can't come with it.

MCMILLIAN: You're using an example there that we don't think is fair and we have examined this very carefully and a risk analysis has been conducted on this. I know that every place that we go we are compared with Alyeska and the cost overruns involved. There are so many different variables between this project and their project by all

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the people in the financial community we have discussed this point by point, unit by unit. We're convinced that this is a normal pipeline project that our industry has been doing for years with a great data base of information. Where accurate costs estimates can be made.

Miles: (Question Indiscernible)

LUBANCO: No again I think you're... We have to raise sufficient funds that would satisfy the sophisticated institutional investors that we have funds to complete the project committed for. Now we will demonstrate this as best we can. I don't believe that there is anybody however, that could assure you that the project will be completed regardless of any turn of event. However, this is true of every investment that anybody has ever financed other than the printer of the currency.

Miles: (Question Indiscernible)

MCMILLIAN: We think the most important variable in the overall financing of the project, the values are important, but the most overall important factor is the roll and pricing concept of being able to roll in the unit pricing of Alaskan gas delivered in the lower 48 with exsisting gas supplies in the lower 48. Also there could become a point where Alaskan gas is priced so high, your transportation system, that it is not marketable. That would have to be extremely high and so it's a direct function of the volume, of the wellhead price the volume of that goes through the

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line that is going to ultimately determine what that pricing is and so naturally we, everybody else would like to see that optimum gas volume flow through the system but I think that there is more important variable whether it is 7/8 or 1/8 of your yet not clearly defined volume. I think it is going to be 2 billion, it could be 2.4, it could be some other variable. We think that the rolled in pricing is critical and its more important than anything else and the marketablity of Alaskan gas could reach this point but it would be a pretty large, we would have to go a long way because it is a domestic energy source, you do have a balance of payment problem, you do have other advantages that you opening other energy corridor for a future gas supply and so I don't think that that is a critical point that would make _____ project.

Niles??: (Question Indiscernible)

MCMILLIAN: We've always, we haven't always, but we have assumed cases where we have assumed that the 1/8 volume is going to be used in Alaska. Some of the studies have indicated that.

KADER: Mr. Chairman along that same line we have a problem of... Let's assume that we are unable to find a responsible purchaser and this time who can process refine and do whatever he can do in state _____, let's assume that our population... (indiscernible) But that

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three years from now or five years from now we find out that now the market is such, or our population is such that or something else we're ..... We cannot use today that we find out we can use in five years from now. What kind of a dislocation... (indiscernible). And what kind of a price are you looking at... (indiscernible). What kind of a tariff would we have at that _____. Would we develop on the payment of the tariff on the total line, or 1/8 of the line or how do you resolve this kind of a problem.

Lee Brown: There are more different pipeline tariffs than the imagation of man. I mean they just go on forever and there are a lot of ways to approach it. But its very seldom that you have a MCS mile type of tariff where, a charge is made for moving gas a set distance for a set volume because a system has to be designed, financed and structured before that unit could be transported at all. And so usually there is a disproportional transportation cost to the units of gas that are transported shorter distances and so I couldn't give you exact numbers or anything like that because a tariff has not been exactly established nor has it been approved by the FERC. But those conditions do exist in current gas complex in the lower 48, short term contract, long term contract and it is not an unusual situation, its not a first time situation.

PADDR: I know. Let's assume, I am _____ to _____ of the disproportionment charge, to avoid that disproportionment charge if we do, before construction begins, during the design stage there would be no reason for disproportionment charge then would there? In other words if we were able to tell you that we have taken oil off at point X, before you started your design stage, would that tend to minimize?

MCMILLIAN: It would tend to minimize yes, I don't think it would eliminate, but I think that it would tend to minimize and you would be able to optimize your transportation charges if conditions were known in advance, yes.

KODIAK: You have the discretion of setting those tariffs, is that the kind of thing that we could negotiate with you or the kind of thing... (indiscernible)

MCMILLIAN: Its a thing that we all go before the with a long series of talks and negotiations with the Federal Power Commission, The FERC now.

_____: Even if we tell you today that we want X amount of gas inside the State of Alaska, we would still have to get Federal Power Commission to approve that would we? ...(indiscernible)

MCMILLIAN: That's right.

_____: Thats correct.

PADDR: And if we went in to a hearing there who would our

opponents be in that hearing. Would that be you, would that be other purchasers, or who would that be? Let's assume that we went in five years from now and wanted to get a tariff through Fairbanks. Who would be the arguer there?

MCMILLIAN: Well traditionally, usually the pipeline operators are able to negotiate these matters out and they come up with tariff. And traditionally they are usually opposed by some states and the state PEC commission. I believe that is true, right? That California, the state of New York or somebody like that would come and say well you're getting 20¢ transportation charges when it should be 30¢ or something, you intervention would be not from us so much, we would have a negotiating process to go through and agreement on tariff _____, but then the approval that would go before the FERC would be the probably the intervention from another states regulatory agency.

SADAR: The way I understand it then, if five years from now we want to withdraw and we got an agreement from you, that we could take 20¢ off of our tariff and pull it out of Fairbanks, you would have to add that 20¢ on to somebody elses tariff who was going through the line and then those people who were footing the bill on that tariff would appear, I suppose, in front of the Commission. existing as you and we worked out?

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MCMILLIAN: That is entirely possible because you have a total unit cost for services, total dollar unit to go from A to B with all the variables involved and to reduce a segment of it here, well somebody picks it up down here and that is where the intervention comes.

Rader: We have had some experience with the oil line and the right of way leasing and that sort of thing. It is my understanding that you and with the Federal Power Commission certificate on an international pipeline, an interstate pipeline in this condition, has the right to condemn without our consent State lands or any property held State land that the State holds as right of way has to be approved by the Federal Power Commission. Is that correct?

MCMILLIAN: That is correct. That is my understanding.

Rader: So actually to get down to negotiating with you, if we are realistic in looking at what we offer and what you have to offer that the withholding of the right of way is not really a threat to you, that it would be in the interest of the oil line but the negotiations would be carried on more as to what we would want from you to be a willing partner in the financing of the line rather than the right of way type of issue but I think _____ the right of way is ours. Without our ...(indiscernible).

MCMILLIAN: You could but its more desirable and more agreeable

in pay agreements that we reach with both parties and usually that can be done.

CHAIRMAN MILES: We will take a five minute break when Mr. Butrovich is through.

SENATOR BUTROVICH: (Question Indiscernible).

MCMILLIAN: Well, you mean if the density of the gas is more or less, The heavier ends are ...

SENATOR BUTROVICH: (Question Indiscernible).

MCMILLIAN: I see, no very little because our pipeline quality gas has to be conditioned so that the gas remains in a aporogaseous stage for the entire transportation of the gas system and so we condition and design our facilities to keep it in a gaseous stage. Now you have a little bit of difference in density. of the gas that is pumped but that would be relatively small and so it wouldn't have any major impact, a minor impact yes, but no major impact.

SENATOR BUTROVICH: (Question Indiscernible).

MCMILLIAN: Appreciable no, its not an appreciable difference.

(BREAK)

CHAIRMAN MILES: Could this meeting please come to order.

Osterbock: Yes I was just wondering about the royalty share of the State. Somebody else was telling us about it, that it would be enough to supply two and half times the size of Seattle and what I want to know is what would we do with it?

MCMILLIAN: It would supply about the whole state of Oregon.

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_____: And another thing that nobody has talked about, when are we planning on putting in this pipeline or starting this construction.

MCMILLIAN: Well the date that we are planning on, the date that we are shooting towards is 1-1-83 for the first gas in. We can meet this schedule in the construction of the pipeline, we also believe that the gasoline processing plant can be constructed in that time frame. It will depend alot on Federal Government actions that are now pending like the energy bill and the gas processing and a few other things but our target date is 1-1-83.

Osterbauk: (Question Indiscernible). Asks for completion date.

MCMILLIAN: We begin several construction works in 1979 so there will be, that's where we start building up our people and putting people in camps, maintaining camps and that type of work. And then the major part of our civil work starts in 1980 and then 1981 and 1982 will be the major part of our pipeline construction. I can give you those broad guidelines. We have exact figures as to manning tables and personnel but I don't have them available but I can send them to you and I will be glad to do so.

SENATOR RADER: You talked about a 15% return on equity. Is that the rate of return. It's a little higher than I thought was permitted by the Federal Power Commission. Where do you get that figure?

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MCMILLIAN: Well we get this figure from two basic reasons. One is that today in rate of return, has always been higher than our industry and their figuring on their section line 16% rate of return and we think that this would set a basis and a foundation for a similar rate for our return on equity should be established. I think the highest rate today for an old existing system is 14 3/4% for El Paso. So there are some systems that are approaching this level. Now the industry average I will admit is a lot lower but the equity ratio is also much wider on most existing pipeline systems. For the dead equity spread that we are talking about, you're looking at a lower income on equity which usually brings a high rate of return and we feel like this is reachable because we know that incentive has to be given to equity before equity is going to participate and the indications that we have is that this is a reachable goal.

SENATOR RADER: You'll first test the tariffs for the whole line including the Canadian portion and the whole works. I don't understand you're figuring. The Canadians are figuring a 16% return and the Americans will have to generate it. We're talking about two different entities here, each one of which will have a different rate of return?

MCMILLIAN: Yes sir, that is part of the agreement between the two governments. I mean the Canadian portion of the system will be built by Canadian companies and they will be

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regulated by the Canadian government under their laws, under their environmental controls and all the different controls that they have in Canada, and so they will approve their rate base and approve their expenditures of like our FERC will do for us and then a combined tariff will be structured for the entire system with the understanding that the segment in Canada is regulated by the Canadians. But there is also language in the treaty agreement that refers to a cooperative effort between NEB and the FERC.

SENATOR RADER: You indicated that a number of participants would be willing to get into financing in it. Would it be possible for you to finance the line without Alaskan participation?

MCMILLIAN: I think it would probably be possible. It would be extremely difficult. I never say that anything is impossible, but I think that the benefits to the project of your participation would make a lot of difference.

LUBANCO: We think that it is of utmost importance the reason for this is that if Alaska with all its benefits accruing to it is not willing to invest, it is very difficult to persuade third parties investors looking for a rate of return only to invest. However again, I concur with Mr. McMillian I don't think that is presenting a insuperable obstical, but I do think that it is presenting an obstical of considerable significance.

SENATOR RADER: But the project doesn't hinge on Alaska's participation.

LUBANCO: I say that to say that it hinges on Alaska's participation is too strong, however, Alaska's participation is of great importance.

SENATOR RADER: You are saying that it can be done without our participation.

LUBANCO: Yes we think so. We wouldn't want to close the book without you.

REPRESENTATIVE MCKINNON: Talking about State participation of $1.2 to $1.4 billion, what is the breakdown in terms of debt?

MCMILLIAN: The definate guidelines established other than the

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thinking of $1.2 billion debt.

REPRESENTATIVE MCKINNON: You also indicated that the Province of Alberta is interested in this _____. Are they talking about debt on equity financing?

MCMILLIAN: Mostly they have been talking about debt. These equity discussions I am really not familiar with.

McKinnon: Does anybody else besides the State being considered for equity capital outside of the Alcan group?

MCMILLIAN: Yes, in Canada the trans-Canada, who is not a member of the _____, is being considered. Also Alberta National Gas is being considered. They are talking about a approximate 20% participation.

McKinnon: That's not on the Alaskan segment. That is on the Canadian segment. Just so that he understands that.

MCMILLIAN: I'm sorry. Just on the Canadian segment.

McKinnon: We also consider... (indiscernible). There are more pipeline issues that are an issue to the public _____.

McKinnon: How firm is that 25% figure in terms of ~~dead~~ debt equity?

MCMILLIAN: It is approximately, that's kind of your traditional type project financing for pipelines of this magnitude. But it would be in that range.

LUBANCO: It is not inconceivable at all that many of the institutional investors who may wish to invest in debt may also like a portion of the equity and indeed, we would be willing to talk to them. In addition to that, we are not

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ruling out the fact that the Alaskan section could be in part, financed in equity by virtue of public ownership. We're taking this one step at a time, we are building this pipeline one section at a time, or the financial structure one section at a time. We are not foreclosing any avenue which makes sense. And all of these that we have talked about make sense.

_____: Did you say, in response to Representative _____, that 20% that is under consideration in Canada, is for the Canadian section only?

MCMILLIAN: Yes.

Butrovich: Then is the $1.2 billion that is proposed that Alaska participate in is in the Alaska section only?

MCMILLIAN: That is part of the Alaska financing. We are going to be responsible for financing the portion in Alaska. The Canadians are going to be responsible for putting up their equity for financing the part in Canada. However, in the financial institutions the total debt picture would have to be structured... (indiscernible).

Lee Bennett I think that basically the two pipelines will be structured and coordinated in such a way that when a lendor is presented a package he will be presented with the overall pipeline. We will have two series of debt. One in U.S. and one in Canadian.as he makes his investment.

SENATOR BUTROVICH: You say one in U.S. and one in Canadian?

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_____: Perhaps I should back up and explain how the Canadian segment of the pipeline is structured and that might help. This is structured in a series of companies that parallel the segments as to our transverse in Canada, starting in Yukon then through the northern part of British Columbia, then into Alberta and then two small segments that go along the lower section, one which goes west in the lower part of BC and the other which goes east into _____. Each one of those segments is done by a separate project company, similar when it comes up to the Alaska company.

SENATOR BUTROVICH: Will our portion be tossed into the lower 48 portion?

_____: No.

SENATOR BUTROVICH: Then wouldn't there be three.

MCMILLIAN: Four different financing segments to our system and that is why we believe that they are financiable. You're talking about the Alaskan segment which is around $4 billion, and then you are talking about the Canadian section which is greater than that, then you are talking about the northern border leg which is financable and then the western leg. The western leg is going to be structuring the existing BFU system.

SENATOR BUTROVICH: Well the equity if we are talking only about _____ section with the percentages .... we are talking almost 50% of the Alaskan portion.

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MCMILLIAN: No, you are talking a little over 25% I think.

SENATOR BUTROVICH: (Indiscernible).

LUBANCO: But again, recognize that this pipeline, although it is segmented into sections, is one pipeline and as a result the top half isn't going to built without the bottom half. So the total financial commitment has to encompass almost all of the financial strengths. It can be utilized in this type of investment in the United States, into a lesser degree Canada, it's that large. And to suggest that your investment will be put in to build the Alaska section, however, that Alaska section could not be divorced from the Canadian section, and indeed, it could not be divorced from the south 48 section, without which you would have no consumers to pay for the gas.

SENATOR BUTROVICH: Is there one total transportation cost?

LUBANCO: There will be, yes.

SENATOR BUTROVICH: And one kennel?

LUBANCO: There will be one total transportation cost, which would blend in many factors which Mr. McMillian suggested including the Canadian.

SENATOR BUTROVICH: Would that total transportation cost only be to one kennel? In otherwords, would it be divided into our segments?

T Lubanco: There would be a separate tariff for the segments. I think answering your question, sir, there would be a

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tariff that would represent the Alaskan tariff, which would represent the Canadian. And then as you would go down the system there is a series of other tariffs, depending on whether it is _____ gas that is dropped off and that is the subject...

MCMILLIAN: You have one total delivery price here that the consumer distribution companies pay to that company which is distributes according to the tariff along the line.

SENATOR SUMNER: Yes if I could follow up briefly and then I have a series of items that I need to talk to you about. If the Alaska portion of the financing winds up generating more money than is required to build just the Alaska portion, what would happen to that surplus or would that be thrown into one common construction pool? Well let me back up and make that simpler for you to respond to. Is the Alaska financing portion for which the State will contribute intended only to finance the Alaskan portion of the line?

LUBANCO: That is the intent because we recognize the desire for the Alaskan participants to invest in Alaska. It is the Alaska section that is perhaps subject to the greatest degree of uncertainties to the extent that there are uncertainties here. The south 48 is a very convential type of line and that will have very little variations and we don't anticipate that one would necessarily feed on the other.

SENATOR SUMNER: One certainty that I could share with you that it could appear that on the basis of return on investment is that Alaska money built some portion, any other portion, of the gas line that there would be some reprecussions.

LUBANCO: We would have no problems structuring your particular financial commitment to assure you to your satisfication that that would be clear. That would be no problem.

SENATOR SUMNER: Another point. To the best of your knowledge are there any other obsticals standing in the way of construction of this pipeline except financing at this point?

LUBANCO: We don't consider financing to be an obstical. We consider it to be a problem that can be resolved.

MCMILLIAN: I agree with Mr. Lubanco. The problems that have yet to be resolved, as we mentioned to you, are to first determine the price of the wellhead Prudhoe Bay gas, and that is the main problem that has to be addressed. And the contrast ... (indiscernible). Those are the problems that we must solve before complete financial structure ...

SENATOR SUMNER: I understood that while it wasn't impossible to obtain financing, that it was one of the problems that to be surmounted. Are you telling me that not...?

LUBANCO: I beg your pardon.

SENATOR SUMNER: I understood from most of the testimony today and the presentation, that while financing outside other than Alaska participation was not impossible that it was

still one of the problems that had to be resolved in constructing the line. And you are just telling me that financing is not a problem?

LUBANCO: I didn't say that. I said that it is a problem that still has to be resolved. Sir, I was just commenting on your word obstacal. We felt that was indicating something that would be an insuperable hurdle. And we don't consider it to be such.

SENATOR SUMNER: Okay, in your equity position in this program, would it be estimated at this time to be what, you mentioned $200 million this morning. Is that in essence the amount that you intend to have in the capital position?

MCMILLIAN: That is the position that we would like to have. We realize that there are other parties, other participants, that would be here, including the State and parties that we mentioned earlier and other companies. There might be possibly, we might not be able to achieve those goals. That is what our goal is.

SENATOR SUMNER: You may have answered this at some time in the past, but has anyone in the State implied any moral commitment in terms of State support or State financing of this line?

MCMILLIAN: No they haven't.

SENATOR SUMNER: Okay. Do you perceive a plan that you would propose to the State to pledge in anyway, or encumber in anyway, the reserves of the field?

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MCMILLIAN: No. I think that in this light the reserves that we would have and the initial statement would be naturally, a commitment to the project to be sure that the project is completed. But as far as allowing you to do something with these gas reserves upon completion of the project, we don't see any barrier there.

SENATOR SUMNER: You indicated earlier today that in the process of conditioning the product to maintain a continues gaseous state, what happens to the heavier properties? What disposition do you plan for those?

MCMILLIAN: Basically we receive a pipeline quality gas in the _____ of our pipeline and this depends upon the design of the plant that we were discussing earlier. We can design the plant where it carries a certain percent of liquids according to the pressures and tempertures that you operate. The rest of these will be recovered on the North Slope... (Indiscernible). Would be recovered on the North Slope for either blending with the present crude oil where possible so that a large volume of liquids will be recovered. I think the number is around 100,000 barrels a day of liquids of various types will be recovered on the North Slope. Now these have various uses depending on overall energy _____ and how these liquids can be put back into _____.

SENATOR SUMNER: The last area that I would like to see if we

can get a little closer on. When Senator Rader was speaking to you a little earlier today he mentioned the possibilities of take off in maybe Fairbanks or other places along the line and you mentioned the term disproportionate share. I'm more familiar in term of in the oil line what that does, and that says that disproportionate share tends to imply mostly that you pay for the length of the line, like 99% of it. I'm wondering if we are talking similar terms in disproportionate share in this instance?

MCMILLIAN: I can't answer that question direct. I don't think that I have ever seen a tariff structured for a gas system of that magnitude... (Indiscernible).

LaBarre: Well I think that it is fair to say that we would contemplate a tariff if delivery, let's say at Fairbanks, the transportation from the North Slope to Fairbanks would be something less than the transportation charge from the North Slope to the Yukon border. And that recognizes the fact that it is being transported a very shorter distance.

SENATOR SUMNER: I certainly don't want to abuse that because I know that there must be some pratical way out of it, but I would urge you to generate some sort of a plan to address that problem because it would be one you will hear.

LaBarre: Well I think that this will be addressed by the FERC in terms of approving the tariff. I think that we would contemplate that the Commission would not approve it

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unless it had that feature in it.

SENATOR SUMNER: It just seems to me that the you are talking a four foot line and 1200 hundred and some pounds of pressure. Am I correct there? Does that equate to a flow rate?

MCMILLIAN: There is a maximum flow rate in which we hope to obtain of about 3.5 billion cubic feet a day in this system. I know that without lopping now, when you lop a system you get further additional capacity, depending on how you do it. We design and build this line for an initial design of 2.6 _____. So it is a matter of _____ in the spacing of design and _____. And so, basically that determines the volume.

SENATOR SUMNER: The one thing that I am leading up to is that, as Senator Butrovich has referred to here and encouraged to pursue, is the ultimate hope of the petrochemical facility in the State. Of course, that meets its own share of obstacals and we would hate to see that added to the, problems added to the fact that we would be facing pipeline tariff equivalent to some figure that would prohibit the effort. Those areas, while I don't ask you at this moment for specific answers, I do think that that is an area that needs to be addressed for the producers to answer.

MCMILLIAN: We can give you general guidelines, but the final approval would have to come from FERC.

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SENATOR SUMNER: I was thinking in terms of, I suppose in no bigger pipeline and I am not attempting to preempt those people who have enginerred and designed pipelines, but if there was any way to address the situation that if it is to come off at Fairbanks or if there is to be a take off at Haines junction, that these... I would hate to see us preempted from those options down the road on the financial basis alone. So those aren't critical comments but they are areas of concern I think. Thank you.

CHAIRMAN MILES REPRESENTATIVE ~~MCKINNON:~~ I just would like to clear up something in my mind. Assuming the State agrees to participate, are we gaining an equity position as a company operating the pipeline system or as a company operating one fourth of the pipeline system?

MCMILLIAN: Basically you would be gaining the equity position of a company operating the Alaska portion of the pipeline. Our main interest... (Indiscernible).

LUBANCO: But understand that that section of the pipeline which is restricted to Canada will be bound by as firm agreements as is possible with the other sections of the pipeline so as to make it in effect one continuous pipeline for these purposes. So although legally there might be separate section, the form of agreements and treaties with the Canadians, and indeed the agreements with the lower 48, would be such that you will be looking for the viability

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of a single system. Otherwise there aren't to many buyers for gas at the Canadian border in the Yukon.

REPRESENTATIVE ~~MCKINNON~~ Chairman McGee: One significant factor that hasn't been discussed and I think that we have to throw it out on the table, is the conditioning plant. It has been variously estimated to cost $1 billion by some and $2 billion by others. It probably falls somewhere inbetween. It seems traditionally that producers have passed the cost of this conditioning facility on to their buyers. Recently, it is my understanding, that there has been a reverse on the Phillip's case. Whose problem is that? Maybe we can start with that. Is that your problem, is that our problem, is that the producers problem? Somebody has got to pay that, let's call it $1.5 billion, and its obviously going to be plugged into the top, who is going to eat that?

MCMILLIAN: Well, traditionally 85% of the gas processing plants in the United States are owned by the producing oil companies, and 15% by the transmission companies. Today if we had a large field and we wanted to build the gas processing plant in the lower 48... (Indiscernible). Now you have a different set of circumstances with you processing plant in Alaska. And that is that a lot of the liquids to be obtained from that processing plant on the slope cannot can not be as oftenly used as the liquids can be down in the lower 48 where you are right at the transportation

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system with a market right next door. I think that we know that ARCO is making a feasibility study on this project. They say that they can assume the responsibility for this feasibility study before the Congressional Committee and indicated that if they had a proper rate of return that they would be willing to build this plant. We do look for it as the producers responsibility. It is indicated that the most... (Indiscernible).

Chairman MILES
REPRESENTATIVE MCKINNON: But that trend has changed now, hasn't it? Aren't we talking about new ground rules? Wasn't there a recent litigation that said, well, it may not be the producers responsibility?

MCMILLIAN: Well, I am not familiar with that.

LUBANCO: You mean litigation on this particular project?

Chairman MILES
REPRESENTATIVE MCKINNON: No, not in this particular project. The Phillip's case I think it was.

MCMILLIAN: That would be a matter of contract negotiations. I mean like I said if you had gas reservoir down in the lower 48 and you want to build a gas processing plant on it and you try to reach out and do it, they will try to break your arm.

LUBANCO: It is usually not something shunned. It is usually one of the most desirable investments that you can make because you know that the gas is there and you are taking off the top and selling liquids. It's a money machine really.

_____: I think maybe that what you have reference to is the fact that there are several weeks of FPC, FERC rulings that would really support the concept here that Mr. McMillian has said. I think in certain cases where the transportation companies have taken over that responsibility the FERC has now said that that really should have been the responsibility of the producer and reflected in the price that the producer is receiving in the sale of his gas. So I think that they have taken the position very comperable to what we're saying. That really it is the responsibility of the producer. How he gets compensated is another question.

Chairman Miles ~~REPRESENTATIVE MCKINNON~~: It is the responsibility of the producers and the producers may not be allowed to pass this cost on? Is that what you are saying?

?? McMillian: I think that the indication is that in certain cases, and these are very specific cases, that the area price or the nationwide area price, was such to have compensated the producer for that processing function. Now in certain instances the transporter has taken on that and the Commission has questioned whether the consumer ought to pay for that because the producer really should have been compensated for it by way of the gas price that he is receiving. I think that my point is that is consistant with our position which is that it is a producer responsibility. Now the compensation for it is another question.

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MCMILLIAN: ... (Indiscernible). In some form these drafts should be approved. We talked about two different prices of gas, $1.48 was the lowest price. It also goes on to mention that that they shall be compensated for the severance tax, like Senator Stevens said, up to a certain amount. And also the compression process and other things that normally take to process gas. There is also readjustment that has to be determined on most of these projects. You have a cost to process it, to compress it, to gather it, but you also have a recovery of liquids at that processing point. And so the exact processing cost, if the energy bill goes through as today, it would be a set price with a processing charge to be added to that to compensate for those factors.

(Chairman Miles)

REPRESENTATIVE MCKINNON: So we are in a position now, as I understand it, that we don't know who will pay that billion and a half?

MCMILLAIN: No. We think that the producers are and we anticipate that they are.

(Chairman Miles)

REPRESENTATIVE ~~MCKINNON~~: What time frame do you take to build that?

MCMILLIAN: The initial studies that we have was to give it about a four year time frame.

(Chairman Miles)

~~REPRESENTATIVE MCKINNON:~~ There has been no environmental impact statement done on it?

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MCMILLIAN: Well, if you put this under the Oil Pipeline Act you don't need an environmental impact statement.

Chairman Miles
~~REPRESENTATIVE MCKINNON~~: Yes, but if we don't?

MCMILLIAN: Well then you have to have the environmental impact statement.

Chairman Miles
~~REPRESENTATIVE MCKINNON~~: That is backing us up quite a bit isn't it?

MCMILLIAN: That would be very true.

SENATOR POLAND: I wanted to ask Mr. McMillian, isn't there a clause in the treaty that says that the liquids can be taken off in Canada in exchange for BTU on the ...?

MCMILLIAN: I believe there is a clause, I don't remember that, I might be wrong but I don't think that is allowed. I think that what is allowed is that volumes of gas can be removed from Alaskan gas to be removed in Canada to service their small communities along the route and that gas of equivalent BTU volume is put back in the system for the placement in the smaller communities in Canada. So I don't remember the liquid concept. I don't believe that that is there, but it is that they can take gas out for their communities in small volumes and would have to equivalent BTU volumes back.

SENATOR POLAND: Does it define small volumes?

MCMILLIAN: Eight delivery points to eight different communities.

T. LeBon: Mostly, Senator, in the Yukon. They are mostly

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speaking about Yukon Territories. In very small, generally rural communities.

_____: (Indiscernible. Speed of tape extremely slow.) Bennett asks about construction headquarters. No determination made.

SENATOR ~~RADER~~ RODEY: Mr. McMillian, it is obvious from discussions today that we will need further discussions between both the Legislature and the Executive Branch before this motion can be drafted that would approve the project. How would you like to see these discussions undertaken from your point of view. It is obvious that we need to do this right away.

MCMILLIAN: Yes, we would like to pursue several problems, ... (Indiscernible).

(Last few minutes of tape indiscernible.)

My notes:
Miles: Asks about $20 billion in benefits projected to Alaska.
McMillian: $20 billion based on inflation. A $4.26/mcf average gas price.

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FEBRUARY 16, 1978

CHAIRMAN MILES: We will call this public hearing to order. This is the Joint Hearing of the Senate Resources Committee and the House Special Committee on Oil and Gas. (Indiscernible). We have with us today a gentlemen with the Federal Government and I invite him up to the table.

JOHN ADGER: My name is John Adger and I'm the Department of Energy's Senior full time person on the Alaska Gas Project. With me today I have Phil Essley who is my Technical Advisor, and Ned Hengerer who is a Legal Advisor, and Bob Anderson who is the Economic Advisor. We have a fourth person working with us now as an Environmental Advisor, a man named Mike Satoc who couldn't be with us today because he had to be in New York last night to receive a national award for his work with the Federal Power Commission on the Alcan System, the chosen project for this Alaska gas delivery system. Our office has a dual function really. First is to manage the Federal Regulatory Commission final certification process. The result of that process is the final Certificate of Public Convenience and Necessity for the facility. Approval of the financing plan, approval of the gas sales contracts, and the like. We have a description of function of our office which we talked to you all about a little bit earlier today and we will make available

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at the end of this second hearing. The second thing that we do is we have responsibility for the Department of Energy's interests in this project to go beyond the normal jurisdiction of the Federal Energy Regulatory Commission. Those interests are in the area of relationships with the Canadians on this project and in the area of relationships with other government agencies for establishment of the Office of the Federal Inspector, for instance, and the monitoring process that would be part of the Federal Government's relationship to this project.

Let me tell you a little bit about what the different people here have done on this project and then I want to get into a bit of a discussion of the decision itself, the President's decision itself. We have also brought with us copies of that for anybody who doesn't have them. Phil Essley did an important piece of treasury analysis on the relationship between deliverability and the financing prospects of this system and wrote a great deal of the material on safety and design aspects of the Alaska Gas Transportation System decision that went into agency reports and the final report to the President. He also did the material in the President's report which includes a comparison with Alyeska on economic grounds. Ned Hengerer has been an attorney at the Federal Power Commission who was involved in preparation of the Admistrative Law Judge's

initial decision in which case, so he has an extensive knowledge of the issues that were involved and how they apparently came out. And Bob Anderson was the principal author of the Interior Department's Title Three of the CAPS Act that authorized the study by the Secretary of the Interior of alternative gas transportation systems. The result of both Bob's work and Ned's work, I think, were to pump up the El Paso system relatively. Bob's work in particular was looked to as a very substantial kind of improvement in El Paso's prospects and I guess my role in this thing was that I was a member of the group that prepared the President's decision, netogiated the deals with the Canadian and prepared the President's decision, so I have to be considered, I believe it was referred to yesterday as the person who went through the grocery store and picked up a bunch of groceries and told the man that "my friend would come in later and pay the bill."

We have brought copies of the decision for people who haven't seen it but let me go through quickly some of the reasons for the decision as we perceived them at the time that the decision was made, and then I want to get into a more sensitive discussion of the State's role. The threshold issue, of course, was whether or not to do an Alaska gas project at this time at all. And we felt that it was time to do it now. We felt that even if the availability of

gas supply was better than we expect, the Alaska gas project would ultimately displace oil imports. I think if you look at the decision of the President's Energy Program the sum total of the proposals for crude oil equalization tax and the conversion taxes produced an affect which means that natural gas is always to be cheaper than oil to lower priority users, to all users I guess. And if the gas supply situation should be such that the Alaska gas might not be needed for strictly gas demands in the early years of the operating life of the project then it, through the operation of the incentive taxes that are part of the President's program, it would be consumed because it would displace oil imports. It would be cheaper on the basis than oil and it would displace the oil imports. Additionally, an important consideration with the relationship of this decision went to our Canadian gas supplies. It was clear from our discussions with the Canadians that if we did not do a joint project there was a serious risk of curtailing existing Canadian gas exports, whereas if we did do a joint project there was every possibility that Canada's gas supply situation was that we would be able to get additional gas exports. Another reason for going ahead and doing one of the projects now was the simple fact that the net national economic benefits of doing something like this sooner, rather than later, are higher.

It's just a net benefit of going ahead with it now. Now, on the choice of systems, the primary consideration was, and here again it is layed out in detail in the President's decision, was the clear cost of service advantage of the trans Canada alternative over the El Paso system. We estimated that that cost of service advantage at roughly 15% which amounts to really a tremendous amount of money for the life of this project. Other reasons were direct delivery to the markets in the lower 48, not having to depend on displacement. The higher effenciency of an oil pipeline system rather than one that is dependent on the changes of state to liquified state and the regasification. That same efficiency gives you cheaper expensibility as well, longer useful life of the facilities and, of course, facility siting difficulties on the West Coast. Our experience has been that environmental and legal complications with facility siting on the West Coast puts you in a position of not really knowing when such a facility might be available.

A final but very important reason was that the Alaska Highway System that was ultimately chosen seems to be clearly regarded as an environmentally superior system by all of the conservation intervenors and in fact FERC environmental staff. That was Mike Sotac who was very instrumental in having that chosen as the staff's environ-

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mentally preferred alternative.

Now talking about the President's decision itself, perhaps the most controversial aspect of the President's decision was the finding that the project can and should be privately financed without recourse to either Federal Government loan guarantees or any form of consumer completion guarantee. Our conclusion that the project can be privately financed was based upon our analysis of our experience in financing the oil pipeline. Federal policy on whether or not such projects should be privately financed, based on a very careful analysis of costs and benefits of taxpayer assistance which was carried out for the recent Synthetic Field Commercialization Program. That analysis showed that such assistance was not in the taxpayers interest and we have nothing since then to change the results of that analysis.

The appropriate role for the Federal Government is to expedite resolution of the remaining uncertainties surrounding the project, thereby creating an atmosphere of confidence about what investor's can expect from it. My office for the Federal Government is the vehicle is the fastest possible action in the area of tariffs and financing and reducing regulatory uncertainties. We are working with other federal agencies to insure efficient and responsive planning and monitoring.

Another major timing regarding financing was that the

direct and major beneficiaries of the project should participate in financing it, either directly or through loan guarantees. Specifically, our finding was as follows: "Tradition and equity suggest that the parties who tend to benefit directly from a transportation system should participate in the financing and share the burden of these risks. The direct beneficiaries include the equity investors, namely a consortion of gas transmission companies, the producers of the gas, and the State of Alaska with its royalty interest in the gas. Now let me emphasis quickly that I think that those two findings are separable. One was that Federal Government financial assistance was inappropriate given the analysis that we've just been through in the context of this synthetic fuels program, and secondly that given that it should be privately financed, we felt that it is important that the major beneficiaries of the project should participate in the financing.

Now let me review with you the basis of that finding. We have prepared a sheet detailing our estimate of the approximate distributions of benefits and costs to the state and other beneficiaries of this project. We derive these figures starting with an estimate of the approximate market value of the gas at the wholesale level after delivery to the lower 48 states and backing out the transportation costs using analysis leading to the President's decision to determine the value of Prudhoe Bay for

purposes of calculating tax and royalty payments. Now this is in constant 1975 dollars and all of the numbers here under the per thousand cubic feet. This is an a twenty year average. The twenty year average cost in 1975 dollars was really the basis that we used in reaching the decision. There are plenty of other ways of considering this and unless we go into some sort of transportation costs normalization system, levelization system , then the transportation costs would be expected to be higher in the early years and lower in the later years. That would be the normal case but in this case we are not going to set a level like that. Now as you can see from this table, the total transportation costs, according to our calculations, is average $1.04 per MCF over the life of the project. And you get that by adding the 84¢ plus the 3¢, the 5¢ and the 1¢. I think that comes to $1.04. And the 10¢. $1.03 plus the State corporate income taxes that pushes it up towards $1.04. Adding the wellhead price in the range of $1.50 means that the delivered cost would approximately equal the value of this gas to the consumer. The consumers would not receive major benefits from this project. The $2.62 number represents the measure of what the gas is worth to the consumer. And it is derived from the price of alternative fuel. At that price the consumer doesn't care whether he is buying gas from Alaska or from someplace else, or whether he is buying fuel oil derived from imported oil.

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Notice the Federal Government's benefit from corporate income taxes. That is 10¢ per thousand cubic feet or $90 million annually. If this project is not built the $10 billion of investment would be shifted to other needed projects in Alaska or the lower 48 states and the Federal Government would still receive its tax revenues. This is not true for the State of Alaska if a project is not built in Alaska. The transportation costs figure of 84¢ represents payments to the company for the facilities used to transport the gas and the various Canadian government industries for property and income tax. Notice that this figure includes our estimate of the likely cost overruns. The asteric item is our estimates of the flow through the State of Alaska when the project is completed. These benefits items are State corporate income taxes, State property taxes, severance taxes and royalty. Now we haven't tried to reconcile our estimates of the benefits to the State with those of the project sponsors, but I suspect that if you went through inflating the dollar flows and you did not deal on a twenty year average basis, than the estimates would probably be comparable to the direct benefits. Now if you were to invest $1.5 billion in 1975 dollars which I think is more than the project sponsors are asking you for, we estimate that you would have annual benefits from direct taxes and royalty of the $320 million, for an

annual rate of return in excess of 20%. The interest or dividends which you would earn on this investment would be over and above the $320 million annual return. That annual return there is simply from corporate income taxes, property taxes, severance tax and royalty. This sheet lists only direct costs and benefits. At many stages shown there are a number of indirect benefits which will flow from the project.

Miles: (Question Indiscernible).

ADGER: That's right. If the project goes forward, our estimation of the benefits that would accrue to the State is separate of any return on the State's investment. This is direct costs and benefits. Among indirect benefits are indirect taxes from the salaries and property of workers on the pipeline project and from the profit and property of companies supplying businesses and services to the project which are based in Alaska. General economic stimulus for other workers and companies which, in turn, create more indirect tax benefits, stimulus to oil and gas exploration on the North Slope from availability of the transportation system, with attendent employment and tax benefits. Higher bids in forthcoming lease sales in the Buford Sea area because of the availability of the transportion system ... There are, of course, other costs to the State in extra provisions of Government services and in generally coping with additional development. These costs will have

to be counted against the total of direct and indirect benefits to arrive at an estimatation of the net benefits to the State. We had a meeting with Commissioner of Transportation Harris this morning and we were talking to him about benefits to the State and he was very careful to emphasize that pretty substantial costs are involved here as well.

The terms of any State participation in the project are a matter for negotiations between State representatives and the project sponsors. My intent is to explain to you the basis for the President's findings in this area and to be sure that you understand the significance of your decision to the overall outlook of the project. Potential investors are aware of the very substantial benefits which will accrue to the State of Alaska, over and above any interest on debt securities or return on equity investments when the project is completed. Surely those investors would be difficult to enlist for only normal rates of interest on debts on competitive rates of return on equity that they _____ the State declined to participate. Investors now expect that the State will participate in order to realize this extra benefits early and the atmosphere for completing the rest of the project financing would be severely affected if the State is unwilling to help. In the context of discussing the

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the expectations of potential investors, let me take this opportunity to try to set the record straight with regard to the perceived degree of the State's financial commitment to El Paso. It was well known, both to us and to the financial community generally, that the State Legislature had only authorized the State Administration to study the possibility of financial participation. However, even this limited commitment on the State's part was taken by the financial community and the Treasury Department as an expression of the degree of interest, assumed degree of interest in possible financial participation. Although on your part I think you would consider this an extremely limited expression of interest, when we on our side compared that with the expressions of interest in financial participation from anyone else, it looked awfully large.

Commissioner Gallergher's letter of last summer to the Treasury Department was in response to a request from them to estimate the limits of the financing assistance, on any financing assistance which might be provided by the State. He was asked for an estimation of capacity as opposed to some sort of expression of intent. I think that is an important distinction. Although the purpose of his letter was limited, there again its very existence reconfirmed to the financial community, the State's possible interest in participating in the El Paso Project. Again I would refer you to the fact that even though you're

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expression was very limited compared to everybody elses, it looks pretty large. The additional expections created by the State's limited expression of interest in the El Paso Project would be very hard to overcome if the State declines participation in this project.

The President's decision as it stands, contains the conditions under which both the Canadian and the U.S. Federal Governments are prepared to have this project go forward at this time. Although you may not like some of those conditions, it is important to realize that to change any of them means starting all over again. The decision on the Northwest Alaska Project, with all the attendant conditions, is the result of a unique affirmation process which is included approvals by the Federal Power Commission, which is now the Federal Energy Regulatory Commission, a large number of Federal Government agencies, the President himself and the Congress, not to mention all of our counterparts on the Canadian side. To try to change any aspect of that decision would have to be expected to result in extensive delays. I hope the State of Alaska will take the possibly of extensive delays into consideration in reaching its decision with respect to financial participation in this project.

When the wellhead prices of the gas is set, which I am hopeful will happen in the Congress in the next few

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days, I have been saying that for about 90 days now and its always the next few days, the State will be in a position to make its own estimates of the size of the benefits which are likely to accrue to the State. At that time, I am hopeful that the State will be able to make some determination on the approximate degree of support, the possible conditions of support, it might make available to the project. Ideally, certain broad terms and conditions associated with any State participation could be worked out and presented for approval before the Legislature adjornes.

The exact benefits and costs to the State from this project would not be known with complete certainty until a number of issues are resolved over the coming months. However, under any plausible set of circumstances the net benefits to the State would be very large. This is well known to the financial community. If the State were to postpone making a decision about financial participation for many months, or to decide not to participate, this may create an atmosphere of doubt and pessimism about the project. It may be difficult, in that event, for Northwest and other project sponsors to overcome this major setback and successfully finance the Alaska Highway Pipeline. I appreciate your interest and I would be glad to try to answer any questions that you might have.

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SENATOR TILLION: Mr. Chairman, I certainly don't want to be rude but it sounds to me like your evaluation and recommendation is an exercise in fantisy. It reminds me on the assembly instructions that I get on toys at Christmas time. Whoever writes them finds it very simple, but when I get down to screwing the nuts and bolts, it winds up being very difficult. To say that all of these benefits that are going to inure to the benefits of Alaskans. Are there any rights or benefits that inure to Alaskans that they are not otherwise entitled to, outside of the financing participation?

ADGER: I don't understand what you are driving at.

SENATOR ~~TILLION~~ SUMNER: Everything that you have listed as benefits coming to the State, it seems to me that they are entitled to anyway, regardless of whether they enter into or do not enter into this financial agreement. Is that essentially true?

ADGER: I think that right. I think that the key issue here is whether or not the project goes forward now as presently put together.

SENATOR ~~TILLION~~ SUMNER: You're here, underscoring the importance of Alaska to participate in regard to the delay. Were those considered at the time the recommendation that was made to the President?

ADGER: Yes.

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SENATOR TILLION: They weren't important then or they are not important now?

ADGER: They were important in putting the decision together on this basis, in the terms and conditions. I think that if we are talking about putting the decision together on a different set of terms and conditions then we are talking about doing it in a different time frame.

SENATOR ~~TILLION~~ SUMMER: In terms of the availability of this sort of an end product in the south 48, in terms of making the finances available to them. Did the Federal Government consider that this project is not important and did not want to participate in the financing? Is that their attitude?

ADGER: The Federal Government says that as a matter of Federal Government policy, it is not the Federal Governments policy to assist in projects of this kind. That's not solely a policy for this project. We went through a very careful evaluation of taxpayer assistance in the Synthetic Fields Commercialization Program and we found that it was not in the taxpayers interest and that analysis hasn't been seen since it was done. In fact, Deputy Secretary O'Leary who, at a meeting of gas industry people just within the last month, has reconfirmed Federal Government policy on that point.

SENATOR ~~TILLION:~~ SUMMER Are you aware that presently process is to move only the gaseous component of the products that are

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available at Prudhoe and the solid or the liquids are going to have to be transported in the existing pipeline? Was that considered in part of your evaluation?

ADGER: The question of the natural gas liquid is an issue that is yet to be definitively settled. I think that we have the broad outline of what liquids would be available and we have in broad terms an idea of what the options are for this position of those liquids. Part of the reason for our trip now is to discuss with State people about what their interests are with respect to natural gas liquids and to initiate a proceeding to finally resolve questions associated with the liquids. We spent quite a bit of time with State Administration people yesterday on this question.

SENATOR ~~TILLIAN~~ SUMNER: Would it be appropoirate to discuss with you at this time any rate information as it relates to takeoffs on the line anywhere?

ADGER: If your reference is to the possiblity of a takeoff for communities in Alaska along the routed pipeline, what I can tell you is that takeout policy is a feature of every tariff filing. And we would expect that the Northwest tariff filing would have a expression of their takeout policy as part of that filing. When we get that filing, we would be in aposition to review it in accordance with FERC policies in this area. The other side of the issue from the State of Alaska, which of course, we have to deal

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with in these matters is the _____ in the lower 48. I just don't know what I can tell you now about takeout policies but we feel like that the State of Alaska, that the Alaska communities should try to get some benefits from the gas going by, _____ going by and not have it available to the communities, but at the same time the competing interests is what it _____.

SENATOR ~~TILLION~~ SUMNER: I want you, as near as you can, to go back and translate for me how in the world you are able to conclude from somebody's interest in this pipeline, that that is, in any way, being a commitment. That's like saying that somebody is a little bit pregnant. Either they're pregnant and interested and committed or they are not and that is what I am concerned about. How in the world could you assume that somebody in the Administration and their interest represented something different from your prospective interests and ours? I don't know how you reached that.

ADGER: I think that my answer would have to be that looking at it from our perspective, one of the few people who were even willing to consider at that point, financing of this statement and the thing, was to say the Legislature had authorized the Administration to study it.

SENATOR ~~TILLION:~~ SUMNER Was that for all the lines or ...

ADGER: For El Paso.

SENATOR ~~TILLION:~~ SUMNER And so you translated that expression of

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interest or investigation to be a possibility of commitment even on other gas lines. Is that correct?

ADGER: I don't think that is what we did. I think that what we did was we made two findings. One was that the Federal Government financing for this project was not appropriate. The second was that we thought that beneficiaries ought to participate. The State of Alaska expressed intentions on this point, notwithstanding, we felt that it was appropriate that beneficiaries would participate. Among those beneficiaries we felt one was the State of Alaska. Now I think when we talk about expectations and who is committed to what and what deals where, I think that those were expectations of the financial community and I think that the expression of some interest, however limited in the El Paso project, was taken by the financial community as an indication that if the terms were acceptable to the State, then the State would consider participation.

_____: Question indiscernible.

SENATOR ~~TILLION~~ Sumner: And as I read that I got the impression that that was intended to express a preference of the line at that point rather than being translated as permission for whatever line was being built. Rightly or wrongly that's how I took it. I was wondering how it is they could wind up in some of the context with it. I'm not critical of the decision made at that time, I'm just saying I don't know how you could jump to that conclusion.

ADGER: Well my point to you is that our finding, I believe, was a narrower one than just, that say "would." Our finding was that it was important to us that beneficiaries should.

SENATOR ~~TILLION~~ SUMNER: In light of some of the severe winters that have been happening and the shortage of heating fuels that existed in the midwest and eastern part of the country. Is the Federal Government saying that it is not interested? Is this decision absolutely irreversable at this point in regards to the financing?

ADGER: In a word, yes.

SENATOR ~~TILLION~~ SUMNER: Thank you.

CHAIRMAN MILES: Representative Chatterton?

REPRESENTATIVE CHATTERTON: Thank you Mr. Chairman. With your permission, and give me a little bit of latitude, I'd like to ask three or four questions. Sir, I have before me what you handed out and it has market values here. Is that what is normally referred to as, $2.62 as the ____ price?

ADGER: Yes.

REPRESENTATIVE CHATTERTON: Now, referring to the same handout I noticed in the title block, it refers to 2.4 billion cubic feet per day deliverability over a twenty year period. Does that mean that each and every day of that twenty year period you want 2.4 billion cubic feet? Is that correct?

ADGER: That throughput is the basis for this set of cost estimates.

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REPRESENTATIVE CHATTERTON: If that through put were to be less or interrupted, this would be completely in error. This would not be correct.

ADGER: Yes, it would be different.

REPRESENTATIVE CHATTERTON: Now, I am paranoid, however, I am told that paranoia is the mother of discretion. Do you interpret the Alaska Gas Transportation Act of 1976 as it or by itself being permissive to the Federal Governmen to override the Alaska oil and gas conservation package?

ESSLEY: Could you be more specific?

REPRESENTATIVE CHATTERTON: The Title 31 of the Alaska Statute, Chapter 5 thereof, by manditory of our Department of Natural Resources in the esterest of the people and, Article 8 of our Constitution also speaks to it, that we shall maximize the coverage of oil and/or gas or land. Now at this point in time there is no human on earth that can predict, in order to live up fullfill that manhood, that a deliverability each and every day for twenty years of natural gas from the Arctic North Slope can be guaranteed, without possibly and very probably without _____ with ultimate recovery of those reserves. My question is to you, does the Natural Gas Transportation Act of 1976 or is there anything in your knowledge connected with this where the Federal Government believes or feels that they can override, in the national interest, our own statutes or constitution?

ESSLEY: Well to begin with I think we look first at the Natural Gas Act which is the enabling Legislation for the Federal Power Commission, the Energy Regulatory Commission. I think that the Courts have made clear, for a long time, and there have been a number of recent decisions that the Federal Government has a certain relationship with the State Conservation or Railroad Commission, or however you will have it, to respect those decisions but its not total preemption by any means and the decision, the operating decisions of the field really are not in our domain. I don't read anything in the Alaska Natural Transportation Act of 1976 to change that. I think that its the duty and the responsibility of the Government in certificating facilities, especially one that is rather expensive, to make every effort to assure that its within the frame work of the normal and legal responsibilities of the State Commission to assure itself that the reasonable certainty of deliverability at a certain level will be forthcoming. I think, nontheless, there is invariably certain reasons be they force majeure or decisions on the part of the State to alter that deliverability depending on certain operating characteristics of the field. I hope that answered your question and I hope that a lot of the uncertainties can be resolved before the final certificate is...

ADGER: Let me pick up there. I think that the answer was no.

And let me say this on that point. The Regulatory system that we have for natural gas pipeline is fortunately poorly suited to betting on the come, if you will. I'm a geologist by training so I'm a natural optimist. I don't think and I don't believe that very many other people think that the only thing that is up there is the Prudhoe Bay accumulation, but there again, the regulatory system, the financing and tariffs system that we have to put together to make this thing go, is a function discovered in proven reserves. We have a responsibility under our statutes to size the system to the available deliverability. Now I think, today, where we stand is that we've got a state conservation authority's approval of production plans which calls for deliverability of 2 billion cubic feet a day from the main pool reservoir in the Prudhoe Bay field. We have had a estimate from the geological survey and this was in the context of a report to the President in the course of last summer on supply and demand questions in this decision. The geological survey indicated that they felt that it was an additional 3/10 of a billion cubic feet a day of deliverability from other reservoirs in the field and extensions of the main pool reservoir. So between what the State has done in its conservation order last May and what the Geological Survey feels is there in addition to that, in this field, is almost 2.4

billion cubic feet a day. You know that the Geological Survey is prepared to go on from there and tell you what they think the estimate of speculative reserves are up there. Its rummored that Exxon has got some more discoveries up there and I think that we want to try to get, as we go into some final deliverability finding that is related to the sizing of the system, the best estimate of your Department of Natural Resources, what the deliverability is and try, if we need to change the size of the system then change the size of the system. But based on the evidence that is available to us now, this seems to be the appropriate size of the system.

We've also studied how the economics of various systems changes as you change through put volumes. We haven't studied the downside as closely as we have studied the upside because our most careful studies of the upside were in the course of the negotiations with the Canadians on what the addition of the Canadian McKenzie Delta gas volumes did to our operating efficiencies in the 48 inch 1260 line. On the downside, in the course of the Congressional Hearings process, we did take a quick look at what reduced volumes, reduced through put volume did to operating economies and, if I remember right, we will get you these numbers, reduction of this number by an 1/8, takes it down to 2.1 billion, increases the transportation costs,

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the twenty year average transportation cost, by 10% or 15%. And it starts to really go up if you get that $2.1 billion down to about $1.8. I think that is right. When you get to a 1/4, if you are down a 1/4 from the $2.4 billion then we probably ought to be looking at a different size system.

REPRESENTATIVE CHATTERTON: One final question, somewhat unrelated but from the same page. I noticed down here in footnote 2, when you come up to the severance tax estimate to the State and footnote 3 coming up to the royalty, you use two different prices. I presume and I think that you have already mentioned that the $1.58 is a well head value and the $1.28 obviously subtracts 30¢ from that well head value to give us a royalty value of $1.28 per barrel. I've been told in past practice that on the federal level anyway that field price and well head price are almost interchangeable. Can you give me a little bit of elaboration on why 30¢ in MCF is used and does it make a difference whether it would be used, thats one question. Does it make a difference whether the processing plant is built by the operating company or built by the transmission company?

ESSLEY: Ok, since I prepared that number I think that I should explain why I did it that way. What I found out was that there is some uncertainty as to whether or not the royalty would be caluculated before or after deduction of processing costs. And I decided to be conservative here and not over-estimate the state's royalty revenues

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and so I took the interpretation that the processing costs would be deducted before the royalty value. I have since been told by people here in the Administration that, in fact, it needs to be entered in litigation and no one really knows for certain how it will be handled but that is where that number came from.

ADGER: You can look at the number for royalty benefits then as a minimum and then it would go up from there?

ESSLEY: I was, on the other hand, told that the severance tax, that was fairly clear cut, that that would be taken prior to any deductions, at the inlet to the pipeline there would not be any deduction or tailgate.

REPRESENTATIVE CHATTERTON: Very quickly, and you can almost give an answer yes or no. First of all, if my understanding of the federal _____ practice at the well head price and field price are interchangable.

ADGER: Ned, I think you probably know as much as any of us about the FERC practice on this matter.

NED HENGERER: If you are defining field price as the well head price plus additional costs I think it depends on the facts and each situation depending on the location of the plant, the nature of the gas, there are a number of different....

ADGER: It is very hard to find an adequate precedent here because of the gathering and conditioning costs are typical

in the order of a cent and MCF maybe 2¢ in MCF, and you know, this argument is on all sides of the question of what the approporate precedent is and I think that we are just going to start some sort of inquiry into the question and try to do the best we can.

CHAIRMAN MILES: While we are talking about numbers and this sheet you handed out, you indicated that the Federal Corporate Income Tax seems to be $90 million. Is that...is there any other income for the Fed Gov't?

ADGER: Well I think that there is some money involved for rights of ways on federal lands but I think that the amount of money there...

ESSLEY: I think that we give away the right of way.

ADGER: Do we. Oh, its the state that charges. I think that the federal income taxes is the biggest part of it.

CHAIRMAN MILES: There was an earlier estimate of the total federal income tax which, I just multiplied it out here very quickly here and $90 million times twenty years is a billion eight. And Secretary _____ estimated it at $3.8 billion. I don't understand where that difference comes from?

ADGER: One could be current dollars versus constant dollars, but we'll find that estimate and we can....

CHAIRMAN MILES: Are you in current or constant dollars?

ADGER: This is constant. Constant 1975.

CHAIRMAN MILES: We don't know what the Secretary is referring to?

ADGER: No, I don't. I know who put the estimate together but I don't know how he got it. We will find out what the basis of that estimate was and give you an answer on that.

CHAIRMAN MILES: And then there is no federal right of way fees at all.

ESSLEY: My understanding is that the Federal Government does charge or ask for compensation for monitoring expenses but I don't believe that they charge more than a nominal fee for the right of way. I may be mistaken about that. Other people here know that better than I do. A filing fee or something like that.

CHAIRMAN MILES: Is there an excise tax?

ADGER: Not that I know of. There may be an indirect excise tax on the tires on the truck.

CHAIRMAN MILES: It seems that the theory was that the beneficiaries to be the financial participant, it would seem like, to me anyway, that the Federal Govermnment would be as big a beneficiary as the State of Alaska, if not substantially bigger with all the consumers. But I guess that that is a point that is over the dam already.

SENATOR HUBER: Thank you Mr. Chairman. I have several questions that haven't been answered yet. The first one is your estimate of Alaska net Corporate Income Tax. 1¢ per MCF or $13 million. On what basis is that, how did you arrive at that figure?

ADGER: We just pulled those numbers out of our cost of service estimates that were based in turn on the filings by the project sponsors on this, adjusted for our estimate for cost. But probably the fundmental estimate of the state's corporative income tax comes from the project sponsors.

ESSLEY: I don't know what income tax rates were assumed by the applicants in their cost of service calculations. I could find out but I don't happen to know off hand.

SENATOR HUBER: Well I asked you the question because the same thing was being computed for the Trans-Alaska Oil Pipeline. The financial community and the Federal government both looked at Alaska's tax structure and found that we had a 9.4% corporate income tax in the state of Alaska and this was charged as a contigent liability to the _____ of the line and we found yesterday, we heard there were some other figures that in terms of the _____ and I was trying to find out where it came from. This other figure must of came from Northwest Pipeline, Is that right? What they estimated they would pay?

ADGER: This is based on the Northwest filings with us in March of 1977 and then are adjusted for the cost overruns that we make. In terms of benefits to the State, even if it were two or three times as high. It is overrwhelmed by strictly royalty and severance tax in terms of its size.

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SENATOR HUBER: (Indiscernible) That there is a little bit of a misnomer in comparing it with the states. In most of the states the gas is owned by the people that own the property and here, in this particular field, is the property of the people of the State _____, and so you are adding the farmers share into the taxable revenue as though they were in one pot. You realize that you are doing that don't you?

ADGER: Well we were just counting the farmer as a beneficiary.

SENATOR HUBER: Well, but that wouldn't be done in a state where the farmer actually owned the gas. The state's revenues would be in one column and the farmer's share would be in another.

ADGER: I understand that. I think that we want to point out that the state's interest is, in effect, is a producer here. In the royalty share. From our perspective, really adds to the State's interest in having this project go forward sooner.

SENATOR HUBER: I wanted to look into another item and we are having a little trouble getting into it. The Federal Government has decided by some report, I think you mentioned the Synthetic Fuel Study, do you have copies of that? You apparently made some major decisions, the Federal Government to stay of energy financing in spite of its importance to the nation as a whole.

ADGER: We haven't brought that study with us but we can make it available to you.

SENATOR HUBER: Would you make a copy of that.

ADGER: I tell you that its such an incredibly sophisticated study, only PhD type economists can make any sense out of it, I'm afraid. And not many of them.

SENATOR HUBER: I was once told, since I have been involved, that only certain kinds of geologists have enough sense to understand the reservoir studies and that I should shut up and not ask the questions. I usually throw those kinds of reports in the garbage can. If I can't understand them I've found that other people can't understand them either.

ADGER: That's right I think that Bob will tell you that he had a pretty hard time with it.

HUBER: Question Indiscernible

SENATOR RADAR: The expectation that the Vice President advise the financial community that Alaska will participate in financing, no matter how it was developed, it apparently exists. We need to consider, I think, the ability of Alaska to respond to that expectation and be more precise in detail as to the nature of that expectation. For example when we were talking yesterday with the Alcan people, they were talking in terms of the State participating by pledging its royalty in some manner or another on a revenue bond which the state would sell and then reinvest

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those funds in either equity or debt position along with all other investors that would like to invest in the pipeline. At the same time we have had people tell us that our general obligation rating, our bond rating, will deteriorate pretty badly if we go above $270 million a year. At least this is the advice the Administration has received. The Governor, in his State of the State message to us, the budget statement, stated that, and last year, as a matter of fact, vetoed a large number of items that would have called for bonding, in excess of what he considered to be prudent, what $240,$250-$270 million, I guess my equasion breaks down into, does the Federal Government expect us to, if there is an expectation here and by the financial community and by other investors, do they expect us merely to try to take royalties and pledge those to revenue bond issues if that revenue bond issue is unacceptable in the market place, then Alaska would be relieved of its expectation that it would participate or is that expectation that we participate go so far as to expect Alaska to tie up its general obligation bonds in debts. I think clearly, under anybody's analysis, it would mean that we had no bond capacity for any other purchases for schools, highways, roads, ferry systems, airports, whatever the cup of tea is. Or that we take it directly out of our general fund. Does the expectation address itself to those kind of problems or not?

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ADGER: I don't think that the expectations, particularly on the part of the Federal Government, is developed nearly to that extent. I think that were it developed to that extent I don't think that the Federal Government expects the State of Alaska to stop everything else in order to do this. I think the Federal Government is pointing out that there are very substantial benefits to be realized here and encouraging the State to participate in realization of those benefits, and suggesting that negotiations with the project sponsors you work out a deal that is consistant with your interests and theirs. I don't really feel that the Federal Government is really adequate for or would it be appropriate for us to really get involved in the nature of your participation. I really think that its up to the State and the project sponsors.

SENATOR RADAR: You're familar I think probably in general terms as to the proposal suggested by Alcan Northwest people as to how the State would get involved by pledging its revenues from its royalty gas to secure these bonds. Do you think that there is expectation by anybody that we would go beyond that?

ADGER: I don't think so at this point. I think that, in fact, listening to Senator Stevens yesterday, that his support for the concept of state participation really is based on the fact that that participation would be supported

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by this project. And that seems to me a principle which if acceptable to the lenders, the project and its financial advisors, if its acceptable to them then it seems to me that it is a sound principle for the State to use.

SENATOR RADAR: Getting off that subject a little bit. Going back to something that we discussed before, privately, but I think that it should be discussed here too, and that is the capacity or the ability of the Federal Energy Commission people, your people, to deal with the problem which would arise in the event the State has no market for its gas at the initial stages of the pipeline, but they develop the market five years later, whether or not we can negotiate with you at this time, with Alcan, and with the other sponsors, a tariff which would give the State, in the event the State gas goes through the line but is recalled, under 13(b), recaptured or whatever for instate use and instate processing, whether or not we could expect you to give us some assurance as to the nature of the tarrif that we would pay and whether or not we could expect to negotiate with you or them in any matter which would be firm enough have any meaning. A tarrif which would not include the tariff for the full length of the pipeline, but just Prudhoe Bay to Fairbanks if that were to be the point of takeoff?

ADGER: Let me answer that with two kinds of thoughts. One

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is that these would be the kinds of questions that we discussed with the Department of Natural Resources people, a cross section of State Administration people yesterday, in the context of what is the appropriate size of the system. And of course the fundamental issue here, which I'm sure that you recognize, is that when the State takes its royalty gas for its purposes, what does that do to the operating economics of the system. And the way that we talked about trying to get some resolution on the question of the appropriate size of the system was to try to get an expression from the state of expected deliverability, expected gas deliverability which might be available in different time frames and the size of expected or possible demand for gas within the state during those same time frames. Such that we could try in our deliverability findings, in our findings about appropriate sizing of the system, to take the state's intentions with respect to its royalty gas into consideration. We will certainly be glad to send the same kind of enquiry to you all to have you participate in the inquiry to the State Administration.

And the second thing that I would say about this is that I think that this is the point for negotiations betweeen the State and the project sponsors. I think that this is the kind of thing that could be made part of an agreement with the project sponsors. I think that their

primary concern as well is going to be what the State's intentions with respect to the royalty gas due to the economics of the system. We discussed in your office briefly the question of, well, would they really be all that concerned, but as we pointed out, the people who will be the project sponsors are the shipper companies who are involved in selling gas in their market areas in the lower 48, and the impact of the withdrawal of the Alaska gas on the delivery price of the gas in the lower 48 I think is going to be a concern to them. Now on the point of the tariff within the State of Alaska and what the possibilities are there, Ned correct me if I'm wrong, but I think that it, dependent on the nature of the State's participation, it might be able to file its own tariff of the shipper company.

HENGERER: Its a possibility.

RADAR: That's all I have, Mr. Chairman.

Sumner: One comment that I might make to this question. I certainly, at least in my _____, would not want to create the impression or leave the impression in any circumstances whatsoever, that I'm laboring under any implied obligation of the State to participate in this loan, but am at absolute freedom to attempt to negotiate, on a mutual basis, benefits that might inure to the Northwest pipeline people, and benefits for such a loan or such

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financing that might inure to the State of Alaska in terms of employment opportunities and job sharing within the State of Alaska and for the people of Alaska. I see that as maybe the making of such a union. But I certainly am going to question or quiz every time there is that implied obligation. I don't see it, I don't share it, I don't believe it. From your standpoint, so that at least however you compute these into future decisions or recommendations, you can at least be advised, at least from one person.

ADGER: My own view on that, I think, is that we found that the State is a major beneficiary of this and we are hopeful that the State will find a basis on which it would participate. I think that you have perfect freedom to negotiate the deal that you are happy with. My personal plea in this would be that, given that we get resolution of the well head price of the gas issue, that we get resolution of that issue pretty soon, that you enter into active negotiations pretty soon on what form your participation might take.

Sumner: I am concerned about the reaction of what the public might take if they are led to believe or they conclude that somebody has obligated the State either morally or in some other manner to finance this. There is some emotional issues out there that have not been settled

yet and I would hate for a bias to arise that would impede down the road of negotiations, that might in the long run bring some positive benefits to the State and to the people. That's the point that I would like really underscored.

ADGER: I think that I understand that perfectly well and I would only try to add for you that I think it is important for the State to work for a deal that it is satisified with. But I think it is also important for the State to realize a certain amount of down side risk here, that the State has something to lose if it doesn't go forward now. And that is really all that needs to be said.

Sumner: Let's follow that one step further. In terms of what the State has to lose, have you evaluated at all the increase of the gas if it stays in the ground in terms of twenty years down the road. Somebody talked about some figures yesterday. Have you concluded what figures might be available, what price this product might sell for in two years or fifteen years. And compared that and the benefits to be gained against the benefits to be gained at this time?

ADGER: We have not completed our evaluations on that point and as you can well imagine, the ultimate answer to that depends on what sort of price trajectory you want to assume for world oil prices. But our expectation is that on a net present value basis, people who are producers

would be better off going ahead now. If you want to assume that world oil prices are going to go up faster than we assume they will, then you draw probably a different conclusion. But, our sense now, not having completed those evaluations, is that here again it depends on what kind of discount rate you want to use and the price projectory you want to use for the world oil prices. You are better off going forward now.

?, Sumner: It would tend to minimize the down side risks.

ADGER: Reduce them?

?, Sumner: Reduce them yes.

CHAIRMAN MILES: Why don't we take a break until 3:30.

(BREAK)

CHAIRMAN MILES: We will call the Joint Hearing back to order now.

SENATOR RADAR: Yesterday the Northwest people were talking in terms of a 15% rate of return that would be permitted on the equity owners? Does that jive with your understanding, is that a resonable rate of return to expect in this situation?

ADGER: That has been the basis of all of our calculations is a 15% rate of return on equity. I think that it is recognized that this is a project with substantial risk for equity investors and therefore the rate of return is commensurate with that degree of risk is appropriate.

SENATOR RADER: The President's finding and the posture that beneficiaries of the line, so to speak, should participate financing of it. Should the beneficiaries not participate in the financing of it, would that effect the setting of wellhead prices in your view or the Administration's posture as a recommendation to Congress? In other words if the beneficiaries are the State of Alaska and the other owners of the gas, in otherwords they get their gas to market this way, they receive the value but they wouldn't have the right _____. If the beneficiaries failed to respond to your thoughts that they should help finance, would it be reasonable then to assume that the Administration, through the Administrative structure or through the organization or otherwise, that that would be taken into consideration in the setting of the wellhead prices or tariffs for future purposes? Or, in otherwords, if this has to be done without the help of the beneficiaries, there is another way to get the beneficiaries help involuntary and that is to set a different tariff or different price on the wellhead.

ADGER: I just don't see how that could be the process. On the one hand the wellhead price will or will not be set by the Congress, probably based on their own set of considerations and I don't think that the wellhead price for the Prudhoe Bay gas will be set for that deposit specifically. I think

it will be captured in a definition that will apply to gas across the country, broadly across the country. Our expectation is that that would lead to a well head price that is related to what the administration has proposed for the categories that I know as "old gas." It is a number now in the $1.45, $1.48 range. And it is related to the national rate set by the Federal Power Commission in 1976. So I think the Congress sets the wellhead price, or they don't. And on the tariffs, I think that we approve or disapprove what is presented to us. I don't think that we get involved in what rate of interest on debt is paid, we have to have some sort of finding on rate of return on equity -- the appropriateness of rate of return on equity. But this finding is completed before money is put up. It is completed after commitment are made on that basis, but before money is actually put up. And if you were an equity investor you wouldn't be the only equity investor. And to try to ratch it down to your rate of return on equity in order to try to press you into some sort of financial commitment, runs off of everybody else, you only have...

SENATOR RADAR: But of course, marking down my wellhead price might not hurt everybody else. It would only hurt other producers.

ADGER: I think the Congress is going to set that though. I

think your question was that if the federal government, which it does in this instance, is going to take it out on you if you don't participate financially, I think the answer is no. Because a different set of people are going to set that.

SENATOR RADAR: If I was the President and I felt that the producers have an obligation to participate in the financing, and the producers did not rise to that obligation, did not meet that obligation, then I think, if I were the President, and I felt confident in my position, I would look for a way to where they fulfilled that obligation in another way, through a regulatory _____ of some sort, or through Congress, by recommendation of Congress, or something else. And say, you have failed, producers, to meet the obligation that I have printed out here, that I have sent out to you. I have sent my people to Alaska and have talked to Alaskans and have talked to other producers and they haven't responded. Now there is another way to get them to contribute to this and that is to set the wellhead price. That way they contribute to the financing of it because they make it more feasible. The less you have to pay Alaska and the other producers for the gas at the wellhead, the bigger the spread between the market in the southern 48 and the producers in Alaska. Why wouldn't you do that? It seems to me that if you were certain of

what you are doing that you would automatically do that. I would. If you refused to share the responsibility that I genuinely thought that you had, voluntarily, I think I would go ahead and say to the Public Service Commission, look, you have a decision here in setting this rate, or wellhead or something else, and those fellows haven't responded. It seems to me like we get their cooperation or assistance in another way.

ADGER: What I started to say was that, Oh no, we wouldn't do that because that's not fair. But if you would do it, I don't want to put that kind of... I wouldn't want to pass judgment on what Senator Stevens says either, but... Hopefully, regulatory determinations are made on the basis of higher considerations. I think regulatory determinations are made on some sort of assessment of the public interest.

SENATOR RADAR: (Question Indiscernible)

ADGER: Well, I think that the fundamental point here is that your financial participation is important to the atmosphere surrounding the project now. And to my way of thinking, that's important to have the project go forward on schedule now. And I guess, I just question the wisdom of posing some kind of a threat that the state might be punished if it didn't step forward.

SENATOR RADAR: Let's not talk about punishing the state, let's

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talk about punishing the oil, the producers. That's not hard to conceive. If you said, okay, you producers didn't come through and finance this thing, and so and so forth, so we are going to make it financible by knocking down the wellhead price. That will make it financible.

ADGER: Well, I just don't think we would do that. I think on the one hand we are making some progress with the producers on participation in some way. As I think we discussed in your office earlier today, the producers are not really _____ on this issue, and they have different degrees of interest in this project and different feelings about it. Make no mistake, they have been very stand-offish about the whole thing, at this point. And I don't mean to imply for a minute that any of them are racing to sign up, but we think that we are going to be able to make some progress with the producers when the wellhead price is set.

SENATOR RADAR: Thank you Mr. Chairman.

SENATOR SUMNER: I wanted to talk to one instance; going back to some discussion earlier, that we do look forward to having a petrochemical industry or at least we want to maximize the opportunity of having one in Alaska... (indiscernible) I think that is going to have to be _____ in quantitative terms or estimates, or ballpark figures, before there will be a lot of willingness to

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commit to funding and and other commitments that are necessary. I think we need to address that and that's the area that you are primarily involved in. Will you respond to what is likely to happen in the future, as to consideration given in terms of tariffs, rates for the _____?

ADGER: There again, I think you said before, the primary responsibility there, I think, is on negotiations between you-all and the project sponsors, as participants in the project in some way. Then you have the right to determine the conditions, the basis on which you would participate. Now, I think that...

SENATOR SUMNER: Suppose we came in with a mutually agreed tariff for this section of the pipeline. Is it reasonable to assume that you would approve that (indiscernible)

ADGER: I think if both sides agreed on a tariff, what we would do would be to send the proposed tariff to a hearing, probably as soon as we could, to find out whether or not there was any opposition to doing it that way.

SENATOR SUMNER: (Question indiscernible)

ADGER: Well, no. I am not sure that...

? Adger: ...accepted to the tariff if Alcan didn't object to it. That would be a major...

SENATOR SUMNER: (Question indiscernible)

ADGER: I think a distinction I want to draw here is that if

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something on the tariff is important to the State's decision, on whether or not it would participate, I think we would do everything that we could to expedite a decision from the regulatory body on that point. And you're suggesting that if you didn't do it, we would go the same route. I don't think we'd feel anywhere near the urgency to get that particular point resolved. Am I being clear there?

Sumner: Well, I won't pursue it now, but I want you to know that that is a point that brings to my mind, must be defined in quantitative terms before a commitment would be made.

Senger: One thing that may not be clear is that the case of taking Alaskan royalty gas out of the line before the Canadian border at some point, is not all that new or unprecedented. In the lower 48 gas pipelines, not all the gas is delivered to the ultimate end of the pipeline. It's taken out all the way along the way. So there is an abundance of past techniques that have been used, or procedures, to set the tariff of gas that's taken out at intermediate points.

Sumner: (Indiscernible) In your opinion, can the current gas line meet demands, with conventional financing, if the state does not participate?

ADGER: I'd say that, number one, I would go back to something that you said earlier today about the ease of doing this

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at all. I would agree with you 100%, it's going to be very difficult to do, no matter what. Now, having said that...

Sumner: Explain that.

ADGER: Well, it's a whole lot of money. And it's going to have to be done, probably, on a sort of unconventional basis. Maybe somebody back there knows that better than I do.

Sumner: Has any other state been involved in similar sort of financing before?

ADGER: I don't know of another right off hand. I heard rumors for a while that the state of California was toying with the idea of financial participation.

Sumner: (Question Indiscernible)

ADGER: I don't know of any right now.

Sumner: Okay, are you saying it's going to be difficult even with Alaska's participation?

ADGER: Yes. I think I want to emphasize though that it's going to be even more difficult without.

Sumner: In your view, is it impossible without Alaska's participation, is it improbable without Alaska's participation?

ADGER: I would have to refer you to Alcan, the project's financial people. Or better yet, probably the State has its own financial people, I'm sure.

Sumner: (Question Indiscernible) President's Decision found that the project could be privately financed. But, now you have changed your conclusion, finding that State participation is needed. Why did you initially decide it was privately financeable?

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ADGER: Well, our finding, were that it could be done privately, and that was based on an analysis of the oil pipeline experience, the relevant conclusions, I think, there that are set out in some detail in here, are the relationship of the financing, the size of the financing to the total amount of capital that's raised in any given year, I mean, this would represent about the same proportion of private financing that Alyeska was in its peak years.

Sumner: Is the data that you based your conclusion on then, is that data still active, still current?

ADGER: Well, you're privately financible.

Sumner: (Question Indiscernible)

Anderson or Metzger

ADGER: Yes. Let me see what it specifically said. If I may read you this, it would be the largest privately financed energy project ever undertaken requiring between $10 and $15 billion by the time it is completed. To effectuate such a private financing, a plan that equitably and carefully balances the budget, the benefits and risks is required. The conclusion that Alcan can be privately financed is founded on the basic economic desirability of Alaska gas and the desirability of the Alcan transportation system. Nevertheless, skillful financial packaging and risk/benefit balancing will be required. It is therefore necessary to explore the boundaries of the financing problem by considering Alcan's likely capital needs and sources, relating

those needs to the capital market in general and reviewing the list of beneficiaries and examining the roles each might be expected to play in the financing. Then we go into a discussion of those items.

Sumner: (Indiscernible)

ADGER: Well, I think I question your conclusion that the thing is running into some problems. And I would say this about that. We concluded that it was privately financible though difficult to do, but it could be done. And we also proposed that the project's beneficiary should have a big part in that. That would help a lot.

Sumner: When you define private financing, does that include Alaska participation? Is that part of the definition of private financing?

ADGER: Yes. Well, private financing did not, I think, automatically assume that Alaska would participate. I think privately financible was a separate conclusion from Alaska participating.

Sumner: Trying to bring this thing back because I get a little confused. I think you told me just a few minutes ago that it was difficult, even with the State financing, and you would assume even more difficult, if not improbable, if the State does not participate. Now you are saying that it is only difficult if there is private financing involved. So I am trying to determine whether the definition of

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private financing includes the State since you said it was difficult for private financing. I'm trying to determine your conclusion. Have you always anticipated that Alaska would have no option but to finance this line. Was that any part of your active conclusion in the Senate?

ADGER: No.

Sumner: Alright. If there has been no new ingredient, are you still under the impression that it is still only difficult to finance it privately?

ADGER: Yes. There are degrees of difficulty.

Sumner: Alright. In your view, how long would it take assuming the State of Alaska did not participate? How long would it take before the project would be under way, in your view, encountering the degree of difficulty as you understand it, to complete this project, to move ahead with it. Move ahead as a result of having obtained private financing?

ADGER: I just have not worked through the set of circumstances that would be involved there. I don't know if I could really speculate on that. I think, as the sequence goes, that the sponsoring company consortium has started to come together now, and we feel like that if the State of Alaska could see its way clear to participate in the financing, then we feel sure that the Province of Alberta would also be willing to participate in the financing. And we think

that we'll get to the producers down the road somewhere and we build on an atmosphere of confidence...

_____: If Alaska financing was part of the game plan all along, and I'm wondering why ~~doesn't~~ weren't we told before?

ADGER: I think there's sort of a real distinction between a conscious game plan at the time this was written, and observing how the thing might be coming together now. I would think that it would be a big mistake to assume that this was all planned out when this document was written. I think you'll find that we said in here some things that were not exactly dictating the script. We didn't anticipate that the Province of Alberta.

Sumner: And do you want to restate for me your definition of private financing?

ADGER: Private financing I would say would be the private capital market.

Sumner: Inclusive or exclusive of the State of Alaska?

ADGER: What you are saying to me is, do you think that the implication is that Alaska resources is part of the private capital market, in the sense that Alaska has money available to invest like other private investors.

_____: (Indiscernible)

Adger: Part of this may be the egocentric view of the federal government. Anything that is not the federal government is private. That is sort of the way the term

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was used. And it is quite fairly explicit in the President's decision. Tradition and equity suggests that the parties who tend to benefit directly from a transportation system participate in the financing and share the burden of these risks. The direct beneficiaries include the equity investors, the producers of the gas, and the State of Alaska.

Sumner: You would agree that there are other ways of saying that other than in terms of private financing. I think you will agree. I don't care in the definitions and I don't care in some of the conclusions, and in some of the ways that Alaska got obligated. So I am not going to pursue it any farther. But I think you should, and I'm going to recommend that you seriously reevaluate how you got in the box that you are in and see if you can't find a way out.

ADGER: Okay. Let me just say on this point about what is private financing. I think when we contemplated what private financing is, we think not about the State of Alaska diverting necessarily tax revenues away from schools or this kind of thing. I would consider that private financing, but to the extent that the State of Alaska or the Province of Alberta has investable funds, the Heritage Fund in the case of the Province of Alberta. I would consider them a private investor.

_____: (Indiscernible)

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ADGER: We were talking about what is private financing as opposed to what is the obligation of the State. That is what I was talking about. And then you shifted to what the obligations of the State were and the projects.

? Miles: Earlier in the State's testimony, you concluded that or seems to imply though that you didn't expect us to share the same degree of commitment that you had concluded that there was a commitment, an express interest which implied some commitment on the part of Alaska to finance the program.

ADGER: I think that I said that I felt that that was a percep_ tion of the financial commitment. That's what I meant to say.

? Miles: Just so I understand it, you're not saying that the project hinges on investment of Alaska's resource dollars? In your opinion?

ADGER: I think that the financing of the project is made enormously easier if the State of Alaska is a private investor. Make private investment decisions on available investment funds.

Miles: (Question indiscernible)

ADGER: I think I would refer you to the ultimate answer to your own financial advisors and the project. But from my own perspective, I don't think that that is the only considera- tion. If the only thing that happens is that Alaska does

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or does not participate, that is not going to make or break the project. If Alaska does participate, a whole bunch of other things are going to have to fall into place as well.

SENATOR HUBER: (Question indiscernible) Did you consider Alaska's problem of the constitutionality of dedicating resource revenues, except Permanent Fund money, that it would be competing with

ADGER: We did not exclusively consider that because we did not get into, except to take note of, take note of Commissioner Gallagher's estimate of what the order of magnitude of the State's participation might be. We just pointed out that the State of Alaska, as a beneficiary, it would be nice if they would participate. other Alaska projects?

SENATOR HUBER: (question indiscernible) What are the four portions of the pipeline?

ADGER: The Alaska portion, the Canada portions and the two southern portions?

SENATOR HUBER: (Question indiscernible)

ADGER: I don't know about that. I think that you would have a difficult time buying a piece of the Canadian segment. Actually I think you could buy a piece of the Canadian segment, you just couldn't buy a majority.

SENATOR HUBER: (Question indiscernible) ... then you would have to deal with how desirable this investment is. How does the desirability of the Alaska portion of the pipeline segment stand up with the desirability of the other two segments?

? Adger: Well, I think this is the kind of thing that you have got to take up with the project sponsors. I just

can't really do any good in terms of telling you how it ought to go. You all have got to come up with a basis on which it's satisfactory to you, and if it is put to you in a way that this looks better than that, and you don't have a shot at that, then I think that is something that you take up with them.

SENATOR HUBER: (Indiscernible)

ADGER: Well, I would absolutely suggest that this investment ought to be evaluated against all of the other possibilities that the State has got. But I suspect that this investment would be an attractive one, relative to some of the others, and I would point out to you that this investment, there's always the possibility of very substantially enhancing the amount of money that are in the permanent fund. I think there is a pretty substantial amount of benefit there to be had.

SENATOR HUBER: (Indiscernible)

ADGER: Yes. I think what you are talking about is the constraint on the amount of participation, the availability of funds through the proportion of the funds that are allocated to the permanent fund. Certainly the size of that fund and the prospective size of that fund, given the additions to it of the proceeds from the sale of gas, are going to limit the degree of your participation.

SENATOR HUBER: (Indiscernible)

AGO 800989

Rep. Gruening: Senator Radar asked a question earlier about... Producers want to wait to see what the well head price will be. (Indiscernible) In consideration, do you think that is a reasonable stance?

ADGER: Yes. I said that I thought that the state would likely want to wait for the setting of the wellhead price before making its decision.

Gruening: When is that likely to transpire. I missed your presentation.

ADGER: Well, what I said there, we've been saying for 90 days now that it would be any day now. We still expect that it would be any day now. That's under the legislation that's before the Congress. I think, in the alternative, that if a decision on gas pricing is not forthcoming out of the Congress then we're all on a whole different time scale.

Gruening: If it were to arrive in 90 days, do you (INDISCERNIBLE) think producers would start negotiating gas sales contracts?

ADGER: We would certainly expect them to start negotiations on the gas sales contract. I think that some aspects of the gas sales contracts might well affect the financibility of the project. Now, I'm not sure exactly what the nature of their spectrum might be and wouldn't want to speculate on it. But I think that negotiations over the gas sales contract are...

_____: (Indiscernible)

ADGER: Well I just think that -- I'm afraid I know where you are leading me because I'm afraid I know that conclusion of

AGO 800990

that sales contract for the State's royalty share can't finally be concluded until the next session of the legislature, isn't that right.

_____: (Indiscernible)

ADGER: I think that the negotiations over the gas sales contract, the setting of the wellhead price, is going to fundamentally determine the producer's interest in this whole thing. But then the producers also have expenses associated with producing the gas that they've got to consider. The allocation of costs associated with some sort of conditioning facility which is to be considered as well. I think it's going to be hard for the producers to really establish where their interests lie before they know some more on those things.

_____: (Indiscernible)

ADGER: You mean on the state's conservation?

_____: (Indiscernible)

ADGER: I guess so, yes. My only hesitation is that I'm not sure what... Well, I think it's a level of the ceiling process. I think that we anticipate that the ceiling price for that gas would be set at the old gas price, which is about $1.48 now, I think. And we just assume, our marketability studies are not completed but we assume that the producers would be able to sell it at that price. There the open question...

Gruening: You use the contract after its financed, to help

AGO 800991

finance. And I'm wondering whether that doesn't have some parallel with the State of Alaska... (Indiscernible)

ADGER: I'm sorry that I'm not enough of a financial expert to know whether or not that is a possibility. We hope to have a financial guy on our staff sometime soon that would be able to speak to that. I can't.

Butrovich (Conversation Indiscernible)

Adger: It's on page 115, if you have access to a copy. It is simply tradition and equities suggest that the parties who stand to benefit directly from a transportation system participate in the financing and share the burden of these risks. The direct beneficiaries include the equity investors, namely, a consortium of gas transmission companies, the producers of the gas and the State of Alaska with its royalty interests in the gas.

Butrovich: (Question indiscernible) Would producers participation be just as important as State participation? Perhaps we should put more emphasis on the producers.

ADGER: We've got a little problem here with the Justice Department and the Justice Department has put some pretty severe limits on the ability of the producing companies to participate in the thing. I think it is spelled out in here some, but they generally prohibited the producers from equity participation in the thing and pretty much limited their participation to debt guarantees. So they're sort of working out of producer participation. It's going to be a complicated matter.

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Butrowich

SENATOR ~~HUBER:~~ (Indiscernible)

ADGER: Well, the statement was that the beneficiaries should participate. And what I'm saying is that the Justice Department has put some unusual conditions on the participation of the producers who are named by President Carter as a beneficiary. I think President Carter still believes that they ought to participate, but... (Indiscernible) The Justice Department just hasn't put as much in the way of constraints on the nature of your participation as they have on those who are the producers.

Butrowich

SENATOR ~~HUBER:~~ Would you repeat that please.

ADGER: The Justice Department has not put as much in the way of constraints on the nature of the State of Alaska's participation as they have on the nature of the possible producers participation.

?

Butrowich

SENATOR ~~HUBER:~~ (Indiscernible)

ADGER: Well, I'm just not, by any stretch of the imagination, an anti-trust expert, and I know that the Justice Department's concerns are rooted in anti-trust considerations. I'm sorry. I'm just inadequate on that.

?

Butrowich

SENATOR ~~HUBER:~~ (Indiscernible)

REPRESENTATIVE CHATTERTON: Thank you Mr. Chairman. Mr. Adger, I could not help but catch the Nixoneze you used quite a while ago. But I'd like to change a little bit there, the line of questions. Do I understand correctly that you are

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in charge, you and your staff, in effect, is this right, to come up, sooner or later, with a (Indiscernible) I gather that you are still in the fact gathering mode. Is that right?

ADGER: That's right.

REPRESENTATIVE CHATTERTON: And why we're here right now is the fact gathering mode on the financibility situation?

ADGER: Yes. I was up here talking to the State Administration people and we thought it would be useful for me to come and talk to you all as well.

REPRESENTATIVE CHATTERTON: Do you feel that even beyond the financibility, so to speak, because I gather that you are going to have to be sure, before you issue a certificate, that there is indeed a viable project that can be properly funded in some form or another and _____?

ADGER: Right.

REPRESENTATIVE CHATTERTON: Okay. Now, are you planning to gather facts on other things other than financing? Do you still have many facts left to gather?

ADGER: Yes. And I wish that I had said that more completely in my opening statement. I am really here to find out the facts on a lot of things.

REPRESENTATIVE CHATTERTON: You are still willing to, and in fact are seeking more facts upon assurances of the daily rate of deliverability uninterruptable over a 20 year period? You are seeking facts now, right?

AGO 800994

ADGER: The one word answer is yes. We are scheduled to meet with the State Conservation people in Anchorage tomorrow.

REPRESENTATIVE CHATTERTON: Now did you have, in this fact finding PROCESS, where you were out _____, and by so doing though why you can fairly well select with whom you talk. Did you ever come to a point in a public hearing, in the process before you made your determination on whether or not to issue a certificate of Necessity and Public Convenience?

HENGERER: I think we are, at this stage, gathering information as compared to facts. There will be a public hearing on the record with full adjudication of the issues, assuming that they are contested. I think maybe information gathering is a better... Just for the benefit of the Commission at this point, just to help it understand the issues, there will be public notice, obviously. And I know the state has participated accurately in prior proceedings and they would have notice as all other potential parties.

REPRESENTATIVE CHATTERTON: Do you gentlemen have a rough guestimate of the time frame as to when you will be in a position to make a judgment decision as to whether or not to issue a certificate?

ADGER: Ned, here again, my understanding is that we are shooting for final filings. We would like to try to get the final filings for the Certificate of Public Convenience and Necessity sometime during the first quarter of 1979, about

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a year from now, or since the wellhead price _____ 90 days, but once we have the final filing then we go to hearings on the complete package. Now, between now and then there may be issues that we turn up that we need to get some resolution on in order to proceed to the next step. And we might have to go to a formal proceeding and some more narrowly defined issues, between now and the first quarter of 1979 when a public on the record proceeding would start on the whole package.

REPRESENTATIVE CHATTERTON: Am I clear in gathering from what you say, that the earliest would be the first quarter of 1979 before you would feel in your own mind,...

ADGER: I suspect that final filings on the whole thing could not be completed before the first quarter of 1979.

REPRESENTATIVE CHATTERTON: May I ask you one last question. Can construction or even any scratching of the earth... along whis petrochemical right of way that the President selected take place until the issuance of the Certificate of Public Convenience and Necessity?

ADGER: Yes. There is some project development expenditure contemplated between now and then in anticipation that the certificate will be granted. We have, in fact, granted a conditional certificate. But I think that the major commitments to the project, the ordering of the pipe, for instance, will wait for the issuance of the final Certificate of

AGO 800996

Public Convenience and Necessity.

REPRESENTATIVE CHATTERTON: Any expenditures at this point in time are pure and simple risk?

ADGER: They are at risk.

HENGERER: There will be certain geotechnical work done on the right of way which would go through the Department of Interior and through the State perhaps, but as far as actual construction, no.

REPRESENTATIVE CHATTERTON: Thank you. Thank you, Mr. Chairman.

? Sumner : (Question Indiscernible)

ADGER: Well, alternatively there is a possibility of commitment of gas funds, which you wouldn't put out any money for in quite some months. Probably not until...

? Sumner : (Indiscernible)

ADGER: I think the project development expenditures between now and the time of issuance of the final Certificate are a little over $200 million. And if you would come in as an equity participant now, you might be involved in some sort of pro-rata share of those project development expenditures. But unless there was that kind of a circumstance, they are not, as I understand it, going to draw against... The final financing commitments are not binding until the Certificate is issued. Is that right? Equity is considered the first money spent.

? Sumner : In your information gathering, is there question

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of any possibility that as you gather this additional information you will find that indeed you can't honestly issue a Certificate? Have you ever considered that possibility, that your findings may be such that you can't issue a Certificate?

ADGER: I think that we just, right now, can't conceive of a situation where we wouldn't be able to issue any certificates. Certainly, there are uncertainties in the area of deliverability which might affect the sizing of the system, but we would just anticipate the ultimately certificated system, it would just be a different size.

Sumner: My mind is not closed, but it's only a narrow crack.

Adger: It's not within the first choice at this point because we do have the Congressional Act which says you shall issue a Certificate. You may quibble about exactly what is in the Certificate but we are sort of obliged to issue it. Unless Alcan just doesn't ask for it.

Sumner: Thank you, Mr. Chairman. I apologize for interrupting.

SENATOR POLAND: You have mentioned What is the feasibility of taking out royalty gas somewhere else besides Prudhoe Bay? several times today and many of us up here are... (Indiscernible)

Essley: Before I start, let me say that I wear a hearing aide and I tend to speak to my hearing aide sometimes and my voice drops off. So if it does, please don't hesitate to tell me to speak up. The system was designed to the

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1260 psi maximum operating pressure. And with the 1260 maximum operating pressure we cannot get all of the gas liquids through the line at that pressure without actually having liquids drop out which could actually destroy the turbines and the compressors. So, given the 1260 psi maximum operating system, we are limited to pretty well taking out the liquids at Prudhoe Bay, at least some of the liquids. We can get all the propane through and a little bit of the butane, but we can't get the rest of the liquids through. So, if we start with a limitation that we are going to go with the 1260 psi system, then we have no choice but to remove some of the liquids at Prudhoe Bay. The pentanes plus can go through the oil lines, and all the propanes can go through the gas lines. That leaves the problem of the butanes. Now, to address your specific question, could we take them out elsewhere. Yes. It is technically feasible to take the liquids out elsewhere. We have 12%, 13% co_2 in this gas and co_2 has no heating value. And we didn't, particularly the project sponsors, do not want to move a large volume of the co_2 to the states because automatically that creates a fuel penalty, moving something all the way down to the states. But, theoretically, if we were to put a high enough pressure line in we could move all the gases, other than dehydrated them initially, we could move all the gases to

the states. And remove all the liquids and the co_2 at that point. Or, alternatively, we could move all the gases, except for the dehydration facilities which were necessary on the slope, we could move all the gas to, say, the Fairbanks area and process it at that point, and remove the co_2 and all the liquids at the Fairbanks area and then process the gas. So, specifically, your question, could we process it elsewhere, yes, we could. If we altered the design of the line and go to higher pressure system to the point of processing.

?, Mills: In order to get the co_2 out, you've got to go ahead and take the liquids out.

Easley: So this is one of the problems we are looking at right now and several people have brought it up. To remove the co_2 from the Slope, the process that the producers are looking at right now involve first removing the water. Secondly, removing the gas liquids. We are going to take them out as a whole, not try to separate them. And thirdly, then we would take out the co_2. Now, at that point, we either separate the liquids, the gas liquids, and move some of them through the pipeline and burn some of them on the Slope, and put some of them with the gas, or we can put them all back into the gas if we have a high enough pressure system. At that point we bring the process to Fairbanks. Now, at this point, if the State of Alaska wishes to extract some of the ethane

and set up a petrochemical plant, we would have to again extract the liquids. After we extract the liquids, we go through a further extraction where we take the heavier part out which leaves the ethane. We put the heavier liquids back in the line and then the propanes and butanes back in the line, which would then be transported to the United States, at which point we would again extract the liquids. We are talking about where do we take these liquids out and how would the most economical, where would the most economical point of extraction be? We are looking at the pressure of the system. If we go with the 1260 psi system, it puts very severe restrictions on where we can extract these liquids. We have to take some of them out of the North Slope with the 1260 psi system. Did I confuse you or help you?

SENATOR POLAND: Can you have one pressure for part of the line and then reduce it to a lower pressure? What I am thinking of is could we have a high pressure line in Alaska, and as I understand it, Canada builds its lower?

Easley: Yes. It would be technically quite feasible to move all the gas, including the liquids to Fairbanks through a high pressure line, reduce the pressure at that time and move just the gas the rest of the way to the states, take the liquids which are extracted at Fairbanks and either utilize them there or move them to the coast.

SENATOR HUBER: Mr. Chairman. Let me ask a question. By a high enough pressure line, do you mean talking about liquifying everything and bringing it down as far as the point where you extract (cough)?

Essley: Well, gasifying everything. You could.

Huber: What do you mean liquifying everything? If you go to a high pressure line, all the liquids would be in a vapor phase.

SENATOR HUBER: I'm sorry, my physics is giving me some problems. I have got some real problems with physics because the higher the pressure we put on a gas, the closer it is to turning into a liquid. For instance, the methane is something over 3,000 pounds per square inch, while the propane is about, at room temperature, or less than 200 pounds per square inch, before it turns to a liquid. Now, can you explain that to my... What you are telling me is contrary to my physics and I'd like to know why.

Essley: Well you get into a phenomenon known as retro-grade condensation. And it is called retro-grade because it is contrary to what you learn in beginning physics. But what we are getting into is, at a high pressure we have a single phase, and if we drop the pressure and at a certain temperature we reach a point where we call the dew point and some of the liquids will condense and will form two phases then, both a gas and a liquid. Now, the

peculiar nature of any gas is that we can make laboratory experiments, or if we know the composition of the gas from previous laboratory experiments, we can determine very closely what the pressures and temperatures are in which we will have those two phases. And what it amounts to in this system, that with the operating temperatures that we are going to be bringing this gas down -- in other words, we are going to bring it down below 32 degrees to avoid melting the permafrost. So with these type of temperatures we have, for any given composition of gas, a certain envelope which we have to stay outside of. Basically, this means we have to stay at a fairly high pressure. I know this is contrary to your basic physics and this is why we call this particular phenomena retro-grade condensation.

SENATOR HUBER: Rather than confining it to self supporting laws and a few other such things, does it have to do with the fact that it is a mixture of gases?

Essley: It is a mixture of gases and we depart from ideal gases. We can take a liquid and we can, through manipulating temperature and pressure, we can take a substance and we can go from a gas and put the pressure up to real high value then drop the temperature, then drop the pressure back down, we can go from a gas to a liquid without ever seeing a phase change. Or we can go back from a liquid

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to a gas. Now, instead of going that route of going to the real high pressure and dropping the temperature and coming back down, if we just went straight across at a lower pressure, we'd go through a very definite phase change at some point where we would have liquids formed and then the amount of liquids would continually increase, and we reach another point where we would have the bubble point when we would have all the gas disappear and we would have a single phase of liquids. So we are getting into some phenomena of how we transfer from a liquid to a gaseous state.

SENATOR HUBER: Within a mixture of gases.

Easley: Within a mixture, yes. But what we are talking about here is if we are going to carry all of the liquids, we have to go to fairly high pressure. If we carry just part of the liquids, we can get a lower pressure and end up fine.

SENATOR HUBER: That clarifies something that has never been clarified before. Thank you.

Chmn. Miles: Mr. Adger, the questions surrounding the conditioning plant hasn't really been brought up and we really couldn't get an answer because there apparently is no answer to the question. Who is going to build the conditioning plant? (Indiscernible) Where does it stand now, and if your agency is going to make a ruling on it, wha-

factors are going to be important in that?

ADGER: I'm sorry that I'm not right up to speed on what the precedents are in the lower 48 on processing and conditioning facilities. I am informed by the producers that there is a dramatically different set of precedents for conditioning facilities than those for processing facilities, but I haven't been too thick to understand what the difference is between the precedents on those things. One of the things that we have been trying to do while we're up here was to start an inquiry, an informal inquiry, into what the issues are associated with the gas liquids and try to define better for ourselves what those issues are and set up a procedure for getting those issues resolved. We talked to the state people yesterday, really kicking off our inquiry into these matters, and we will be proceeding to talk to the producers and the pipeline company in the coming weeks in order to try to get this thing resolved and find out who it is that ought to pay for it. Ned, do you know enough about conventions in the lower 48 to sort of know what the precedents are?

NED HENGERER: I am not totally conversant with the specific applications of the rules, but I do know that they really do depend on the specific factors of the case at hand, depending on the location of the plant and the characteristics of the gas and the relative interests of the parties as

to the liquids and such matters as that. At this stage, I really couldn't give a definitive answer. I don't think anybody could.

ADGER: I think we have a closet expert.

Essley: I wouldn't say I am an expert but we have a little different problem here than the commission is normally used to addressing. In most of the plants in the lower 48 states we are quite often dealing with multiple owners, and if any processing is... Generally when we have a processing plant, we quite often have quite a few owners, the processing plant will be built separately and process gases from different owners, and we quite often have quite different ownership in the processing plant than we do in the gas and the oil. And so these kind of conditioning costs will almost always be excluded from the consideration of the costs of the owner of the gas. And only those conditioning costs that are done before it leaves the lease, will be considered part of the conditioning. And the processing will be, normally, considered separately. Here we have a different situation. Previously, in all the rate cases before the Federal Power Commission, we were dealing with non-associated gas. Associated gas was always just handled to fall under the rules that they set for non-associated gas. And here, for the first time, the FPC, now the FERC will

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be dealing with setting a rate, or setting a conditioning and processing for an associated field, gas, where the gas is a by-product of producing the oil. We are going to be getting into totally new grounds here and we are going to be closer to the precedent where in the state where the processing costs may have been associated with producing the gas, other than the conditioning cost where there was a separate plant with separate ownership. It's really undetermined yet how this is going to rule, but we're on new ground as I understand it. Is that correct?

Chmn. Miles: Well what this comes down to then is a $2 billion precedence.

Adger: That's right.

Chmn Miles: This is roughly a $10 million project. If the $2 billion precedent added on to it, this is a tremendously significant factor. Equally significant fact as the pricing determination.

ADGER: Well, let me just refer you to the numbers here I think that the order of magnitude of the wellhead price, in that determination, is on the order of $1.50. Whereas the order of magnitude in comparable terms of the conditioning costs, I think is on the order of 30¢. And 30¢ is a smaller number that $1.50.

Chmn Miles: Yes. But it is still quite substantial.

Adger: That's right.

Chmn. Miles: That is a substantially significant factor. When might this decision be made? It will obviously be made by FERC.

Adger: Not obviously. It is conccivable that legislation now before the Congress would decide whether or not the gas processing costs were included within the set wellhead price or in addition to the wellhead price.

Chairman Miles: If Congress doesn't resolve it, roughly how long would it take your shop to resolve that question? I realize it is a ballpark shot, but...

Adger: I addressed this same question to the professionals at FERC who actually make this determination. And they said that once the decision is made to go ahead and we know for sure that we have to make such a determination, it would probably take a minimum of three months.

Chmn. Miles: And a maximum?

Adger: Well, he didn't say, but he thought we could do it in pretty close to three months. We have quite a bit of information on the previous commission. It would be three months from the time we get the data from the producer on the cost of this. And that may be, the way the schedule is now, it would look like it will be at least August or September before we get information from the producers on the cost conditioning.

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ADGER: But we've got some things that we can do on that issue between now and then.

Chairman Miles: If Congress does not come to terms on the pricing bill, that will also fall into your hands. How long do you figure, again ballpark figures?

ADGER: Would you care to guess on that one?

?. Hengerer: On what?

ADGER: On the wellhead price. At least the end of the summer?

?. Hengerer: The gentleman I addressed the question to at the FERC, was up to his ears in making that determination, said that it would take at least a year.

Chairman Miles: (Indiscernible)

?. Hengerer: Now they are doing a study on that. Conditioning facilities could go on simultaneously.

_____: Yes, but no resolutions would be made. (Indiscernible)

ADGER: Updating an estimate of the basic costs involved in a conditioning facility is going on now. And the producers have a study of that going on, sort of in parallel with this whole wellhead pricing thing. We would have to come up with our own process to satisfy ourselves that their estimates of the cost of gathering and conditioning were the right ones. But the timing of the variance, the ultimate resolution of the gathering and conditioning cost thing is probably related to the timing of that study. The wellhead pricing question, on the other hand,

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is either related to the _____ of the Congress or the FERC proceeding and the problem there is the difficulty of the allocation issue. Allocation of expenses between oil production and gas production. If we had to set a cost base rate.

Senator Sumner: (Indiscernible) lead to the conclusion that there is too many variables and too many decisions yet to be made. (Indiscernible) I don't know how one could be expected to make an intelligent decision unless one wants to assume that _____ sort of all work out in the end.

ADGER: I think that what we've said all afternoon is that you really are not in a position to decide unless the wellhead price is roughly settled. We wouldn't argue with that at all. And if the wellhead price is not settled by the Congress, I think we all recognize that all of us are on a different time frame. The project sponsors, I don't think would argue with that. They know that the FERC and the price setting under that then becomes a critical _____, and it's just a matter of how fast we can do that. But our stance is that when the wellhead price issue is settled, the State can come up with a fair estimate of what's in it for the State and have a fair idea of just how important it is to the State for the thing to go ahead now. I think that the kind of commitment

to the project that even the project sponsors would like to have within the next few months is not one where everything is finally said and done. I think that is more an expression of intent which is related to computations of a benefit that is available in the time frame of the commitment is made or expression of intent is given.

Senator Sumner: That question was pursued yesterday and they said that they would like to have some sort of a commitment of expression or interest this session and it seems to me like the only thing they could get from us is that maybe we are interested if the following _____.

ADGER: Well I think that you would be in a position to do a pretty good job of enumerating those ifs in the wellhead prices is settled. In my own, and I haven't talked him in any detail about this, you know, its none of my affair, something where you were to assess the order of magnitude of interest in this thing and make some sort, give them some sort of an indication based on that assessment. I think that that would be what it would take.

Senator Sumner: (Indiscernible). You're saying now as well that there are many other things that may cause delay.

ADGER: The wellhead pricing thing could certainly cause delays.

Rep. Osterback: I have a couple of questions that I would like to ask. Suppose that we give them $1.4 billion for the

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pipeline and a large part of the pipeline won't be in Alaska. Suppose Canada struck a big oil or gas flow there. What assurance would we have that we could still run our Alaska gas through that gas pipeline ...(indiscernible).

ADGER: The decision and the agreement between the United States and Canada is for a joint system that contemplates them hooking up McKenzie delta reserve to the system shortly after the Alaska gas reserve. The Alaska portion of the system is completed and in the agreement we made provisions for a higher capacity system between the portions of the system that would transport both Alaskan and Canadian gas volumes. That was a feature of the agreement and we will be a part of the system that's built. There will be extra capacity in the system for that part which carries Canadian gas.

Rep. Osterback: (Question Indiscernible) Trading North Slope royalty gas for Cook Inlet gas

ADGER: The State Department of Natural Resources has mentioned to us a scheme whereby the State would trade their North Slope royalty gas for Cook Inlet gas. And I just told you everything about it that I know. They have explored this, I guess, in a bit more detail and ought to be able to tell you what the benefits and costs associated with that are.

SENATOR RADER: Mr. Chairman. I don't have a question but, aside from the grilling, I want you to know that we

appreciate you coming here. We are really merely fishing for information, but we understand that you are here really at our invitation, and we appreciate that.

ADGER: Let me just say for all of us that we are delighted to have the opportunity to come up here. I wish I had ended up with more output but our mission in coming up was really an information gathering one. We came up at the invitation of the Executive Branch to discuss a whole range of mutual interests with them, and they suggested that we have a session with some of the important legislative people and I am delighted that you all had the time to spare.

CHAIRMAN MILES: Thank you very much.

(END OF MEETING)

AGO 801013

APPROXIMATE DISTRIBUTION OF BENEFITS AND COSTS
FROM ALASKA HIGHWAY GAS PIPELINE
($ 1975, 2.4 BCF/D, 20 Yr. Average)

	Per 1000 cubic feet ($/MCF)	Annual Total (Millions $)
Market Value	$2.62	$2,295
- Federal Corporate Income Taxes	0.10	90
- State Corporate Income Taxes		
Alaska*	0.01	13
Other	neg.	4
- State Property Taxes		
Alaska*	0.05	46
Other	0.03	22
- Other Transportation Costs[1/] including cost overruns	0.84	736
= Prudhoe Bay Value	1.58	1,384
- Processing Costs	0.30	263
- 10% Severance Tax*[2/]	0.14	121
- 12½% Royalty*[3/]	0.16	140
= Producers Net Revenue	0.98	860
* Alaska Revenue Total	$0.37	$ 320

1/ $1.04/MCF total transportation costs, President's Report to Congress

2/ .10 X .875 X $1.58

3/ .125 X $1.28

AGO 801014

NORTHWEST ALASKAN PIPELINE COMPANY

Alaskan Pipeline

ALASKA HIGHWAY PIPELINE PROJECT

Alaska Financial Participation

Fact Sheet

BENEFITS TO ALASKA

Economic Benefits*

- Royalty Income of $10 Billion
- Severance Tax of $7 Billion
- Other Taxes (Ad Valorem and Income) of $1 Billion
- Total Royalties and Taxes (Including Taxes Related to Gas Processing Plant and Corporate Income Taxes Related to Sale of Gas) Would Exceed $20 Billion

25 years

*Amounts represent estimates of minimum benefits based on assumed production of 2 billion cubic feet of natural gas per day at a wellhead price of $1.45 per Mcf escalated at 6% per year over 25 years.

Employment Benefits

- During Construction Years 1979-1982 Jobs Created Will Range From 1,300 to Over 10,000
- Project Is Committed to Hiring Qualified Alaskans
- After Completion Project Will Employ a Permanent Staff in Alaska

Development Benefits

- Project Will Stimulate Further Development of Alaska's Natural Gas
- Project Will Allow for Distribution of Prudhoe Gas to Alaskan Communities Along the Route Thus Providing for Future Industrial Development

Indirect Benefits

- Housing, Communications, Transportation and Other Services Supporting the Project Will Provide Additional Employment and Revenues
- All Economic Benefits Will Be Multiplied as They Circulate Through State's Economy

NEED FOR FINANCIAL PARTICIPATION

- No New Energy Supply Will Be Financed on the Basis of Federal Government Guarantees
- Capital Funds to Be Raised on a Project Financing Basis - Cash Flow Generated From the Project Will Service Debt and Equity Requirements
- State's Participation Would Assist in Demonstrating to Financial Community that Project Is Economically Viable. A Negative Response Would Hinder Efforts to Develop Confidence in Private Capital Markets

HOW STATE CAN PARTICIPATE

- General Financing Plan Contemplates a Committed Pool of Capital Large Enough to Assure All Investors and Lenders that There Are Sufficient Funds to Complete the Project. Committed Pool of Capital Would Consist of Equity (Approximately 25%) and Remainder in Debt
- Project Encourages State's Financial Support in the Amount of $1.2 - $1.4 Billion Consistent With Support Previously Suggested by State for the El Paso Project, Adjusted for Inflation

- Commitment Would Include Purchases of Both Debt and Equity
- Project Also Plans to Offer Equity Participation to State's Citizens, Native Regional Corporations and Other State Organizations
- State Will Receive a Rate of Return on Its Investments Identical to All Other Lenders and Investors
- State's Commitment Will Not Be Binding Until All Capital Necessary to Assure Completion of the Project Has Been Committed
- Ultimate Backing for State's Participation Will Be Revenues Generated From the Project

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#15:6

FEBRUARY 4, 1977

SENATOR RADER: The joint hearings of the Alaska State Legislature relative to the sale of royalty gas will come to order.

We've been asked to announce that smoking in the courtroom is absolutely prohibited, and no beverages are permitted in the courtroom, or food either. I don't know if that's any problem, but if it is, be advised.

Today, as we announced yesterday, we're going to go first through our experts, the committee experts that have not yet testified. At the conclusion of that testimony we will consider further public testimony. I'll leave it up to the committee at that time to decide what they want to do, if they want to reopen public testimony at this time, or else request those members of the public who have not testified to submit their testimony independently to the Senate Finance, or Senate Resources Committee, or to the House Resources Committee.

This will be the last session of the joint hearings. Representative Gruening will hear from the Department of Resources and such others as the House determines, I guess next week or thereafter, at their pace; and the Senate will do the same, except that the Senate Committee will at least reconvene here at 10:00 o'clock Monday morning, primarily for the purposes of a

review and a rebuttal by our Department of Administration, Attorney General's office, and whatever, concerning misstatements that may have been made or positions that are unclear, and also submit themselves to questions by the committee members and, of course, other Senators on any questions of which we have reason to question their earlier statements or need clarification.

Representative Gruening, did you have any further announcements as to your committee?

REP. GRUENING: I guess not.

SENATOR RADER: We'll first take up Dr. Carl Swanson. Doctor, would you please identify yourself, give us a resume of your background, your position, and I would suggest that you go through your report and outline to us those portions of your report which you think are most important to us, and then open it up for questions. Would that be appropriate with you?

DR. SWANSON: That would be very appropriate. I have some remarks that I've outlined here which I'd like to give to summarize the report, as well as a few remarks on issues that have been raised during these hearings upon which I'd like to comment. Would that be appropriate for me to do?

SENATOR RADER: That would be appropriate. I'd like to have your background read into the record first.

DR. CARL SWANSON: My name is Carl Swanson, I am Executive Vice President of Jensen Associates, Inc., which is an economic consulting firm with offices in Boston, Washington and Geneva, Switzerland. The company specializes in economic analyses, forecasting, pricing, analysis of investments, advice on contracts, occasionally testimony before various Congressional regulatory bodies, or Legislative bodies, in matters of world oil, natural gas, natural gas liquids, and occasionally some work on electricity prices.

My educational background is at Massachusetts Institute of Technology where I received a Bachelors Degree in Economics and Engineering, and a PhD in Management. I taught for five years at the Sloan School of Management, at M.I.T. as an Assistant Professor. More recently I have been a consultant, since that time.

In my consulting, relevant to the issues that you face, I have assisted in the staff work, backing up, price negotiations on long-term LNG projects, I have performed analyses for computer simulation models of the logistics of moving LNG from the liquefaction line across the Atlantic Ocean to receiving terminals, into distribution systems, and to the burner tip. I have assisted industrial buyers under Order 533, analyzed supplies of natural gas and contracts that are offered to them. We have assisted

producers in analyzing their contracts, producers in analyzing their gas contracts, in order to see if they're well protected. I have looked at supply and demand of natural gas in the United States and impact upon curtailments. I have forecast the world-wide supply and demand to 1985 of propane and butane, that is liquefied petroleum gases, and lastly, relevant to your concerns my firm and I have analyzed the gaseous fuel markets in the states in the northeast quadrant of the United States in order to see the impact of price upon the demand for natural gas and for propane by industrial consumers.

That's my background, and I think what I'd like to do is briefly summarize the report which has been, I believe, distributed to the committee and is available to anyone else. Should I identify this report, Mr. Chairman?

SENATOR RADER: I would like to have the report made an exhibit in our proceedings. Would the reporter inform us as to the exhibit number.

MS. SANDERS: 16.

SENATOR RADER: Exhibit No. "16" will be the "Economic Analysis of Alaskan Royalty Gas Contracts" to the State of Alaska by Jensen Associates, Inc., consisting of some forty-four pages, dated January 1977. Therefore, any matter which the Doctor omits in his testimony will be available in the supplement, or in the exhibit. Would you proceed,

Doctor?

(Whereupon Exhibit "16" was duly marked.)

DR. SWANSON: First let me summarize the report. There is a summary of the report on the first four or five pages, which you may already have read, and I will essentially go through that summary.

Let me first, before I continue, identify who I'm representing. We were hired, Jensen Associates, Inc., were hired by the Legislative Affairs Agency on behalf of you ladies and gentlemen, the Legislature, to assist you in analyzing the contracts that you are now considering. Our mandate was to see if the contracts protect the interests of Alaska. We did not address ourselves to the legal issues; we confined ourselves to economic issues as appropriate to business ---

SENATOR RADER: Excuse me, Doctor, let me interrupt you. I do see some members of the Legislature, and I want to invite you to seat yourselves at the front tables here, if you would care to. It will be easier to participate in the questioning and also address the witness.

I'd ask, do we have a page. We're supposed to have a page here. When we get one I was going to ask the page to invite other legislators who may come in at a later time to come forward.

Proceed, Doctor, I'm sorry for the interruption.

DR. SWANSON: Thank you. We looked at this contract from two points of view, or we asked two questions. One question we asked was, if the El Paso project is not approved has the State preserved itself the right to protect its royalty gas and interest through provisions which allow it to terminate the contract. The answer to that question is yes.

The second question we asked is, if the El Paso project or any pipeline project which the Governor would like to support is approved, does this contract protect the economic interests of Alaska; that is, if this contract is in force is Alaska protected. We examined three different respects in which Alaska might be protected, and one of them is, can Alaska use the gas within its own state. Secondly we asked, are its interests in the natural gas liquids protected. Thirdly we asked, will Alaska, under the terms of this contract, receive a favorable price.

Let me take those questions in order. First, I think this contract has extremely well designed provisions to allow Alaska to reserve natural gas from Prudhoe Bay for its own use. The terms on reservations are unambiguous, and Alaska with what I consider to be short notice, two years, can take back to itself one hundred percent of the royalty gas.

Secondly, there is a provision in the contract which allows Alaska to exchange royalty gas for gas which may be more proximate to its markets and use the royalty gas, taking back the royalty gas in paper at least, in order to trade for gas which may be more available to it. This exchange provision provides a great deal of flexibility to the State of Alaska.

Thirdly, the provisions of the contract do not set any limit to when in the future the State could determine it will need the royalty gas which is in Prudhoe Bay. I interpret this to mean that the State could decide today or sometime when this contract is in force five years downstream gas which is currently being delivered, or part of the gas which is currently being delivered, would be needed in the future and thus Alaska, as I interpret this contract (and you probably should ask others about this) could at any time reduce deliveries to the purchasers. Now, since the Prudhoe Bay field has a gas cap, it would appear to me -- I am not a reservoir engineer and your reservoir engineers could comment on the reality of what I'm about to describe -- but it seems to me that Alaska could work out a deal with the producers to reduce slightly the production of gas from the gas cap and, in effect, store Alaska royalty gas for future years.

The second question we've addressed is, are the

rights of Alaska to the natural gas liquids well protected and the answer is, I think very well protected. Alaska has the right to extract ethane and heavier components at any time before or after delivery to the purchasers. I would interpret this to mean that if a gas processing plant were to be built in Canada or the United States and the liquids extracted there, that the rights of Alaska to the liquids would still be retained. I would suggest you ask Mr. Moody the same question.

Furthermore, within the contract, statements on quality of the gas of the contract, I saw no limitations to the btu content of the gas delivered to the consumers. To be sure, there is a price adjustment clause built in the contract for the btu content of the gas, but I believe there is no quality limitation to the delivery of methane or the natural gas which would restrict removal of liquids.

Third, I think the more important question and lengthier analysis in our report, is what price will Alaska receive for its royalty natural gas under the terms of this contract. I think in order to understand the terms of this contract as written I need to review for you very, very briefly what I believe to be the course of energy prices over the terms of this contract.

This contract has a term of twenty years, beginning upon initial deliveries of natural gas, which

will occur sometime close to 1985 very likely, meaning this contract will exist from sometime around 1985 to about 2005. As we look downstream at the price of energy in the world, I think most energy consultants agree that the Organization of Petroleum Exporting Countries is not likely to lose control of world oil pricing between now and 1985 certainly. I think most agree that the price of oil will continue to increase in world markets. I think the price of energy within the United States is going to rise more rapidly than the price of world oil, largely because at the current time the price of energy in the U.S. is controlled below world levels. As these controls are relaxed, particularly as more and more new oil, as it's defined in the regulations, is produced, and as more imported oil is brought into the United States, the oil prices should increase in the United States more rapidly than world oil prices.

Secondly, I think that it's very clear that there's a consensus developing in the United States that the conservation of energy is a very, very important national objective. There is yet no means that have proven to be effective by which this conservation is to occur.

Europe and Japan have imported oil in great quantities for many years, and they have very actively for many years used taxes to increase the price of energy

to their consumers in order to force conservation and this conservation, through the use of the price mechanism, has proved to be effective. I would expect the U.S. would begin to follow such policies of using prices to bring about conservation.

In sum then, I think that to 1985 we should within the U.S. and the world see increases in the price of energy. After 1985 we believe, Jensen Associates, Inc. believes, there is a very good likelihood, as long as industrialized nations do not fall into worldwide depression, that the production limits of the OPEC nations will begin to be strained by the demand for oil in the industrialized nations, and the chances after 1985 for very sharply rising prices will exist. Between now and 1985 we would expect oil prices to essentially track inflation in the industrialized nations.

This is the price scenario under which we need to examine the price terms of this contract; that is, prices rising gradually to 185 and with sharply rising financial prices thereafter.

The question is, do the price terms of this contract protect the interests of Alaska, its revenues essentially, with sharply rising prices after 1985. I think the people who framed the contract recognized that there is a fair amount of uncertainty about energy

prices, which there are, and they designed the contract to adapt to prices established outside the contract. There is not a price, there is not a set price, a certain number, in this contract for royalty gas. But prices are established within the contract under two different types of regulation that may occur in the future. One of them is deregulation.

If the price of natural gas at the wellhead is completely deregulated the terms of this contract, in my opinion, protect the interests of Alaska well. There is an annual redetermination clause which has been clarified by the purchasers as applying to both Section 6.3 and 6.4 within this contract, which will allow the contract to try prices on the North Slope of Alaska.

Now, the North Slope of Alaska is expected to be producing oil and gas in many other locations in the future. The terms of the deregulation clause in the contract allow the price to attract the highest price paid on the North Slope. One would expect that there will be continuing discoveries on the North Slope, and under deregulation continuing new fairly well market base pricing of natural gas which will be tracked by this contract.

Under deregulation this contract protects the revenues and the prices Alaska will receive for its

royalty gas in interstate commerce very well.

The second scenario one can view with a future is continued regulation of wellhead prices by the Federal Power Commission and possibly by Congress. The shape of that regulation is, hard for -- it's certainly hard for me to discern as regulation has changed from time to time with some fairly sharp shifts. Mr. Moody can explain that to you better than I can. We attempted to indicate it in our report.

But the contract does state clearly that Alaska will accept the regulated ceiling prices for the natural gas which the regulatory agency will set. It also says that the price that Alaska will receive for the gas will never exceed that price which the purchasers can include in their cost of service to their customer. This is the clause which protected purchasers. I would assume that the contract could not have been written without that clause in it. It essentially says that, given the very large volumes of gas which we're discussing in these contracts, that the purchasers will not have their shareholders pay part of the price of the gas if the regulatory agencies do not allow the full price of Alaskan royalty gas to pass to the consumers. I think it is probably likely that the purchasers would not have signed the contract without such protection for their shareholders

and their bankers.

Now, Alaska under regulation, you and anyone else who attempts to understand what the regulated price for gas will be from Alaska, will be faced with some difficulty, and that is because the recent national rate decisions from the Federal Power Commission have clearly excluded Alaska from the national rate, both in the application of a national rate and secondly, in the calculation of the proper national rate for new natural gas. Thus, it's not clear, the precedent is not clear the calculation of the procedures which will be applied under regulation if regulation persists to this North Slope royalty gas.

In our report we've attempted to show that there is a great deal of uncertainty, very significant uncertainty about what this price might be. In 1980 if the current pricing mechanism or the vintaging of 77-A, using the vintaging of 77, and I'm sorry if I'm using some terms with which you may not be familiar, the price which might apply to new natural gas, a Dollar Fifty-Six a million btu's. But Alaska has characteristics which are very different from the characteristics of the Lower 48 States in its gas production, and that is in the calculation of the national rate the calculation is based upon the costs of finding and developing non-associated gas. The reason for this is the Federal Power Commission has had a very

great difficulty in pricing associated natural gas because it had difficulty in allocating costs of drilling, exploration and development between oil and gas.

Thus, the Federal Power Commission, and there's an expert to my left and to your right who can describe it more fully than I the reasons behind it; the Federal Power Commission recently has said that the national rates for non-associated gas, and it simply said that the prices for associated gas will be equal to that calculated for non-associated gas.

Non-associated gas comprises perhaps seventy percent of the Lower 48 gas supply. Such is not true of Alaska. The Prudhoe Bay field is the largest field in North America and it has the predominance of the reserves of Alaska, and it's an associated gas field. If the Federal Power Commission were to apply cost based pricing to Alaska, particularly to the Prudhoe Bay field, you would have to face the issue of how to allocate the costs of drilling, development and exploration between the gas and the oil. The fact about the Prudhoe Bay field which is very delightful for Alaska in its sales of oil is that it is the largest field in the world. From the point of view of selling gas, if a rate were to be applied to Alaska, the fact that it's the largest field in the world may not give you the highest price because

the costs of finding and developing the gas per thousand cubic feet are relatively low.

We've calculated, using some very rough estimates, and ignoring the costs of water flood that may be attributed to the taking back of natural gas and the costs of extraction of carbon dioxide, that the Alaska rate might be somewhere between Twenty and Forty-Five Cents per million btu.

The question remains, however, does this contract protect your interests in your royalty gas, and I think that we can safety say this contract is not going to influence too greatly, with one exception (I'll talk about that in a second) the regulated price of natural gas. This contract can only adapt to prices set by the Federal Power Commission or other regulatory bodies.

Under regulation, the contract clearly states it will accept the regulated price (a), and (b) it says that it can receive a price no less than the price received by any working interest owner. Both clauses, I think, protect your interests reasonably well.

However, there is one concern we had, which we described in the report, which is that most royalty interest owners, and certainly working interest owners, are usually private investors. The State of Alaska is a body different from the private investor. It has social

responsibilities to its citizens.

One question that has been raised is, could Alaska under regulation claim, because of its unique responsibilities as a state, get a higher price for its royalty gas than the price given to the working interest owners. If such were true, this contract does not distinguish Alaska from the working interest owners, it clearly states it will accept that price which will be received by the working interest owners. I think you need to assess, and I would like to help you assess, the probability that Alaska might receive a higher price for royalty gas under regulation than working interest owners.

Let's do it in the following way. If Alaska were to state that it will ask for a price different from the working interest owners, and if Alaska were to ask for a higher price, I think the response could be a varied response. One response might be, and I'm sure there are some people who would make it within the courts and certainly before the Federal Power Commission, is that since Alaska has incurred no costs whatsoever in the discovery and production of its natural gas that if it wishes to separate itself from the working interest owners, it should accept prices based upon its costs, and its costs were zero. This would be unfavorable to Alaska.

The other possibility is that Alaska would claim it should receive a higher price for its gas because of its unique responsibilities to the State, to its current citizens and future generations. The likelihood of such an argument being accepted is one which I have difficulty judging. I think, however, that as we look at the decision of Administrative Law Judge Litt, he did not appear to have an attitude which would be favorable to giving the State of Alaska higher prices for its royalty gas than working interest owners were to receieve under regulation. You may wish to ask me some more questions about that point later.

Let me go on. One of the concerns of the contract that we had as we first read it was that since the State of Alaska does not collect severance taxes from itself that under regulation it might be possible for the purchasers to pay a price higher to the working interest owners, higher by the value of severance taxes, than the State of Alaska. I think the testimony certainly before these two committees by the purchasers was that right in the contract they did not intend to not pay an amount equal to severance taxes to the State of Alaska for royalty gas. Your legal staffs may need to judge whether or not you need to change your severance tax laws in order to insure that under litigation and under regulation, if

regulation occurs, if in fact Alaska will be able to accept a payment in lieu of certain taxes from the purchasers under its current law.

At this point I think I have finished my summary of the contract. The contract overall, I think, is a very good contract. It does protect the interests of Alaska. There has been one clause, which I've described earlier, about Alaska separating itself from working interest owners under regulation.

The thing, however, which is very clear in examining this contract and your sale of natural gas is that the provisions of this contract do not set a price for natural gas. The price of natural gas is going to be set by forces outside of this contract, perhaps market prices. More important, they're going to be set by regulation and legislation.

If Alaska wishes to return to itself favorable revenues for its royalty gas it should, we think, focus its attention more upon regulation and legislation than upon the terms of this contract. The terms of this contract will stand Alaska in good stead, but you need to deal with regulation and legislation in order to increase your revenues from the sale of royalty gas.

I would like to comment now on several issues, three issues, that came up during the course of these

hearings if it's appropriate to do so at this time, or would you like me to stop, Mr. Chairman, and entertain questions about our review of the contract?

SENATOR RADER: Why don't you go ahead and answer those questions that you think are pertinent and we will question you later on it.

DR. SWANSON: Thank you, sir. Several of the witnesses, including Natural Resources Commissioner Guy Martin, stated that, and I believe I quote Commissioner Martin, that very likely a higher price could have been attained in this contract for the royalty natural gas. I thought that was a very important statement that came out in his testimony. A number of other witnesses made the same statement.

I have asked myself can a higher price, in my judgment, be obtained than under the terms of this contract, and I must confess that I think it's highly unlikely. I think the pricing terms of this contract have been very well designed, again with that one proviso that I mentioned earlier. Let me review with you why I came to that conclusion.

I think, first of all, we must understand that royalty gas that Alaska has to sell now is 2.6 trillion feet; it's a large package of gas. I think it is possible in the future that Alaska could sell maybe a billion cubic

feet in a spot market for a higher price than you will get under this contract. But a billion cubic feet is not the same as 2.6 trillion cubic feet. It is possible, for example, under certain shortage conditions to receive a very high price, but not for the volumes of gas, I think, that you have here.

It has been suggested by some other witnesses that Alaska could have received a higher price for its gas had it sold gas directly to gas distributors and then had the gas transported by interstate pipelines, and that gas distributors would be willing to pay a higher price. I think Mr. Moody should discuss this with you more than me, but it is my impression of the Natural Gas Act that if a gas distributor in Boston or Chicago who is not now subject to the jurisdiction of the Federal Power Commission, if that person were to purchase gas in Alaska, move that gas across state lines and resell it in the Lower 48 states anywhere, that gas distributor would be subject to the jurisdiction of the Federal Power Administration. I think no gas distributor would subject himself to such regulation and thus would not purchase gas directly.

Secondly, it was stated that Alaska may be able to receive a higher price for gas if they were to sell it directly to an end user such as, I believe Pacific

Gas and Electric was mentioned, or large industrial consumers of gas. Again, I think Mr. Moody can comment on this with greater knowledge and with greater competence than I. It's my impression, however, the Federal Power Commission currently does not allow direct users of natural gas to transport gas through interstate gas lines for their own use except under Order Number 533. Order Number 533 is a very highly restrictive order which sets the term of any contract to two years and it says that only industrial high priority direct end users of gas may purchase the gas, and they may purchase the gas on a monthly basis, or perhaps on a daily basis, only to that extent of their high priority use is curtailed. Thus, when a winter is very cold and many home owners are burning a great deal of gas, such industrial purchasers could buy a great deal of gas. In warm winters such as we had in 1975 and '76, many industrial purchasers had their full needs of high priority gas met and thus they couldn't receive delivery of gas under direct purchase.

I don't think that any direct user of natural gas will be willing to sign the term of this contract, which says that they will take delivery as you receive delivery from the working interest owners, depending upon the gas production and upon the oil production, and pay for it because the timing of their needs for gas under

Section 533 is probably quite different from the timing of the delivery of gas from the working interest holders to Alaska and thus to your purchasers.

Secondly, let me address one other possible purchaser of your gas. It was suggested that an electric power and generation utility might be willing to purchase gas directly from you and burn it underneath its boilers. I am very, very doubtful if the Federal Power Commission would allow interstate transportation of gas to be burned, purchased in such a way, under boilers.

In fact, in some of its opinions on the purchase or the retention of gas by producers in the Gulf Coast to be used in refineries, the Federal Power Commission has very explicitly stated that gas may not be burned under boilers; in fact, it went beyond that. But I think it's unlikely that anyone who would burn gas under boilers can buy substantial quantities from Alaska or anyone else to be transported through interstate pipelines when high priority users in parts of the pipeline system in units are denied gas.

Let me go on to another issue. We have heard from two or three witnesses descriptions about the setting of price for natural gas under deregulation. The gist of their testimony has been that it's very difficult to set a price at the wellhead under deregulation. We have

been asked by a major pipeline and some liquids sellers to evaluate the industrial market for natural gas in the future in order to help them make investment decisions, in the case of one company in liquified natural gas and goal gasefication and another company in import problems.

So we have gone around, I personally have interviewed plant engineers, plant managers and energy buyers of large and small companies to ask them what price will they pay for natural gas. The price of natural gas will be set by the next buyer who will buy from the seller, the distribution company. If the seller, such as Boston Gas, is really selling to homes, the person, you and I, the home owner, will pay a higher price for natural gas to be burned in our furnace, to cook with, and heat hot water than will an industrial customer. However, if the quantity of natural gas delivered by a distributor is large enough so that he is delivering gas to industrial consumers, the price that that person can pay, that the distributor can pay, will be set by the next industrial customer that he can sell gas to.

In our interviews with industrial consumers of natural gas who were sometimes burning gas under their boilers but more often using the gas in their processes -- by process use of gas I mean the melting of glass, the keeping of glass warm as it moves into bottle making

machines or it moves from the annealing furnaces. The use of gas in annealing furnaces and metal working, the use of gas to heat metal for forging operations, the use of gas to dry the paint on automobiles, these are all processed high priority uses of gas.

In our review of the volumes of gas used in various locations and in the prices that these industrial consumers will pay for gas, we came to the very, very clear conclusion that there is more than enough gas in the United States, perhaps not well distributed, as we've seen this winter -- but there is more than enough gas in the United States to meet the needs of industrial consumers who are willing to pay from forty to sixy percent more per btu than they would have to pay for number two oil.

Also it is very clear that natural gas is a very easy fuel to handle, it's very clean burning fuel, it has flame characteristics which are easier to control in which one can use either fewer supervisory people or less skilled supervisory people to control the process such that industrial consumers will pay a premium for natural gas, five or ten percent, maybe fifteen percent in some cases, for process uses of natural gas.

We thus have concluded that, at least in the northeast quadrant of the U.S., which I might point out is

relatively short at the moment, that in the long run industrial consumers, many of whom have already converted to dual fuel firing of many of their pieces of equipment, will pay (to pick a number) ten percent more for natural gas than they will pay for number two oil. Consequently, when we, in our report, set prices that we believe under free market, under net back calculations, will be received by Alaska at the wellhead, what we asked is in 1980 and 1985 what will the price of number two oil be to the industrial consumer.

We've estimated those prices essentially by taking Arabian like oil, bringing it over to the United States with a transportation charge, moving it either through pipelines, or certainly through import terminals, moving it to a refinery close to the consumer, putting refinery margin on the number two oil and coming up with a price per million btu of number two oil; adding ten percent, and saying, "This is the competitive price for natural gas at this industrial consumer," and then netting back, subtracting the transportation costs to that industrial consumer back to the Alaskan wellhead to come up with some of our prices.

There have been witnesses before you who have argued that such a calculation that I've just described to you is inappropriate for determining the price of

natural gas, and they have argued that the so-called market competition incremental value pricing that I have just described to you doesn't apply because the Federal Power Commission and the State regulatory commissions allow new higher priced natural gas to be (so-called) rolled in or cost averaged with the lower priced, lower contractual, lower regulated price gas they receive such that even if the price of Alaskan gas delivered to a distribution company were to be higher than would be competitive before sold separately, because the higher price Alaskan gas (this is the theory) can be offset by lower controlled price gas from other parts of the Lower 48 States, that the distribution company could pay more than competitive prices for Alaskan gas, and still be able to sell its gas.

I understand the theory behind such an assertion, and the theory is a sound theory. And to be sure, today, in some fuels markets, propane specifically, where today prices of propane are controlled for some companies far below market values, those companies will go out and buy high priced propane, foreign propane, mix it in with their -- at least on their accounting bases, mix it in with their cheap domestic propane and they will be able to sell; they can pay a higher price for foreign propane.

But these purchases are a purchase of a shipload, and they'll sell the high priced propane within three months, purchase which may exist over a quarter, the next calendar three months. The contract we're talking about is a contract to purchasers of natural gas which will begin close to 1985 and will run for twenty years. So we really must look at the price of natural gas between year 1985 and year 2005 in order to estimate the applicability of so-called rolled in pricing to the distributors to allow Alaska to receive a very high price, a non-competitive, non-market based value price for its gas.

You should be reminded that other sources of natural gas, the distribution companies in the Lower 48, are such projects as coal gasefication, which is very high priced. A number of transmission companies are now importing liquefied natural gas. Some of the price escalation clauses in those importation contracts for liquefied natural gas, I believe, will generate some fairly high prices for that liquefied natural gas. And so on to rolled in pricing, the rolled in pricing of Alaskan royalty gas will not be based solely upon Lower 48 conventional production of natural gas, but will be based upon other alternate sources of natural gas.

I would submit that the rolled in pricing that

you are likely to receive will not be substantially higher than a competitive net back price computed, as we have done so in this report. Further, when I was assisting in the negotiations of the pricing clauses a long-term LNG import project, the clear position of at least the customers was that they would not pay a higher price for that LNG than would compete with two oil. They were unwilling to take the risk that either (a) rolled in pricing could not be applied to them or (b) that there would be sufficient amount of cheap conventionally produced low price controlled, low contract price controlled natural gas to offset higher than competitive price.

Thank you, I have finished. It turned out to be a very long statement.

SENATOR RADER: Representative Gruening.

REP. GRUENING: I have one question I would like to get answered. Is it your intention to start questioning now or after lunch?

SENATOR RADER: It is ten after 12:00. I assume that the committee would like to break for lunch and come back at 1:30. That seems to be the consensus; we will recess until 1:30.

(Whereupon the hearing recessed at 12:15 p.m. and reconvened at 1:30 p.m.)

SENATOR RADER: The committee will come to order. I would

like to ask the page to be certain to advise any Legislators that come in, they're welcome to seat themselves up forward here for more convenient questioning of witnesses and so forth -- and also to make certain that we enforce the "no smoking" rule in the courtroom.

We will continue, unless there is some objection, with the testimony of Dr. Carl Swanson. I believe we're in a situation for questions. Senator Gruening, did you wish to start off with that?

REP. GRUENING: I was waiting for the rest of the members to get here.

SENATOR HUBER: In that case can we take a five-minute recess, Mr. Chairman?

SENATOR RADER: I'm reluctant to do that because I'm afraid we're going to run out of time today. I'm just reluctant to do that, but I will wait so long as my Co-Chairman thinks it necessary for additional members to show.

SENATOR HUBER: I know Senator Butrovich is on his way.

SENATOR RADER: There are several routine matters that we can go through while we're waiting on other persons. We're going to conclude today the joint hearings. There will be additional testimony taken by the individual committees at their discretion at a later time, but the transcript of the record of these proceedings will be concluded today.

I am going to ask the reporter -- she has already been instructed to record some testimony out of order. Whenever such a request is made, I want her to clear that with Representative Gruening and myself. It's been asked that the expert's testimony, Dr. Tussing, be transcribed first and the other expert witnesses' testimony hired by the committee be transcribed in order of their presentation of testimony, then after that start at the beginning of the proceedings and go through them as they occur.

I'll want you to deliver -- the Department of Natural Resources will not be able to give their wrap-up testimony today, therefore, we will save the last exhibit number for them. Their testimony will be submitted in writing sometime next week. I will certify to it and deliver it to the reporter, she will append it to the original record and it will become a part of the official transcript of these proceedings.

After the document has been printed, I will ask the court reporter to certify one original copy for the House and deliver it to Senator Gruening, one for the Senate to be delivered to me, one for the Governor's office, one for the Attorney General's office, one for the Department of Natural Resources and one for each of the purchasers, to be delivered to such other persons

as they may designate in writing in a communication to my office. I will deliver them to them. Is there any further suggestion as to how to handle the record?

REP. GRUENING: It might be good to put the applicable statutes, the applicable statutes, someplace in the supplements to refer to as you read the testimony, if we could include it in the report. I have a stapled copy here that would cover the statutes that deal with the Royalty Board and surplus oil and gas.

SENATOR RADER: Then we will leave open two exhibits, one being the rebuttal and supplemental testimony of the Department of Natural Resources, and the second will be statutes, and I'll leave it up to Representative Gruening and the staff to submit the statutes that you want printed as an exhibit.

REP. GRUENING: I didn't realize you intended to include further testimony as part of the joint hearings, in which case maybe we ought to participate.

SENATOR RADER: Well, I think it's important that the Department of Natural Resources respond to some of the matters that have been raised and I was just going to let them respond in writing as an exhibit. I don't know what they're going to say.

REP. GRUENING: I see.

SENATOR RADER: Although we do intend to question them

personally, but our personal questioning of them Monday morning would not be a part of these hearings. But their written testimony, or their written response, if they care to make any as a part of these hearings, can merely be appended as an exhibit.

REP. GRUENING: We may show up Monday morning too.

SENATOR RADER: You're certainly welcome. We intend to go on at 10:00 o'clock.

SENATOR HUBER: Mr. Chairman.

SENATOR RADER: Yes, Senator Huber.

SENATOR HUBER: I notice from the assignment of the exhibit number 16 today, that that was the next number in line, and I note that the J. McCutcheon written testimony which I had requested be put in as an exhibit must not have got in because number 16 was the next in line. Would you please take care of that at this time, make sure that it appears as an exhibit?

SENATOR RADER: I think yesterday that we established that the secretary took the written statements of Mr. McCutcheon, that he submitted them to her and that she had intended, and does intend, to include his total statement as a part of the transcript of the verbal testimony. Is that not correct, Madam Reporter?

MRS. SANDERS: I believe that's correct.

SENATOR HUBER: We did deviate from it, Mr. Chairman, and

I wanted to make sure the written was in also.

SENATOR RADER: I just don't want you to type it twice. I observed yesterday during the testimony of Mr. McCutcheon, it was my observation that the reporter was not taking notes and, therefore, I assumed she was relying upon his statements and intended to include them in full as a part of the oral testimony given. Is that correct?

MRS. SANDERS: Yes.

SENATOR RADER: Mr. McCutcheon, does that satisfy you?

MR. McCUTCHEON: It wasn't my request.

SENATOR RADER: Senator Huber, does that satisfy you?

SENATOR HUBER: Yes.

SENATOR RADER: Then we will keep the exhibits numbered as we presently have it, with the Economic Analysis, the Jensen Report, as Exhibit No. 16, and Mr. McCutcheon's testimony will be, as I say, reproduced verbatim as a part of the verbatim transcript.

Should we proceed at this time? Any questions of Dr. Swanson? Representative Gruening.

REP. GRUENING: Dr. Swanson, the last couple days you've heard some concern expressed by the various members and Legislators as to the reason why the producers have not already entered into contracts, and various explanations have been given.

Judge Litt, in a report to the Commission in

April of 1976 attributed, at least to the producers, one of their reasons that they expressed to him for not entering into contracts, and I'm going to introduce this as an exhibit. It says, "They, the producers, expressed distress that the Commission has not yet embarked on a proceeding to establish a price for the gas and feared that an early sales contract would lock them into an adverse cutoff date under possible vintage pricing by the Commission, or the possibility of a deregulation statute being enacted by Congress." Now, would those concerns that the producers expressed to Judge Litt also apply to our entering into a contract at this time?

DR. SWANSON: The deregulation bills that have been introduced into the Congress normally deregulate new gas, and there's a definition for new gas. One of the definitions which has -- the definition that has existed in the Pearson-Benson Bill in the Senate and the Krueger Bill in the House, which were the deregulation bills which proceeded furthest in the past session, said new gas would be, among other things, gas which was dedicated to interstate commerce after some date.

Now, Mr. Moody is someone whom you should address the same question to, and I would defer to his knowledge and judgment. He is much more aware of the implications of the definitions of energy than I am. The impression

that I have left, that taken away from reading some of the bills, is that Alaskan gas which did not commence flowing in interstate commerce until sometime in '85 would be classified as new gas. But it's entirely possible that a bill could be introduced which has a different definition of vintaging. For example, the currently applicable opinion which sets the national rate, 77-A, defines new gas as gas flowing from wells which were spudded after January 1, I believe it's 1976, or '75.

Some of the wells which will be producing gas in Prudhoe Bay were spudded before that and would not qualify as new gas under a spud date definition of new gas. Under regulation, or under a deregulation bill everyone runs the risk that part or all of gas will not qualify as new gas.

Probably of greatest concern to this committee would be a definition of new gas which says new gas would be gas which flows into interstate commerce from contracts which are dated after some date which would be after the date of these contracts. Now, there is some precedent for contract dating, I believe. The applicable definition of new or old gas are set in vintaging.

REP. GRUENING: This may be what the producers then are

concerned about in their concern not to enter into contracts as of now.

DR. SWANSON: I would assume there are a number of questions that the producers had in their mind. There may well have been some questions about rolled in pricing versus non rolled in pricing. Certainly there were questions about vintaging, maybe some questions about deregulation. They were prepared, when they felt it to be in their economical advantage, to accept advance payments and to commit gas as they have in the past. Even though all of the same issues existed then, as they do now, they didn't. But those contracts, I do believe, did not set prices for the gas which will flow, even though they committed gas in their advance payments.

REP. GRUENING: Well, is it fair to assume that they're probably concerned about how the regulatory and legislative enactments affect pricing arrangements under the contract?

DR. SWANSON: I assume they are, and they may feel that they can exact a higher price if they wait, although I'm not sure that's the case. I think we should point out that the working interest owners have seven-eighths of the gas and the royalty interest is one-eighth of the gas. One of your concerns may be, if you commit now you will influence the price on the seven-eighths. I find that

dubious.

REP. GRUENING: That isn't -- really, my question goes to, should we not have the same concerns in terms of dealing with trying to write a contract which sets price terms now as opposed to waiting, as the producers seem to be waiting, until a time in the immediate future when pricing arrangements under the FPC and, perhaps, Congress will be more clear?

DR. SWANSON: I think the risks you run, the principal risk you run is if a deregulation bill or a definition of new gas or step price vintaging of gas were to use contract date as the applicable vintage date or new gas date. I am less qualified that Mr. Moody to describe issues of vintaging and the probability that contract date may become the applicable date of vintaging.

Another question that I think you raised was, does this contract fail to protect the interests of Alaska if the royalty gas committed under the contract is treated in the same vintage as working interest owners' gas. My reading of the provisions of the contract state both under regulation and under deregulation that the price of the royalty gas will be the highest price paid.

REP. GRUENING: Do you read that as meaning that vintaging, if I understand that term correctly, is not important for us to concern ourselves with? In other words, that concern

that I think the producers are expressing as to being thrown into a special category because they enter into a contract now doesn't apply to us, as a royalty owner.

DR. SWANSON: I think there is a concern. The degree to which it is a realistic concern or merely one of those very remote possibilities, I'm not able to judge except by citing some history. The real concern that you should have is the probability that vintaging will depend upon not the date of initial deliveries of gas into interstate commerce, but the date of the contract or the point the contract comes in force.

There is, in fact, in our report on page 29 a table listing ways in which gas can be defined, either vintaged or different ways in which gas is put into different price categories. In that table, and you may wish to ask some of the other witnesses about this table and its accuracy -- in this table a Permean base in Opinion 468 of August 1965 did use contract date as a method of vintaging gas.

In none of the recent national rate opinions nor the Krueger nor the Pearson, and this is the Pearson-Homes Bill, has contract date been, if I understand this correctly, an applicable vintage definition.

So we must go back fairly far in order to find contract date as applicable.

REP. GRUENING: I take it that it is possible there might be some disadvantage then if contract date became important as fixing a vintage on this gas?

DR. SWANSON: There is the possibility, yes.

REP. GRUENING: And what we're trying to establish here is just what we're losing by entering the contract, and the question I think that has been stated again and again is, aside from what we're trying to accomplish outside the pricing arrangements what could we be losing by entering a contract now as opposed to later since we're not actually at this time trying to get money for State revenue, we're trying to protect ourselves from any distadvantage by entering into this contract at this time. I think you said timing and price were very important.

DR. SWANSON: Yes. In my opening remarks, I felt that the State was well protected in this contract in the use of liquids, in the ability to reserve gas for in-state use, and I felt that the pricing provisions in the contract protected the interests of the State. I think you certainly have correctly identified a possible cost of the contract; that is, if vintaging in future FPC decisions or in possible deregulation bills or other bills in Congress use contract date as the applicable vintaging criteria, and contract date of this contract, and the date of break point in vintaging were to be between the

contract date of these royalty gas contracts and the working interest owners' contracts, that's a risk.

REP. GRUENING: The problem being an older vintage gets a lower price?

DR. SWANSON: This has been historically true, yes.

REP. GRUENING: There are some other points the producers make in here. I'd like to introduce this as an exhibit. It's a report to the Commission by Judge Litt.

SENATOR RADER: All right. That will be Exhibit 17.

REP. GRUENING: This is my only copy of it.

SENATOR RADER: Report to the Commission by Judge Litt. And the date of it?

REP. GRUENING: April 27, 1976.

SENATOR RADER: April 27, 1976, and you will deliver a copy of that to the reporter, will you, Representative?

REP. GRUENING: Maybe she can make a copy for me.

SENATOR RADER: If you deliver the original to her she can give you a copy back.

(Whereupon Exhibit 17 was duly marked.)

SENATOR RADER: Representative Parr.

REP. PARR: Mr. Swanson, we have heard testimony that, as you know, the royalty gas price is tied to the price the producers get.

DR. SWANSON: Yes.

REP. PARR: We have heard testimony that it may well be that

the dollar price, let's say, shown on the producers' contracts may not be all they're really getting because they have tie-ins with some of the people to whom they will be selling and there may be, for example, a swap of some oil or gas, and other kinds of things that will not be directly a part of that contract and will not show a dollar value, but which obviously will have value to the producers. If that's true, do the contracts that we presently have, these contracts before us, protect our interests?

DR. SWANSON: I remember the testimony, I've forgotten who testified, as you just described. The concern you have, I believe, is under deregulation where there is somewhat market pricing that might apply. The reason I say that is, if regulation occurs probably the price will be held below market price, the price for Alaskan gas will be held below market price, and there would be no incentive for a producer on the North Slope to keep their prices below the regulated price, the allowable ceiling. So I think you're talking about a case which might exist under deregulation.

Now, on the North Slope or in the Prudhoe Bay area there are at least three major working interest owners, BP-SOHIO, Atlantic Richfield, and Exxon, plus some of the working interest owners are consortiums of

Amarata, Hess, and five, or six or seven different oil companies. Now, the contracts, under deregulation, in Section 6.3 and 6.4 clearly state that the redetermination shall be the highest price paid any working interest owner on the North Slope. It may well be, though I think the possibility remote, but it may well be that one working interest holder may have a somewhat lower price, stated price, in the contract under deregulation than would be justified by an arm's length not around the back deal.

However, in order that the highest price all be held down below market justified pricing would require at least six or seven oil companies to conspire to hold that price down. There are people who argue that the oil companies conspire frequently. It is my opinion that they compete vigorously. I doubt very much -- I think it highly improbable that six or seven oil companies of quite different size, who operate in very different areas of the world and very different areas of the United States, with very different crude balances and very different supplies of natural gas would find such a commonality of interest that they could even structure such a deal.

REP. PARR: I take it then, Dr. Swanson, that your answer to my question is, yes, the contracts do protect us.

DR. SWANSON: Yes, they do.

REP. PARR: Thank you.

SENATOR RADER: Any further questions? Senator Huber?

SENATOR HUBER: Thank you, Mr. Chairman. Mr. Swanson, are there any other reasons which you might be able to think of that the producers appear to have for not committing their gas at this time that might be worth the State's consideration before we commit ourselves, other than you have discussed already?

DR. SWANSON: I can't think of any at the moment. If I do think of one while I'm on the stand, would it be appropriate for me to so indicate and explain it to you?

SENATOR HUBER: Yes, I would appreciate that if you would.

SENATOR RADER: I had a couple questions, Doctor. You've attended the hearings since they commenced last Monday at 2:00 o'clock, is that not correct?

DR. SWANSON: Yes, I have been here all the time.

SENATOR RADER: You've been in constant attendance at all times?

DR. SWANSON: Yes, I have.

SENATOR RADER: Doctor, considering all of the testimony which you have heard and considering the difference between possibilities and probabilities, how would you characterize this contract as to whether or not it protects the State in an overall manner or does not the possibilities of it --

not as against the probabilities of it not -- in other words, I would like to have you use your expertise to help us weigh the value of very conflicting testimony and the statement of possibilities as against probabilities.

DR. SWANSON: In my opening remarks I attempted to deal with some of the issues that were raised in the testimony which precedes mine when I talked about the issue of, can a higher price be obtained than would be obtained under these contracts in the issue of pricing, royalty pricing.

It's my judgment that these are good contracts. I think that they protect the interests of the State in the use of liquids, in its ability to reserve gas and obtaining a favorable price. Very well, given the set of probable circumstances which may emerge in the future, and there is a great deal of uncertainty about the price of natural gas, to be sure, there is -- I think Representative Gruening has identified one possible event, that is the setting of vintage dates on contract date, which hasn't happened recently, which is a risk.

SENATOR RADER: Would you weigh that risk for us as possible, probable, improbable, or whatever terms you might choose to use? Again, it's very difficult for me to know whether that risk is something that is of such a nature that we should reject the contracts or how to weight it. In other words, place a value on this, recognizing again

that's really what you're hired for, is for your value judgment on matters in which we are not experts, on which there are conflicting possibilities and probabilities.

DR. SWANSON: I recognize that, and I think that's a valid question. You're asking me to evaluate probability of any legislative or regulatory event. Now, that is the using of contract date as the appropriate time for vintaging. If we look to recent history being in the last ten years, contract date was not used in such a way that the value of this contract to the State -- this contract compared to that with the State -- to be sure, the course of regulation and legislation is something which can be, particularly in the area of natural gas, can be highly unpredictable, as it has proven to be in the past two or three years. I would say that the chances that contract date will be used as a vintage date to the detriment of the State, if this contract were to be approved now, is probably less than fifty percent, and it may be quite a bit less than that. I'm not sure I've answered your question.

SENATOR RADER: Well, does it approach fifty percent? In other words, we signed this contract, we have a fifty/fifty chance of having signed a disadvantageous pricing contract because of vintaging.

DR. SWANSON: If I may just try to think through to myself

what the advantages to advocates of various positions and the position of the Congress might be of a contract date vintaging. Let me just pause a minute and think about it, and I will respond.

Senator Rader, I frankly don't understand the history or regulation well enough to know why a contract date was used in the Permean base in case, rate case for vintaging.

SENATOR RADER: Let me ask you this: I don't want to ask you to go on record here on something on which you are not prepared.

DR. SWANSON: I would like to continue, if I may, sir.

SENATOR RADER: All right.

DR. SWANSON: The reason for using vintages and defining something called new gas is to raise the price of gas to producers so that they are encouraged and have the financial resources to explore and develope natural gas.

The reason there is vintaging is to keep the price of flowing gas down, the theory being that one does not increase the incentive to a producer to find new gas by raising the price of old gas. That strikes one as a reasonable theory.

Both Mr. Moody and Mr. Byrd have done a good deal of natural gas contracting, but my understanding of natural gas contracts (you might want to pose this

same question to them) -- my understanding of natural gas contracts is that under contracts a whole reservoir, where all the natural gas under a lease will be dedicated to the sale, to the contract, often underneath the land area there will be more than one reservoir of natural gas, or often the reservoir may be sufficiently intimiable that after a while it makes sense to drill some additional wells, or it may be that in a natural gas lease, a natural gas reservoir, that after a while the well will sand up, the casing will collapse, or the well will be damaged, and thus a new well will have to be drilled; or if there is a deeper reservoir a well will have to be drilled or an old well re-entered in order to find the gas in a deeper reservoir.

If the vintaging date were the date of the contract -- remember that the whole, all of the gas underneath the lease, perhaps defined by depths, were to be dedicated to the contract, then there would be no incentive for the producer to repair the wells or to redrill the wells or to search deeper for new reservoirs. Thus, it strikes me -- the point I have is, and I guess you should ask other witnesses, is that given some of the conventions of natural gas contracting, that vintaging new gas by date of contract may impair the discovery of additional supplies of natural gas, which would be contrary to what

I understand to be the purpose of deregulation or the purpose of allowing a higher price for new gas, and thus self-defeating. If the theory I have just expounded is true, then I think that a vintaging gas generally within the United States by contract date would be unlikely.

SENATOR RADER: Any further questions? Senator Sumner.

SENATOR SUMNER: Mr. Chairman. Have you evaluated contracts between states and oil companies in the past?

DR. SWANSON: No, sir, I have not.

SENATOR SUMNER: Do you have any basis to compare or to answer a question of how does this contract for the sale of the royalty gas compare with the sale of royalty gas between other states and oil companies?

DR. SWANSON: I happen to have in my possession a very bad photographic copy of a sale of royalty gas from New Mexico to El Paso.

SENATOR SUMNER: How does this sale contract here compare in favor of the State?

DR. SWANSON: I read that contract last night, the one between the Royalty Board of New Mexico and El Paso, and I think that the sale of Alaskan royalty gas compares well. The other contract also was a soundly conceived contract, and it did not have the reservations clause that Alaska has.

SENATOR SUMNER: When you say compares well, is this contract better than, in your view?

DR. SWANSON: The contract you have negotiated is a better contract.

SENATOR SUMNER: There's some confusion in my mind. If the contract says that Alaska is going to get paid as high as any of the producers that are selling to the oil companies for the seven-eighths supply, would the vintaging determine the sale price that Alaska receives, or would the contract dates on their contract with the users or buyers determine the sale price that Alaska gets?

DR. SWANSON: I think you have posed a question which would require legal interpretation and, frankly, I had not thought of it, in response to the earlier questions of Senator Rader and Representative Gruening, because what you're arguing is that through the terms of this contract the vintaging date applicable to this contract alone may not apply. That's a very important question and I would only like to say that I'm not a lawyer, I do not have extensive Power Commission experience, and you have a witness who does. I just am not qualified to answer the question. I do understand the issue, and it's a good point.

SENATOR RADER: Let me go back just a moment then to the question I asked you. Does that change your answer to my

question as to whether or not it is likely in the future, in view of the past policies, that contract date will be the determining factor in vintaging? As I understood your testimony, you said you thought it would be highly unlikely the contract date would be the determining factor in vintaging.

DR. SWANSON: Unlikely, yes.

SENATOR RADER: Now, the question raised by Mr. Sumner does not affect your testimony in that regard, does it?

DR. SWANSON: No, it does not. In fact, if anything, it suggests that at least within the terms of the contract one does not know how those terms will be interpreted in accordance with the Federal Power Commission, at least within the terms of the contract, that there is even less likelihood that contract date vintaging would apply to the price.

SENATOR SUMNER: Mr. Chairman, in response to you, that's the view that I thought.

SENATOR RADER: Senator Colletta, do you have a question?

SENATOR COLLETTA: I believe Senator Huber did.

SENATOR RADER: Oh, Senator Huber.

SENATOR HUBER: I had on your subject in response to Senator Rader I want to get back in. Now there's a second one since you came in. Senator Rader and I apparently didn't hear exactly the same way. I thought I heard you say

that the chance that vintaging would be disadvantageous or that it would happen to the State was on the order of fifty percent, not very unlikely. So which way is it?

DR. SWANSON: Senator Huber, what I attempted to do was, when I said that the probability that vintaging would be based upon contract date, I said I thought the probability was less than fifty percent. I chose a number where I felt extraordinarily confident, and Senator Rader felt that, in his judgment, he needed a finer definition, a more precise statement of probabilities, and he pressed me on the point, and upon thinking about the point, in thinking about the use of contract date for setting vintaging dates for pricing, given the traditions of contracting in natural gas, did not strike me as too sensible, given the purposes of national policy in the use of vintaging. So I think that the probability that contract date will be the applicable vintage definition that dominates price under this contract is quite a bit less, it is unlikely.

SENATOR HUBER: Would you like to give a percentage of less than? You gave less than fifty before. Would you like to give us less than something now?

DR. SWANSON: Less than fifteen, less than ten percent.

SENAGOR HUBER: Less than ten percent. All right, that goes on ---

DR. SWANSON: Now, the difficulty of a number -- excuse me, Senator, I'm sorry.

SENATOR HUBER: Go ahead.

DR. SWANSON: The difficulty of a number given, such as that, is that it's a number which can assume greater importance, or it's an easy number to grab ahold of. You asked me the question straight, and I answered it as straight as I could. Maybe it's fifteen percent, maybe it's five percent, maybe it's ten percent, maybe it's two percent; I don't know, but I think when I state ten percent (maybe it's less) I think that's a fair characterization of unlikely. But remember that that ten percent would be further reduced by the point that Senator Sumner has brought up, which is that there are contract terms in the contract you are examining now which might make the vintaging which would allow working interest holders a higher price than applicable, but that's something presumably which will be worked out in the courts, and also it's something that requires legal judgment, which I would suggest you ask of Mr. Moody.

SENATOR HUBER: Mr. Chairman, that brings me to the second half of my question. Mr. Swanson, your definition that vintaging, I believe, was quite narrow here. In regard to that, have you taken into consideration the precedent that was set by the Federal Government action in disallowing

North Slope oil new status? Do you think that they might use vintaging or some other mechanism there to do the same thing with the gas that they have done with the oil that might affect the status of these contracts?

DR. SWANSON: There are two questions, I think, which we must address, and one question is, will these contracts approved now put the State in a worse position than if they were not approved, which is a very appropriate question, to be sure. My judgment is that these contracts are very good contracts and they do protect interests of the State, and that if they are approved now the chances that the State will suffer value are not great.

The second question arises, and I think it comes out of your point about the Federal Government, and that is, what are the risks to the State of Alaska of receiving very favorable value for its royalty gas and oil. Those risks are great, and I think they are legislative and regulatory risks, but by and large they lie outside of the contract.

SENATOR HUBER: Could I just draw you out a little more? You said there wasn't disadvantages to the contract. Could you conversely say , is there definitely advantages to the contract?

DR. SWANSON: The theory of examining the contract at this time, and many witnesses have testified to this, that by

approving these contracts at this time the likelihood of the El Paso project being approved will be enhanced. That's the theory. I, frankly, am not competent to judge.

SENATOR HUBER: And you don't want to make a judgment of how much enhance them being chosen over Arctic?

DR. SWANSON: No, sir, I'm not competent, and if I were to make a judgment I would be doing you a disservice.

SENATORY HUBER: Thank you, Mr. Swanson.

SENATOR RADER: Representative Gruening had a follow-up question.

REP. GRUENING: Are there any advantages to the State in terms of pricing in these contracts? Let's say if we do sell the gas at a later point under these contracts, have we gained anything in terms of pricing, setting aside the question of political gain that the contract is based on?

DR. SWANSON: It's very hard to be actually sure about what the course of events will be in the future. The contracts do state -- let me step back a second. The question is an important question and I must answer it.

Royalty gas comprises one-eighth of the gas in the Prudhoe Bay field. The contracts are very clear, that both under regulation and under deregulation that the price received by the State will be the highest price. The contracts are unambiguous. I do not believe that one-eighth interest is sufficiently large to swing the

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value of the gas such that the prices received by the working interest owners will be less than if you waited.

For example, and let me expand on the point because I'm not sure I'm being very clear. If the amount of gas which you are selling now were enormous, more than enough to satisfy the demands in the Lower 48 States. then possibly by delaying, by not committing gas now and by having these highest prices for other people to obtain, you could depress future prices. But that's not the situation to be faced. The royalty gas interest is only one-eighth, and all of Prudhoe Bay gas, while very large, is not sufficient to solve the lack of natural gas supply in the Lower 48 States; so that your committee now does not so change the balance of supply and demand that future prices will be reduced by your commitment now. Have I answered your question?

SEN. GRUENING: If I interpret it correctly, you were saying that the contract protects us in most regards in your view, but in terms of advantages outside the political aspect of it, you don't see any -- it may be a good contract but you don't see any advantages to entering into a contract now as opposed to, say, trying to acquire these same terms at a future date, and that may be dependent upon whether, in your expert opinion, we could get these terms at a future date.

DR. SWANSON: You would require me to read the minds of the purchasing companies to determine if you could get the same terms that you have in these contracts at a future date. I have difficulty doing that. I would like to point to one section of the contract where you do have some very favorable terms, I think, and that is the purchasing companies have committed to pay the royalty share expenses upstream of the delivery point whether or not they are able to put those expenses into their costs of service. That's a good term, I think. Whether they'll agree to the same term in the future, I really don't know.

SENATOR RADER: Representative Chatterton.

REP. CHATTERTON: Thank you, Mr. Chairman. Dr. Swanson, I don't expect I'm going to ingratiate myself with you with this line of questions, but nothing personal is intended.

DR. SWANSON: You have an obligation, sir, a very important one.

REP. CHATTERTON: To bring everything into perspective, I have before me and have not a little slower than hastily read a November 30, 1976, letter addressed to Ms. Elke Kallab and signed by you, regarding a proposal to make an economic study of the gas sales contracts. That was dated November 30, 1976. And I also have before me a letter, or a document accepting your proposal that was

dated December 27, I believe, 1976, and unless you're like some people who may think that they're willing to commit course money to build a pipeline before you have a contract, I doubt if you started to do much work on this problem prior to the first of the year. I'm not questioning you as to the fact that in context of what you were asked for and what you have presented is, you've fulfilled the obligation completely, and I do concur with you, with slight exceptions of your findings, that this contract permits Alaska to recall and use the gas. It does have that, it does provide the LPG protection, but you did state here that in your proposal you would not involve an analysis of the sale of natural gas liquids, in your economic analysis, does provide for a favorable price. Now, I think it's equally important to this committee to know things that you did not find in arriving at this conclusion, and obviously within the framework of thirty days there's a bunch of things you did not find out.

DR. SWANSON: There's a very large number of things of concern to this committee that we did not state, that's correct.

REP. CHATTERTON: And possibly even the economic considerations, if you had studied these things, if we had paid you more money and you had had more time, it's possible -- it is possible, if you had studied possibly a trade in kind

of gas at Prudhoe Bay with like owned State gas someplace else, or State owned crude with like State owned crude someplace else, or looked to see if in any way this would be jeopardizing the ultimate recovery of hydrocarbons from the Arctic Slope, aiding and abetting the jeopardy thereof, is it possible you could have come up with a slightly different conclusion?

DR. SWANSON: Let me list for you a number of the things which perhaps are of concern which we did not study. I'm not a qualified reservoir engineer. Our firm are not qualified reservoir engineers. We did not study the question of the level of production of natural gas from Prudhoe Bay from the sedilogic sands which are appropriate. On the other hand, I would assume that, given the terms of the contract, that the State is well protected, if it were determined that to maximize the recovery of oil, gas production would need to be cut back, because this contract does not specify any minimum quantity of natural gas which must be delivered to the purchasers.

This contract does specify very clearly that the purchasers must pay for, whether or not they can pass on in their cost of service, the royalty share of facilities required prior to delivery. So I'm not really sure that our lack of knowledge of the specific reservoir characteristics

apply too much to our analysis of this contract.

We did not study, and I have no judgment of the relative merits of the three proposed gas lines, for example. A good deal of testimony has been presented here, and much more before the Federal Power Commission, on that issue, and perhaps you may, as individuals, in your judgment, in your decisions about this contract, weigh the relative merits of the three gas proposals. We have not examined them, and I have no opinion, no professional opinion on it.

We did not attempt to uncover for the State of Alaska other alternate buyers of royalty gas and attempt to understand from them the terms that they might be prepared to offer to you for the purchase of that royalty gas. I presume that in a sense the Administration, under Commissioner Martin, did explore with a variety of purchasers the royalty gas and possible alternate terms; we did not.

So the question you raised, Representative Chatterton, was, is it conceivable, is it remotely possible that our analysis would be altered had we spent more time and more effort in examining these contracts and the alternatives which are applicable to you. And when I was studying physics I read in a book that it's entirely possible, it is remotely possible that

all of the molecules of air in this room will suddenly rush over into that corner and we will all explode; I think that's remote.

In a contract such as this, one can over-study it. One should study to a point where one thinks one has a grasp and can offer sound judgment to a client. If we were to study, and study and study we would charge for that, and perhaps not give value for money received. I'm confident that our analysis is sound, our conclusions are sound; I can no more say that there is no possibility whatsoever of something possibly changing than I can that apples will fall up instead of down. Do I answer your question, sir?

REP. CHATTERTON: Yes, thank you very much.

SENATOR RADER: Senator Colletta.

SENATOR COLLETTA: Dr. Swanson, we have had a lot of talk about the possibility and probability of what could happen, and just taking the one aspect, the contract provisions (period), since you deal in that area what is, not the possibility but the probability of duplicating a contract verbatim to what is before us now if, in fact, we wait and see who builds what and when? I make specific reference to one section on the total take-back that we're allowed.

DR. SWANSON: The provisions for reserving natural gas in this

contract are favorable to the State. The reason that the purchasers signed this contract is, as I believe Mr. Tomas of Tenneco stated very clearly, that they frankly don't think that either (a) you're going to take back that much or (b) if you do take back that much they have a good deal of confidence that Alaska will experience a number of additional discoveries of gas and under the terms of this contract they can buy that gas.

Now, if you waited so long that it became more probable that Alaska would take back the gas or that additional discoveries would not be found and other discoveries were to be committed, then perhaps you couldn't get exactly the same terms with the reservation clause as in this contract. I think I'm grasping at something that is relatively small, and I think you may well be able to get reservation clauses in the future. As good as these? I don't really know.

The pricing provisions? I think in the future -- if you were to wait I think you probably will have pricing provisions which are as favorable as these. Whether the purchasers would pay for, at their own risk, the royalty share of the costs of gathering or whatever, I just simply do not know. I think likely they might; I don't know.

SENATOR RADER: Any further questions? Any questions on this side? We'll go a second round here. Senator Huber.

SENATOR HUBER: Thank you, Mr. Chairman. I'm sure that this question was asked of other people but it was not asked of Dr. Swanson, and I would like to know his answer.

I refer generally to the provisions in the contracts that head end money, premium money, whatever you want to call it, will not be allowed or will not be paid to the State, but that the highest unit field prices, in the language that we're both familiar with is there to state that, is used. Assume now that deregulation occurs, which apparently some form of deregulation is going to occur, and the working interests should negotiate large lump sum or front end payments with smaller amounts per mcf, wouldn't our contracts then have a good chance of denying the State the same opportunity for these much higher prices that might be paid, or likely would be paid, would be unlikely to be paid?

DR. SWANSON: Senator Huber, with your indulgence may I characterize what I think is concerning you and then see if I have characterized it correctly and then proceed from there?

SENATOR HUBER: Please do that.

DR. SWANSON: Would that be an appropriate way to proceed? I believe what you're suggesting is that the provisions

of this contract clearly state it shall be the highest price specified in some other contract, and that price will be in so many cents per mcf to the working interest owner. You were concerned, I believe, that potentially the value given in a contract or an interest owner may exceed the price stated in the contract, value being given to the working interest owner by an advance payment on an interest free loan.

SENATOR HUBER: Even if it's a separate document for advance payment.

DR. SWANSON: Or whatever, yes. I believe that is your concern.

SENATOR HUBER: That is my concern.

DR. SWANSON: We have the same concern in our analysis of this contract. Specifically we were aware of advance payments having been made for working interest holders of Alaskan gas. We then reviewed, as best we could, the outstanding advance payments, the ones that had not been terminated, advance payment premiums, so we uncovered, particularly the Columbia Gas advance payment agreement with, I guess it's BP and SOHIO. I'm not sure. And we asked exactly that question in our analysis. We addressed exactly that question in our analysis, would the price as quoted in the contract be lower because of a previous advance payment to a producer and, thus, not give full

value to the State.

Our research, looking at the contracts between SOHIO and Columbia led us to believe that the advance payments given to the producers would not reduce the price as quoted in the contract. That was the conclusion of our research.

Let me continue. One question that can be raised is, will advance payments be allowed in the future. I think the Federal Power Commission has suggested that they won't be. A pipeline will give an advance payment -- well, the Federal Power Commission says they're not doing it now -- a pipeline will give an advance payment only if it can somehow recover the cost of using that money or that money in its rate base. If they can't put it in their rate base or they can't somehow recover it from their consumers, they're unlikely to make advance payment, because they can recover an allowable price.

Secondly, in the repayment -- I would like to say something and I think I'm going beyond my current research and competence and I'm not sure whether I should say it, subject to verification of Mr. Moody or simply not say it. I'll proceed by your judgment.

SENATOR HUBER: If it's part of my question I wish that you would.

DR. SWANSON: I'll do that, but I do want to warn the two

committees that my recollection of the regulation of the law is shaky. My recollection is that the amount of gas that must be delivered for the repayment of an advance payment will depend upon the subsequently negotiated price for the gas. Thus, it is in the interest of the working interest owner to negotiate the highest possible price he can get in order to repay the advance payment as soon as he can.

If that theory or recollection were true, and you can check this with Mr. Moody, then the granting of an advance payment probably would not reduce the stated price in the gas sales contract and, thus, would not provide full value under the most favored nations clauses or the clause of deregulation in them, and in the highest price clauses under this contract.

SENATOR HUBER: Thank you, Mr. Chairman. I feel it is a little better given, the answer, from our experts rather than the oil company in this case on that one. I lay that one to rest as far as I'm concerned.

SENATOR RADER: Any further questions of Mr. Swanson? Mr. Swanson, I think you were trying to catch an airplane, were you, this afternoon?

DR. SWANSON: No, sir, I'm going to catch the 8:30 plane out tonight, so I'm at your service.

SENATOR RADER: Would you stay for the remainder of the

proceedings in case questions do come up later?

DR. SWANSON: Yes, sir.

SENATOR RADER: Thank you very much. I have no particular preference of order myself. Mr. Moody, Dr. Kilgore, do you gentlemen have any idea as to a preference of testimony, your order?

MR. MOODY: Whatever the will of the committee, Mr. Chairman.

SENATOR RADER: Why don't we take a ten-minute break and let me discuss with both of you the nature of your testimony and make a decision?

(Whereupon the hearing recessed at 2:40 p.m. and reconvened at 2:50 p.m.)

SENATOR RADER: The committee will come to order. During recess I discussed with Mr. Moody and the Doctor the order of testimony, and it was the feeling that the Doctor's testimony would be more in line and more relevant to that which has gone immediately preceding and, therefore, it would be logically easier for him to testify at this time along the same lines as indicated previously by Dr. Swanson.

Doctor, of course, you're an old hand here. We all know that you're with the Levy Lipton Associates, but for the record, for those who do not know you, and who may come across this record, would you give us a full statement of your firm and yourself, and then proceed

with the statement, which I presume then we would open to questions.

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MR. KILGORE: All right, thank you, Senator. My name is Richard Kilgore. I'm Director of Research for W. J. Levy Consultants Corporation. Our firm has been economic advisor on matters of oil and gas to the Legislature since, I believe, 1969. We are also consultants to a number of oil companies, domestic and foreign, small and large. We also are consultants to a number of chemical companies on feed stock procurement and feed stock availability and so on. We're also consultants to a number of major oil users such as electric utilities, mining companies and the like. In addition to the State of Alaska, we are consultants to a number of other governments, at the present time the Province of Alberta, for example, and Pertamina, the state oil company of Indonesia, among others.

As for myself, I'm an economist by training, a Bachelors Degree in Economics from Rutgers University, and a Masters Degree from Carnegie Mellon University. Senator, you've been calling me Doctor; that is incorrect. I'm one of those who passed Ph.D. exams and never wrote a thesis, so I would like to correct that.

I've been with W. J. Levy since 1963, just about fourteen years now. Prior to that I spent two years with the National Bureau of Economic Research, which is a major non-profit research organization. I was also with the

Econometric Institute for a short while, and also did some work for the Committee for Economic Development.

I would like to make what I hope are relatively brief opening remarks, and they really have to do with how we, as your economic advisors, view what you're trying to achieve through these contracts. At least my opening remarks today are addressed primarily to the underlying reasons for sale of Prudhoe Bay royalty gas.

I'm going to cover such things as what are the interests of the State of Alaska, what issues can Alaska properly decide for itself; set against these, what are the broader national interests; and how do Alaska's interests fit into the national decision making process on this gas pipeline. And we'll try to put these in the context of the contracts before you.

As I said, my initial remarks will have relatively little to say about the contracts themselves. As an opening statement, our view can be characterized this way: if Alaska decides that sale of royalty gas is essential to support of an all Alaska pipeline route, we feel that the contracts, in general, are carefully conceived to protect the State's interests.

The primary objective in entering into agreements for sale of Prudhoe Bay royalty gas at this time is to provide support for an all Alaska route. We would like

to review briefly the reasons for Alaska's interest in that route and the importance of these reasons. As we see it, there are basically two types of benefits to the State in an all Alaska route. First, there appear to be certain fairly clear-cut economic benefits, although probably offset to some extent by some social costs.

And second, there is the question of the potential availability of gas for State use with the El Paso route.

We would like to provide some perspectives on both of these potential advantages. Among the pipeline alternatives there are certain economic advantages to the State that can be reasonably established. These were reviewed by the Governor's Task Force, and then the report, Comparative Evaluation of Prudhoe Bay Natural Gas Pipeline Systems.

An all Alaska route, together with its liquefaction facility, does appear to provide the greatest economic advantages in certain key areas. Employment is an obvious one; resulting income flows to Alaska's labor force, although all these will obviously not be State residents, there will be migrants too. Employment and income should be higher, both in the construction and operating phases of the El Paso facility, as against others. The greater length of the line, and the LNG facility virtually insure this will be the case.

Tax revenues to the State treasury should also be higher, largely through the operation of your property tax. Again, it's the greater length of the line and the LNG facility that make this possible for you.

Now, another major source of State revenue from Prudhoe Bay natural gas will be royalties and severance tax, both of which are based on wellhead values, as you know. The Governor's Task Force concluded that these revenues would not be affected by alternative routings; that is, that higher or lower transport costs to markets would not bear on wellhead values.

Now, we agree that as long as sales of Alaskan gas in interstate markets continue to be regulated by the Federal Power Commission, this is likely to be the case; that is, that wellhead values will probably be established on a basis other than a net-back from markets, that transportation would probably be added on to a regulated wellhead price, and the final price would be rolled into the final cost of gas to distribution companies and to ultimate consumers.

The FPC staff, I believe, has recommended the rolling in of high-cost gas supplies such as foreign LNG and Alaskan Arctic gas, and I understand that Judge Litt has also recommended this approach for high cost sources.

Under deregulation this is not necessarily the case, that the costs of transportation would not bear on prices. Transport costs, in that case, would have an ultimate bearing probably on the value of Prudhoe Bay resources. But we basically feel that deregulation is not a too likely event for some years to come.

We would caution, however, that Alaska cannot always assume that the value of its resources will be unaffected by the routing of its exports. In the long-run this may be the case. I think Prudhoe Bay provides a current example of some of the problems of transportation costs on wellhead value. As you know, there is a problem of potential crude surpluses on the West Coast, the major market to which Prudhoe Bay crude will move. And there is a possibility that some volumes of Alaskan crude may have to move to quite distant markets, that is, beyond the West Coast, around to the Gulf and East Coast of the United States, and this would be at very high tanker transportation costs since the oil must move in U.S. flag vessels and the distances are very substantial.

And if this is the case, if Alaskan crude does move in this direction in any kind of substantial volumes, there will inevitably be a question of the value of Alaskan crude in Alaska; that is, what market is its value established in. We feel that over the long-run it is not

in the national interest, and probably not in Alaska's interests either if its wellhead values are affected, to funnel ever larger and larger volumes of Alaskan energy supplies through California; that is, larger and larger volumes beyond Alyeska crude and beyond the El Paso route, if that is chosen.

If major oil reserves are found in Petroleum Reserve No. 4 on the North Slope, for example, a strong case will be made for a pipeline to move that oil through Canada I think, despite the fact that you have a pipeline corridor southward. Incidentally, if the gas Arctic pipeline is not built and an oil line moves in that direction, it would then be pioneering a corridor rather than following a corridor which might be established had the gas Arctic pipeline been constructed.

But this is somewhat aside. We believe it is reasonable to assume that the value of Prudhoe Bay gas will most likely be unaffected by the cost of alternative pipeline routes, at least for many years ahead. And let me also say that we've looked at the various studies that have been made on the costs of transportation, what the FPC has done, what other people have done, and we are not entirely certain in our own minds which system would, in fact, have the highest cost of transportation. It looks like a very uncertain thing to us. A lot of the

cost estimates are based on probabilities of delays, cost over-runs and so forth, that are very, very difficult to assess, in our view.

Against positive advantages in terms of employment, income and tax revenues, there are other factors to be considered as well by the State; and, as the Governor's Task Force concluded, some of these may be negative to the State in an all Alaska routing if one looks at such things as social impacts, the effect on the cost of living, prices in Alaska, and so on, and also looking at environmental factors which are, obviously very difficult to assess. The all Alaska route also involves an LNG facility, movement of LNG tankers out of Alaska, and these pose new environmental concerns, and ones we feel are very, very difficult to assess.

However, these are all factors that the State and its citizens must evaluate and weigh with the more clear-cut economic advantages from taxes, employment and so on. Your own Task Force concluded that the positive advantages outweighed the negatives, as you know.

The second reason for supporting an all Alaska route is the potential availability of natural gas for in-state use, and it is very clear -- I've been through all the -- I've sat also through all the hearings -- it is very clear from your questions that many of you

consider that aspect very vital.

It is obvious that the potential availability of gas is quite different among the three pipeline alternatives. El Paso moves to tidewater, and this could be very important for uses of gas in industries which involve export of their products to Lower 48 markets, obviously; being on the water, near water transportation, is important.

Alcan, of course, moves gas to Fairbanks and then moves off in a southeasterly direction, and in directions which run through areas that are, obviously, not very populated.

Gas Arctic route, of course, provides gas essentially just on the North Slope.

It is difficult, however, to assess how much value to be placed on this greater potential availability of gas for in-state use. We should point out first that there may well be other gas availabile in the State over the years ahead. Exploration is beginning now in other areas, the Gulf of Alaska, Lower Cook Inlet, Bristol Bay and so on. Gas may be discovered in one or more of those areas, and it is possible also that gas may be available for in-state uses from these areas at lower costs, lower transport costs and the like.

As an aside, I think we should also mention

something that we have before, that to the extent that the State of Alaska feels that in-state use of gas is very important to it or may be important to it in the future, they might consider in their leasing policy, perhaps changing leases so that what they have available to them, to the State, is not simply a royalty which can be taken either in value in kind. Perhaps the State should consider some sorts of options in leases which provides the State's future ability to buy back gas if the State feels that's necessary. This is not what is under your consideration now, but I think I should say again one should consider this if use of gas, you feel, is important in your State.

In any event, all may not be lost in terms of future availability of gas if the Gas Arctic route is chosen. As for now, however, it is Prudhoe Bay gas that is becoming available, and other potential supplies are obviously very speculative. And El Paso clearly has the potential to make more gas available to more locations in the State of Alaska. But what then really are the advantages in using gas within the State of Alaska?

You have major oil resources in the state, as you all know, and you're obviously not an energy short region. I believe we've pointed this out before, but we would

like to again: there is likely to be an economic advantage to using gas versus oil in an area such as Alaska, which is a major exporter of energy and also an exporter which is remote from its major markets. The reasons for this is that the economics of transportation clearly favor movement of oil over gas.

Gas transport costs per btu are roughly three to four times that for oil when the gas is moving overland by pipeline. Gas transport costs are roughly ten to fifteen times higher when the gas is transported over water as against transportation of crude oil over water. Thus gas, which carries very high transport costs, tends to have a lower value in an area such as Alaska, an exporting area such as Alaska; and oil, a higher value.

In general then, the economics tend to favor use of gas in Alaska and export of oil. To put it another way, gas is a better btu bargain locally, oil a better product to sell nationally. But we want to caution you and point out that gas transportation within Alaska is also, obviously, expensive if distances are very great over which gas must move; it's possible that the general economic advantage of using gas internally could be wiped out. But in general, the distances that you're likely to move gas to markets are likely to be comparatively short, at least as compared with the distances

you would be moving it to export markets in the Lower 48. Thus, in general, we would expect that gas will be a relatively attractive fuel for use in the State, as against oil.

While there can be significant cost advantages to using gas in Alaska, the potential volumes that might actually be consumed, we believe, are very elusive. We've looked at a number of studies that have been done projecting these volumes, and we think it is by no means certain that the volumes would be very large, especially any time in the near future.

It is even difficult to estimate what future residential, commercial and conventional industrial fuel uses might be in Alaska. Realistically, as I said, we believe that the volumes are not likely to be very, very large. We would note that in the Anchorage area where gas has been available for many years, as you know, and which is the area's most populous region, Alaskan consumers are now consuming something like two hundred million cubic feet a day of natural gas. Your royalty share of Prudhoe Bay gas might be on the order of three hundred million cubic feet a day, or about fifty percent more than is currently being consumed in Anchorage, where it has been available for many years, and where a large part of your population lives.

Now, new industries are possible. Copper, iron ore, nickel were pointed out by the Governor's Task Force, but they also were very candid in admitting that, and I quote, "At the present time there have been no large-scale, serious and detailed proposals by the private sector to utilize Prudhoe Bay gas for in-state use."

Non-conventional uses of gas, and we've heard some testimony about these, such things as using gas as a feed stock for petrochemicals or for methanol are even more uncertain, we believe. If these do materialize it seems likely that it would be many years down the road. While the resources are available in Alaska for these types of operations, the economics of scale and of transport of products to other areas tend not to favor Alaska and tend to work against the economics of these industries in Alaska. We don't mean to say nothing of this sort will ever come about, but what we are saying is that one has to look very carefully at the economics of these things, and it is uncertain, quite uncertain as to what volumes would be used in the foreseeable future for these unconventional uses.

So, as we see it, the State's interest in an all Alaska route depends on, first, reasonably clear-cut net economic and social benefits; second, the potential

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availability of gas for in-state use which, in principle, could provide economic advantages as against other fuels, notably oil. But the volumes that might be used, and their importance, is very difficult to judge and uncertain.

But it is up to the State and its people to decide how important these factors are to their interests, and how vigorously, and by what means it wishes to pursue these interests. We do not, however, feel that the State of Alaska can really be the judge of what pipeline route is in the best overall national intersts. There are a great many factors that bear on this beyond the interests of the State. Alaskans should be aware that other routes than an all Alaska route might have greater overall advantages to the Nation.

On the other hand, if Alaska feels strongly about what it sees are important advantages to the State in the all Alaska route, what is important is that these interests are considered and weighed in the national decision making process that is now taking place as to the routing of the pipeline.

We were struck, in reading the FPC staff report, which strongly recommended the Gas Arctic route, that the interests of Alaska and potential benefits to the State were apparently not really considered at all. Judge Litt,

in his decision, and I haven't read it all, I haven't read it in its entirety, acknowledges that -- and again I quote, "Alaska's views are entitled to substantial weight." However, I suspect that he is not as convinced of the validity of Alaska's arguments and gives them less weight than most Alaskans might wish.

If Alaska feels strongly about what it believes are the interests of the State in an all Alaska gas pipeline, it will want to work to insure that its views get a very careful hearing in the nation's decision-making process. The sale of Alaska's state royalty gas is one way of attempting to do this. If this approach is chosen, we believe that the contracts before you are, in general, as I said before, carefully conceived and effective in protecting the State's interests.

We are not legal advisors to the State, I want to caution, and we have no legal expertise, and there are others here who do. But I would like to make the following general comments on the contracts.

Some questions have been raised about the pricing provisions, and you will obviously have to consider these very carefully. You obviously are by the nature of your questions. In the end, it seems to me, you will have to assess the likelihood of these contingencies that are spoken about; that is, the likelihood that the State

might be able to get a higher price if it didn't sign this contract. Various alternatives have been thrown out. Some of them seem to involve sales of emergency gas to industrial users, questions of whether the State would be caught on a vintaging problem if it signed the contract now, and get a lower price, and so on. From your questions it's obvious also that you are taking the approach that we would recommend, trying to assess what the possibilities of these things happening are. I'm sure you're going to ask me more questions on this.

In general, I've looked at these possibilities; I think they're relatively unlikely. And second, if you conclude that these things are possible, that is that it's possible that the State might get a lower price by entering this contract, and even if you assume that that possibility is very small, you might want to consider how could one protect oneself against this possibility. You'll have to ask yourself, could you write contract terms or modify this contract in a way which would protect you from these eventualities. Well, I don't know whether I have the answer to this, but I suspect it's probably doubtful that you could. I think there are probably other witnesses who may be able to give you a better answer to that.

Now, as to the other provisions, the recall

provisions seem to us to be very strong. It is difficult for us to see how they really could be improved upon very significantly.

We are also pleased with the State's ability to get access to liquids under the contract. We have always felt that liquids could be very important to the State, if not as a petrochemical, or a feed stock, or for methanol, or something rather exotic, we think that they could be especially of value as a fuel to local residents, especially to businesses and residents in remote areas. So that we feel that liquids, in the end, could perhaps be of even more benefit to the State for in-state use than gas itself. It's a possibility, and we're very pleased with the provisions of the contract in that respect.

In sum, the Legislature will have to consider carefully what its interests are and how to pursue those interests. In the end, only you can decide whether the contracts before you are an effective mechanism for achieving your objectives. Thank you.

SENATOR RADER: Thank you, Mr. Kilgore. Any questions? Mr. Gruening.

REP. GRUENING: Mr. Kilgore, when you mentioned studies that you looked at for in-state use of royalty gas, which studies were they?

MR. KILGORE: Well, there was one prepared by your Division of Natural Resources.

REP. GRUENING: Could you identify it specifically?

MR. KILGORE: I think I have it with me. "Analysis of Prudhoe Bay Royalty Natural Gas Demand & The Proposed Prudhoe Bay Royalty Natural Gas Sale" dated January 1977. It's a study done by the State of Alaska, Department of Natural Resources, Division of Minerals and Energy Management.

Now, I don't want my remarks to be construed to mean I quarrel with this study. It's very difficult, all I'm saying -- estimating future requirements is an extremely difficult and uncertain thing, and this may be as good a job as can be done, but the results are still highly uncertain.

REP. GRUENING: Did you do an analysis of what projected uses might be?

MR. KILGORE: No, we have not.

REP. GRUENING: In that regard, the testimony yesterday from Mr. Thomas Stahr was that the Anchorage utility saw that in 1985 their needs in Cook Inlet would be exhausted. In your readings or studies have you established that to be true?

MR. KILGORE: No, I really don't know whether that is true. I do not know how much gas is committed to that pipeline.

REP. GRUENING: But the major part of that would be that two hundred million cubic feet per day that you referred to that's used there?

MR. KILGORE: Yes, a significant part of that does go for generating electricity in the Anchorage area.

REP. GRUENING: And the total royalty share at peak capacity is about two hundred-fifty to three hundred million cubic feet per day?

MR. KILGORE: I said very roughly three hundred million cubic feet a day. That's an eighth of 2.4 million cubic feet a day, a very rough number.

REP. GRUENING: Did you run across a date at which at least the present known reserves at Cook Inlet are exhausted?

MR. KILGORE: No, I haven't. The gas reserves data are available. The American Gas Association has estimates of reserves in the area.

REP. GRUENING: Do you recall whether that study of January '77 covers that point?

MR. KILGORE: No, I don't recall. As I recall, it was basically an anlysis of potential gas demands along the route of the pipeline.

REP. GRUENING: But it didn't take in total the gas demand in the State?

MR. KILGORE: I believe not.

REP. GRUENING: Are you familiar with the provision that

allows the companies that are purchasing to take one and a half times new reserves that are discovered to replace gas that we call back?

MR. KILGORE: Yes.

REP. GRUENING: Do you see any economic disadvantage to the State in doing that? It was raised, I think by Mr. Dallas, yesterday . He pointed out that, say, reserves were found in Cook Inlet, new reserves or, say, Copper River Basin, that we would be giving them lower priced gas. In other words, because of the lower transportation costs we would be giving them gas at a lower price than we should.

MR. KILGORE: Well, frankly, I don't know the answer to that. As I originally read the contract I thought it referred to gas which traversed the whole length of the pipeline, that this was gas they would have a call on. I was thinking in terms of North Slope new discoveries or more gas on the North Slope. I really don't know the answer to that question.

SENATOR RADER: Representative Parr.

REP. PARR: Mr. Kilgore, you mentioned a while ago that one of the possibilities was gas from OCS, you mentioned the Gulf of Alaska, etc.

MR. KILGORE: Yes.

REP. PARR: And that this might be cheaper than what we could

get from the North Slope actually. As you know, of course, the Supreme Court has held that all belongs to the Federal Government and we don't have a claim on it. So I suppose we would have to buy it from the producers. Even considering the fact that we would be buying it rather than using our own royalty gas, do you think the economics are still such that we would do better by taking OCS gas, assuming it is produced in reasonable quantities?

MR. KILGORE: I think the answer to that is very uncertain. It's impossible to really know. One doesn't know the pricing of this gas, one doesn't know the physical circumstances under which it would be produced, what sort of costs would be involved in bringing it to shore and so on. I think the answer is, one cannot really determine in advance whether that gas would be cheaper. It could be.

REP. PARR: Is it also possible, Mr. Kilgore, that the Federal Power Commission could decide where the OCS gas would go, it might say it would all go to Pennsylvania rather than staying in Alaska at all?

MR. KILGORE: Yes.

REP. PARR: Thank you, Mr. Kilgore.

MR. KIGORE: Certainly.

REP. PARR: Two different points. You said a while ago it didn't seem really that there was too good a potential

at least at the present for use in the State of the gas. At least it seemed to be highly doubtful as far as you were concerned.

MR. KILGORE: What I said was, it's very uncertain, it's elusive, and we suspect that the volumes would not be too large.

REP. PARR: Does that mean what you're saying is that you don't anticipate, at least in the foreseeable future, a sufficient demand; is that what you're saying; or are you simply saying you can't tell? I'm not sure.

MR. KILGORE: What we're saying, it's very difficult to tell. If you want a judgment, I suspect it's lower volumes rather than higher volumes.

REP. PARR: Has your company ever done any kind of a study as to the lowest economic threshold at which petrochemical plants and so forth will become feasible, of the kind that might be built, let's say, in Alaska using the royalty gas?

MR. KILGORE: No, we have not made formal studies of that. We know some of the problems of the economics involved and so forth, but we have not done a formal -- this is from broad knowledge chemicals and so on. It is not from a detailed study of the potentials for petrochemical uses in Alaska.

REP. PARR: Could we assume that the use of natural gas in

other communities in Alaska would be roughly comparable to that being used in Anchorage? I'm not talking absolute terms, of course, but in, say, relationship to the population? Fairbanks, for example, is roughly -- the Fairbanks immediate area is roughly one-third the size of Anchorage. Now, do we anticipate that they would use about one-third as much as Anchorage, or does that vary quite a bit?

MR. KILGORE: I think, if one has to make a guess, you might guess that it might be lower per capita. Don't forget, Anchorage is a populated area, you have a density of population, and this provides advantages, economics of scale of putting in distribution systems and things of this sort. If you were going to put gas into Fairbanks there would be a very, very high expense of putting in a distribution system. If you look at other more remote areas, the economics of just getting it there and the scale of population, or the users in those areas, is quite small and tends to work against the advantage of gas use.

REP. PARR: That was going to be my next question. You did say, I believe, something about the possibility of using, I believe, butane and propane, which are the liquids from the natural gas, especially for remote areas. One thing you really didn't touch on very much was the

liquids. You said you thought it was desirable to the State to have them. Do you have any idea of the economic feasibility of taking liquids out in the State, let's say propane and butane, and shipping those to remote areas of the State to use?

MR. KILGORE: Some liquids, obviously, have to come out, I guess there's been testimony here. On the North Slope there will be some taken out for pipeline reasons. The answer is no, we have not done detailed studies on the economics of the use of propane as a fuel in areas. The statements I made really come from our broad judgment and from our knowledge of the industry, not from detailed studies.

REP. PARR: Thank you, sir.

SENATOR RADER: Representative Hayes.

REP. HAYES: Mr. Kilgore, yesterday Mr. Thompson of the Alcan Pipeline testified that in his opinion one of the advantages of the Alcan route over the El Paso route was an approximately Eight Hundred Million Dollars of additional revenue to the State. From your testimony I conclude that you don't agree with this, and if my conclusion is correct is that because you don't agree with their projected construction costs or you don't agree with his statement that if construction cost is less it will result in a better price to wellhead?

MR. KILGORE: It's the latter. I don't quarrel with his or anybody else's construction costs because I don't have my own estimates. What I'm saying, we really don't know what the circumstances of pricing of Prudhoe Bay gas are going to be. If it's still regulated by the Federal Power Commission we don't know quite how they're going to regulate it. We don't know whether there will be regulation and so on.

We think the most likely thing is that we will have continued wellhead gas regulation by the Federal Power Commission and that it will set prices independently of what the transportation costs are. That's the most likely thing to happen.

If you're looking down the road and we really have deregulation, then the cost of transportation could have an impact on the value of gas at Prudhoe Bay.

REP. HAYES: If I might continue on that, we have had testimony here that we can expect deregulation of some sort down the line. Would you agree with that?

MR. KILGORE: Well, if far down the line is a very long period of time, yes, I think you can't rule it out. We think it unlikely it would come anywhere in the near term.

REP. HAYES: Anytime during the life of the contract?

MR. KILGORE: The life of the contract is?

REP. HAYES: Twenty years.

MR. KILGORE: Twenty years. Well, near the end of the contract I suppose the probabilities get higher.

REP. HAYES: But in any event, in your opinion, you don't anticipate any regulation that would be beneficial to the wellhead price in the next ten years.

MR. KILGORE: I think that's most likely, there will not be.

SENATOR RADER: Senator Sumner.

SENATOR SUMNER: My concerns lie primarily in the area, say, of economic development potential, whichever line is chosen. Which line, in your view, would provide more economic development opportunities for the State of Alaska?

MR. KILGORE: Well, I think the all Alaska; I think that's reasonably clear.

SENATOR SUMNER: Do you think that petrochemical manufacturing is a potentially viable interest for our future?

MR. KILGORE: I think it may be. I don't know at the present. I think it might be and I think obviously this is something you want to look at. You will want to get people, chemical companies who do this kind of thing to look at it very, very carefully for you. I don't want to imply, anything that I've said, that you shouldn't pursue economic development.

SENATOR SUMNER: There seemed to be some doubt in your mind

as to whether it might not be feasible, and yet the primary interest in using the Alcan line, or the all Alaska line, would be for that primary benefit. Yet you seem to have a fair amount of hesitancy as to whether that's ---

MR. KILGORE: I think this is something that you're obviously interested in. I guess, yes -- what I'm really saying is I wouldn't overdo my expectations as to what you will get because you have gas available.

SENATOR SUMNER: If we don't get the all Alaska line what opportunity in the future do you see where there might be a possibility of getting gas to tidewater or an Alaska line bringing the gas down?

MR. KILGORE: Is your question where else one might get gas?

SENATOR SUMNER: What is the opportunity of getting gas to tidewater in the future if we don't get the Alaska line that's proposed?

MR. KILGORE: That depends on what the chances are of finding gas in the area close to tidewater, and there are a number of prospective areas where gas could be found. But there isn't anyone, including myself, I'm not a geologist, but one who really knows geology, who can tell you for sure exactly what the probabilities are of finding gas in these areas because there has been, as you know, virtually no exploratory work in many of these areas. So you just

can't assess in advance how much you might get or what the chances are.

SENATOR SUMNER: Are you aware of any interest at the moment from different chemical companies that might have an interest in Alaska in the petrochemical area?

MR. KILGORE: No specific knowledge. In the past -- as I say, we have some chemical company clients -- we have very broadly suggested they might want to look into this possibility. But I don't know of any detailed proposals of looks at the present time.

SENATOR SUMNER: And if I've drawn the right conclusions, you're saying that the Arctic line provides virtually no economic benefit or development benefit for the State of Alaska except money; the all Alaska line provides the most opportunity of the three lines; is that correct?

MR. KILGORE: In terms of economic advantage and potential availability of gas.

SENATOR SUMNER: Thank you very much.

SENATOR RADER: Senator Butrovich.

SENATOR BUTROVICH: Mr. Kilgore, in your work for the State, have you people projected changes in population down the road?

MR. KILGORE: No, we have not, Senator. We have not been asked to do that.

SENATOR BUTROVICH: Are you aware of what is happening in the

way of population in Alaska?

MR. KILGORE: I know that it's growing rapidly, yes.

SENATOR BUTROVICH: Can you see any difference in shipping a product by water, say, from an Alaska port to the South 48 than from Alaska to Japan or from South America to the United States?

MR. KILGORE: Well, obviously the costs of transportation depend upon the distances involved, but in the case of Alaskan shipments to the Lower 48, they also involve the use of U.S. flag vessels, which are considerably higher on cost than foreign flag vessels. Shipments from Alaska, for example, to Japan would not have to move in U. S. Flag vessels.

SENATOR BUTROVICH: You are aware, however, I assume, or are you aware that when the consumer in Alaska buys something he is generally paying the freight up and the freight back because of the fact that there is no back haul?

MR. KILGORE: Yes, sir.

SENATOR BUTROVICH: Wouldn't you consider the possibility of a petrochemical industry in Alaska greatly reducing that span of cost to the people living up here if, indeed, there was a back haul?

MR. KILGORE: Yes. I think it's obviously something you have to look at. It's an important objective for you to pursue. You see a problem and you obviously should

pursue it. The problem may be that -- I said may be -- certain types of chemical processing, you're talking about a plant on a very large scale, and a very small part of the output of that plant may be consumed locally in Alaska, which means that a very large part of the output may have to go to other markets, and you have to look very carefully at how competitive that big part that goes elsewhere is with supplies from other sources. I don't want to prejudge the answer.

SENATOR BUTROVICH: No, I'm sure you don't. It's awfully hard for me to reconcile, in this day and age, why it is not as practical to ship by water from Alaska as it is to ship by water anywhere else. There's no such thing anymore anywhere that I know of where such a thing as cheap labor exists. That used to be a great argument, but it certainly doesn't exist in the United States today. I, for one, don't think that enough emphasis and enough study has been developed on the petrochemical side of this question.

MR. KILGORE: I would agree with that.

SENATOR RADER: Senator Huber.

SENATOR HUBER: Mr. Chairman, I do have a couple. Dick, do you believe that the contracts that we have before us are attractive enough to disregard the earlier admonitions of Walter Levy and Milt Lipton to be very

cautious about committing our future oil and gas supplies before delivery systems actually exist that are able to transport them? We've heard that many times from Milt and Walter, and can you expound on it?

MR. KILGORE: I think, as a general proposition, I would probably agree with that, but what one has to do is -- here you have a new objective, something else which you are trying to do with these contracts. You obviously have a purpose for doing it; it's to help promote a line which you seem to be quite interested in having, and you just have to assess that against a more general position that perhaps waiting is better. You really have to assess the value of it.

SENATOR HUBER: Leading to my next question, Dick. Do you believe the contracts will decide which route is chosen, and would you please try to give us a percentage of chance for El Paso against Artic Gas, for instance?

MR. KILGORE: Senator, I'm really not able to give you that kind -- it obviously provides some positive support. I really don't know what the odds of it are. I think that's beyond the scope of my competence as an economic advisor.

SENATOR HUBER: My last question fits in with it. Leaving political considerations aside, if you remove the political considerations from the contracts, do you believe

we could get more money if we held off selling our gas until a transportation system is ready instead of using it for political clout? If so, what magnitude would you project?

MR. KILGORE: As I said before, we don't really know what future pricing is going to be like. We don't know whether it's going to be regulated pricing, or deregulation and so on. So there is an uncertain future. It has been suggested there is at least a possibility that the State could get a higher price by not signing this contract and waiting. But when I look at the circumstances under which this possibility might happen, I think it's unlikely.

SENATOR HUBER: You think it's not the most likely scenario?

MR. KILGORE: That's correct.

SENATOR HUBER: Thank ycu, Mr. Chairman.

SENATOR RADER: Any further questions? Mr. Chatterton? It's about time for a break. I assume we're just about. through with this witness, but go ahead.

REP. CHATTERTON: There are three questions, and I don't know how long he's going to take to answer them.

SENATOR RADER: Why don't you go ahead, let's try it.

REP. CHATTERTON: Sir, Mr. Kilgore, let's take an assumption that here last week there was a natural gas transportation system between Prudhoe Bay and the South 48 and, at least

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we will take that premise right now. Now, apparently a crisis occurred in the northeastern sector of the United States that has led the President to take near national emergency situations, at least for transporting liquefied methane between American ports in foreign bottoms and Heaven knows what all we are doing, quite an upset. On the premise that that straw existed, do you believe that the President might even have been able to legally, and I'm sure he would have, demanded Alaska gas from Prudhoe Bay even though it might have made the people of Alaska suffer?

MR. KILGORE: Yes, I think it's a possibility. In an emergency situation you can't rule out that if he doesn't have the power now that the Congress will legislate such powers.

REP. CHATTERTON: Without that straw he can't do much about it, can he?

MR. KILGORE: No, there's no way he can move the gas to the Lower 48.

REP. CHATTERTON: You indicated, when you were giving your reasons for being hired by the Legislature here and so forth and so on, that you did do consulting work for, I think you said, transmission companies, other foreign governments. I don't know whether I singled out of context transmission companies, but would any time,

keeping in mind the powers of the Alaska Oil and Gas Conservation Commission, would you recommend to a client or do you think that a client, even if you recommended that he proceed to look for financing, could possibly get financing for a Six to Nine Billion Dollar pipeline in view of the powers of the Alaska Oil and Gas Conservation Committee?

MR. KILGORE: What your're asking, are these powers likely to be an important stumbling block to ---

REP. CHATTERTON: To the financing.

MR. KILGORE: To the financing? No. I think those powers, in and of themselves, no.

REP. CHATTERTON: Even though they can turn the valve and shut the gas off in two years?

MR. KILGORE: I think if the lenders were reasonably assured from their own looks and so forth at the reserves and so forth, and carefully considered what they felt were reasonable flows of gas without loss of pressure and so on, without loss of oil, I think they would go ahead, yes.

REP. CHATTERTON: You, yourself, or your associates have not so done, have you -- made that determination?

MR. KILGORE: No. We are purely economic consultants.

REP. CHATTERTON: One more question and I'll close. Do you think, by any chance, that the transmission system between

Prudhoe Bay and the South 48 would be financed by public money?

MR. KILGORE: Do I think is there a possibility that in the end public money or some sorts of guarantees, or something?

REP. CHATTERTON: Yes.

MR. KILGORE: I think there is a possibility, yes.

REP. CHATTERTON: Thank you, sir. Thank you, Mr. Chairman.

SENATOR RADER: Representative Hayes.

REP. HAYES: Thank you, Senator Rader. I want to get back on the question that I was asking you about, the timing for deregulation. I didn't quite pose the question correctly. I think you said that you didn't think there would be deregulation in the next ten years, but within somewhere between ten and twenty years from now. The contract actually starts on the date of delivery, isn't that correct?

MR. KILGORE: Yes.

REP. HAYES: So that during the first ten years of the life of the contract we might expect deregulation, going back to your previous answer?

MR. KILGORE: It's possible, yes.

REP. HAYES: Thank you.

SENATOR RADER: Any further questions?

SENATOR HUBER: I have a short one that comes from a question Mr. Chatterton asked.

SENATOR RADER: Go ahead, sir.

SENATOR HUBER: I just wondered, Dick, I thought maybe you might have some idea. Well, here's the question. How much is the reasonable flow of gas without reducing oil recovery? That's in answer to the way you used it in answering Mr. Chatterton.

MR. KILGORE: Would you repeat that, Senator?

SENATOR HUBER: In your opinion, how much is the reasonable flow of gas without reducing oil recovery in the content that you used it in answering Mr. Chatterton's question?

MR. KILGORE: As I said, I'm not an engineer, I don't know technically the answer to that. My answer to the question was, if the lenders and other people in their own analysis were assured of this fact that they probably would be willing to go ahead. I have no opinion of my own as to what the volumes would be.

SENATOR HUBER: I thought it indicated to me you had some knowledge that we didn't have, from your work with other companies.

MR. KILGORE: No, sir.

SENATOR RADER: I think you stated, Mr. Kilgore, when you started, that you've been in attendance constantly during the hearings which started Monday, and that the value judgments you have given us today, you have taken into consideration the testimony that you have heard

at these hearings thus far?

MR. KILGORE: Yes, Senator.

SENATOR RADER: Are there any other questions of Mr. Kilgore? Mr. Kilgore, will you be available the rest of the afternoon?

MR. KILGORE: Yes.

SENATOR RADER: We'd appreciate it very much if you could keep yourself available for the committee if they have any questions.

MR. KILGORE: I intend to. I'll be happy to do so.

SENATOR RADER: We'll take a break and then hear from Mr. Rush Moody. Ten minutes.

(Whereupon the hearing recessed at 3:45 p.m. and reconvened at 4:00 p.m.)

SENATOR RADER: The committee will come back to order. Mr. Jerry McCutcheon has handed me a two-page document dated April 4, which he has asked to be inserted into the record as an extension of his remarks as Exhibit 18 instead of requiring him to verbally testify. Unless there is objection, we will have those remarks placed in the record as Exhibit 18.

REP. CHATTERTON: Objection. Would you change the date to February 4, please, from April 4?

SENATOR RADER: I'm sorry, did I say April 4? It's February 4.

(Whereupon Exhibit 18 was duly marked.)

Our next witness -- before he starts to give us his own statement of qualifications, I just thought I might direct the attention of the people present, as well as for the record, that the February 7, 1977 Newsweek entitled "The Gas Crisis" in the National Affairs section, Mr. Rush Moody, a former Federal Power Commissioner, is extensively quoted. So I want you to know that Mr. Rush Moody has a national audience for sure and perhaps a national constituency. I don't know about that.

MR. MOODY: If nominated, I will not run.

SENATOR RADER: But, at any rate, I want to say one thing about the Alaska Legislature; we go first-class when we hire consultants. That's February 7, 1977 on page twenty.

Mr. Moody, would you please -- as many of you know, Mr. Moody was first retained by the State of Alaska last year by the Joint House-Senate Gas Impact Pipeline Committee, which was a statutory committee chaired by myself and Representative Gruening as Co-Chairman. Mr. Moody gave that committee extensive testimony last year on some of the same matters that we're considering now. The committee went out of existence as of January 1 of this year, the statutory committee. As I say, he was retained by that committee, as was Mr. Swanson,

from funds appropriated to that committee, with the thought that some committee of this Legislature would need his advice and his counsel in this matter.

So, Mr. Moody, with that, would you please read into the record first, sir, your background qualifications, and then I assume you will make a statement and open yourself for questions.

MR. MOODY: Thank you, Mr. Chairman, to both Chairmen, and to the Members of the Committee, I wish to express my appreciation for the opportunity of being here. I have been most impressed over the course of the past five days with the attention and the concern which each of you expressed. I wish that the Congress of the United States would take as seriously some of the problems they have as you obviously take seriously this problem before you.

I am a lawyer by trade. I attended the University of Texas, with a Bachelor of Business Administration, University of Texas Law School, licensed to practice in the State of Texas in '56, in private practice from 1956 until 1971. I was appointed to the Federal Power Commission as a Democratic member by a Republican President. I served on the Federal Power Commission from 1971 until March 15, 1975. I was Vice-Chairman of the Commission for two of those years.

I resigned from the Commission in March of 1975 because of my belief that the structure of Federal regulation was injuring the consuming public of the United States and that very serious regulatory reform was necessary if the country wasn't going to get in a lot worse shape than it was already in.

Following my resignation I represented the

Governor of the State of Texas in Washington, as his special counsel on energy affairs. In January of 1976 I became a managing partner of the Washington office of the law firm of Vinson and Elkins. The firm, of which I am a member, has offices in Houston, Washington, Fort Worth and London.

I hesitate to claim to be an expert in any area, but I am more than fifty miles from home and I do have a briefcase, so I guess I qualify.

Mr. Chairman, I would start out, I suppose, by saying that I attempted to prepare for the committees a summary of the contracts together with some analyses, or attempted analyses, of what I perceive to be the major strengths and major weaknesses.

SENATOR RADER: Let me interrupt you, Mr. Moody, so we be sure we don't miss that. Make certain that the remarks, your analyses and your covering letter of January 28 is entered in full as an exhibit to the hearings, and that would be Exhibit 19; is that not correct, Reporter?

MRS. SANDERS: Yes.

SENATOR RADER: Be assured that your full remarks are in the supplement.

(Whereupon Exhibit 19 was duly marked.)

MR. MOODY: Thank you, Mr. Chairman. I realized after I got here and after I listened to the course of the

hearings over the past several days that, in many instances, the issues that were being explored related to whether or not any contract should be signed, whether it was appropriate use of the State's resources to commit to these contracts, these particular purchasers, under these particular circumstances at this particular time.

I will, if I might, go through the more formal part of my contract analysis first and then turn, if it is the committee's will, to some of the other issues that have been addressed during the course of the hearing, and then finally respond to whatever questions the committee will have.

With respect to the contracts themselves, I should start out by saying that it is very difficult to make a comparison with any other gas sales contract because you have a unique situation, and much of what I can offer to you, other than with reference to the technical side of the contract in terms of measurement, metering, and that sort of thing, I can tell you whether that's standard or whether it's not standard. But there's much that's in the contracts that reflect the unique nature of the transaction, and so when I offer thoughts on that I hope that you gentlemen and ladies will understand I'm having to offer you value judgments of a sort. I didn't perceive it to be my job to say this is the best of all

arrangements that could be made, but rather to take what the Administration had negotiated and brought to you and try to offer some thoughts as to where those contracts seemed beneficial and where there might be questions.

I would speak first on the positive side with reference to the contracts themselves. I find four areas where I think an excellent bargain has been struck, in several instances much better than I would have expected in trying to plat out what course this all might have taken when we first started discussing it a year ago.

I think one of the principal strengths of the contract lies in the provisions that the State will not suffer monetary loss by reason of an in-kind taking, compared to what expenses the State would be out, which would be none, if it just took in value. When the State takes in-kind there has to be a point in the production cycle when title to the gas passes. It cannot be, in my judgment, at a point after all of the processing has occurred and all liquids have been stripped out, and the State just walk in and say, "All right, we want one-eighth of the residue gas and we want one-eighth of the liquids free of any costs."

I don't believe that's the way it's going to work under your leases and under the practicalities of the arrangement. But since the gathering lines haven't been

built and the processing plants have not been designed or constructed, no one knows what those costs will be, and I think it very important that the contract negotiators realized that there was a risk, a substantial financial exposure on the part of the State, and that they undertook to protect the State against those costs. This, in my judgment, they have done in Article II, Sections 2.2 and 2.3 wherein, in effect, the buyers say whatever it is that the State is out in terms of out-of-pocket costs by reason of this in-kind taking, that the State would not have been out if it were value taking, then we, the buyers, agree to reimburse the State in full.

I think that was a significant concession on the part of the buyers to the State, and I think it's an important element of protection in the contracts.

Secondly, I think it is very much in favor of the contracts that the arrangements have been structured so that the State is selling one hundred percent of its present deliverability, but not one hundred percent of its Prudhoe Bay reserves. You will notice as you go through the contracts that of the three buyers, one is to receive twenty-five percent of the gas that flows that belongs to the State, another twenty-five percent, and then the third fifty percent.

Well, obviously, that's the full one hundred

percent of the deliverability as it is produced. But because the volumetric lim. .ations are written into the contract in Article III, what we have is a situation that the State is not selling what it really believes that it has in totality. In this instance I operate on the strength of what I was told last year when I was up here, that the State's royalty share of recoverable reserve was anticipated to be in the order of 3.2 trillion cubic feet, and these contracts obviously sell less than that. So it's less than a complete sale of all of the royalty gas that the State expects to recover from Prudhoe Bay.

Personal judgment, I think that is prudent because it gives you an opportunity to have some operating experience behind you, it lets you see what the market conditions are like at that point in time when the total volumes have been delivered under these contracts, and permits you the flexibility and freedom to make new contractual arrangements if that appears to be in the best interests of the State.

Third, I think the arrangements for withdrawal of gas for in-State needs are very favorable. I think the protection there is quite good. I will express to you the view that these provisions may almost be too good when it comes time to try to finance construction

of a pipeline. It's going to be a little bit hard for a financial institution to look at a situation where the State has a right to pull back out one hundred percent of one-eighth of the gas stream, so that that throughput is not available to stand behind the generation of revenues for the line.

From a contractual standpoint, I see no reason in the world not to insist upon this bargain as far as the State is concerned. What I'm suggesting to you is that there may come a moment of truth further down the line when the financial institutions come to the State and say, "If you insist on this we can't finance it." To me, I'm trying to underscore what I believe to be the strength of the withdrawal provisions because I think they are very favorable to the State.

I am impressed with the provisions in the contracts relating to the retention of the State's rights in natural gas liquids. You've heard a number of people say, and certainly I agree with them completely, that the liquid content of this gas may be of greater value to the State than residue gas itself. I do think that the State has retained fully the right to remove the liquids, process them and do with them as they will.

You're not forced to do that. It's an option under Article IX. If you leave any part of the liquids

in the stream the buyer has to take them; you, the State, will be compensated on the basis of the increase in btu content of the gas that comes about by reason of leaving the liquids in the stream. So you, in effect, have an option as to whether to pull the liquids out or to leave them in. If you pull them out, they are yours to sell on the open market or to devote to uses within the State. If you leave them in you will be paid for the btu content. I think those provisions are quite protective of the State's interests.

Finally, I read with interest the different places in the contracts where the State has the right to withdraw or terminate because, since we are dealing in such such a flexible fluid situation, I would think it important to the State to know that they were not forever bound to these contracts, that if certain things happen that you might walk away from them without incurring any obligation or liability.

There are, I believe, four instances where the State can withdraw from the contract without penalty. It may do so if it is prevented by a Federal action from taking its royalty gas in-kind. The contracts may be terminated if a decline in production results in non-profitability to the State. The sales agreements may be terminated by the State if the State so elects after

the FPC makes a routing decision that is adverse to an all Alaskan line, and finally, the State may terminate if by January 1, 1979, all approvals necessary, authorizations, that the State feels necessary to get the benefits under this contract, if all of those approvals have not been received.

I think the latter quite a good provision. I think it lets you look at the decisional process at the Federal level. If it's something that the State could live with, you may do so; if you don't like the way it's structured, you've got the right to terminate the agreements. I think those provisions are all quite sound, quite protective of the State, and I think they are major sources of strength in the contracts.

The principal areas of difficulty that I have with the contract all relate to Article VI, dealing with pricing. There are several problems here. I've tried to be as exhaustive as I could in thinking up the problem areas that you need to be aware of. In the course of talking about them though, I'd like to give you an assessment as to whether I think they're problems of great magnitude or problems of lesser magnitude -- because any lawyer can find anything in a contract, you know, and say, "This might not work out too well." So I'll do the best that I can to give you an assessment of how bad

it is as we touch upon each one of them.

The first one relates almost directly, Representative Gruening, to the line of questions you were asking about the possibilities of a deregulation bill or any action that would result in a vintaging situation that would be hurtful to the State. The structure of Article VI is such that there is a proviso in Section 6.1 which has overriding effect on the pricing structure. I'm sure that each of you have read these contracts carefully, and you will recall that Section 6.2 provides a pricing mechanism if regulation continues.

6.3 provides a pricing mechanism if there is no Federal regulation, and 6.4 provides a pricing mechanism if Federal regulation starts, deliveries commence, and then Federal regulation terminates. So there are three alternatives, really, in terms of pricing, and then you pick up Section 6.5, which is important and which gives redetermination rights.

But Section 6.1, the last clause makes it clear that there is one condition that cuts across all of the pricing alternatives, and it is that so long as the pipeline buyers are subject to the jurisdiction of the Federal Power Commission, so long as their rates are subject to the jurisdiction of the Federal Power Commission, then the price that they will pay to the State

shall be no higher than the price which they are permitted to recover in their jurisdictional rates at the FPC.

I'm not surprised to find that the pipelines wanted that, because certainly you can understand that they don't want to pay you more than they can get back from their customers and, indeed, I would be surprised if all pipeline purchasers didn't bargain most strenously for this type of provision. But I do want you to be aware that the effect of it is to say that so long as deregulation does not occur the Federal Power Commission is going to be setting the price for your gas.

So far the State has taken the position that it is not a person within the meaning of the Natural Gas Act, that it is not subject to direct rate regulation by the FPC. I concur in those positions, but the effect of Article 6.1 is to consent to indirect rate regulation by the FPC because you are saying that the pipelines do not have to pay to you more than the FPC will permit them to flow through in their jurisdictional rate structure.

That problem disappears if appropriate deregulation legislation is passed. But if it does not pass, if we are with substantially the same form of pricing that we now have for some period into the future, then it seems to me that the 6.1 proviso does override the other pricing

alternatives that appear in the contract. Because of that, Representative Gruening, you can postulate a situation where a deregulation bill passes that deregulates the producer but does not deregulate vintage of gas that the State would be selling under this contract. That would occur if a deregulation bill were drawn so as to deregulate gas sold under a contract dated after a certain date.

I offer you the value judgment that that is a most unlikely occurrence. The Commission moved away from contract date vintaging in 1969 in the Southern Louisiana Two decision and has never returned to it. I believe that I have read every piece of gas legislation that's been offered in either House for the last four years, and I can recall no bill offered in either House that went to deregulation on the basis of contract alone. They are mostly cast in terms of new gas being defined as gas sold under a contract or delivered after a certain date, and it's an "or" delivery test. I don't really think it's likely at all that a deregulation bill would be cast so that it would be harmful to you.

As a practical matter, so that you will understand why the Congressional reasoning and the FPC reasoning seems to be moving in this direction, away from contract vintaging, it is simply because if you

permit a deregulated price to a producer on the basis of when he contracts to bring the gas to market, if that producer has been guilty of withholding his gas from market in anticipation of deregulation, then you have rewarded his wrongful conduct.

So, to me, it's not likely that people are going to go back to contract date vintaging as a test for deregulation. So my answer to the line of questions you posed is that there is, yes, a theoretic possibility that the State could be hurt by contract date vintaging in deregulation, but I do not believe that that possibility is substantial.

I do think that the present language of Section 6.1 is unclear in one respect. In my opinion letter, on pages six and seven, I attempted to spell out why I thought there was an ambiguity. I think, from my discussions with Mr. Byrd, that the parties did not intend the ambiguity to exist and it would be probable that the buyers would enter into whatever type of letter modification or letter of explanation that is necessary to straighten this out.

It seems to me that it must be made clear that Section 6.1's limitation goes out the window, becomes totally inoperative, if an appropriate deregulation bill is passed. I just don't think that the language

is altogether as clear as it could be on that point, but I don't think it's a major burden or a major obstacle to the contracts if the purchasers will agree as to what the proper construction of that provision is.

Other witnesses have advised you, and certainly I agree, that you cannot determine a sales price under these contracts as drawn. Section 6.2 will not give you a sales price because the FPC has set no price for Alaska.

Section 6.3 and 6.4 will not give you a price because they're conditioned precedent, deregulation, has not occurred. And so you have before you a contract that is indefinite as to price, and you have a contract where your price will ultimately be determined by someone other than the State. In the event of continued regulation your sales price will be determined by the FPC. In the event of deregulation your sales price will be determined by the prices which producers, working interest owners, obtain in their contracts.

So, I would want you to understand that you are giving up direct State control over the sales price through the pricing mechanism embodied in Article VI.

There have been a number of comments about whether we will or will not have deregulation, and if we have continued regulation, what is likely -- I'm mentioning at this point, because it's structured into my opinion

and I think it is a major concern.

So many things have happened so fast in the Lower 48 States in the natural gas business over the course of the past three or four weeks that I don't think anybody can give you an informed guess as to the likelihood of deregulation or not. We've seen two and a half million people out of work on a given day in the Lower 48 States because there wasn't enough natural gas to go around. We've seen the Congress in three days' time pass an emergency allocation bill that for the first time gives the President of the United States the right to reach into one interstate pipeline supply sources and move the gas to another interstate pipeline.

We've seen as of, I think it was Wednesday night, the President authorized Two Dollars and Twenty-Five Cents as an emergency purchase price that any interstate pipeline could pay for one hundred and eighty day emergency purchases of gas anywhere in the Lower 48 States.

All of this says to me that it is a time of great uncertainty. We will nationally, I suppose, sooner or later arrive at a decision whether we're going to move toward greater regulation and allocation on a national scale, or whether we move to less regulation and honoring of private contracts. I wish I had an answer for you, because I think if you knew what the future held, it would

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make your job a lot easier.

But I cannot, in honesty and in good conscience, tell you that I'm confident what the future will bring. If deregulation continues, or if a deregulation bill is passed that is not appropriate to Alaska, and by that I have reference to the possibility that a bill might be structured like FPC and go to commencement date of a well rather than date of first deliveries. So you might have some gas up there that continues to be regulated even though a deregulation bill passes. But if some or all of your gas remains regulated, I hate to say it but I must say it, brace yourselves -- my judgment would be that the Federal Power Commission will determine a rate for Alaska as a separate producing area, that they will not treat you on the same basis with the national rate, as they treat the rest of the country. They have specifically excluded Alaska from applicability of their last set or rate orders, they have specifically excluded Alaska data from the calculation of a national rate, and to me that indicates that when the time comes for the setting of an Alaskan rate, it will be a rate peculiar to Alaska.

I am concerned, and I would want you to understand the reason for my concern, that an FPC separate for the State of Alaska will probably be not as high as Judge Litt

and they came up with a very low rate, relatively speaking, for associated gas. You can understand it. Gas was their responsibility, they could keep the price down and make everybody happy by putting the costs over on the oil side; so that's what they did.

The second factor that you've got going against you is that you do have a major, huge discovery up here, and obviously the more units of gas you have in terms of reserves added, the more units that you have to spread these costs over, then you come up with a lower per unit cost figure. So the arithmetic of FPC methodology is against you if they're going to set the rate for you. I can't really do much more than say that the structure and the methodology is just going to work against you; that's all there is to it.

But that is a condition beyond my control, or yours. It is only one of those things that you need to be aware of. That condition would exist whether or not you sign these contracts. The existence or the absence in the Federal regulation is not, obviously, going to turn on whether these contracts are signed or whether they are not. But in speaking with you today, I at least want to mention to you that it would appear to me that the State of Alaska needs to be very active at the FPC in any rate matters affecting Alaskan gas, because if you

mentioned in his opinion, of a Dollar, probably not be as high as some of the economic projections that have been laid before you over the course of this past week. And the problem essentially arises because of the structure of rate making methodology at the FPC. They try to set a rate for natural gas on the basis of what they perceive the cost of production to be, the cost of finding and production, and a reasonable rate of return to the producer.

They have, since 1968, been costing gas well gas where they could find a data series and they could determine how many feet were drilled in gas well exploration, what gas reserves were found, what the costs of gas production were. So their national rate determinations since 1968 have essentially been for new gas well gas.

You go back to the early Commission efforts at rate regulation when they tried to price associated gas, and they became enormously tangled up with the problem of cost allocation. Here are two joint products, oil and gas, they come out of the same hole in the ground, you spent a certain number of dollars to find it and produce it, so how do you allocate the cost between the two products. The FPC, since they had jurisdiction over gas, allocated a very heavy burden of costs to the oil,

leave it to them to do it for you without some evidence, and some input and some argument from you, you are probably not going to like the results.

I did have a problem with the redetermination provisions under Section 6.5. They were the same concerns that Mr. Swanson raised with Chairman Rader the second day of the hearing; and with the purchasers' representations about their meaning of Section 6.5, I no longer find an objection in that area.

Over all, to get back to the general structure of the thing, since your rate is going to be determined by somebody else, one consequence of entry into these contracts will be the necessity that the State participate in some FPC proceedings. Your rate, under this structure, in the event of continued regulation will be set either in a national or an Alaskan rate proceeding where the FPC determines by rule-making a rate applicable to the whole state, or it will come up in an independent individual producer's certificate case where one of the North Slope producers goes finally into the FPC with a contract and says, "Here is the price I bargained for. Let me charge it." And the FPC can approach the rate issue in that context.

Or, finally, if neither of those two things occur and deliveries commence, the pipelines that buy

from the State will take to the FPC their rate structure and ask for approval of what they paid to the State. There are three possible procedural mechanisms where the pricing problem can be reached by the FPC. Whichever of those three comes to pass, it seems to me absolutely essential that the State be there to participate fully. I don't think you can rely on other people to carry this important issue for you in that fort.

On the whole, if you asked me whether the pricing problems that I've tried to outline for you are sufficient to condemn the contract, I'm going to give you one of those "either/or" answers, I think. I'm not sure that what we're talking about here is a pricing issue, in terms of what the Legislature is going to be asked to do. I think it's a routing issue.

Having already stated that these contracts are unique and that, therefore, there's not much I can compare them with, I offer you the value judgment that I don't think you'll get better terms than this from anybody at this time and under these circumstances. I think that on the whole they're as good a contracts as you are likely to get.

The real question, it seems to me, and here I need to, I guess, go back a little bit -- I did come up here this time thinking that the State had already made a

decision about which route it supported and that the sale of the gas was an appropriate means to try to help influence a favorable decision on the routing. I can well understand it, because a lot of things that have occurred in the last year that many members of the Legislature and many citizens in the State might want to think through again, whether those are both questions that you would still answer in the affirmative. But if you come to the same answers and you say, "We do think that the routing decision is important to the State, we do think that the State should do all that it can to influence a favorable routing decision," then I suspect that the pricing provisions here should not be a bar to your approval. But I can't -- and I'd make it perfectly clear to you, you've got a third applicant in the game since I was here a year ago. I carry no brief for El Paso or for Alcan, I carry no brief for the individual purchasers under these contracts. Pick Tenneco, Southern, anybody else -- I'm just trying to speak to the concepts of what are you doing with the State's resource and is this a good time to do it.

I think there is a risk in not doing anything. I cannot tell you, and I don't think anybody else can tell you, how much it will influence the routing decision if these contracts are approved. I think, as Mr. Ward

said the other day, that most people would recognize that it will have some impact. I don't think, and this kind of disturbed me, about the way things sounded a time or two. I don't think what we're talking about is the State trading its royalty gas for lobbying efforts by two companies.

It seems to me what I was talking about a year ago and, hopefully, what everybody is thinking about, is that the State is holding out to a number of states in the Lower 48, "We will share our gas with you if you will help us get the route that we need." I have a jaundiced and prejudiced view, I suppose, of lobbying as such, if a corporate vice president thinks he's going to influence a Legislator's vote. I don't think that happens very often. I don't think that's the way to get things done anyway.

But I don't perceive these contracts as a means where you buy a corporate lobbying support and expect you're going to get anything. If you look at it that way, I don't think you will get anything. But if these purchasers, in your judgment, are responsible companies that know their business and can reach to their customers, and go to their customers and say, "We have the promise here in writing of some gas from Alaska if we help Alaska on getting the right route," then it seems to me

you've got to have some influence on the routing decision.

I think Judge Litt has spoken the first word, but most assuredly, he has not spoken the last word on the routing problem. An Administrative Law Judge of the FPC, and particularly Judge Litt, is respected by the Commissioners. They will believe him to be an honest man who has worked diligently with the record over many months, and I would anticipate that they would think that he is infinitely more familiar with the record than any of them can hope to become. But they will not abdicate their responsibilities to Judge Litt. I say that institutionally and I say it knowing the individuals. I think they will try their best to reach a decision on what they perceive to be truly in the national interest.

Certainly I think the same will be true when it moves over to the White House for Executive Agency decision. So I don't think the routing decision dies with Judge Litt's decision. I think it's still an open issue. I think it's possible that some persuasiveness can still be brought to bear on the issue.

Really, I don't ask myself so much, "Is it too early to enter into these contracts," as do I ask myself, "Is it too late that we entered into these contracts?" Once again, I'm not talking about individual buyers (I hope you all understand that), I'm talking about

the concept of the use of the State's royalty gas as a means of trying to influence what you believe to be in the State's best interest, and whether you come down on the side of Alcan or El Paso, that's beyond my concern and beyond my knowledge.

Whatever you do, it seems to me, perfectly legitimate that you use the State's resource in a manner that helps you get the best benefit for your State.

I preach a lot, I apologize. I guess I feel strongly about your situation up here because you're one of the few places that still has the opportunity of controlling your own destiny.

There are a couple other things that I guess are worth mentioning. I don't try to characterize them as good or bad since I think that your perception of them depends on things other than legal analysis. But I think the provisions of 11.4 are noteworthy, which grants to the Governor the right, in effect, to make a switch in the State's support. I really can't offer any judgment as to that provision. Certainly you have to be aware of it.

The contracts do contain certain options on State royalty gas that are triggered if the State effects a withdrawal of some of the gas covered by these contracts for in-State use. I think the option provisions, themselves,

are not remarkable and are understandable. I suspect that they reflect the necessary bargaining process of what State negotiators had to give up in order to get some of the stronger elements in the contract that I covered earlier. So I mention it only to make sure that I've tried to make you aware at least of the major provisions in the contract.

The contract is silent on one thing that I think is significant, and I'm probably beyond my depth here and, therefore, going to make a mistake or two. But my recollection of your severance tax structure is that if you take your gas in-kind, the one-eighth taken in-kind will probably not bear a severance tax. That is a substantial revenue loss that occurs by reason of an in-kind taking that would not occur if you took in value, and I don't think the contract deals with that. I don't think that the questions asked to the purchasers the other day, in effect were, "If you pay a severance tax component to a working interest owner will you match that and will you pay it to the State," and they said, "Yes," and that's fine.

In the event of the continuance of regulation they will be permitted to pay a severance tax component only as reimbursement for severance tax pay. So I don't think that the FPC will let them pay you the equivalent

of a severance tax component. So I do suggest, as I think one of the other folks did this morning, that it might be appropriate for the State to give some thought to its severance tax structure in conjunction with these sales arrangements.

One or two general thoughts, if I might, maybe it would save some time, before we get to individual questions.

I think several of you have indicated an interest in knowing whether or not these same or better terms could be obtained if the State waits until a later date to make a sale. I suspect that if the routing decision is adverse, if Arctic Gas is selected, I don't think you'll get these favorable terms because I don't think that your rights of withdrawal will be meaningful to you, and I'm not sure that a purchaser through that system would consent to it.

I'm not sure that you could get the same provisions on the reimbursement of costs incident to your in-kind taking. In essence, the four areas that I thought represented real bargaining pluses in the contracts, it seems to me if you're talking about a buyer through the Gas Arctic system, they have little reason to offer you those favorable terms. So it may be that waiting until a later date, in the event of an adverse routing decision,

you might not see terms as favorable as these again.

Some questions have been asked as to whether or not the State could obtain a higher price if they pursued some other type of sales arrangement. Again I have to offer you a value judgment because I haven't surveyed the market. There's not any real way that I could do that, but I can speak with reference to how sales arrangements are structured under FPC regulation. And I will say that any sale that you make to someone in the Lower 48, or in the State of Alaska, is going to involve FPC transportation jurisdiction and, in a sense, that sale is going to be subject to FPC review.

If you attempt to find a distribution company in the State of Alaska or outside the State of Alaska to sell to, yours will be a sale for resale in interstate commerce, and the transportation of the gas will be in interstate commerce. So I don't really think that you move beyond where you are now by looking for that type of purchaser. There are not many purchasers that are able to take the volumes of gas that you all are talking about delivering, so you've got, in one sense, a limited market.

Electric utilities, I'm sure, would love to have it to burn under boilers, but I am quite positive that the FPC would never grant transportation authority for

that type of use.

The FPC does have a procedure whereby high priority users can purchase gas from a producer. It's called Order 533(a). It is limited to two years. The buyer is supposed to receive only those volumes that offset his curtailment in high priority two and three usage, and I think it's just simply not applicable to the type of sale that the State would be looking to.

So, while I will not absolutely rule out any possibility of a sale at a higher price, I offer you the value judgment that you probably won't find one.

One of the Representatives the other day indicated that perhaps Section 13-B of the Alaska Natural Gas Transportation Act rendered the desirability of these contracts somewhat less than might have been true before the passage of that act. It seems to me that 13-B is helpful to the State only if the right route is selected. If the gas moves out of the State north of the Arctic Circle I don't know how you would ever implement your rights of withdrawal. You're just not going to have a means of getting it down to where your people are and where you hope your industry is. So it will look good on paper. It doesn't vanish if the Gas Arctic route is chosen, but it is hard to see how it is of much practical help to you.

I will confess to a certain academic interest over the last few days in the discussions that you all have heard with reference to the effect of transporation costs on wellhead prices. It's a very confusing area, and I will offer you my perception if you want it.

In a regulated market, transportation costs are not going to have a thing to do with wellhead price. The FPC is going to set a wellhead price based on what they perceive to be the costs of finding and production, and a reasonable rate of return to the producer, and they simply have no mechanism for looking at transportation costs as a function of that rate. I know of no instance that the FPC has ever set a producer rate based upon any consideration of transportation costs.

In the event of a non-regulated market, I think that what I have heard over the last several days with two sides of the argument, I've heard some truth on both sides, but I'm not sure that I've heard the complete truth from either side, and I mean no disrespect, obviously, by saying that. In a deregulated market transportation costs do have an influence, but they are not the only factor that influences wellhead prices.

The nature of the use to which the gas is going to be put determines whether it is appropriate to look at a number two fuel oil equivalency price. For some

uses a user will pay much more than a number two fuel oil price. So you have to look at the market to which the gas is going before you know what is your base point for comparison backwards, and in the absence of a fundamental change in regulation the average cost of purchased gas on a pipeline system is buying from you has an influence on the wellhead price in the sense that, indeed, regulatory agencies now tell a pipeline or distributor, seller, to roll in or average his costs. And if you're dealing with a buyer that has a low average cost to purchase gas, then what he pays you is influenced by the fact that he's working against a lower averaging base.

I guess what I'm saying is that in the event of deregulation, if you tried to determine wellhead price only by looking at transportation costs and only by equivalencies with number two fuel oil, I suggest that's less than all of the factors that will enter into it. I suspect that as of right now, trying to determine what wellhead price will be in the event of deregulation is largely a metaphysical exercise. I'm just not sure that it's productive. You'll get as may guesses as you get economists up here.

Now, we lawyers are more definite, you see. I'm sorry I've taken more of your time than I intended to. I guess, Mr. Chairmen, it would be appropriate

to offer myself sacrificially.

SENATOR RADER: Representative Rudd.

REP. RUDD: Mr. Moody, this morning Mr. Swanson mentioned the possibility of storing our gas in place for some time, until we have a need for it. Is that a possibility if we don't approve these contracts? Is that a possibility?

MR. MOODY: Well, I guess there are two sides to the question. Is it possible mechanically, physically?

REP. RUDD: I was going to ask both questions.

MR. MOODY: And is it possible ---

REP. RUDD: By law.

MR. MOODY: Regulatory. I better not make a guess on the first one because I really don't know enough about your reservoir and its mechanics, that I really couldn't give you anything of value other than to guess on it. On the other side of it, once again you've got to make a judgment as to whether we're going to be deregulated or continue to be regulated. Since my personal feeling is that we probably are going to face regulation, I think I'll deal with that one first.

If the producers start selling the gas stream into interstate commerce you would have to be most careful that some type of balancing arrangment or under-lifting arrangement with the producers had been reduced to writing and had been approved by the FPC, because in my judgment,

if eight-eighths of the gas stream starts flowing in interstate commerce without some advance approval for the State to be storing its gas having been had and obtained from the FPC, you would be met with the argument when you later wanted to change the flows that you were trying to work an abandonment and that Section 7-B of the Natural Gas Act would interfere with what you wanted to do.

I think it's something that perhaps could work but I think you need specific agreements and, to be on the safe side, I think you'd want to go for regulatory proof.

REP. RUDD: Could you give us your appraisal as to how likely it is the FPC would agree to such an arrangement?

MR. MOODY: I'd guess they wouldn't. I think they want your gas.

REP. RUDD: Would this hold true under both conditions of the Alaska exemption, whether it's in effect or not in effect? Would that have any bearing, do you think, on their decision?

MR. MOODY: I read Section 13-B to apply to withdrawal from the system after deliveries have once commenced. Maybe that's too narrow a reading. Assuming 13-B stays in the Act and your arrangements for storage were structured as part of a royalty sales contract, I guess you could

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bring it within 13-B.

REP. RUDD: Thank you. I have one more question on another subject.

SENATOR RADER: Go right ahead.

REP. RUDD: I think it was Mr. Thompson who mentioned yesterday or the day before, that he felt that a lobbying effort in Washington would not really be a very important thing to do at this time because it is now a decision that is before the FPC and then the President, and Congress only gets into it after those two have made their decisions, and only has a very short time to evaluate the President's decision and, therefore, probably will not go against the President's decision. But you're a former Commissioner on the FPC, and you just mentioned that you thought that lobbying efforts would be valuable. Are you talking about influencing the decision of the FPC and the President and the Congress, or at what point do you think the lobbying would be most effective?

MR. MOODY: I'm going to, if I may, take exception to the word "lobbying".

REP. RUDD: I'm sorry.

MR. MOODY: No, really. Because to me it has a specific connotation; perhaps it doesn't to others. What I suggest will happen is that the Federal Power Commission

has been told to gather all the information they can in order to make the most advised recommendation to the President as they can, and the President and the Executive Branch has been told to gather all the information that they can, talk to as many people as they can.

I think those people are genuinely interested in arriving at the best decision they can. I would not want to believe, and I do not believe, that their minds are made up. I don't think that there is anything wrong with offering the views of concerned people, both at the FPC and to the people in the Executive Branch that are charged with this responsibility. I think that the opportunity still exists for people other than the State of Alaska and people other than El Paso, who have made their record, to go in and say, "We do have an interest and here's what it is, and we'd like for you to take us into consideration," and I think the opportunity exists both at the FPC and in the White House.

REP. RUDD: Thank you.

SENATOR RADER: Any further questions? Representative Hayes.

REP. HAYES: Thank you. Mr. Moody, you mentioned that one of four pluses that these contracts have -- interested me. One in particular that's of interest to many of us here is the right to withdraw our royalty gas for in-State use after it's originally injected into the pipeline

system. Then you mentioned that when we get around to the financing that Alaska may have to face a moment of truth. Does that mean that we may have to subordinate that particular clause in order to make it possible for the pipeline companies to build this line and, if so, what do you think the chances are that we'll have to do that?

MR. MOODY: Well, I hate to borrow trouble, but I can see that a financial institution wouldn't be too wild about lending on an eight-eighths pipeline knowing that one-eighth of the through-put can be withdrawn at any time, because it's the through-put that generates the revenues that pay back the debt.

I guess I'd just be guessing if I said I know they're going to come to you and make you give it back. The best I can do is offer you the view that to me, representing the lender, you know, I'd say, "Gee, we'd better go get this straightened out some way, we'd better get some means of determining that the whole financing of the line is not going to be in jeopardy."

REP. HAYES: So we have three pluses and a possible plus.

MR. MOODY: From a contractual standpoint you've got a very good plus. My point is that it may be too strong a plus. You may have to give some of it back.

SENATOR RADER: That was my understanding of what you were

saying too, that we drove such a hard bargain that these people may not be able to finance the pipeline with what they have left.

MR. MOODY: To me it's quite conceivable it could deveop that way.

SENATOR RADER: Representative Gruening.

REP. GRUENING: Is the project so marginal in your view that what we do with our one-eighth will kill the project? I mean, can I fairly infer that from what you said?

MR. MOODY: No, I have no judgment about the economics of any of the three projects. I've never sat down to study them.

REP. GRUENING: But you're saying as it relates to private financing that our one-eighth is crucial.

MR. MOODY: I'm saying that from the standpoint of a lawyer who has done a little bit of work in representing lenders that any time you see something that threatens the revenue flow that you're looking to for repayment of your debt, you raise a red flag. But then I don't know, I have no judgment as to whether the difference between your one-eighth and eight-eighths is the difference in "go" or "no go" on the line. I'm sorry, I have never done any economic studies on it.

REP. GRUENING: But what you are saying though, it is the difference between "go" and "no go" as to whether a

private financer backs that line?

MR. MOODY: I think they're going to look at this provision very carefully, and a prudent lender is going to look at the reserves and he's going to look at the capacity of the line and the cost and everything else, and maybe this won't be a problem. But somehow I kind of suspect that some day somebody is going to knock on the door and say, "We need to discuss these withdrawal provisions with you."

REP. GRUENING: You mentioned that if the Arctic route is chosen we wouldn't get as favorable a contract. Let's say we don't enter into a contract and the El Paso route is chosen, do we stand to get as favorable a contract?

MR. MOODY: They struck their deal with you once. I guess they'd stick by the same deal, but I don't know them that well and I haven't asked them.

REP. GRUENING: You heard Mr. Tussing's testimony yesterday as to what he thought the international ramifications ---

MR. MOODY: I was enthralled with it.

REP. GRUENING: Yeah, I think the headline should have been "Members Entertained by Testimony," but I think what he says may have some merit. But I want you to comment on his view that the Canadians are going to make the choice and that if they do, in fact, make that choice, or cannot make that choice, isn't the El Paso route inevitable

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if they can't make it, and what we do in this contract won't make any difference in that international decision making process?

MR. MOODY: I really had the feeling, listening to Arlon, that if I had his prescience about what our government was going to do, and what the Canadians were going to do, and Congress was going to do, and the FPC was going to co, I ought to be making a lot more money than I'm making. I suspect that an awful lot of what Arlon was saying were very well educated guesses as to what he believed would develop or might develop and, certainly I respect his judgment and the knowledge that he has and the facts from which he draws.

I don't come to the same conclusion about everything being cut and dried and that it's only the Canadians that have something left to say. It's not that I know that that's true, it's just that I am unwilling to recommend to you that you pass up the possibility that you've still got a way to do something. You see, I don't know, and all I've got to do is assume that the FPC and the White House will operate in good faith, that they still have open minds, that they're still willing to listen to reason, to rational arguments from responsible people, and if those assumptions are correct then there is still a way to try to make this routing

decision come out better than it has so far.

REP. GRUENING: I think what you say in terms of rational arguments having some effect is persuasive, I cannot believe anyone who says we can't have any effect on this decision. But the question before us is whether the commitment under this contract will have an effect on the rational part of the decision making. You described earlier that you thought it could have an effect in terms of, I think, the way that the public would perceive what we're doing here. In terms of the amount of gas and date of delivery that could occur under this contract what should we be telling, truthfully telling the American people they're getting under this contract so that they'll be persuaded that they should press their representatives for an all Alaska route?

MR. MOODY: That you're offering a share of your resource, and you're offering it under written contracts with responsible people that operate as buyers, sellers and transporters of gas, and that if the correct route is selected then you fully intend to abide by the terms of this contract.

REP. GRUENING: But can we say that in any other document or any other way and saying in effect that -- is there a more appropriate document than this to say, or a more appropriate spokesman to say this than the gas company?

MR. MOODY: I've forgotten which Justice it was on the English bench that once wrote, "As a man binds himself, so shall he be bound." It seems to me that the most appropriate way to express your sharing of your resource is in a contract. It's very easy for people to say, "Oh, we'll share with you, trust us." But, you know, you're to the point of the State committing itself in writing by solemn legislative and administrative acts that say, "Yes, we will share the resource." It seems to me that's appropriate.

REP. GRUENING: Do you think there is any danger, as long as you're making these political assessments -- could you tell us, is there any danger in assuming that the public is willing to go both ways; in other words, we'll allow you to take it back for any in-State use you want and we'll give you special legislative consideration for it, plus we're going to go along with your route decision? I mean, maybe we're asking for too much; I don't know.

MR. MOODY: It's a valid concern.

REP. GRUENING: One other question. You mentioned the provisions that you've analyzed although, in other words, if you were writing the contract out of the context of trying to affect some political decision you might try to renegotiate it to cover some of these.

MR. MOODY: Representative, I have tried to express in one of the opening paragraphs of this letter. It is very difficult to go in and pick up an executed contract and assess accurately whether it's the best deal that could have been struck or not. Those people who negotiate for you and against you have to go through a process of give and take, and unless you have been a party to the negotiation process and you know where you compromised and where they compromised, and where were the absolute points of no give at all, then you really don't know whether this is the best deal that could have been arranged.

I've read summaries of the contract negotiations. I don't know whether in any particular instance I or anyone else could have driven a better bargain for you, and I just wouldn't want to be in the position of saying that I don't think your negotiators did a good job.

REP. GRUENING: You mentioned that under these contract provisions a letter of agreement, especially 6.1 and I think 6.5 ---

MR. MOODY: Yes.

REP. GRUENING: -- could be corrected by getting a letter agreement or something on the record to clarify the possible ambiguity. As an attorney, wouldn't you recommend to actually get that into the contract?

MR. MOODY: It can be part of the contract by supplement so long as it's been done and properly agreed to by all parties before the Legislature is asked to vote on it. It seems to me that would be the determinative thing. They've laid a proposal before you but I don't see why it could not be supplemented with an additional paragraph or so before the Legislature votes.

REP. GRUENING: Thank you.

SENATOR RADER: Representative Parr.

REP. PARR: Thank you, Mr. Chairman. Mr. Moody, this contract is a twenty-year contract, and you've had a lot of experience with the FPC; what is sort of a rule of thumb, if there is any, on the length of contracts across the country in selling natural gas?

MR. MOODY: Yes, sir. Up until three years ago I would say twenty years was the industry standard contract. About three years ago the Commission went through kind of an evolution in its manner of determining to what gas certain rates would apply, and they permitted a higher price after the expiration of a contract if a new contract was entered into, called roll-over contracts.

You have a contract that expires, you would by FPC vintaging be held at a certain level, but the Commission kind of restructured and they said, "If you enter into a new contract we will permit you a higher rate."

Leaving aside why that happened, whether it was good or whether it was bad, one practical consequence was that contract term shortened because people saw that by contracting for a shorter period of time they would have an opportunity to roll over the contracts and move to a higher price. As a consequence of that trend, the Commission, in Opinion 770-A, abandoned the roll-over contract concept and they refused to permit the higher rate for roll-over contracts. So we may now see a restoration of longer term contracts.

REP. PARR: In this last three-year period you're talking about, what would be sort of a guess as to the usual length?

MR. MOODY: There were still some twenty, some fifteen. The FPC does an every six month analysis on contract terms, and some were as low as two and three years. It would be hard really to say what the industry average was because it was such a short transition period and it really didn't shake out before it got changed again.

REP. PARR: I would like to, Mr. Chairman. You said also a while ago, Mr. Moody, in answer I believe to somebody's question, that we're not likely to get a better contract if we were to wait. Can I assume that you were talking about a regulated, as opposed to a non-regulated, situation in making that statement?

MR. MOODY: Yes.

REP. PARR: You said, when you first started talking, that nobody can really guess whether deregulation is going to come or not; and then just a couple minutes ago you said your own belief is that we will continue to have regulation. Am I quoting you right?

MR. MOODY: Yes, I'm afraid so. I'd like not to be quoted too widely.

REP. PARR: One last question, Mr. Chairman. You said that we might be able to offer some of our resource to some of these states through valid companies with good contractual arrangements, etc., and get their support. Can't we assume that the states which are going to profit by the other route, such as Arctic, are going to be throwing their support behind that route and you're going to wind up, perhaps, with simply a matter of counting the number of votes in Congress in favor of each one, and each one going for the one that seems in its own best interests, Illinois versus (shall we say) Alabama, and Texas versus New Jersey, and so forth?

MR. MOODY: Yes, sir. I would have thought that's the way it was going to develop. But you've got, it seems to me, something kind of unusual operating in your favor on this question. The producers are not entering into contracts because they're concerned about where they're going to be on the price structure. So as of right now

nobody is making a commitment of their gas that they can promise and that the Gas Arctic people can go state by state and say, "You're going to get so much, you're going to get so much." As long as the producers don't contract, you are the one party in a position to say, "We're going to share our resource with you on a specific basis."

REP. PARR: You don't think, Mr. Moody, that the companies such as Michigan/Wisconsin who talked to us the other day, or other big companies in the Midwest, are going to have their people believing they profit by Arctic Gas because there are no signed contracts? Is that what you're saying?

MR. MOODY: No. You know, human nature is a funny thing, and part of what's involved in this whole routing process are certain perceptions in the Lower 48 States. There is a perception that Arctic Gas will bring gas to the Midwest and to the Northeast at a lower cost; there is a perception that El Paso takes gas to the West Coast, that's already afloat in oil; there is a perception that Alcan started too late and hasn't studied their project properly and didn't make as strong a presentation as they could have under other circumstances.

You're dealing with perceptions when you are trying to get people to become involved enough to go to

the FPC or to the White HOuse and say, "Gee, this route would certainly help us." It seems to me that the commitment of specific volumes, even with your oil rights, so specific companies that reach specific states might be of some help in altering those perceptions.

REP. PARR: Thank you, sir.

SENATOR RADER: Senator Sumner.

SENATOR SUMNER: Inasmuch as I get the impression that price is probably going to be determined outside of what the State of Alaska is going to be able to do, doesn't it really come down to a very simplified option that in the end what we are able to provide for Alaskans, or the citizens of Alaska, will depend on whether we have an option of sending part of our royalty gas to an in-State petrochemical type of operation or whether it goes out of the State? Is it that simple?

MR. MOODY: Senator, I offer the judgment that from the very beginning price was of less importance to the State than was retention of the control of the resource.

SENATOR SUMNER: In your view is the Alcan project in a first, second or third running position?

MR. MOODY: I really never have gone into any of them, and I don't mean to dodge you, but the first of these applications were filed when I was on the Commission and some of the evidence came in while I was on the Commission,

and I really have hesitated and don't want to be put in the posture of endorsing one versus the other.

SENATOR SUMNER: And you're here to try as best you can to equip us with the knowledge that you have so that we can punch a button to decide whether we ratify a contract or whether we don't. If you had to punch a button and it comes down to no discussion or no nothing, one day a button has got to be punched; if you had to punch that button, would it be yes or no?

MR. MOODY: Was it Mr. Levy that said, "Elect me to the Legislature and I'll tell you"?

SENATOR SUMNER: But before we let you escape from us today we're going to keep you pretty close to that position. What is your recommendation to the Legislature?

MR. MOODY: I think you've got to go back to where you stand on the routing problem.

SENATOR SUMNER: That goes back to where the option is, and we're now down to the point where our destiny is pretty much controlled as to whether we have the option of using our gas in-State or sending it out.

MR. MOODY: Senator, obviously I have an opinion.

SENATOR SUMNER: Yes, sir, and that's what I'm trying to get.

MR. MOODY: My problem is, I feel very presumptuous, as somebody who grew up in Texas and has been in Washington the past five years, being in the position of saying to

men and women like you, who are elected to and who do represent your constituents, and who know your State, what their needs are and what their concerns are -- you know, how can I tell you what to do?

SENATOR SUMNER: No, that isn't what I'm asking you. I'm not asking you to tell me what to do, I'm asking you to tell me, on the basis of what you know, which you've got lots of years of experience, you're an expert, acknowledged, self-professed, being out of town with a briefcase, and I'm trying to determine in your mind which way would you go if it was your decision, if you were one of those people making a decision.

MR. MOODY: Maybe I ought to put it this way.

SENATOR SUMNER: Sometimes I wish the little button had a message like that.

MR. MOODY: If I lived in Alaska I would probably write my Representative and Senator and express the view that the routing decision was of terrible importance to the State, that this offered a means of perhaps arriving at a happy answer to the routing decision and that, therefore, my Representative would vote for it.

SENATOR SUMNER: Thank you very much. That's all I have, Mr. Chairman.

SENATOR RADER: Mr. Chatterton.

REP. CHATTERTON: Thank you, Mr. Chairman. Mr. Moody, I'm

looking for a value judgment on your part somewhat akin to the question you just had. Let's say that Chat Chatterton takes the position that he just doesn't want any straw, any conduit at all from Prudhoe Bay to Washington, D.C. where they can turn a switch, he wants to delay it as long as he possibly can; do you think that the approval of these gas sales contracts will change, will accelerate it? If I want to delay it, will I be accelerating the issue?

MR. MOODY: Having said that I think that the contracts would be of some benefit in the routing decision, I think it necessarily follows that if you have no contracts, it kind of just may help Gas Arctic, I don't know. I just don't know, and I don't mean to be flip or presumptuous.

REP. CHATTERTON: I'm not worrying about any route, I don't want any route.

MR. MOODY: I can recognize what you're saying and I would have said, "Now, Chat, don't worry about that," a few days ago, but I saw the Congress of the United States pass an allocation bill and, as you know, it was conventional wisdom that the pipeline industry producing states would just never let it happen. But emergency situations came up, the pressure was there, and the bill went through both Houses, and was signed by the President in

three days' time. I recognize your concern.

REP. CHATTERTON: Thank you.

SENATOR RADER: Representative Hayes.

REP. HAYES: Since we've discussed and mentioned several times that the most important aspect of this whole thing is the future in-State use of Alaska's royalty gas, do you think that by signing these contracts that we are in any way jeopardizing that opportunity in the future, as opposed to not signing any contracts?

MR. MOODY: No, sir, because I think the withdrawal rights are clear.

REP. HAYES: But we get into the situation of -- well, first of all, we've got the financing problem that we talked about. So, you know, we're going to be back to the drawing board, possibly.

MR. MOODY: Maybe I shouldn't have mentioned that.

REP. HAYES: The second problem is that once you get it into the system, once it starts flowing out for sale, they may decide that it's in the best interests to the country -- once it starts flowing out it's awfully hard to turn it back around again. That's another possibility of losing it. So it would appear that signing the contracts would put us in a more hazardous situation, could be more jeopardy on the possibility in the future of having our royalty gas available for in-State

use than if we didn't sign anything, we just waited a while.

MR. MOODY: It seems to me that turns on the perception of the same answer that Representative Chatterton asked. If you believe that not signing delays the construction of any pipeline system or transportation system, then what you suggest would follow. But if failure to sign or signing does not slow up the selection on the building of a transportation system, then you are vulnerable to the taking, whether or not you sign the contract.

SENATOR RADER: Any further questions? Senator Huber.

SENATOR HUBER: Most of my questions have been asked, or almost asked, Mr. Moody. One hasn't as yet. The change that you recommend in our severance tax structure, should we rush and make this effective before we get into a contract, from a legal viewpoint?

MR. MOODY: Senator, I'm not an expert on your structure, but I don't think so. I think my answer is that you have time to do it but it ought to be done before gas starts to flow. I don't think you want to tie it to the flow of gas. Somehow that seems like it's to late to do it.

SENATOR HUBER: The time structure then is that we should do it before the flow of gas, but it's not necessary to do it before we enter into the contracts, if we're going to do it?

MR. MOODY: If you will take the word of a Texas lawyer on Alaskan tax matters.

SENATOR HUBER: Would you care to speculate just a little bit further on Charlie Parr's question to you? It got very closely to what I wanted to get into, and the part that it didn't cover is, maybe in what magnitude of lobbying do you think it might take to change the perception of the people in the East that the Canada route is going to bring it to them; the perception in the Northwest that the Alcan route dumps it into them; and the perception in the Southwest, Arizona, California and so forth, that El Paso brings it to them with the first crack? Would you care to speculate briefly on what you think what might be the -- what kind of effort, how big an effort might be needed to overcome those ideas?

MR. MOODY: Senator, I wish I could be some help to you. You know, I think you're talking about a question of political science, or polling, or something I know I don't know, and forgive me, I just can't be of any help to you on that.

SENATOR HUBER: In that question, would you go along with me one more? Would you have any feeling in the area where you are living right now, Washington, D.C., if you and your neighbors feel that, for instance, the

Trans-Arctic Canada route might not give them the best bite on the gas or not? Do you know of any perception like that?

MR. MOODY: No. I think it's still probably as an issue that is being discussed not at the individual consumer level so much as at the State Commission, State Government, certainly involved industry level, but I doubt that Alaskan routing has become a matter about which individual consumers have views at this time.

SENATOR HUBER: I was getting into the end, of course, from necessary lobbying to convince Congress, based upon your earlier remarks. You haven't then noticed this, yourself?

MR. MOODY: No, I haven't, and, you know, you get involved in a certain area yourself and you begin to lose objectivity, because that's all you think about or all you talk about, and I'd be a very poor person to ask what people in Washington, D.C. feel about this, because I would necessarily reflect my own thoughts.

SENATOR RADER: Any further questions of Mr. Moody? Mr. Moody, we thank you very much, and I know that Mr. Kilgore and Mr. Swanson both have reservations out, so I think that we'll excuse you gentlemen from further attendance this afternoon, although we still do have some members of the public to be heard.

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You're welcome to stay if you wish, but as far as the committee is concerned I think it would be well to excuse you to try to make your plane connections.

MR. MOODY: Thank you.

SENATOR RADER: Let me find out before we take our ten-minute break where we stand. I have a list of witnesses that are possibly here or possibly not. Is Mr. Heinmiller here to testify? I see Mr. Penney and Paula Easley. Do you wish to testify?

MR. PENNEY: Yes.

SENATOR RADER: Carolyn Berg, is she here? Dennis Schlofeldt, from the Fairbanks Chamber of Commerce. I'll assume that he's not going to testify. Is there someone here from the Associated General Contractors who is going to testify? There's no one from the Associated General Contractors.

Under those circumstances, we have Mr. Penney and Ms. Easley from OMAR here to testify, the only remaining witnesses. Does the committee wish to take a ten-minute recess, or shall we take their testimony?

SENATOR HUBER: Let's take five minutes.

SENATOR RADER: Let's take a five-minute break.

(Whereupon the hearing recessed at 5:25 p.m. and reconvened at 5:35 p.m.)

SENATOR RADER: Would the committee come to order here?

We have Mr. Robert Penney and Ms. Paula Easley. Would you identify yourselves and who you represent? I suppose you would like to make a statement and then open yourselves to questions. Would that be the way to proceed, Mr. Penney?

MR. PENNEY: Yes, that would be fine, Mr. Chairman. Chairpeople, if that is the correct term, my name is Bob Penney, and I'm President of the Organization for the Management of Alaska's Resources. On my left is Ms. Paula Easley, she is our Executive Director.

This month OMAR is two years old. It was started some two years ago, with the idea of having some citizenry input into what happens to the development and/or the management of Alask'a resources. One of the first goals and projects that we took on was the issue of this natural gas line, and since then we've spent many, many hours and an awful lot of time trying to at least get a layman's understanding of what's really happening.

We have an office in Anchorage. The address is the Fourth Avenue Theater Building. We have a one-man office in Fairbanks, Alaska National Bank, and this next month we'll have an office in Seattle, and we have an associate office in Washington, D.C. under USA, Alaska. We have forty-nine directors from all over the State, and we have an executive board of eleven people, and the executive board meets once a week. We have public meetings once every Thursday in the Anchorage office.

I'd like to start off by saying OMAR doesn't really say who builds the gas line, we never have. We don't care where it goes, through what cities it may

pass; we just say it must go to a tidewater, ice-free port within the State of Alaska. And our second point, in our estimation, Prudhoe Bay gas is going to be produced. Now, it's produced with the oil and, as we understand it, we don't own one-eighth of the gas, we own one-eighth of the production and initially, unless we take it in like kind, we own one-eighth of the revenue. And, as we understand it, if we elect to take it in like kind, as Commissioner Martin has done, we then can take one-eighth of that production of that gas in like kind or take the gas itself.

(b) Per Atlantic Richfield Company engineers (Chat was at the meeting) it will cost nine to ten and a half percent of the gas to reinject it into the ground.

(c) It's against the law to flare it, as it should be.

(d) Eighty-seven and a half percent of the gas is already sold to others. It will leave the State, the rest of the country will demand it. There is a Federal law that sets a time frame for delivery of this gas. The gas is going to be produced.

Our share, as brought out by Mr. Moody, of the estimated three and a quarter trillion cubic feet, we have in this contract before you sold or are endeavoring to sell eighty percent of that gas, or 2.6 trillion feet,

and that amounts to eighty percent of the gas. Somebody said the other day they thought only seventy-five percent should be sold, and this is approximately eighty.

Our surplus royalty gas has to be sold for a period of time; that's what our observations have given us. We can't use it all right now in the State. I believe the State of Alaska looked for four and a half months trying to find a user for that gas specifically within our State. OMAR really feels this, and the reason we feel we're for this line is as follows.

We feel that the eventual use of the royalty gas within our State is the number one reason and benefit that Alaskans will accrue from this gas line.

(b) At a flow of three hundred million cubic feet a day, this royalty share equals, according to our figures, 2.2 times the amount of gas presently being used by forty percent of our population, the Anchorage Bull.

Last year the State could not find, nor is there a user at this time, who will agree to use or develop all the gas within our State.

(d) OMAR concluded over a year ago that we have to sell our surplus gas in order to have it back again some day. The eventual use in our State, as we stated before, the eventual use in our State of that gas should

be our number one priority.

Number Four: Prudhoe gas is going to market and the routing of that gas line will be a political decision finally decided by the Congress of the United States of America.

(a) We initially started working for a royalty gas contract at the recommendation of Senator Stevens and Representative Young over one year ago. They told us the route would probably be a political decision, just as the oil line one was.

(b) El Paso's application, in our opinion, is the overall number one choice for Alaska. Let's face it, they're a pretty small company in the big picture, when compared to the forces and money behind Arctic Gas at this time.

(c) We have been urging Commissioner Martin and the Administration since last February to conclude a royalty gas sale as recommended by the Congressional Delegration. As far as we're concerned, Guy Martin took a long time, worked on it very thoroughly, and went through extensive negotiations. We believe that last April 14 the contracts were almost signed and would have possibly been included for review by the last Legislature, but they were not completed until this November.

A sale, to be most effective for our State, should have been concluded, in our estimation, last spring. It has taken twelve months to get this contract before you in the steps it's in. Six to eight months from now it will all be over, the decision for the routing will have been made.

(d) The FPC Judge stated many times during the testimony and asked, "What's Alaska going to do with its gas? Is their gas going to go into the system? Are they going to keep it?" This contract you have before you was entered into the FPC record in its rough draft on the last afternoon of the last day before public testimony was closed.

(e) If all the gas goes to Arctic and if our State found no new reserves for some reason, wouldn't it be something if Alaska ended up some day like Louisiana, some years hence, with a shortage of gas? It's not probable, but it is conceivable.

(f) A political decision? Alaska is using all the forces we can to affect a Congressional decision. Do you mean like we did for the oil line? Or like we did for Statehood? You bet we are! If we don't stick up for our own state, I don't really think anybody else is going to.

Here are some of the letters we have received

from Senator Stevens, Senator Gravel and Representative Young dated November 2, November 5 and November 17, 1976, mandating a royalty gas contract.

MS. EASLEY: Last fall when we were getting pretty nervous about whether the royalty gas contracts would be concluded in time to be included in the FPC record, we asked Don Young and Ted Stevens and Mike Gravel to meet with us, and we did separately. And we asked them each a very important question. We said, "Do you still consider the royalty gas contract critical to the success of the Trans-Alaska gas line."

Ted Stevens told us that if we did not have the royalty gas contracts we didn't have a chance to win. Don Young said the same thing, and Mike Gravel said the same thing in different words. So we were convinced then, as we are now, that that is the most important thing that we need in order to do our job in committing the funds that have been contributed to our organization to carry this fight to the nation.

MR. PENNEY: November 2 in a letter to Honorable Jay Hammond from Mike Gravel: "In response to a request from the Organization of Management of Alaska Resources, I am putting on paper my position with respect to the commitment of Alaska's royalty gas. I have enunciated this position on numerous public occasions, both in Alaska and

Washington, D.C. Without doubt, the commitment of Alaska's share of the Prudhoe Bay natural gas could bring us allies in our cause if only because the beneficiaries would thereby have a proprietory interest in the success of our endeavor, designation of an all-Alaskan gas line."

November 5, in a letter from Senator Stevens, to Paula Easley at OMAR: "Dear Paula: I am writing to confirm to you my feelings that Alaska's royalty gas should be committed so as to pick up as much support as we possibly can gain in the Congress, in the South and in the Southwest. As you know, I have not expressed any opinion on the question of that share that any respective purchaser receives. However, these commitments will only make sense if they are associated with support for the all Alaskan line, and to get that the share to the new supporters must be credible." That's the time when we were being asked by, for instance, Senator Stevens wanted to see Tenneco, I think, at the time get it all, and Senator Gravel was thinking that El Paso should have gotten half. But it was a decision of what the percentages was, was left up to the State Administration. In fact, we didn't make any comments because we don't think that's within our vein.

"The recent report of the Berger Commission's

staff recommendations (continuing with the Senator's letter) reinforces my feeling that we have a real chance to win, and when the review of Alaska's gas transportation system comes before Congress we will need all the help we can get."

November 17 from Don Young to the Honorable Jay Hammond, in addition to a wire he had sent the prior day. "It is timely that the State has taken this action to achieve the goal of an all Alaskan route and to preserve the State's option for use of its royalty gas in the State. In the past, FPC Hearing Judge Nathan Litt has repeatedly inquired about the disposition of the State's royalty gas. It has been argued that if the State sold its gas it would be an unrefutable indication that the State is willing to do all that is in its power to commit itself to an all Alaskan route. Now at last this is the case and any reservations on this point can be swept aside."

Political decision? It is. If we don't listen to and seek the feelings of our Congressional Delegation as to what should be done on an issue decided in Congress, then who should you ask.

Number A: I would like to take a moment out at this time to do the same thing that Russ did, and I would like to publicly say how much I thought Bob Ward's

testimony was really right on the button yesterday, and he renewed my respect for him so much -- that he just told it like he really thought it was. I thought that was probably one of the nicest presentations I ever heard anybody give, particularly when they've got to have the least desired position of anybody involved. I thought it was well done.

We concur with that thinking. We thoroughly endorse the concept of these contracts. As we said, it's taken twelve months to get this far. We weren't privy to the negotiations. When last April we asked Commissioner Martin how negotiations were to be handled he told us no one was going to be involved but the four companies and the State. We understood and agreed. It took almost seven months to conclude these negotiations.

We really can't answer the questions as to the technical terms and things that you've heard now. The only thing that we can do is address ourselves to the concept of the contracts, which was initially told to us by the Congressional Delegation.

We have some concerns about the switching clause, and we've dicussed it at some length. We have a couple of suggestions after, if you want to. It's hard now for us to judge what's going to be hindsight in two to three years from now, and I'm sure it was

awfully hard for Commissioner Martin and the attorneys to judge now the best contract to draw for probably 1982. But I think from testimony I've heard here, I think the contract is probably as well done as it could have possibly been.

After all our encouraging Commissioner Martin to finally conclude a sale, we have to admit we think on an overall basis the contract really exceeds in many ways our best expectations. We think overall that he's done a fine job and actually has done the best he possibly could for our State, particularly under the circumstances.

One of the points that, as we understand it -- in essence if this contract is inked and it goes for approval, or if it doesn't go for approval but if Congress eventually approves the all Alaskan route as it's proposed, as we understand the contract, the next day our Governor could say, "We have the route now; however, we have an in-State use for the gas and two years from now we're going to take it back," and then two years hence, even before the line is even built, before it's ever constructed, we can cancel out the terms of the contract. I just have a feeling that there's got to be a little faith on both sides, because I don't know how I'd sign it if I were a gas company. But evidently they did think it was all right.

One other point that hasn't been brought out and I don't know why they don't want to talk about it, but I'm going to talk about it because I think it's very important. But El Paso, in essence, and I think you'll find that as we go into this the next six months and some more testimony, if you want it, will show that the financing of either one of these three routes is going to be one of the major critical things, and we think at this time it is the major critical stumbling block for Arctic Gas. And we have testimony, if you want to review that further.

But El Paso, in essence, has already got twenty-five percent of their system financed, as we understand it. Their tankers are going to cost 1.6 Billion Dollars, which is a quarter of their project, and under the Maritime Act (I don't remember the name of the Act) there is a low interest rate available for that, and also in a Federal insurance. So, in essence, they've already got twenty-five percent of their package cut and done. I don't know if that's been brought out before, I don't think it has.

In summation, don't forget, we won't have any accessible surplus of royalty gas if Arctic is certified, and I really think people lose sight of that. We will just have dollars of revenue from then on, because Mrs.

Jones is going to be cooking eggs in Ohio for the next twenty-five years with our royalty gas.

And (b), we think this is almost as important: if either Canadian line gains approval, you will then have an established corridor from the heartland of our State funneled directly to the South 48. If we ever want or choose then to see Pet 4 or other resources used or developed within our State, the chances of doing so will become much, much more remote. Whatever you do with this contract, somebody, some day is going to buy a portion of our surplus royalty gas, and we think that if El Paso, Southern and Tenneco would be foolish enough -- they would be foolish, they'd be unfair to their stockholders, and less effective for Alaska if they publicly review their game plan for approval of the Trans Alaska line. If they do, they're almost sure to read again about it in Jack Anderson's column or else somewhere else in national print. If you haven't heard about the column, I'll tell you about that.

They are large companies, they need the gas, and "no ticket, no laundry." If they don't work with us they very probably will get no gas. So we have to have some reliance on their ability to perform.

(e) To me, personally, this contract is also important nationally, as it's like the tapping of a pencil

on the negotiating table by the State of the Far North, that we're not asleep, we are interested in our own destiny, we do want a say in the use of our own natural resources, in our way of life, we do want to get off the Federal dole, and we do want to direct our own heritage.

We have over one hundred and fifty press clippings. Somebody asked if this was going to be news across the nation, and I'll let Paula enunciate on that. This news of the royalty gas sales has already been in most of the major papers in the United States.

MS. EASLEY: I'm sure most of you are aware of that, and unfortunately it has been reported and accepted as an already concluded situation, and quite a few of the articles have mentioned that the contracts do have to have the stamp of approval of the Alaska Legislature. But the way it is stated, it's just been that it is an assumed fact. And we are concerned about this element of it, should the contracts not be approved, the effect of that at the national level in indicating to the public and to the Congress that Alaska is not behind the proposal that it professes to be, and that eighty-five percent of its citizens say they are.

MR. PENNEY: Last, review, assess, discuss, make sure it's right for all of us, if you have to, this contract. The

final terms are in your hands. But, if you will, pass it out as soon as you can with a large majority. Affirm and then make it your first step in the fight for our own gas line.

Then second, (that's the first step) pass an appropriation bill to be used nationally in an effort to tell the Alaskan side of the story, that the all Alaskan U.S. route is the best one for all of the United States.

Then thirdly, we respectfully ask that you do everything you can legislatively to see that it's "easier" to go through Alaska with our gas than through the middle of another country.

SENATOR RADER: Thank you both. Any questions? Senator Huber.

SENATOR HUBER: One short one. Bob, you didn't agree with Bob Ward's testimony so much as to agree with his bottom line, did you, that it wouldn't make any difference?

MR. PENNEY: No, John, but if you'd like to -- some of the points he brought out we think were very valid, particularly as far as the part that gets into problems in Canada, and we researched those very thoroughly. We subscribe to two clipping services from Canada, and it keeps one person busy just reviewing those, and we think we have a pretty good grasp or feeling for what is taking

place in Canada, at least as far as the press reports. And if you want to get in and talk with some of that, we can tell you where we think some of the tough parts and some of the good parts will be.

SENATOR HUBER: You at least agree that he was very candid?

MR. PENNEY: Yes, sir.

SENATOR HUBER: As far as the last line -- I wanted to be sure you didn't agree with his last line.

MR. PENNEY: That's true, John, but I was very impressed with his testimony. One other aside, there has been some mention in talk made about the treaty here, and last February 1, I believe, Aron Tussing brought this up, so we will be able to see how his suggestion worked. But February 1 we sent a letter to Senator Gravel, Senator Stevens and Don Young, and in essence said this, that while we understand that the U. S. and Canada are agreeing to the treaty in which no line will be taxed any different than somebody else's line, as we all know the -- just let me read the paragraph. "We at OMAR are concerned that the provinces through which the Arctic Gas or Alcan Pipeline might pass have not ratified nor endorsed this treaty between U.S. and Canada. We are all aware the provinces of Canada have unusual taxing powers when compared to those enjoyed by each of the states of the United States. We ask that you consider

a proposal requiring each province through which a Prudhoe Bay gas line might pass to give a written pledge to support these treaty provisions before the U. S. Senate ratifies the treaty itself."

SENATOR RADER: Any further questions? Senator Sumner.

SENATOR SUMNER: You mentioned an appropriation. Did you have a figure in mind or have you gone through some other channels with that?

MR. PENNEY: Senator Sumner, Mr. Chairman, yes, we have. We've projected out two or three different things that could be done. But if the State were to hold down its expenses as closely as possible, we think it's going to require a Three Hundred Thousand Dollar contribution just on the part of the State itself to do any kind of effective job. But there are so many things we could be doing in the next six months to try and win this thing. There are so many avenues we could explore. We've asked the Governor, and Lowell Thomas is going to take another trip now for thirty days. We have to raise the funds to take care of his airplane tickets. He was very effective last time. He's written letters to every one of the other Attorney Generals throughout the United States -- or Lt. Governors, excuse me, asking them about the Alaska route. There's an awful lot we could be doing. We're going to have two more flights going back

to Washington, D.C., about a hundred and ten people, later on this spring and early summer, as soon as our Delegation tells us. And there is so much we could be doing, but if we don't start doing it, and if we don't start doing it right away, and really if we do nothing, and we get nothing, that's just about what we deserve.

SENATOR RADER: Any further questions?

MR. PENNEY: Thank you very much.

SENATOR RADER: Thank you very much. We have a number of exhibits that we need to introduce. Let me just identify them. We have a letter from United States Senator Mike Gravel supplementing his wire of several days ago. That will be Exhibit 20. I won't read it, it will be attached. Exhibit 21 is a series of correspondence including a letter from the Lt. Governor of the State of Alabama, a letter from George E. Smith, Alaska Chapter of Associated General Contractors, a letter from Robert L. Hardick, Anchorage Chamber of Commerce, a telegram from A. L. Swalling of Anchorage, Alaska, a telegram from J. A. Sproul, a telegram from Richard L. Maullin, a letter from Mrs. Jeanne Wilson, President of Greater Fairbanks Chamber of Commerce, a letter from George Easley, President of the Easley Construction Company, a telegram from James T. Jefferson, of Jefferson Enterprises, Detroit, Michigan. Most of these were responses to our

invitation to come and testify, and they sent written letters or telegrams expressing approval or disapproval of what we were doing. I don't intend to read them but I intend to make them a part of the record; so that will be Exhibit No. 21, called miscellaneous correspondence.

(Whereupon Exhibits 20 and 21 were duly marked.)

Do we have any other ---

SENATOR HUBER: Mr. President, may the list to whom invitations were sent to be a part of the record?

SENATOR RADER: Senator, I don't know that we can do that. Representative Gruening's office, I know, sent out some and my office sent out some in two different groups that had some overlap. I'd invite you to come to my office. We've got the letter from the Legislative Affairs people, and, Elke, maybe you know more about those lists than anyone. Would you explain to us what ---

MS. KALLAB: Yes, to the extent that I can. As far as on the Senate side, the list that we initially began with was furnished to us by the Department of Natural Resources which are used as lists as far as Oil, Gas and Royalty Board invitation lists. Those are the three lists we worked from.

As it turned out, in the confusion, everybody got an invitation. So I don't think we've lost anybody from the Department of Natural Resources that has been

on that side.

On the House side, as far as Representative Gruening is concerned, I know that he invited several people that were also invited by Senator Rader, namely Dr. Tussing, and in addition he invited Dr. Michael Scott to testify for the joint hearings here. I don't know, but I'm sure aide, Brian Rogers, will have a complete listing as to what other invitations were issued, either verbally or by writing.

The material that went out through Senator Rader's office is very readily available and could be very easily made a part of the record.

SENATOR RADER: Without objection, I will make available a list of the invitations sent out by my office, and it will be marked Exhibit No. 22. Representative Gruening, do you want to supply such a list for Exhibit 23?

REP. GRUENING: That's fine.

(Whereupon Exhibits 22 and 23 were duly marked.)

SENATOR HUBER: My only reason for the request was so that the record should show that we had invited a large cross section of people so it couldn't be said that we had a selected list later on.

SENATOR RADER: Fine.

REP. GRUENING: Mr. Chairman, in that regard you might want to put another exhibit, and that is newspaper ads that

were run by the joint committees, and we might even get a proof from the paper to attach so they know the dates.

SENATOR RADER: How many newspaper ads were run and in what newspapers?

REP. GRUENING: Daily News Miner, the Anchorage Times and the Daily News.

SENATOR RADER: One ad or several ads?

REP. GRUENING: Two days in each paper.

SENATOR RADER: If we can find a copy of that, that will be supplied to the reporter as Exhibit No. 24.

(Whereupon Exhibit 24 was duly marked.)

SENATOR RADER: Do we have any other requests for exhibits to be attached? We have one final exhibit, No. 25, which will be supplied by the Department of Natural Resources, and with that I take it that concludes our joint hearings; is that correct?

(Whereupon Exhibit 25 was duly marked.)

REP. GRUENING: Do we have the relevant statutes attached in there?

SENATOR RADER: No, we do not. Exhibit 26, would your office supply what you consider to be the relevant statutes?

REP. GRUENING: Sure.

SENATOR RADER: Exhibit 26 will be the relevant statutes, to be supplied by Representative Gruening's office to the reporter.

(Whereupon Exhbit 26 was duly marked.)

SENATOR RADER: Ms. Easley.

MS. EASLEY: I'm sorry, I just gave the reporter some telegrams and letters from other organizations that had asked us to speak on their behalf. Can she just do that, write them in?

SENATOR RADER: I'll make that Exhibit 27, it will be called miscellaneous correspondence and written testimony submitted by OMAR on behalf of others.

(Whereupon Exhibit 27 was duly marked.)

SENATOR RADER: Are there any other exhibits that should be made a part of this written record? Ladies and gentlemen---

REP. GRUENING: John?

SENATOR RADER: Yes.

REP. GRUENING: I know you want to get out, but what are your plans for talking to the Department of Resources people?

SENATOR RADER: Mr. Boness was scheduled to leave Sunday for Washington, D.C. and be gone for several weeks to work on the Federal Power Commission brief. Commissioner Martin has submitted to both you and I a schedule of his activities. It appeared to me that if we did not meet with him Monday -- Mr. Boness agreed to stay over and Mr. Martin agreed that Mr. Boness' presence was important if he was going to submit any rebuttal testimony -- it

appeared to me that if we did not meet Monday it might be several weeks before we could meet again.

It was my judgment and it was my feeling, as the chairman of our committee, and I've announced it in the Senate, that we will meet with Commissioner Martin and Mr. Boness of the Attorney General's office, and whomever of their staff that they deem important, to take any supplemental, rebuttal or additional testimony that they think has been brought out by any of the testimony that has been presented thus far.

REP. GRUENING: What time?

SENATOR RADER: 10:00 o'clock, here.

REP. GRUENING: We normally have a session. We'd like to attend.

SENATOR RADER: Our problem is our session. I scheduled it for 2:00 o'clock. As I recall, I talked to you and I thought that you were not interested in this, so I scheduled our session for 2:00 o'clock.

REP. GRUENING: It was my understanding it wouldn't be part of the record.

SENATOR RADER: It will not be a part of the record.

REP. GRUENING: But it is from your prior statement that they will be submitting something and you're taking testimony.

SENATOR RADER: They will submit written testimony or whatever

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they think is important for this record, and I don't know what that's going to be. But our committee wanted to hear from them and didn't want to wait two weeks for it.

REP. GRUENING: Well, I'm wondering -- I haven't talked to the rest of the committee, but there might be some interest in talking to these folks if it's going to be on the record.

SENATOR RADER: I did not plan to have the reporter here; in fact, the reporter had asked to be relieved. I did not intend that it would be a part of the written record. If you are interested, let's make it 10:30, if we could do that.

REP. GRUENING: Whenever.

SENATOR RADER: All right. Now let me ask you this: if you wish, we can make that a part of the joint hearings and ask the reporter to come back. I don't know whether the reporter can or not.

REP. GRUENING: I don't know if that's necessary, but as long as Mr. Boness is going to be here especially for that, we might as well make it a half an hour later and we'll all attend.

SENATOR RADER: All right. Then I think we should continue the joint hearing, and I will ask the reporter then to come back at that time. I understand we have the

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courtroom committed to us at that time, 10:30 Monday, and I'd like to ask the staff if they will make certain that is posted on the bulletin board; my own staff if they will contact the Department of Natural Resources and inform them, and try to get a page over here from the Senate, or send a page over here at a quarter to 10:00 to inform people who come here for that purpose that the hearings will not commence until 10:30, and to see that order is preserved in the courtroom.

We will adjourn until 10:30 then Monday.

(Whereupon the hearing adjourned at 6:05 p.m.)

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WORLD AND NATIONAL BACKGROUND
OIL AND PETROCHEMICALS

PART I: OIL

1. ERDA estimates that the annual world output of oil is currently 20 billion barrels (200 gallons for every person on earth). Of that, the United States consumes 30% (about 1,100 gallons per person per year).

2. ERDA estimates that the United States now has 8 percent of the world's remaining recoverable oil. The Mid-East has 62 percent. Of that 62 percent, 25 percent is in Saudi Arabia.

3. The Wall Street Journal of 12/23/77 feels that the world oil markets could experience surplus conditions through 1982, possibly up to 1985. According to the Wall Street Journal of 12/23/77 proven reserves have risen 15 billion barrels since early 1974, outpacing world consumption of oil by an average of 5 billion barrels a year. New reserves are likely to be identified in the North Sea and Mexico expanding proven reserves at least into the 1980's.

4. According to the New York Times of 12/23/77, the oil glut will last through 1981 and 1982 and will put to 3 million more barrels per day on the market than needed.

5. The New York Times of 12/23/77 states that the International Energy Agency predicts that by the mid 1980's, the world will face a physical shortage of oil and sharply higher prices.

6. Walter Levy and Associates estimated the non-communist world energy consumption in 1977 was the equivalent of 92.2 million barrels of oil per day. They estimate that consumption will rise to 121.3 million barrels of oil a day equivalent. This slow rate of growth (3.5 percent per annum for non-communist oil consumption) is due to a reduction in overall quantity, increase in cost, and conservation efforts in the industrial sector. During that period, the actual oil consumption increase from 1977 through 1985 is 2.5 percent annually.

7. Walter Levy and Associates estimates that the total OPEC production for crude oil was 22 million barrels per day in 1977; they expect this to rise to 26.3 barrels of oil per day in 1985. The major difference will be the increase of Saudi Arabian portion of the production which will increase from 9.4 million barrels per day in 1977 to 11.5 million barrels per day in 1985.

   The current world surplus which causes OPEC to keep the price low, will narrow by 1985. With a lower surplus, there will be less of a pricing problem. From 1985 to 1990 there will be increased tightening of supply. Since the Saudis said "no" to a price increase, the real price of crude oil has gone down over the past couple of years...that is, it has not kept up the rate of inflation. Levy and Associates expect that situation to continue through 1981 or 1982. After 1982, the price will rise at the rate of inflation plus 2 to 3 percent annually.

8. According to ERDA, (currently, 44 percent of the U. S. energy requirements are supplied by petroleum. Half of that is used in transportation (cars, planes, trains and boats.)

9. According to ERDA, the U. S. is consuming 17 million barrels of oil a day currently.

10. According to ERDA, the U. S. now has only 8 percent of the world's remaining recoverable oil.

11. The USGS states that America's remaining economically recoverable resources of crude oil (identified reserves plus oil yet to be discovered, but soon to be producible) is estimated at 112 to 189 billion barrels or another 33 to 60 years supply, assuming domestic production remains at current levels.

12. In 1900, 9 percent of America's energy consumption was in oil; in 1950, 54 percent was in oil; in 1973, 77 percent was in oil.

13. The U. S. News and World Report feels that the current glut of oil was developed because of the following six factors.
    - A. Alaskan Oil
    - B. North Sea Production
    - C. New Mexican Discoveries
    - D. New Indian Discoveries
    - E. Saudis refused to raise prices early in 1977
    - F. Some exporting countries are cutting prices

PART II. PETROCHEMICALS

There seems to be a general agreement that a very significant number of petrochemical facilities are coming on line around the world. This obviously has impact on an in-state petrochemical facility.

1. Arlon Tussing feels that the Saudis may price their feedstock very low so that their petrochemical operations stay valuable.

2. Milton Lipton indicated that Japan would rather have Saudi feedstock than Alaskan, all things being equal, for the simple reason that the Saudis just have more feedstock.

3. The foreign petrochemical markets are most difficult and elusive according to Milton Lipton. Areas outside of Alaska are just more appealing.

4. Joe Moore makes two points about the Japanese in the world situation:

   a. Japan is somewhat afraid of OPEC because of its instability, and

   b. Japan has only small older plants using naptha as a feedstock.

5. Joe Moore also indicates that Japan is negotiating with other suppliers including Singapore and Saudi Arabia. Negotiations have been on and off for some time.

6. The Oil and Gas Journal of March 6, 1978 indicates that four major world scale petrochemical facilities will be going on stream in mid 1982. Saudi officials insist "The projects will be needed by then, despite fears of a worldwide petrochemical glut."

   In addition to the four ethylene based complexes, two giant methanol plants are planned.

   The article indicates that "the projects are economically viable, but if they weren't, Saudi Arabia would go it all alone." This seems to agree with statements made by Arlon Tussing that the Saudis would reduce feedstock prices to these facilities to make them economically viable in world markets.

JOBS

1. "In our opinion, therefore, the potential for job creation offered by one of the proposed refineries or petrochemical complexes should be evaluated in light of (1) secondary job creation on the order of 2 - 5 new secondary jobs for each ten new refinery jobs and (2) the fact that at best only 50 - 60% of the new refinery petrochemical jobs are likely to be filled by Alaskans."

   (From Report to the Alaska Royalty Oil and Gas Development Advisory Board, David M. Reaume, Principle Economist, Division of Economic Enterprise, State of Alaska, December 14, 1977.)

2. Ed, Patton, head of the Alyeska Pipeline Service Company, said in January that the State could find itself paying $240,000 per year for each job created at a refinery. Patton warned that the notion of an in-state refinery using royalty oil was a "boon doggle of immense proportions."

3. "Additionally, the petrochemical industry brings substantial benefits far beyond those of many other industries. It is highly capital intensive and one of the lowest labor intensive industry of any of our nation's basic industries. Therefore, expansion by the petrochemical industry results in very little population impact. The highly automated petrochemical operation requires very few workers and therefore imposes very little additional burden on public services such as schools, hospitals, highways, etc."

   (From Royalty Oil Decision by Robert R. Richards, The Anchorage Times, February 19, 1978.)

4. "Summary of Additional Employment. New Jobs:

Construction phase (3 1/2 years)	3,500 - 4,000	
Operations phase (20 years)		
Petrochemical Facility	1,900	2,500
Shipping (ACS)	250	350
Total permanent jobs	2,150	2,850

   (From Outline of ALPETCO's Presentation, March 13 -14, 1978.)

SUBSIDIES

1. "There is substantial evidence available which makes questionable the project potential for a large scale refinery operation dependent upon an export market for a major portion of its products. We are concerned that the threat of job loss and financial reversals may generate future political pressure aimed at maintaining an inefficient refinery operation."

   (From the Report to the Alaska Royalty Oil and Gas Development Advisory Board, David Reaume, Principle Economist, Division of Economic Enterprise, State of Alaska, December 14, 1977.)

2. "At the same time however, ALPETCO itself has an important way out. The contract stipulates that if the consortium needs a break in royalty oil prices at a later date, the firm can get it with direct approval of the voters. That ringer raises the spector of voters possibly having to choose between subsidizing an industry or wrecking the economy of the area in which it's settled."

   (Alaska Advocate, March 16, 1978)

3. The contract does have subsidies. One prime example although not major is 2.6 in the contract which provides that the State will pay for the fill and storage tank mount ups. "It's about $9 million."

   (Quote - Charles O. Honig, Chairman of the Board, ALPETCO; Chairman of the Board, Alaska Interstate Company.)

   "But at the time it is ultimately paid for, it will be paid for at the value of the oil at that time, so if oil is $20 a barrel then, it will be paid for at the rate of $20 per barrel."

   (Quote - Willard M. Hanzlik, Vice President, ALPETCO; Vice President, Alaska Interstate Company.)

4. "With respect to the line pack, I suppose that could be viewed as a subsidy. So I really think it's more of an investment of $9 million dollars."

   (Quote - Charles O. Honig, Chairman of the Board, ALPETCO; Chairman of the Board, Alaska Interstate Company.)

   "Or you could look at it that way, or as a subsidy for 27 years?"

   (Representative Bill Miles, Chairman, House Royalty Oil and Gas Committee.)

   "Yes, I suppose you can look at it either way."

   (Quote - Charles O. Honig, Chairman of the Board, ALPETCO; Chairman of the Board, Alaska Interstate Company.)

5. "All I'm saying is that at that point the State of Alaska may be faced with commitments they feel obliged to undertake, which go beyond that of the contract, simply because this is one of your major investment projects in Alaska. And, one way or another, you are not going to allow it to founder for the lack of cash flow."

   (Milton Lipton of Walter Levy and Associates at hearing of Special Committee on Royalty Oil and Gas, March 15, 1978.)

REQUIREMENT FOR IN-STATE PROCESSING

1. "Article 4.3 does not actually require ALPETCO to produce energy fuel for in-state use."

   (Memo from Randy Berry, Revisor of Statutes, Legislative Affairs Agency to Bill Miles, March 20, 1978.)

2. "No, there is no requirement that we process a certain amount of barrels, there is no requirement that we continue the operation, but, if we follow the criteria of 10.2, and meet those criteria, - those are the benchmarks - if we meet the general requirement which is described in Article 4 - the two of those together should satisfy...

   (From transcript of Eddie Rogers, Chief Contract Negotiator for ALPETCO, March 1978.)

3. "This language, which we finally concluded was as far as we can go, really did not commit them, I mean, if they want to build in the capacity and let it sit idle, or build in the capacity, manufacture the products and export them all to California, they would not be in breach of contract for doing so."

   (From Fred Boness, Deputy Commissioner of Natural Resources.)

4. "There is no obligation in the contract to run 150,000 barrels through that facility."

   (From Fred Boness, Deputy Commissioner of Natural Resources.)

REVENUES TO STATE

1. "If the State were to sign contracts for the sale of royalty oil to an in-state refiner, the total revenue loss over time, bearing in mind some sales would be made in-state would be:

   Low = 936 million barrels x 70% x $2.08 = $1,363 million

   High = 936 million barrels x 70% x $3.12 = $2,628 million

   Quite clearly, insistence on the establishment of a world-scale refinery in Alaska would cost this State between 1 1/2 and 2 1/2 billion dollars in lost revenue over the life of the refinery."

   (From Economic Feasibility of Royalty Oil Refining, Niall Trimble, Principle Economist, Department of Community and Regional Affairs, State of Alaska, December 8, 1977.)

2. "Revenue from sales of royalty oil will be greater via the in-value option and the in-kind option independent of the premium. No evidence indicates the premium will be obtainable. The difference in revenue could be as great as $117,000 per day assuming the Sohio line exists or $245,000 per day without the line." (From the North Slope Royalty Oil Market, Pricing and Revenue Analysis, Battelle Pacific Northwest Laboratories, March 1978.)

IN-KIND VERSUS IN-VALUE

1. "Transportation cost figures were available from Chevron which show the cost of transferring products from the San Francisco Bay area to Anchorage to be around $1.23 per barrel. In contrast, they estimated crude shipment costs at around 55 - 80¢ a barrel using a mid point of 67 and 1/2 cents per barrel. For the latter cost, this would give a cost penalty for an Alaskan refinery, using Prudhoe crude and selling on the West Coast, of 55 and 1/2 cents, compared to a similar facility on the West Coast itself."

   (From Economic Feasibility of Royalty Oil Refining, Niall Trimble, Principle Economist, Department of Community and Regional Affairs, State of Alaska, December 8, 1977.)

2. "Much of the North Slope crude is moving to market through trades/exchanges involving other domestic or foreign oil. The exchanges frequently result in a savings in transportation costs. These complex arrangements are possible because the larger North Slope producers have domestic and international refining, transportation, marketing networks."

   (From the report on North Slope Royalty Oil Market, Pricing and Revenue Analysis, Battelle, Pacific Northwest Laboratories, March, 1978.)

3. "The in-value taking option appears to be the State's most practical, long-term economic method for receiving its royalty payment for oil marketed in the contiguous states. This option will provide the State with the most revenue and the least involvement and responsibility for marketing. With the in-value option, the producing companies will transport and market the royalty oil with their oil. This will allow the State to benefit from exchange programs among the oil companies. In addition, a proportionate share of the State's royalty oil will be marketed on the West Coast and less will be moved inland."

   (From North Slope Royalty Oil Market, Pricing and Revenue Analysis, Battelle, Pacific Northwest Laboratories, March 1978.)

4. In-value versus in-kind. "Texas, Oklahoma, Wyoming, Colorado, New Mexico, Louisiana and California are all oil producing states with royalty provisions. All these states currently take their oil royalty in-value.

   (From the North Slope Royalty Oil Market, Pricing and Revenue Analysis, Battelle Pacific Northwest Laboratories, March 1978.)

NEED FOR OVER-ALL DECISION

1. "Others have addressed the feasibility of producing petrochemicals in Alaska from royalty gas. Their conclusions are relevant to the royalty oil issue in that, generally speaking, Prudhoe Bay gas liquids would be a lower cost feedstock and would be heavy Prudhoe Bay crude oil. If processing from royalty gas is uneconomical, processing from royalty oil is even less attractive a proposition."

   (From Report to the Alaska Royalty Oil and Gas Development Board, David Reaume, Principle Economist, Division of Economic Enterprise, State of Alaska, December 14, 1977.)

2. "The cost and benefits of proposed sale of royalty oil to the Alaska Petrochemical Company (ALPETCO) cannot be determined independently of other major decisions involving Alaskan oil and gas reserves. The number of factors suggest that a petrochemical complex using crude oil as a feedstock would be non-competitive with a similar facility processing North Slope natural gas liquids. A favorable decision on the ALPETCO contract, moreover, would limit the options available for in-state use of the State's royalty gas and gas liquids."

   (From the Statement of Matthew Berman, Phd. in Economics, Yale University, to the Joint Royalty Oil and Gas Committee, March 16, 1978.)

3. "The true value of the ALPETCO project is heavily dependent on the natural gas decision. Conversely the options available for North Slope gas may be severely limited by approval of the ALPETCO proposal."

   (From Statement by Matthew Berman, Phd. in Economics, Yale University, to the Joint Royalty Oil and Gas Committee, March 16, 1978.)

4. "If the State were to award a royalty oil contract to a group proposing to build a fuels refinery, then royalty gas could be considered independently. If the State were to award a royalty oil contract to a group proposing to build a petrochemical refinery, it should be understood that NGL availability at the right place would likely require that the oil

project be abandoned or converted to the use of NGL, if that option were within the power of the State to grant."

(Royalty Gas Study, Bonner and Moore, page 7-4)

5. "It is imperative for the welfare of the citizens of this State that the legislature take time to resolve its three major oil and gas disposal questions with a common plan. The hurried piecemeal approach at an unwise method for deciding the fate of the State's precious non-renewable resources."

(From Statement by Matthew Berman, Phd. in Economics from Yale University to the Joint Royalty Oil and Gas Committee, March 16, 1978.)

WEST COAST MARKETS

1. On the West Coast sales. "Pemex has unveiled a $15.5 billion capital investment budget for 1977 through 1982. Mexico's refinery capacity is scheduled to grow by 735,000 barrels per day by 1982, approximately one half of which is probably targeted for export."

   (From the International Petroleum Encyclopedia, page 134, 1977.)

2. "Reference to the statistics published by the Oil and Gas Journal show that in 1976, oil refining capacity in California grew from 1,993,503 to 2,414,585 barrels per day, an increase of 421,000 barrels, or 21.1 percent. It is against these refinery extensions that an Alaskan plant will have to compete and clearly it is against them that its cost should be measured."

   (From Economic Feasibility of Royalty Oil Refining, Niall Trimble, Principle Economist, Department of Community and Regional Affairs, State of Alaska, December 8, 1977.)

3. "The West Coast oil supply/demand outlook for the future period indicates a significant crude surplus each year. The surplus could be as great at 725,000 barrels per day. The surplus appears likely to persist well after 1985."

   (From the North Slope Royalty Oil Market, Pricing and Revenue Analysis, Battelle Pacific Northwest Laboratories, March 1978.)

4. "Mexico's refining capacity is scheduled to grow by 735,000 barrels per day by 1982, approximately one half of which is probably target for export."

   (From The International Petroleum Directory, 1977.)

5. "Given the immense U. S. refinery capacity on the Gulf Coast and projected shortage of refined products on the West Coast, it's possible that much of Mexico's new capacity is aimed at the Southern California market."

   (From The International Petroleum Directory, 1977.)

6. "...the importance of the Mexican refinery expansion is this. Normally a firm will not purchase or produce Alaskan products at a price (FOB California) that is above the competitive price, if they can simply purchase Mexican or Gulf Coast products. The notion of an assured supply of products is one possible exception. However, there are limits to the amount of premium a rational firm will pay for an assured supply."

   (From the Report to the Alaska Royalty Oil and Gas Development Advisory Board, David Reaume, Principle Economist, Division of Economic Enterprise, State of Alaska, December 14, 1977.)

7. "...Mexico will be investing 15 billion dollars in its petroleum and petrochemical operations over the next six years, target for Mexican as well as export markets. It has been announced that the refining capacity will increase from 850,000 barrels per day to 1.7 million barrels per day in 1982, a boost of 93 percent. Mexico's plans for petrochemical development are no less ambitious--self sufficiency in 1979 and exportable surplus equal to 20 percent of its total production by 1982. Even discounting these figures somewhat, Mexico will be a major factor in the future."

   (From the Evaluation of the Proposed Refinery/Petrochemical Plant in the State of Alaska, Data Resources, Inc., November 22, 1977.)

GENERAL ECONOMICS/PRODUCER INVOLVEMENT/PROFITABILITY

1. "Finally, when considering the profit potential of petrochemicals in Alaska, we must ask, "Where are the major oil companies?" W. Monte Taylor, Exxon's Manager of Alaska Operations has provided his firm's answer. In a press release reported mid-November, he stated clearly that in Exxon's opinion Petrochemical Production is a non-economic venture in Alaska."

   (From Report to the Alaska Royalty Oil and Gas Development Advisory Board, David Reaume, Principle Economist, Division of Economic Enterprise, State of Alaska, December 14, 1977.)

2. "The weight of expert opinion clearly supports the notion that the petrochemical industry has entered a period of slower more hesitant growth and that Alaska is not an economic location for petrochemical manufacturing. In such an atmosphere, buyers of petrochemicals will have considerable control over the prices they pay and may be unwilling to enter in the long-term purchase contracts on anything but the most favorable terms. While we cannot be certain, it is likely that this is at least one of the reasons why the Dow Chemical Company withdrew its letter of interest from Alaska Petrofining. Indeed, in a 1975 study, Dow itself concluded that petrochemical processing in Alaska would only be feasible if a variety of incentives were offered, including a reduced price for feedstock."

   (From Report to the Alaskan Royalty Oil and Gas Development Advisory Board, David Reaume, Principle Economist, Division of Economic Enterprise, State of Alaska, December 14, 1977.)

3. "My fourth observation is that ALPETCO's view of the economics of Alaska refining and petrochemical and of the world petrochemical market is a minority view. It is a view that is generally not shared by the major oil or chemical companies, by the trade press, or by government specialists in energy and chemicals in either the United States or Japan. The more general view is that Alaska is not presently a competitive location for a world-scale plant because of transportation factors plus high construction and operating costs."

   (From Statement by Arlon Tussing to the Royalty Oil and Gas Development Advisory Board, February 22, 1978.)

4. "Taken together, the higher product transportation costs, the higher capital costs and the higher operating costs add up to the fact that Alaska products would arrive at a West Coast location at appreciable higher cost than the products of an identical West Coast refinery. Therefore, in order to compete with West Coast products, the only resources the royalty refinery has is to obtain royalty crude at a discounted price. Hence, the old maxim: 'In the oil business, always transport the oil as crude oil to the point nearest the ultimate consumer.' Guam Oil (one of the prospective royalty oil bidders) is quoted as saying the required discount is in the $1.75 - $4.25 per barrel range. Taking the low figure, each of the 400 permanent jobs in the royalty refinery costs Alaskan taxpayers $240,000 per year.

   In closing, all of the foregoing is even more applicable for petrochemicals. Alaska has about a zero market for petrochemicals and the transportation costs of shipping chemicals are horrendous as compared with shipping crude oil."

   (From a letter-to-the-Editor by E. L. Patton, Alaska Construction and Oil, January, 1978.)

TIMING

1. "In summary, most oil and chemical companies, both Japanese and American, think that this is the time to wait and see what happens."

   (From Statement by Arlon Tussing to the Royalty Oil and Gas Development Advisory Board, February 22, 1978.)

2. "And, as I said last time, and I simply quickly summarize. In the state of the circumstances, if you the Legislators have significant doubts about the balance between the benefit to Alaska and the risk, I don't think Alaska loses too much by deferring the decision. This, of course, is contingent upon whether you think royalty oil will be available in the future, whether you think one or two years or three years of draw-down of reserves is going to prejudice your ability later on. But the way in which one sees the future suggests that the perception of all parties as to the value of assured access may improve over time. And, there's no question about it, that the success of this project depends upon the participation of other participants, and the stronger the other participants are, the more closely entwined they are, the more they appear as a party of the first part, the more chances there are for success."

   (From testimony by Milton Lipton, Walter J. Levy, and Associates before the Special Committee on Royalty Oil and Gas.)

3. "But, I would think that a year or two is not going to be tragic for Alaska, except that, in a sense, what you're saying is we are turning our back on what has come to us in good faith, because we are hoping for something more. I would...This has to do with the psychological. But, the companies who might otherwise be involved with the ALPETCO group are not going to disappear in a year or two. They are still going to be there for ALPETCO or anybody else, or maybe come in as a party of the first part. I don't know, and I certainly don't hold tis out as something of great promise.

   (From testimony by Milton Lipton, Walter J. Levy and Associates, before the Special Committee on Royalty Oil and Gas, March 15, 1978.)

RISK

1. "I think the biggest risk is that the contract will collapse, as we personally assess the probability of success is not all that great. And this is the risk. Now, what's the cost to Alaska if it does? That is, if an honest effort has been made and you've got this protection, and, whether it's eighteen months or twenty-four months, the ALPETCO group will be out a considerable amount of money. What has Alaska lost? It's a subtle thing. I guess you don't have the answer to that, but let me tell you the impression I have.

   Alaska has been involved now in a series of episodes involving contracts with off-takers. And, first, it was on the joint resolution of the Legislature and then it was on the sale of the royalty gas - all for a specific purpose. Has Alaska suffered because of this? Well, at some point, if there is misadventure after misadventure, questions begin to arise about how solid is the thinking up there in Alaska about these things. If the contract doesn't come to fruition in the nineteen months or the twenty-four months, I don't think Alaska has lost a great deal. But, it's just become one more episode. But, I think that's about the greatest risk.

   The other risk is that everything is going to go, and the investment's all going to be made, and it may lead to a very, very difficult time. And you may be faced with things which, under the contract, you do not anticipate; that is to say, a real sense of responsibility on the then-administration in the State of Alaska and the Legislature at that time that, hell, we can't let this go down the drain. Maybe that's not all so bad, because, if the thing does come to fruition - if you have to hold for five years or seven years - that's not in the contract, but that's a risk you may have to do this, and it may not even be all that bad.

   But, if you're asking me honestly to give you a personal judgment, that we've all discussed, it seems this is the way we assess it. Now you've got to decide whether, if the worst of these come to fruition, how much does Alaska suffer by it? I can't answer that question, but this is about the way which we will try to evaluate. The biggest risk and the highest probability, I think, is that it will not come to pass. What does it cost you? You decide now.

The other risk is way down the road, and then you may face things that your successors will feel obligated to do, even though the contract doesn't call for it. They may not be so terrible, if worse comes to worse, and if it turns out to be only a short holding operation. But, these are risks.

CHAIRMAN MILES:

You're talking about another set of risks if everything goes, and then some new unforeseen, or heretofore undiscussed, problems (indisc.). What does...Okay, What are some of those that you haven't yet discussed?

MR. LIPTON:

Well, look...that every step along the line the project looks like it's working out, then the fact you do have off-take contracts. And on the basis of the off-take contracts, commitments are made to finance, whether it's net capital or whether it's equity capital and joint ventures, but commitments are made, because everybody perceives step by step down the line that it's working out. And on that basis, ALPETCO has performed according to the due dates of the contract. But then, about the time when...While all of this is going on, other people are making their own investment decisions, too, in similar expectations, and it turns out that, when the first crude oil is being processed, and the first gas oil from the refinery is going into an ethylene operation, and naphtha is being cracked and products are coming out, all of a sudden you don't have as firm volumes, which changes your average cost of processing, and the prices are somewhat lower than have been anticipated in all the calculations, because nobody is committing you to a firm price in the future. You are going to have to meet competitive prices, whoever is doing this operation. This could put an on-going operation in a cash bind for some time. And that's not a matter of something unforeseen happening. Everybody who is looking at this is willing to acknowledge that this could happen. These imponderables that happen in the world chemical industry. All I'm saying is that at that point the State of Alaska may be faced with commitments they feel obliged to undertake, which go beyond that of the contract, simply because this is one of your major investment projects in Alaska. And, one way or another, you are not going to allow it to founder for the lack of cash flow.

(From testimony of Milton Lipton before the Special Committee on Royalty Oil and Gas, March 15, 1978.)

Risk Cont.

2. "The marketing plan we talked about has two elements. One is the expectation of getting long-term, hell or high-water, take or bake contracts from Japanese chemical consumers - Japanese industry. I did an investigation of this for the Commissioner and found no reason whatever to believe that there was any possibility that they would accomplish that, and I would say that the odds on that part of their program are - maybe they are finite - very clost to zilch. Now it is conceivable that the notion that they can market on the West Coast... there is a substantial possibility that, given their cost structure, they can market on the West Coast. There is no basic petrochemical-producing facility on the West Coast."

   (From Statement by Dr. Arlon Tussing before the Special Committee on Royalty Oil and Gas, March 16, 1978.)

3. "I think the problem with ALPETCO is that its proposal is a little different. It proposes, rather than conventional financing, what is called project financing where the companies that own ALPETCO are putting up any their own faith in credit. They are not proposing to support the thing. So the bond holders have no recourse against Alaska interest. They can't take Anchorage Natural Gas; They have no recourse. They can't put a lien on Sea Train's ships, they can't put a lien on a native corporation's lands or future income, or anything of that sort. So, their only recourse is against the project itself. So they are going to look with even greater scrutiny than they would at the income statement and whether there is enough income to cover the debt service. Again, the problem here is that the owners don't propose to put up any capital. They propose one-hundred percent debt financing, or, if I read it correctly, there is something like a hundred...seven percent financing. When the thing goes on-stream the facility will have a negative net worth. That is, they will owe more than the plant is worth. And so the only security...the thing that they have to do, since there is no security in terms of an equity cushion, say all the cash flow has to be available for debt repayment - there is no equity cushion - they're not taking any bath, there's no recourse against the owners. Then what is absolutely essential is there be somebody that they can have recourse against. Well, I've convinced the Commissioner and his staff of adequately protecting the State against any legal recourse against the state, or against its revenues, or its royalty oil.

   (From statement by Arlon Tussing, Page 19)

JAPANESE MARKETS

1. "The fuel oil expected to be produced in the refinery will be sold in Alaska while the petrochemicals are destined for the most part for the Japanese market. However, a period of time is required during which consumer contracts will be executed, perportedly by Japanese end users. Such a concept might very well be plagued with time delays associated with International political bargaining between the United States and Japanese governments on matters wholely unrelated to this project. These time delays might be quite substantial. Furthermore, an investigatory trip to Japan on the week of January 24 did not discover a major Japanese credit capable of shepherding such a deal through the government bureaucracy. Additionally, our research indicates each of the three leading Japanese trading companies have similar projects underway elsewhere in the world and that at least one of these may have been placed in a holding pattern.

   One must question if this plan is not too aggressive."

   (From the Sale of Royalty Oil, Review of Financial Proposals, Smith Barney, Harris Upham and Company, February 3, 1978.)

2. "On the whole, ALPETCO's stories simply do not check out. In no case have I been able to find evidence that any Japanese firm is seriously considering a long-term "take or pay" contract or a "hell or high water" contract to buy Alaska petrochemicals. I did, however, find instances where ALPETCO seems to have exagerated or misrepresented the nature of their contacts with the Japanese."

   (From a Statement by Arlon Tussing to the Royalty Oil and Gas Development Advisory Board, February 22, 1978.)

3. "It was conceivable that instances where ALPETCO's claims did not seem to check out were communications problems--which are certainly easy to have in dealing with the Japanese. Perhaps ALPETCO people naively but honestly mistook curiosity and politeness for active interest. Maybe we don't have the whole story.

Yet my experiences were enough to make me wary--and I think you should be wary--about other claims ALPETCO might make to the State of Alaska."

(From Statement by Arlon Tussing to the Royalty Oil and Gas Development Advisory Board, February 22, 1978.)

4. "The fifteen letters are not evidence ALPETCO will fail to get Japanese participation in their project. They are just not evidence of anything at all. What bothers me about their presenting the letters and about ALPETCO's representations about its Japanese connections generally is the hint that ALPETCO is more tuned to the public relations business, than to the chemical business, and that it may see Alaskans as ignorant provincials who can be influenced best by puffery and huxterism."

(From the Statement by Arlon Tussing to the Royalty Oil and Gas Development Advisory Board, February 22, 1978)

5. "From the standpoint of securing the necessary resources from Japan, the proposal is very attractive; but in view of the fact that Japan already is seriously committed in the Saudi Arabian and Iranian petrochemical projects, it is considered very difficult to accept Alaska's proposal at this time.

(From Japan Petroleum News.)

6. "My speculations would be based on the knowledge that they have for several years now, they (the Japanese) have been engaged in negotiations for these three petrochemical joint ventures that I mentioned; one in Singapore, one in Iran, and one in Saudi Arabia. And these projects have kind of been off and on. They'll negotiate for six months, then they'll announce that the Japanese are withdrawing from the negotiations, and then a year later they back into the negotiations. So these things have been going on for quite a long time. So in that sense I'm sure this planning and weighing process is constantly underway."

(From Joe Moore, Consultant - Bonner and Moore, Associates, March 14, 1978.)

7. "The difficulty, of course, is that the companies who are in most direct control of the market are not the ones who are participating here. It becomes a matter of whether one can establish the relationship which makes it possible to do."

   (From testimony of Milton Lipton, Walter J. Levy, Consultants, March 15, 1978.)

8. "I think that the foreign market, which is discussed, which is essentially the western perimeter of the Pacific, is probably the most elusive and the most difficult one. It's not because there isn't going to be a growth in chemical demand in Japan, Southeast Asia, and the Pacific basin as a whole; there will be a considerable increase in demand. But the areas from which that chemical demand can be supplied looks to be ever so much more attractive than out of Alaska. I'll give you our quick thinking on this."

   (From testimony of Milton Lipton, Walter J. Levy, Consultants, March 15, 1978.)

9. "Now the ALPETCO group is operating on the premise that there are chemical purchasers, particularly in Japan, that will offer a premium for an assured supply of petrochemicals. I think they're a minority of one in that respect. They may be right, but none of the major chemical companies and none of the major oil companies believe. And they're going to have to beat their way into a market which is pretty much tied up by the majors already and in competition with a great number of new petrochemical facilities that are going in in OPEC countries and in third-world countries that want to have them for just the same reasons Alaska does. They want them for diversification of their economies, they want to create jobs, they want it as a symbol of national prestige, and in every case that I've looked at they are willing to subsidize. So they're willing to take a substantial amount of the risk. In Saudi Arabia, Saudi enterprises are taking fifty percent of the thing. In Korea, which has no feedstock advantage, the Korean government is undertaking to back-stop them on any operating losses. In Singapore, again, there seems to be...the government seems to be willing to share the risk. In Iran the government is contributing the feedstocks as its equity. And so, then, if there's a...they are in a

position to do so. So we're looking at competition in the world market with a lot of jurisdictions where they're willing to offer something more than Alaska is to beat their way into the market. And there's a large ethylene-producing surplus in the world today. All the projections show that it will be greater in 1980 than it is today. Now that that surplus would be worked off in 1985 if we have normal rates of growth and if no new facilities are planned in other countries between now and then."

(From testimony of Dr. Arlon Tussing before the Special Committee for Royalty Oil and Gas, March 16, 1978.)

SCOMM

#15:8

PETROMARC

TESTIMONY BY EARL JOHNSON

BEFORE THE

SENATE SPECIAL COMMITTEE ON ROYALTY OIL AND GAS

STATE OF ALASKA

May 11, 1978

P.O. BOX 7343 • TULSA, OKLAHOMA 74105 • (918) 747-5341

Senators.

Thank you for the opportunity to examine and discuss with you the pending Alpetco contract.

I have examined the Alpetco contract and numerous related reports, correspondence, news items and other data provided by the Committee.

The scope of my concern and my comments is essentially from the standpoint of effective crude oil marketing -- the area of my special expertise -- you have already heard a substantial amount of evidence on the viability of the proposed Petrochemical Facility, its effects on Alaska's economy, its risks and benefits to the state, and probably have well formed opinions on these matters.

The contract is well drawn, and does a good job of correlating a number of diverse elements into an understandable whole. There are, however, several philosophical elements that I feel need further consideration by your committee.

First, I cannot recommend the dedication of Alaska's royalty barrels to the proposed plant <u>until</u>, and <u>unless</u> the plant is completed. It certainly is absolutely necessary for any petroleum plant, especially one of the scope of the Alpetco project,

to have an assured, dependable, long-term raw material supply; but an otherwise viable plant requires such supply only when it is operational. Certainly a contract can be written which would guarantee the crude supply for such a plant when constructed, insofar as Alaska's present and future supplies of royalty oil are sufficient for such guarantees.

Absent some strategy for the use of royalty oil prior to plant completion that I have failed to consider, there appear only two ways in which Alpetco could benefit from pre-completion purchase of royalty oil. The most obvious benefit to Alpetco would be the outright purchase and resale for profit of Alaska royalty oil. Given present crude market conditions in the South 48 and existing government regulations, this appears unlikely. However, with an option to purchase up to 150,000 barrels per day at a price enabling them to reach West Coast ports with North Slope crude at a delivered cost to them under $12.40 per barrel (11.45 FOB Valdez + 0.95 transportation) and with the West Coast spot market at $13.00 per barrel or more currently, the opportunity is surely open for them to offer North Slope crude at substantially discounted prices and still retain a considerable profit margin. Whether they actually sold large amounts of crude at discounted prices or not, the market price for North Slope crude would probably be reduced in West Coast markets. There would be no offsetting increase in Gulf Coast markets so

that the net back on Alaskan royalty oil in value would be reduced. The foregoing situation, of course, is based on current circumstances. My original understanding of the contract was that Alpetco might selectively meet the required elements of 10.2 (1) through (3), especially 10.2(3)(d), very early after effective date, thereby advancing the triggering of paragraph 2.2, "Initiation of Deliveries," as early as 60 days after the effective date. Alpetco might then, it seemed to me, begin to take crude in the 9th or 10th month following the effective date. I have just read assurances from Mr. Honig and Governor Hammond that Alpecto would not take crude before the 25th month of the contract, and I find this reassuring.

My greater concern, however, is with the long term conditional dedication by Alaska of most of its known royalty oil. Certainly market conditions for North Slope oil today are discouraging and predictions to 1985 are pessimistic. It seems to me, however, that there are several possible ways that the market could change suddenly and unpredictably, that could greatly improve Alaska's potential for profitable in-kind marketing of its royalty oil. Alaska should weigh such possibilities very carefully before optioning its crude to others -- unless the benefits of granting such option are definite and substantial.

Some of the possible causes of "sudden and dramatic" market changes are (1) Disruption of foreign crude supplies-embargo, etc, (2) OPEC price increases, (3) Presidential imposition of a

fee on foreign oil, (4) Easing of prohibition on crude sales to Japan, and (5) More sympathetic federal regulatory treatment of North Slope royalty oil.

The second possible manner in which Alpetco might utilize pre-operational purchases of crude could be a time-trade arrangement with producers under which Alpetco would sell crude back to North Slope producers currently, in exchange for the right to buy similar quantities from the producers at a later date when it needs crude for actual plant operation. This appears less likely, however, than the resale of crude for profit by Alpetco.

With respect to market changes improving Alaska's in-kind profit potential, it will be argued that such changes would also affect the in-value price, thus increasing the price paid by Alpetco. This argument is valid unless such changes result in regulatory, transportation, or foreign exchange provisions that affect only royalty oil -- in which case in-value prices might not be affected. This would suggest some successful legal or political effort by Alaska to improve the present dissappointing price for its North Slope crude.

The issue of Alpetco's right under the contract to purchase crude prior to plant completion appears to have significant potential benefit to Alpetco, but such benefit seems to be

essentially unrelated to the successful promotion, construction and operation of the Petrochemical Facility. From Alaska's standpoint the possibility of being obligated to sell royalty oil without total assurance of the benefits calculated for successful plant operation would appear to be an indirect subsidy to the project, and could very well result in lower long-term net back to the State from its royalty oil sales. I believe that the concept of Alaska furnishing royalty oil to supply a plant such as Alpetco's is solid -- but only if the plant is one that can be financed and built based on its own economics, with the state agreeing to furnish the crude at competitive prices to supply the plant, beginning with its completion and commencement of operations.

I am still troubled by the lack of precise definition of "commit" and "commitment" as used in the contract, especially in Alpetco's benchmark requirements in paragraph 10.2. Again, Mr. Honig's letter of May 8, 1978, is somewhat reassuring in its statement that Alpetco's intended meaning of "commit to expend" means "contracturally binding agreements, contracts, and purchase orders." My remaining concern, however, is that in practice such agreements, contracts, and purchase orders are conditional, and subject to change or cancellation. Since the dedication of so much of Alaska's future production hinges on interpretation of the one word "commit," the legislature must at least assure itself of a firm and narrow interpretation by the commissioner with respect to all benchmark requirements.

There are a few technical concerns that I feel need comment. These are of less significance but should be considered.

1. The contract never states how much of the state's royalty oil will be utilized in the plant. Generally, the inference seems to be that if the plant is built, then it will process all of the royalty oil purchased. However, paragraph 4.3 is in direct conflict with that concept in that it provides, in part, "If buyer does not use the royalty oil sold and delivered hereunder or traded or exchanged oil in the Petrochemical Facility..." Indeed, if buyer does not use royalty oil or traded or exchanged oil, then what might he use, and with what effect on the State?

2. Paragraph 2.0 provides that seller shall have the right to use the remaining 15% of its crude in any way that it wishes, but paragraph 8.3 provides that state will sell "minimum" quantities of oil in value in order to provide for contract price determination. These two provisions contradict one another, and they raise the more important question -- how little crude can the state sell in value and thereby receive an accurate in value price in the contract? Are there restrictions on the minimum?

3. Paragraph 12.1: In providing for security interest credit protection for the state, I am compelled to comment that the procedures thereunder will turn out to be extremely

complex. As a crude seller, I would have much preferred the bond or L.C. concept. Additionally, is the $50,000,000 capital and surplus provision adequate for a bank to issue a letter of credit for, say, 60 days runs at 150,000 barrels/day at $6.00 per barrel?

4. Paragraph 15.2 (Force Majeure). Item (ix) provides that inability to obtain federal, state, or other government permits or licenses shall be regarded as a force majeure, and could hold the contract in limbo for up to four years (longer if state permits are the force majeure item). Presumably, Alpetco could be receiving royalty oil during any such delay.

In closing, I should like to state very clearly, that I would like to see the Alpetco project succeed -- for Alaska's benefit. My expressions of concern herein are genuine, and the result of my best effort to evaluate the contract as I see it -- from a crude oil marketing standpoint. Time for study and preparation has been short, and the subject is complex.

I shall be happy to answer questions directly or indirectly related to my testimony today -- either now or later, in writing.

PETRO MARKETING SERVICES, INC.

Supplementary Statement By

Earl Johnson

Before The

Senate Special Committee on Royalty Oil and Gas

State of Alaska

May 15, 1978

P.O. BOX 7343 • TULSA, OKLAHOMA 74105 • (918) 747-5341

Senators.

Since testifying before this committee on May 11, I have received and noted several items of additional information that I consider pertinent and highly significant -- enough so, in fact, to appreciably alter some of my attitudes toward the Alpetco contract as it pertains to royalty oil purchases. These changes also must affect my testimony and I should like to make the following brief statement prior to further consideration of the Alpetco matter.

Following my testimony on May 11, I discussed the Alpetco contract with Commissioner LeResche and Deputy Commissioner Boness, especially with regard to my testimony which opposed early taking of royalty oil. I characterized such early taking of crude by Alpetco as a probable indirect subsidy to the project by the State due to my visualizing an opportunity for Alpetco to purchase crude under the contract's pricing formula at a price which would permit them to discount North Slope royalty oil on the West Coast -- and still make a profit.

I found my discussion with Mr. LeResche and Mr. Boness very enlightening. Both of these gentlemen are exceptionally well informed both with respect to the subtleties of the Alpetco

contract and with respect to the crude oil marketplace generally.

In arriving at some of the conclusions outlined in my earlier testimony, I had used a weighted average price FOB Valdez of $11.45, based on the marketing of 2/3 royalty oil on the West Coast (and Valdez) and 1/3 on the Gulf Coast. These figures are essentially correct, but do not fully address the unique pricing mechanism in the proposed contract. This pricing mechanism contains a feature that substitutes the average point of delivery price of all of the other producers for the actual price of any producer whose actual point of delivery price is lower than the weighted average price of all of the other producers. This feature tends to protect the state from receiving a low price from Alpetco under any circumstance, but especially under those actual crude marketing practices now existing with respect to North Slope crude. Specifically, some 61% of North Slope Crude was marketed at Valdez and on the West Coast during March 1978, with the other 39% going to the Gulf Coast. The calculated weighted average price at TAPS inlet was $5.16 per barrel ($11.43 FOB Valdez). However, the pricing in the contract would set the Alpetco purchase price under the contract at $6.09 at TAPS inlet ($12.36 FOB Valdez). Since this would result in a delivered West Coast cost to Alpetco of approximately $13.25, there would obviously be no incentive for Alpetco to exercise its crude option -- and certainly no way to discount in the West Coast Market

(since the going rate forNS crude is approximately $13,00 per barrel at present.) This pricing anamoly results essentially from the fact that almost all of the crude going to the Gulf Coast is Sohio's. Their crude is thus priced at a weighted average $4.34 at TAPS inlet. Since the weighted average price of all other producers (excluding Sohio) is $6.09, this price is substituted in the pricing formula as the price per barrel for Sohio's crude in weight averaging all crudes. The foregoing prices are based on actual volumes and prices as reported to the State for March 1978. I have calculated additional simulated conditions for March and have concluded that even if Sohio commenced marketing an additional 100,000 barrels per day on the West Coast instead of the Gulf Coast, and Exxon and Arco each sold 50,000 more barrels per day on the Gulf Coast instead of the West Coast, the Alpetco price at TAPS inlet would still be $5.53 ($11.80 FOB Valez = $12.70 West Coast). Even this very substantial change in West Coast market balance between companies (which I do not regard as likely in the near future) would not produce a contract price low enough to permit Alpetco to discount significantly in the West Coast market and still achieve a profit on the sale of crude.

Because of this special pricing feature, the full import of which I had not realized at the time of my earlier testimony, I now believe there is very little likelihood of Alpetco's early taking of crude; and even less likelihood that if such early taking does occur (after 25 months), that the State

would be adversely affected as to price. In the light of my more complete information, I visualize the Alpetco's possible sales of crude on the West Coast would have no serious effect in the West Coast marketplace. I retract my earlier statement regarding the crude option to Alpetco constituting an indirect subsidy by the State to the Alpetco projects, since I have been convinced that the State is reasonably protected by the pricing clause.

The foregoing represents a substantial alteration in my testimony since last week. Briefly stated, I now feel much more comfortable about the crude dedication features of the Alpetco contract.

As earlier stated, I have been very favorably impressed with the grasp that your Royalty Commissioner and his staff have of the contract and its implications. Certainly, from the standpoint of the present administration attitude, one can feel assured that the bench mark requirements would indeed be rigidly and narrowly interpreted.

Thank you for the opportunity to amend my earlier testimony. My change of attitude about part of the contract is based on several hours of calculation based on actual March 1973 movements of crude as reported and an application of the Alpetco purchase price clause to these actual crude deliveries and modifications thereof.

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August 30, 1974

Robert Hartig, Esq.
717 K Street
Anchorage, Alaska 99502

Dear Bob:

I've put together for your and your committee's convenience a quick summary of what we had discussed prior to and in the course of the Hearing, dealing with "Alaska's Interest in Natural Gas and a Gas Pipeline." I thought it would be useful for you to have this recap of our preliminary thoughts for the record. As requested, there is appended also a list of questions that your committee may want to pursue.

We have begun to get some information from the Oil and Gas Division of Natural Resources as to NGL. Obviously a lot more work has to be done on this aspect of the problem. In any case, your committee should have available to it, in the course of the Fall, the filings of Alaska Gas Arctic and El Paso, hopefully with a broader range of information than has thus far been put on public record.

I don't know how far you plan to go with possible interrogation of the competing pipeline sponsors. But I would hope that the appended questions, together with and supplementing the ones I discussed with your committee earlier in the month, may be of help. It is not that I am confident that you will get direct answers to any of these, but your asking the questions may provoke more careful consideration on their part as to the various matters with which Alaska will be most concerned.

The enclosed copies would be for possible distribution by you to your committee members. In addition, one copy is going to John Elliott in Juneau for the Legislative files.

With best regards, I am,

Cordially,

Milton Lipton

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ALASKA'S INTEREST
IN NATURAL GAS AND A GAS PIPELINE

1. It is our purpose in this brief Note to summarize the main points set out in discussion with the Joint Interim Committee on Natural Gas Pipelines on August 8 and 9, prior to and in course of its Hearing in Anchorage. We also append a list of questions which we feel have not been really answered as yet in any of the pipeline companies' submissions, although further information will obviously be forthcoming this fall when Alaska Gas Arctic makes its additional filings with the FPC and NEB and El Paso makes its initial submission to the FPC.

Availability of Gas

2. Alaska has a strong and continuing interest in the availability of energy for household and industrial consumption within the State at reasonable prices. The State's established oil and gas reserves are obviously more than ample. But the State can directly affect the disposition of its energy resources only through its control over royalty oil and gas.

3. Internal gas consumption can be expected to increase rapidly in Alaska, reflecting both population growth and industrial expansion. Cook Inlet reserves are relatively modest. However, the prospects for additional discoveries in the Inlet and in course, as exploration progressively opens up, in other areas of South Alaska are considered good.

4. The potential use of North Slope gas to supply future needs in the South has therefore to be weighed against the prospect of future gas reserves to be proved up at locations closer to southern population and industrial centers. Further, the unquestioned availability of oil means that the State would not be energy-short, however the gas picture should develop.

5. The prospects for direct gas consumption elsewhere in the State, outside of the Kenai-Anchorage area that's now being served, would depend on the interrelation between (i) population density and hence the economics of distribution and (ii) the availability and cost of alternative fuels (i.e., oil). Fairbanks, for example, might benefit from availability of natural gas. But so far as smaller towns and villages are concerned, it is more likely that oil or bottled gas would be more efficient fuels than piped gas.

6. One further observation about Fairbanks. Alyeska will apparently power its first four pumping stations with gas, piped from the North Slope to the foothills of the Brooks Range. Subsequent pumping stations will be able to operate on gas, but are not planned to initially. It will be recalled that Alaska Arctic Gas expressed its willingness to construct a separate line to Fairbanks if demand made it economically feasible. The possibility could thus be explored of combining Alyeska gas requirements along the half of its route to Fairbanks with other potential gas demand to support a relatively small diameter gas line beyond Pump Station #3 and on to Fairbanks.

7. On balance, it would not appear that the State's own gas requirements, given overall oil/gas availability and prospects, would in itself be a decisive consideration in favor of the El Paso as against the Alaska Gas Arctic project.

8. Oil and gas derivatives -- naphtha from crude and ethane/propane from NG -- could provide a powerful stimulus to development of a substantial petrochemical industry in Alaska. Uncertain feedstock availability (even more so than feedstock cost) has retarded expansion of petrochemical capacity world-wide. And increasingly, petrochemical investment is moving toward oil/gas producing areas where feedstock availability can be assured (e.g., the Province of Alberta).

9. Alaska could have various interests in a petrochemical industry -- investment and income, relatively high-paying if modest employment, and possible effect on the prices Alaska has to pay for chemical intermediates and even various products. If feedstocks are exported to petrochemical centers in the Lower 48 and processed material imported back into Alaska, the State's consumers would be paying transportation costs twice. This is not to say that petrochemical facilities in Alaska would necessarily mean lower prices; a great deal would depend on the terms and conditions under which feedstocks were made available in support of petrochemical investment. Thus, the net advantages of a petrochemical industry are not entirely clear-cut, although the potential benefits have certainly to be considered.

10. To the extent that private companies determine the disposition of potential gas-based petrochemical feedstocks, export to the Lower 48 is more likely than their retention for use in Alaska. The State may be in a position to control the disposition of a significant volume of NGL through its royalty gas.* The precise volumes are still elusive, but it would appear that something on the order of 35,000 barrels per day would be consistent with associated gas when crude production is at the rate of 1.2 million barrels daily.

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* Propane would not only be valuable as a potential petrochemical feedstock but for use as bottled gas in areas of low population density.

11. Normally, there would be minimal stripping of NGL at the North Slope, no more than would be technically necessary for pumping the gas. The extracted NGL could then be commingled with crude in the oil pipeline. If the State opts to take both royalty oil and gas in kind, it would be in a position also to obtain and transport that volume of NGL that is stripped on the North Slope. The routing of a natural gas pipeline would not affect the State's interest in the NGL that would be extracted on the Slope.

12. If the Alaska Gas Arctic line is approved, the remaining liquids would be exported via Canada to the Lower 48. Gas Arctic has indicated that it would be willing to use its good offices to try to arrange possible swaps so as to make NGL available on the south coast in return for the royalty gas that would be transported through its line. It is not clear what Gas Arctic could really do in this respect.

13. If its line is approved, El Paso has indicated its willingness to transport royalty gas for the State as a contract carrier, even though it proposes to buy the rest of the gas for transshipment to the West Coast by LNG tankers. The State could then, to the extent desired, strip additional NGL from its gas on the south coast. How deep a cut would depend on a range of technical and economic considerations.

14. A second set of uncertainties revolves around FPC regulatory practice. Would the State's royalty gas carried under contract be deemed to be commingled with gas that El Paso owns? If so, would State gas be subject to FPC jurisdiction? Could, or would, the FPC extend its possible jurisdiction over the end-use of royalty gas? It is these and related questions that Alaska must pursue as intervenor for the record and in future Hearings, so that FPC consideration of the El Paso application also comes to grips with Alaska's concerns.

Economic Interest in
Value of North Slope Gas

15. Alaska has a very considerable economic interest in the value of North Slope gas -- through royalty and severance tax. If the wellhead value of the gas were independent of destination, then pipeline routing would not be a concern in this respect at least. But that is not at all assured.

16. Current FPC practice provides few guidelines to how it will handle the pricing of North Slope gas. It is most unlikely to blanket North Slope gas under its new nation-wide price; nor is there a basis in experience for cost-related pricing. Realistically, the value of North Slope gas will be related to gas values in the Lower 48. Administratively, the FPC would probably have at least to take account, directly or indirectly, of gas values in the alternative markets to which Alaskan gas might move and respective transportation costs.

17. Furthermore, North Slope gas will be produced from around 1980 to the end of the century, so that current FPC practice (and even the concept of gas price regulation separate and apart from other energy costs/prices) may not be relevant to Alaska's economic interest in the long-term value of North Slope gas reserves.

18. For Alaska, the combination of lowest pipeline costs and highest destination price would make for optimum value of its gas resources. Given the range of uncertainties about both, State policy could hardly revolve around minor differences. But this is not to say that Alaska should not be keenly interested in the pipeline cost projections that will be placed in evidence, as well as all relevant material about respective regional gas balances and values. If significant differences should begin to emerge, then the State has to be ready to consider and set out its position.

Investment and Employment

19. Alaska has various interests in the matter of natural gas pipeline construction per se. One has to do with the investment, income, and employment involved in the construction and operation of the respective proposed pipelines. If a natural gas pipeline were to be constructed in staggered timing with Alyeska, the continuity of employment, multiple use of infrastructure, etc. could add to the advantages the State might expect, and spread over a longer time the cost of offsetting disadvantages (such as mobilization and demobilization costs that communities have to suffer).

Environmental Impacts

20. A second has to do with the environmental effects of the proposed pipelines -- including impact on both physical and human environments, and on the plus/minus for government with respect to such impacts.

21. So far as the pipeline route itself is concerned, El Paso would have access to the same corridor as Alyeska -- as specifically anticipated in State legislation. Gas Arctic, for its primary route, would look for right-of-way over a relatively short span of State land, but access to the Federal Wildlife Refuge could be a stumbling block.

22. On the other hand, the liquefaction/terminal infrastructure and shipping density in the Valdez area could add further to the anticipated problems that Alyeska will be bringing.

23. None of the above is intended to add up to a definitive answer as to where Alaska's final interest lies.* The purpose of these early comments was to try to provide a check list of pivotal considerations that will have to

* Nor do we consider here the broader issues of policy and administrative decision that will confront the U. S. and Canadian Administrations, the FPC and National Energy Board.

be weighed in the balance. Meanwhile, the Department of Natural Resources has been cooperating in putting together available material on the NGL content of North Slope gas. And projected filings with the FPC this fall should provide more careful and comprehensive data than has thus far been placed on the record. In sum, the picture should be rather clearer by the next legislative session than at present; and the Interim Committee may be able to expedite the development of relevant facts over the months ahead.

W. J. Levy Consultants Corp.
August 29, 1974

Some Relevant Questions*

NGL Availability

1. What volumes of NGL's would be stripped on the North Slope per MMCFD of associated gas for pipeline transmission? (El Paso; Alaska Gas Arctic, transmission and/or producing companies that will be shippers)

2. Are there technical limitations on the NGL volumes that the State could strip from its royalty gas if the methane were to be tendered for pipeline transmission? (Gas Arctic) What limitations would there be on the volume of NGL's that could be commingled on the North Slope with State royalty oil for movement to the south coast? (Alyeska)

3. Are there technical limitations on the NGL volumes that the State could strip from its royalty gas if the methane were to be tendered for LNG export? (El Paso)

Natural Gas Availability

4. Could the pipeline contract to buy royalty gas subject to the State's option to withdraw such gas for either internal consumption or petrochemical processing? FPC policy? Liquefaction/LNG economics? (El Paso)

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* These are selected questions, relevant to the interests of Alaska as set out in the preceding Note, looking toward information that may not be developed in the pipeline companies' FPC and NEB filings.

5. What would be the estimated cost of moving 25-50 MMCFD of North Slope gas to Fairbanks, taking account of Alyeska's intention to supply gas up to Pump Station #4 via an 8-10 inch line? (Gas Arctic)

Transmission Costs

6. If Alaskan and Canadian gas were both to move through the same pipeline within Canada, how would costs be allocated? E.g., fixed costs apportioned on basis of capacities and operating costs charged on basis of throughput; average total costs assessed on basis of throughput; etc.? This could be particularly relevant if the pipeline is designed with excess capacity to accommodate potential expansion of Canadian gas production. (Gas Arctic)