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Royalty Gas Sales

TESTIMONY

Book II (V. 3 - 6)

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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

VOLUME III

PRESENTATIONS BY PROSPECTIVE GAS PURCHASERS

2/1/77 - 2/2/77

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 arrangement 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 somebody 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 lslands, 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 ab)ut 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 groundwork 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 understand 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 deregulate 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 along 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 locking 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 least 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 months 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 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 approv[illegible], 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

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

FEBRUARY 3, 1977

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 rcuting 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 economic 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 ıpacities, 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 representatives? 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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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 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

PRESENTATIONS BY INDIVIDUALS, ORGANIZATIONS, AND OTHER INTERESTED PARTIES

cont'

FEBRUARY 2, 1977

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 .ave 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 wellhead 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 not 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-fiv- 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 req ire 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 petro-chemical 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- ation, 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, environmental 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.

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 onthe 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 intra-state, 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. Chair-people, 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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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 ii

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?

iv

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# /

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 800535

1977 JAN 28 PM 7 42

TELEGRAM

RCA ALASKA COMMUNICATIONS, INC.
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.

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

2.2

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.

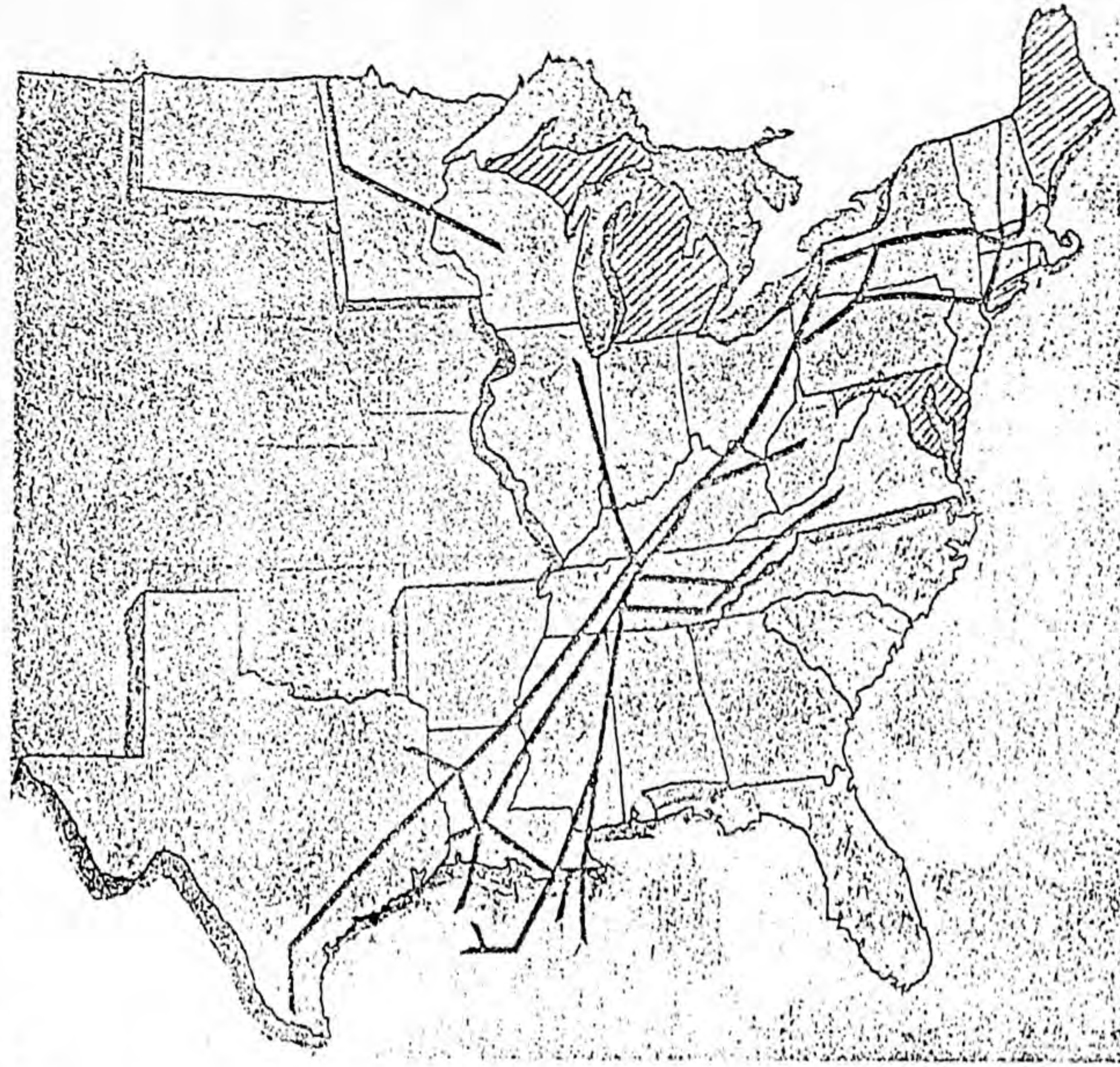
Prepared for House Special Committee on the Sale of Royalty Gas

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%.



AGO 800542

3.3

Source: "Why Tenneco" published by Tenneco
1976

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

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.

5.1

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

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

AGO 800549

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?

10) 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?

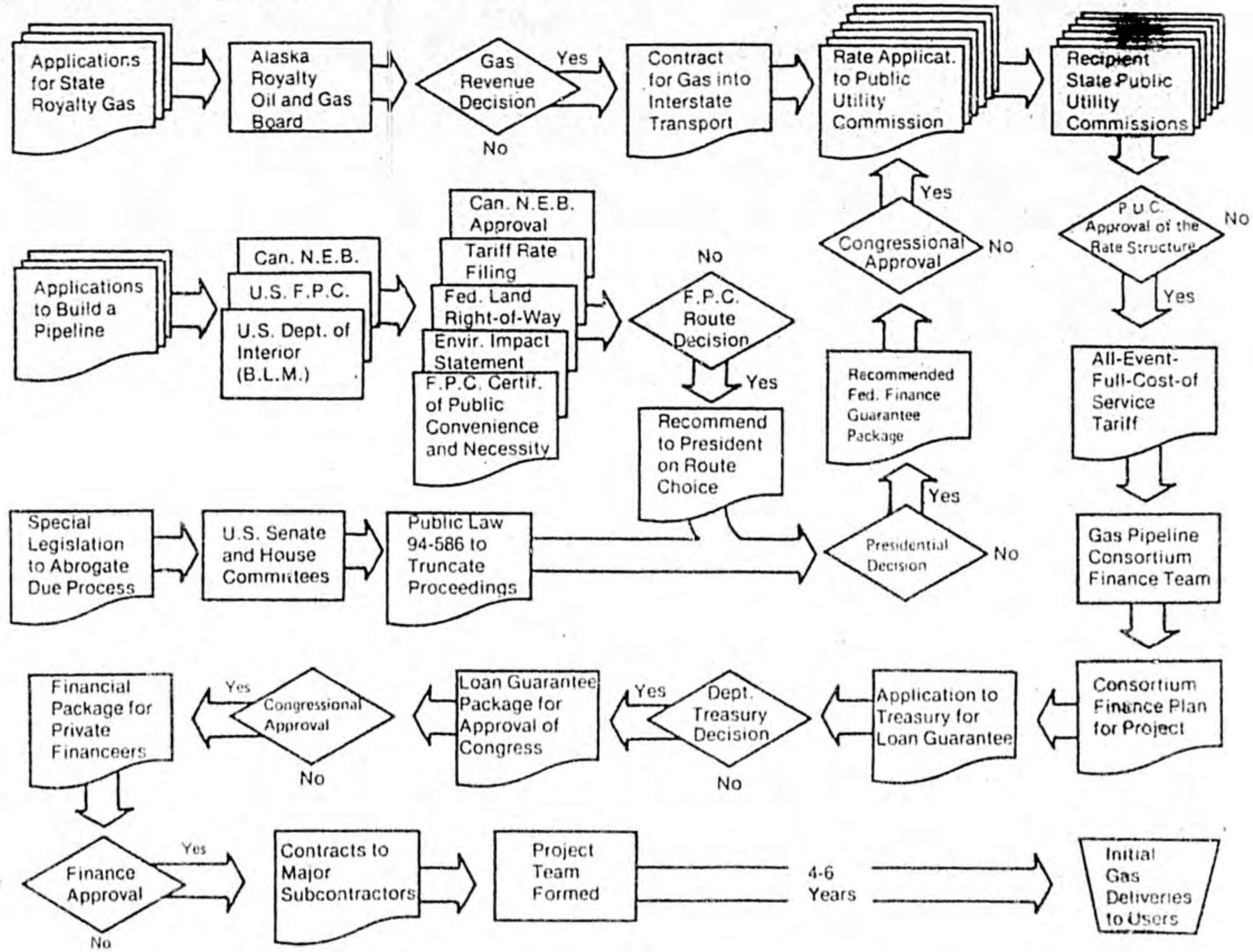
6.3

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

6.4

THROUGH THE MAZE WITH GAS



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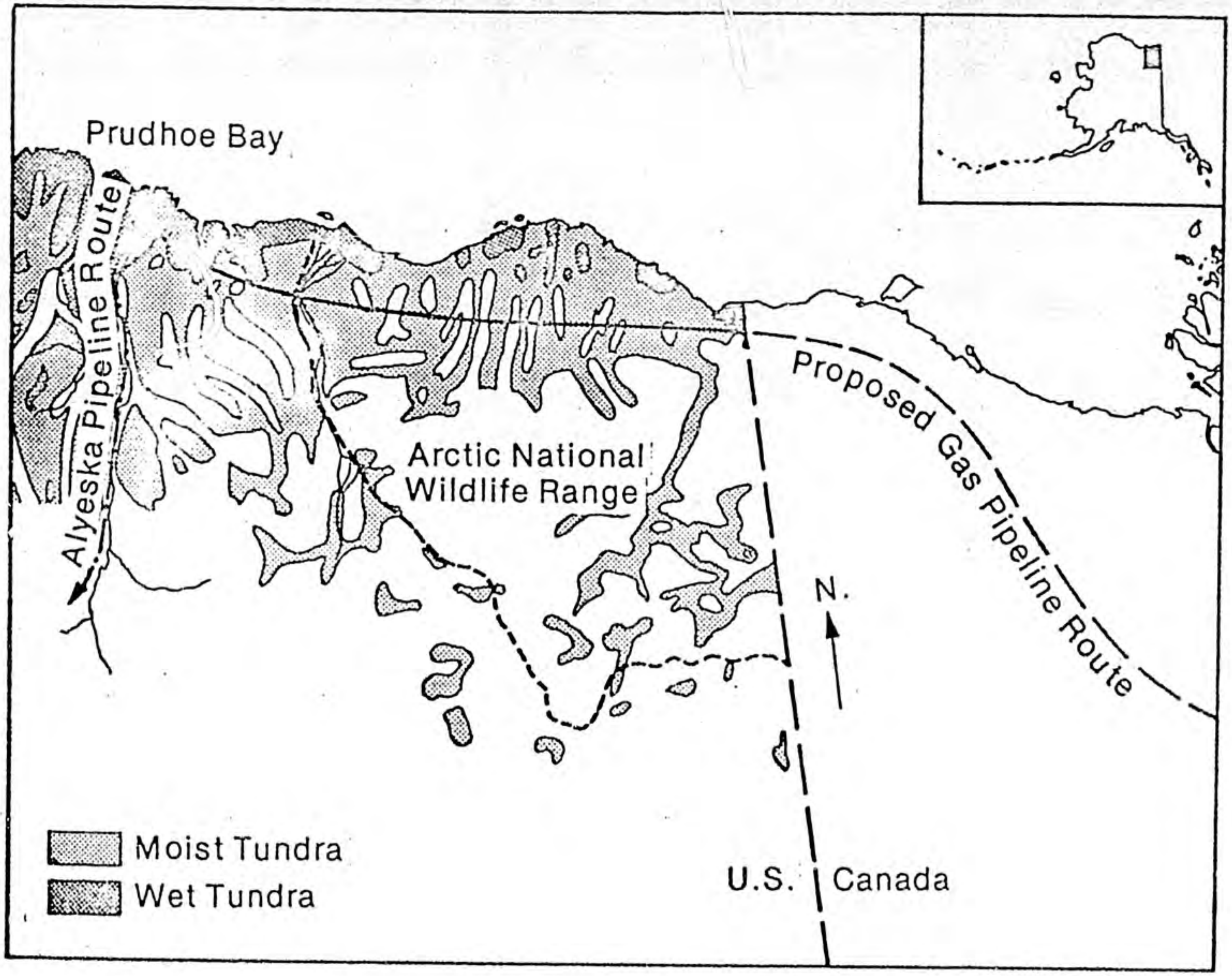
6.5

THE ENVIRONMENTALISTS LAST STAND



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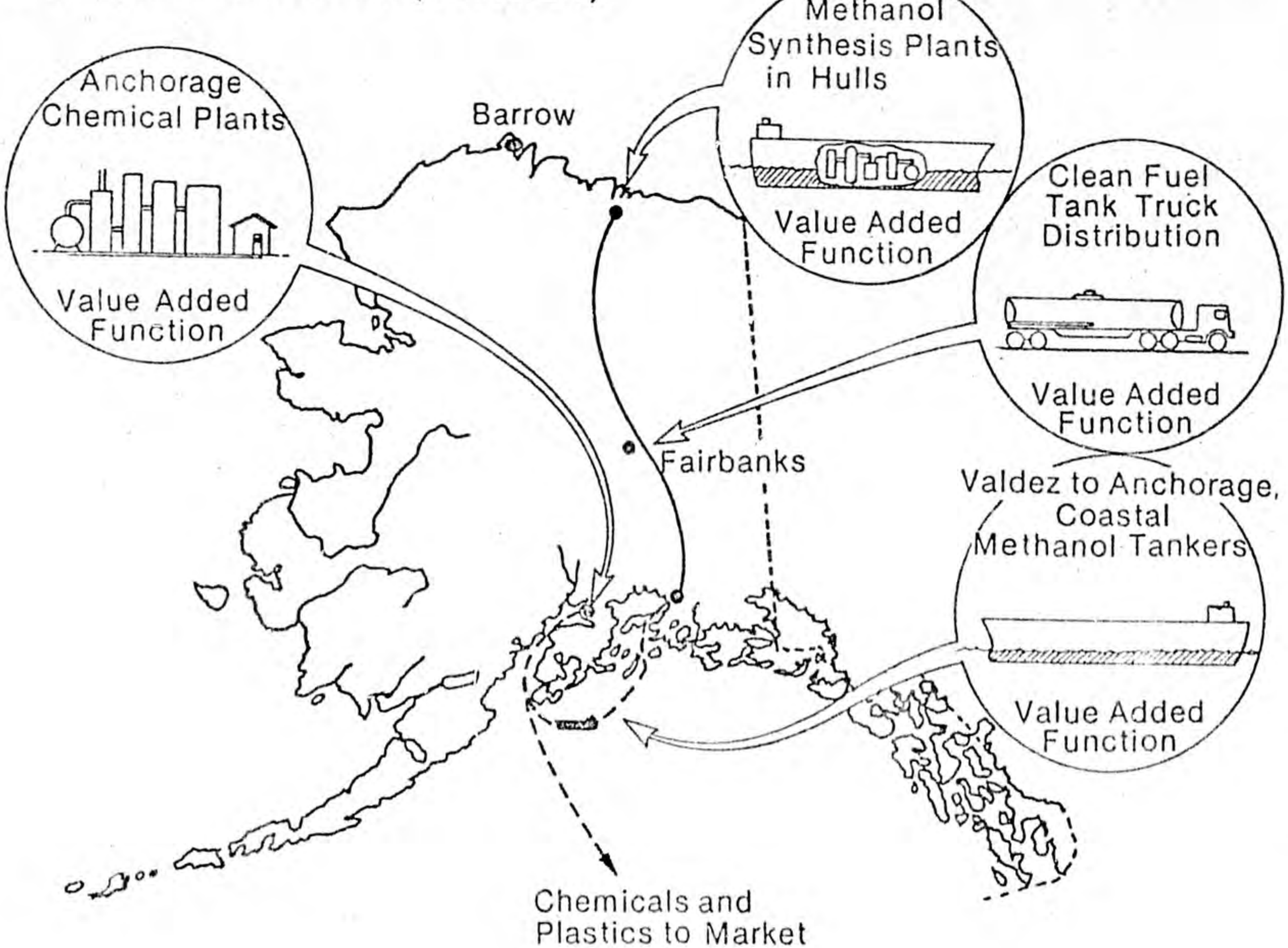
6.6

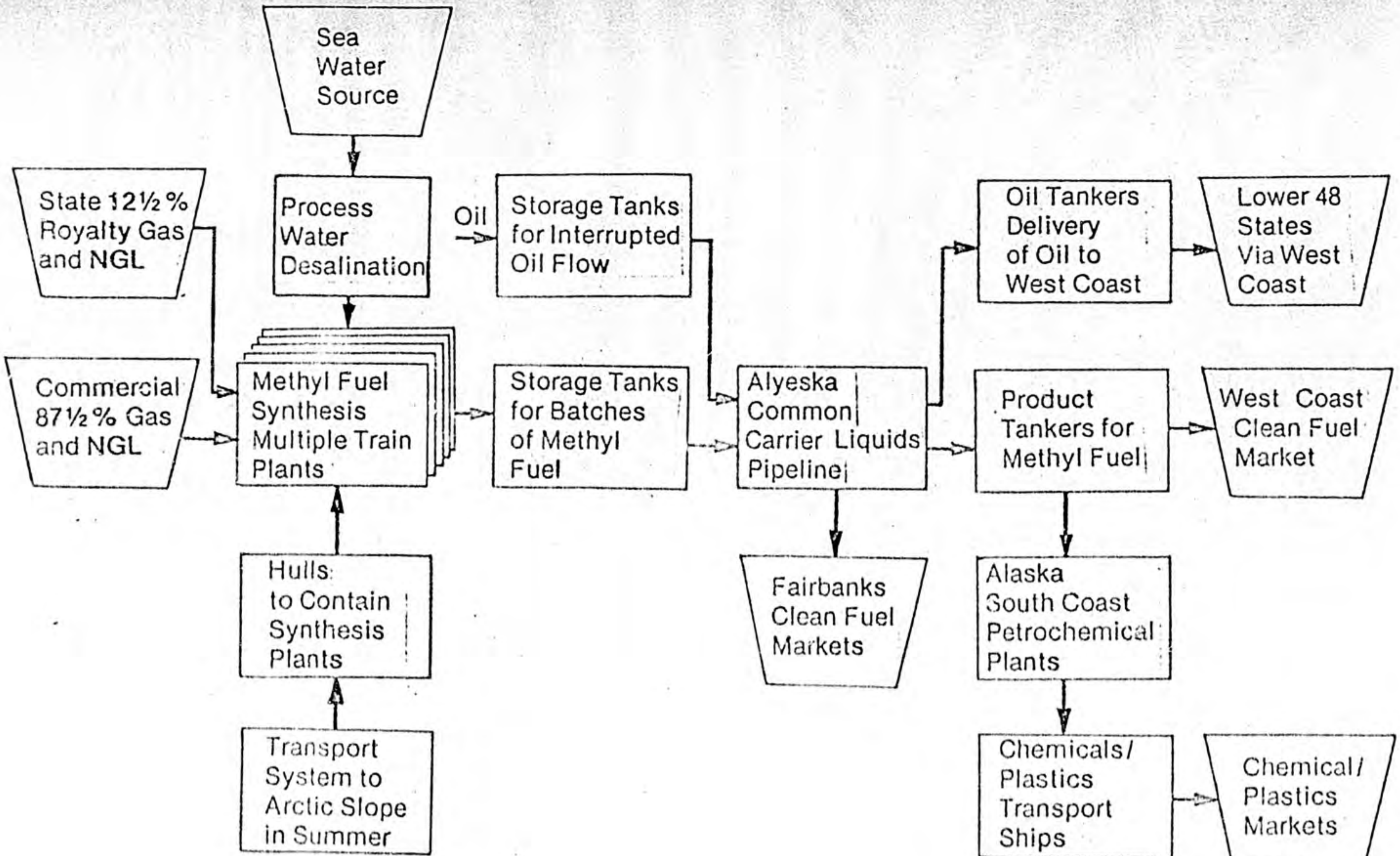
(39)

REVENUE SHARING (STAGE 1)



6.7

STAGE I SYSTEM ELEMENTS



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6.8

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

=

$\boxed{\text{The Alaskan Methanol Way}}$

6.9

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

TENNECO

January 18, 1977

Exhibit # 8

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 delivery system has national interest advantages over the competing systems. I am hopeful these

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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.

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TENNESSEE GAS TRANSMISSION COMPANY

--- 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

AGO 800569

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

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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

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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

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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

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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.

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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

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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

AGO 800578

Item 13. Other Materially Important Events.

9.10

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.

Notary Public in and for
Harris County, Texas

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).

AGO 800582

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).

10.2

— 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.

OTHER ACTIVITIES OF SOUTHERN

10.8

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."

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

*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.

cost overruns or shortfalls in gas supplies to the system.

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 lenders 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 "ful cost of service all-events tariffs" to cove their debt service obligations and to en sure a return on their equity. These ta riffs provide, in brief, that consumer are required to pay the debt service anc operating costs of the transportatior system (plus a profit to the owners) nc matter how great these costs are anc whether or not the customers receive any gas. Arctic Gas's tariff would begir to run as soon as gas was first deliv ered; El Paso's would begin 60 month after approval of its project, ever if i were never completed.

The proposition that consumer should bear or share in the risks asso ciated with a project which benefit them is not in itself unreasonable, pro vided that the economic expectations c the project are clearly favourable an the risks are of a reasonable magnitude But with these projects there are goo reasons for doubt on both scores. More over, even if the Federal Power Com mission were to approve "all-events tariffs, local gas distributors would nc

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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 pre-empt 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."

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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 entire 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.

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.

12.4

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 <u>all</u> 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 <u>pro-forma</u> 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 <u>one thousand times less</u> 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.

EL PASO NATURAL GAS COMPANY
NATURAL GAS CONSUMPTION FOR THOSE
STATES SERVED WHOLLY OR IN PART
Calendar Year 1975

Exhibit 13

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-

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.

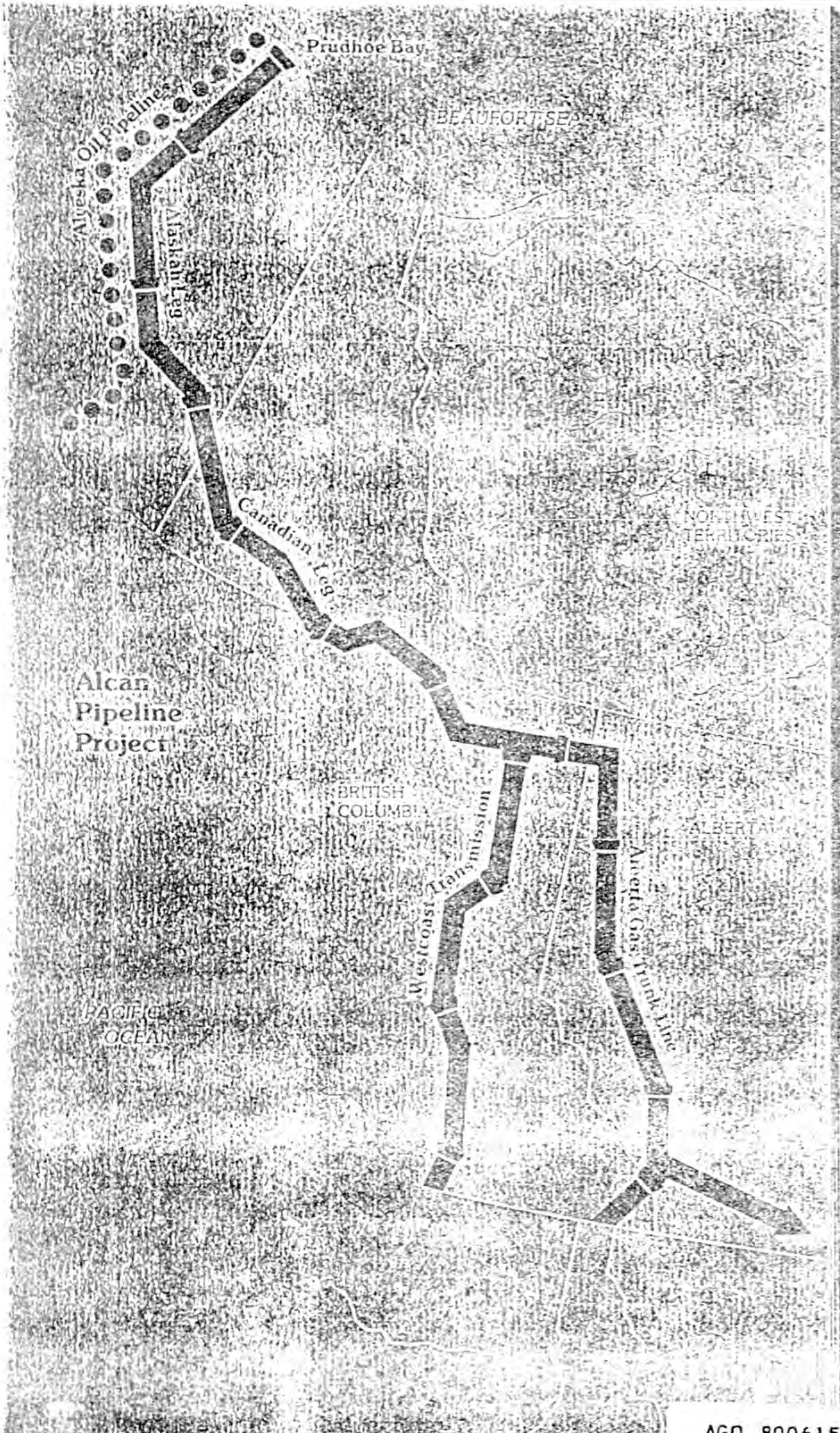
Cost Estimate: In 1975 dollars, the Alaskan portion of the Alcan Project will cost $2.3 billion, and the Canadian portion will cost $2.4 billion. Alcan's total costs, including additional facilities in the lower 48 states, are $6.3 billion.

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.



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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.

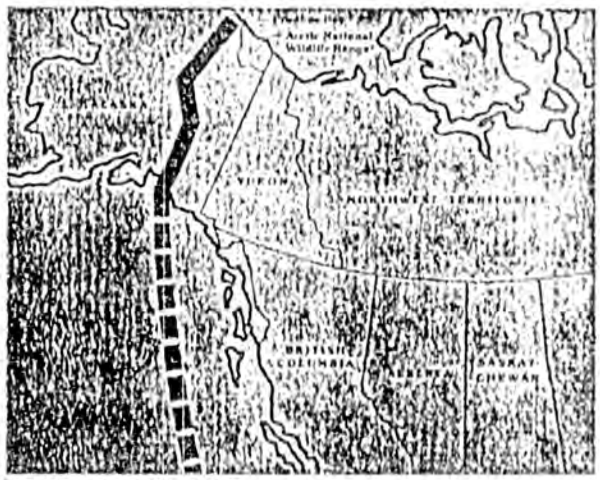
The remainder of the gas would be transported from Fort Nelson to Zama Lake, Alberta through a new pipeline for delivery at Zama Lake to Alberta Gas Trunk Line Company Limited. Alberta Gas Trunk Line would then transport the gas through its expanded existing system for delivery to Empress, Alberta, and 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

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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, [illegible] only about 10 inches per year and occurring mostly in summer.

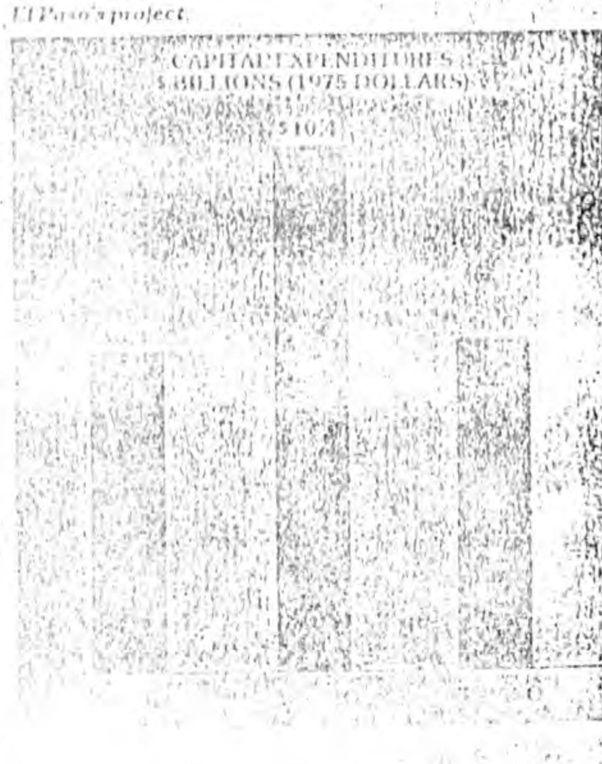
Therefore, annual snowfall would be insufficient for the construction of snow roads and the manufacture of artificial snow would be required. However, Arctic Gas has no prototype machine to produce the snow necessary for the roads.

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 $4.1 billion less than that of Arctic Gas and $300 million below El Paso's project.



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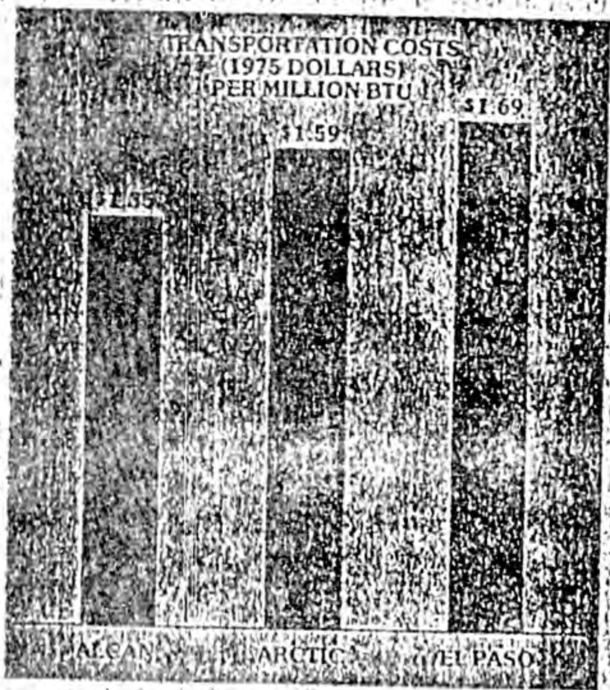

Alcan delivery cost per million BTU, an all-important cost to the consumer, is the lowest.

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.

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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 Project 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.

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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

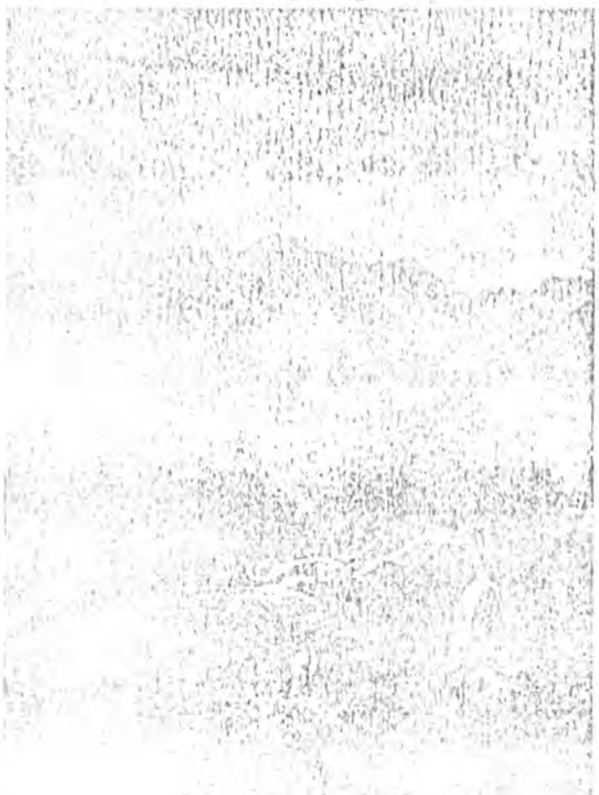
Environmental Advantages of the Alcan Plan

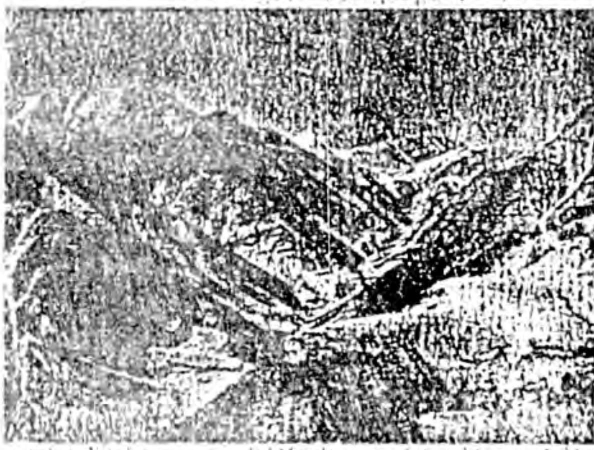
The pipeline route chosen by Alcan and Northwest has been widely acclaimed as environmentally superior to the other two alternatives. The Federal Power Commission environmental staff and the Department of Interior both favor the Alcan Highway route. This route also has won the support of the Sierra Club, 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."

—Ben Cooke, The Wilderness Society

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"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

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"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] would . . . the least envi[illegible] damage [illegible] while, at the same time, [illegible]"

[illegible] National Wildlife Federation

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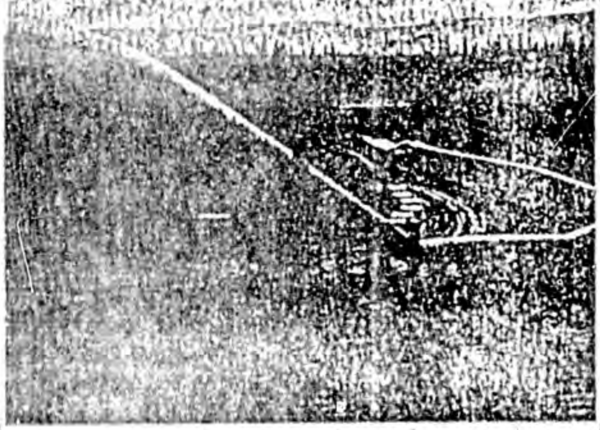


Alcan will utilize the Alyesko work pad.

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.

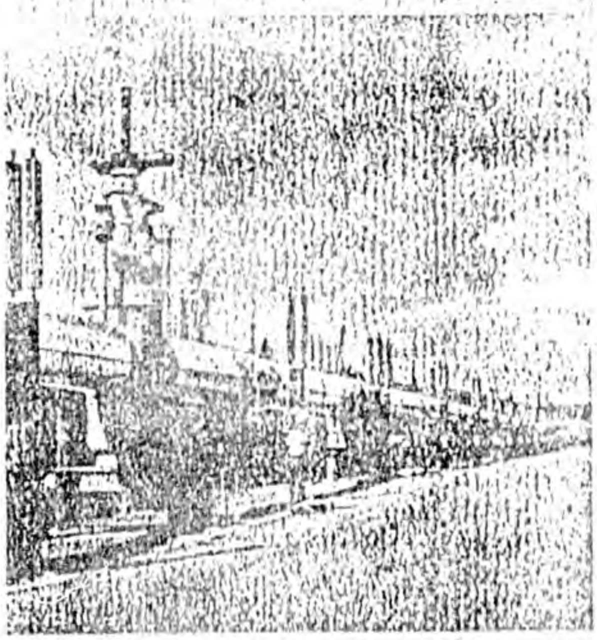
Also in order to site its LNG regasification plant at Point Conception, El Paso must receive approval from a number of California state regulatory agencies.

Uses Less Gas

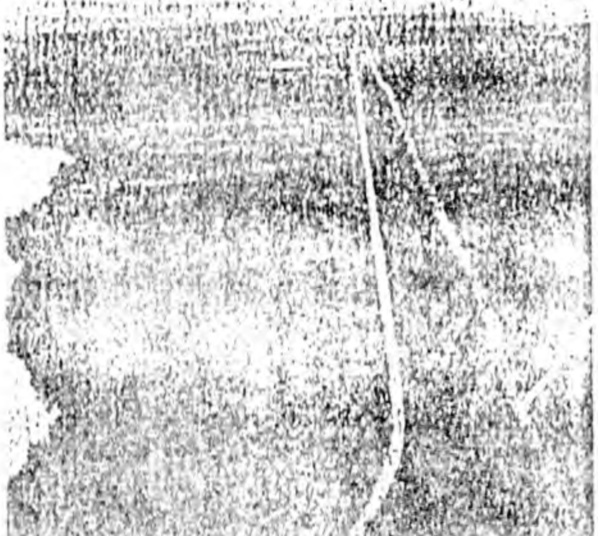
Few doubt that Alcan will use less gas for transportation than El Paso. Not only does El Paso use gas for transportation but also for liquefaction operations. The pipeline system is also more reliable. Bad weather and rough seas could easily delay shipping, and under the El Paso plan the [illegible]

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 from Delta [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 [illegible] 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 815 million cubic feet daily, through transmission lines across [illegible]. 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] flowing [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.

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.

14.11

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

15.1

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.

15.2

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.

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, GAS TRANSMISSION LINE

LOAN AMOUNT : 400,000,000
INTEREST RATE (% PER YEAR) 8%
YEARS 20
MIN MONTHLY PAYMENT 345.77
ACTUAL MONTH PAYMENT 3,500,000
PAYMENTS START(MT,YR) Jan 1980
PRINT LINE EVERY ? PAYMENTS
PRINT MAX OF ? LINES

15.3

MORTGAGE REPAYMENT SCHEDULE (8.00%)
MONTHLY PAYMENTS $350.00

M-YR	INT PAY	PRIN PAY	TOT INT	BAL.		
0 0-80				400000.00		
12-80	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	852.68

NOTE: multiply all results by 1000

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GAS DISTRIBUTION SYSTEM

LOAN AMOUNT 50,000,000

INTEREST RATE (% PER YEAR) 6.5%

YEARS 20 15.4

MIN MONTHLY PAYMENT 372.79

ACTUAL MONTH PAYMENT 380,000

PAYMENTS START(MT,YR) Jan 1982

PRINT LINE EVERY ? PAYMENTS

PRINT MAX OF ? LINES

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

AGO 800629

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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16.4

I. INTRODUCTION AND SUMMARY

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.

16.5

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

16.6

TABLE I-1

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.

16.8

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.

16.9

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.

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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.

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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.

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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,

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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.

MARKET BASED VALUES OF NATURAL GAS 16.18

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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Jensen Associates, Inc.

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.

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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

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[1]Title 18, U.S.C., paragraph 2.56a (f).

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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 <u>non-associated</u> gas wells in Alaska, the national rate would not be much affected. The number of Alaskan <u>non-associated</u> gas wells and the quantity of Alaskan <u>non-associated</u> 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.

<u>An Area Price Ceiling for Alaska</u>

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

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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.

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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

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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

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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	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.

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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.

16.35

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

16.37

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

16.38

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

16.39

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

16.46

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.

16.41

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

16.42

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

16.43

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).

APPENDIX A 16.44

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

16.45

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.)

16.46

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

16.47

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.

17.1

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

---

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. - 3d 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

19.1

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.)

19.3

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.)

19.4

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 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

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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 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

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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 <u>not</u> 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.

Rush Moody, Jr.

RM:bw
Attch.

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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 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 <u>force majeure</u> situation through its own action, and if the effect of <u>force majeure</u> 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.

<u>Section 10</u> 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.

<u>Section 11</u> 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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<u>Section 12</u> 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

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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 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

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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

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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

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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

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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

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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

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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

Honorable Lowell Thomas, Jr.
January 14, 1977
Page 2

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

JERE BEASLEY

JB:cw

AGO 800717

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
1139
REVIEW COMMITTEE 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.b.1

02003 ANCHORAGE AK 151 02-07 943A AST 1977 FEB 7 PM 1

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

AGO 800719

TELEGRAM

RCA ALASKA COMMUNICATIONS, INC.
PHONE: 586-6440
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

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

21-d

#

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

1977 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

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
...RCE
550 First Avenue
Fairbanks

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

GENERAL CONTRACTOR / SITE DEVELOPMENT • COMMERCIAL BUILDINGS

AGO 800726

21-i

TELEGRAM

#

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 99811

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

OFFICE OF THE GOVERNOR

Exhibit 22

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

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Fairbanks, Alaska 99701

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Office of the Governor
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Juneau, Alaska 99811

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Mr. Mike Holland
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OIL COMPANIES MAILING LIST

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Travis H. Petty
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Mr. A. Baca
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Mr. John A. Sproul
Vice President-Gas Supply
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Mr. James K. Curry
Manager of Exploration and
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Mr. Ray J. Lynch
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227

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22.8

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22.10

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Chairman
State Lands Commission
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Sacramento, California 95814

Mr. Anthony Kline
Office of the Governor
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Sacramento, California 95814

The Honorable Robert Battinovich
Commissioner of Public Utilities
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22.11

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AGO 800744

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Alaska State Legislature Exhibit 23

SPECIAL COMMITTEE ON
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ROYALTY GAS

(907) 465-3873
POUCH V
JUNEAU, ALASKA 99811

MEMBERS

REP. CLARK GRUENING, CHMN.
REP. C. V. CHATTERTON
REP. JOE L. HAYES
REP. JOSEPH H. MCKINNON
REP. CHARLES H. PARR

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

II. Invitations by mail or telephone:

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23.1

Joint Hearings of the
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Senate Special Committee to Consider the Sale of Royalty Gas

January 31, 1977 - February 7, 1977

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Vice Chairman
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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:

HOUSE GAS SALE COMMITTEE
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SENATE GAS SALE COMMITTEE
SEN. JOHN RADER
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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

25.1

CONTENTS

GRAPHICS

25.2

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

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 I. 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.

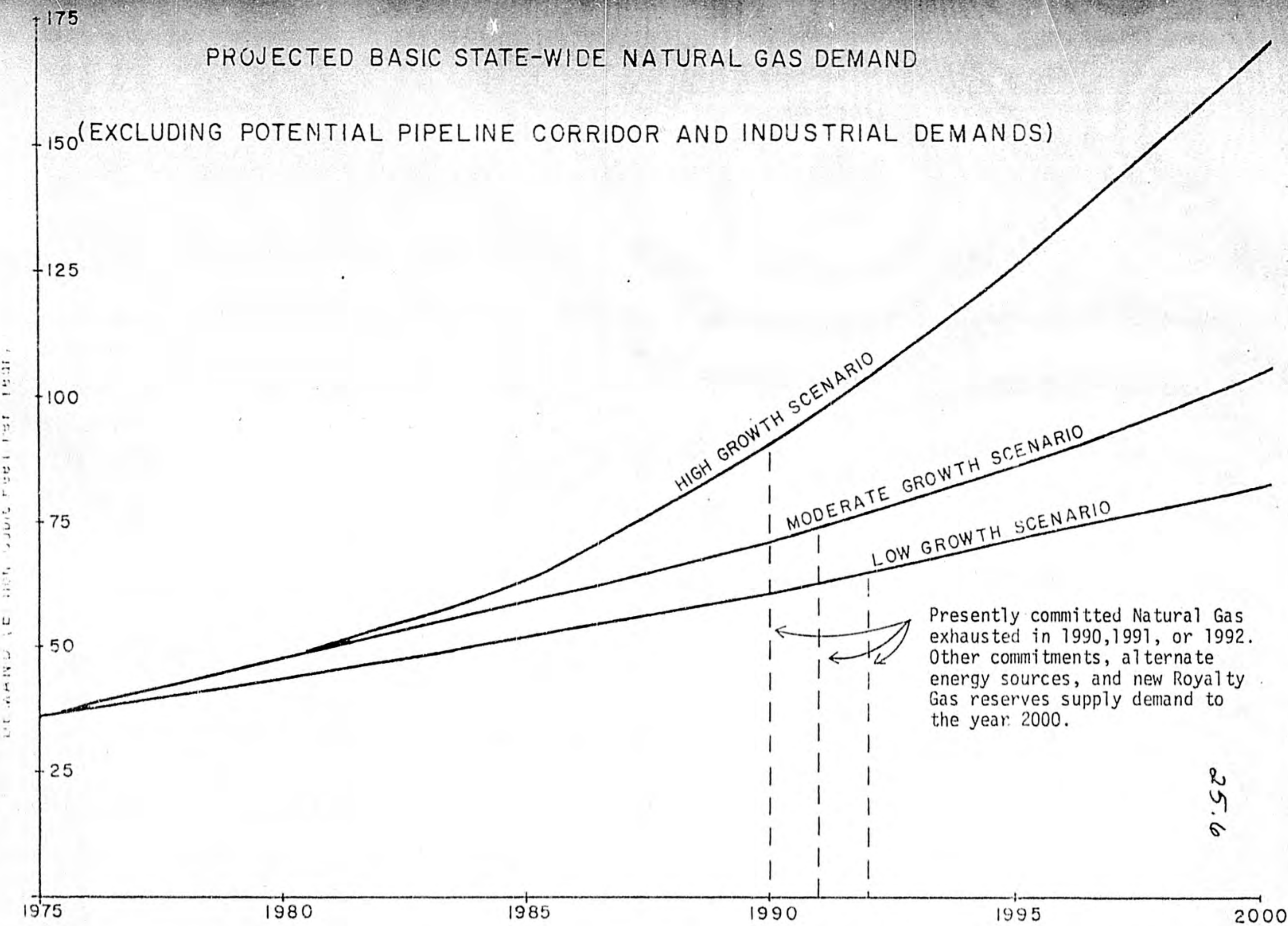
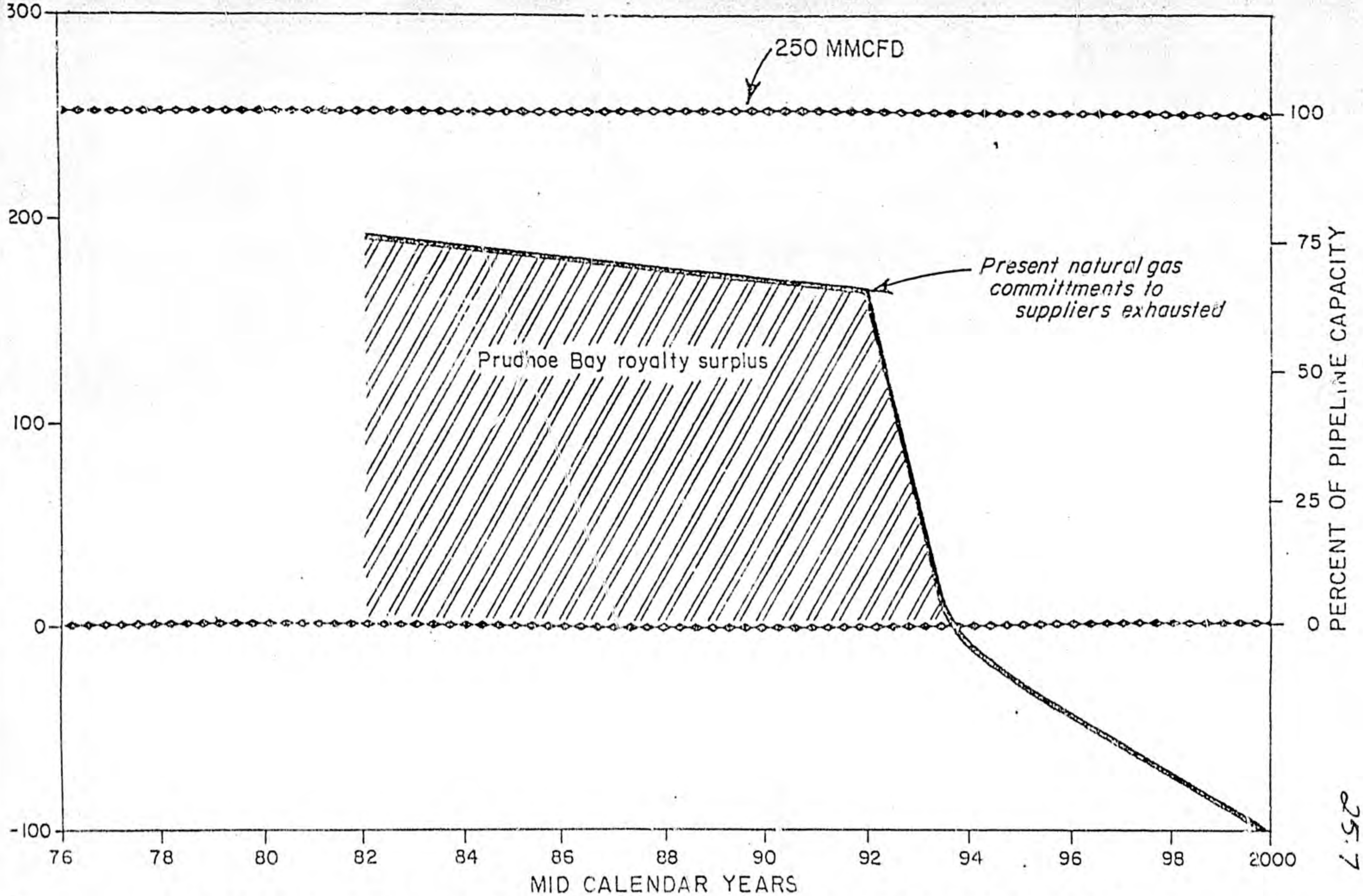

PROJECTED BASIC STATE-WIDE NATURAL GAS DEMAND
(EXCLUDING POTENTIAL PIPELINE CORRIDOR AND INDUSTRIAL DEMANDS)
175
150
125
100
75
50
25
HIGH GROWTH SCENARIO
MODERATE GROWTH SCENARIO
LOW GROWTH SCENARIO
Presently committed Natural Gas exhausted in 1990,1991, or 1992. Other commitments, alternate energy sources, and new Royalty Gas reserves supply demand to the year 2000.
25.6
1975
1980
1985
1990
1995
2000

FIGURE I



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PRUDHOE BAY ROYALTY GAS AVERAGE DAILY SURPLUS
MOST LIKELY CASE AT 2.0 BCF/DAY PIPELINE THRUPUT

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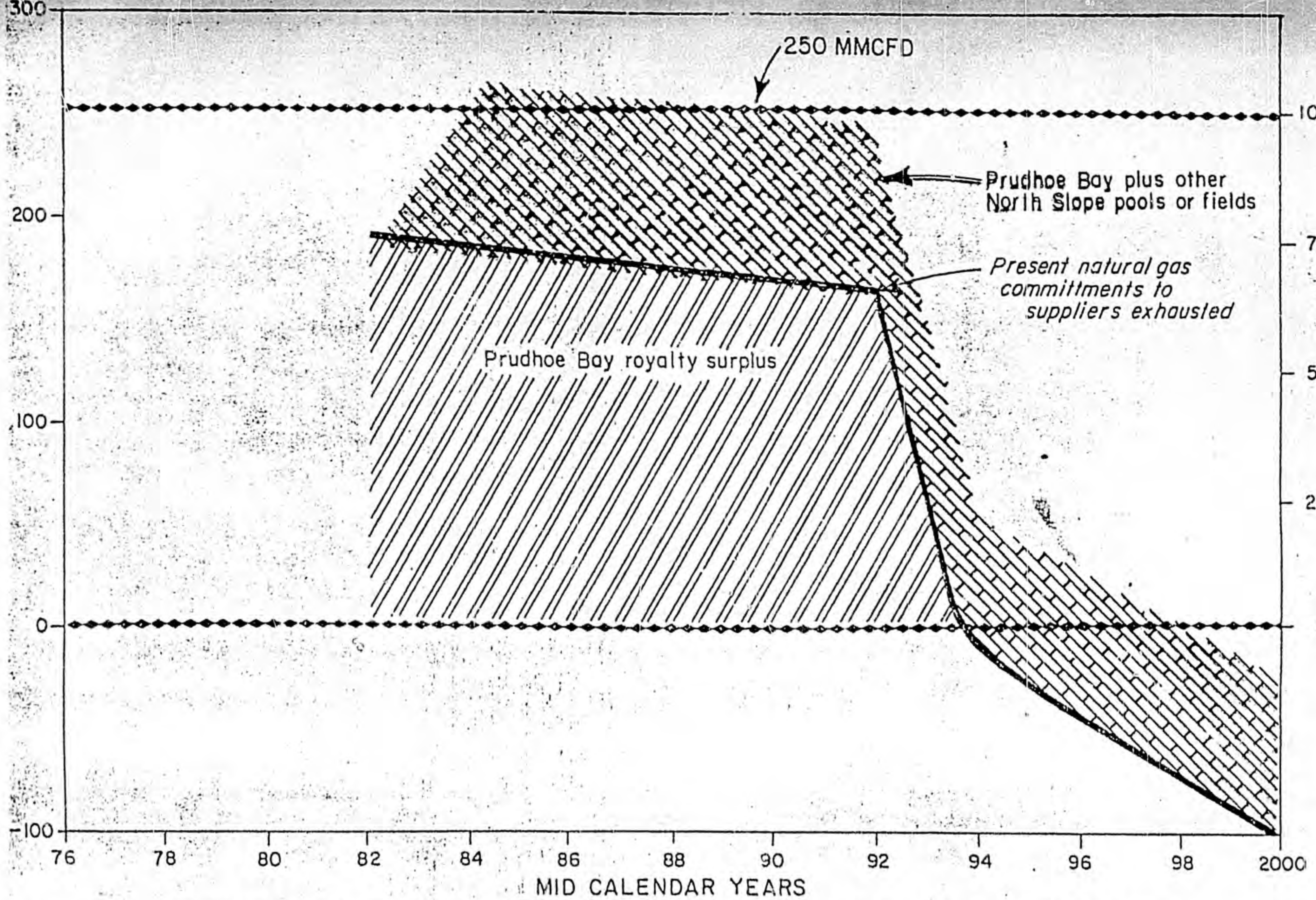
FIGURE 2



PRUDHOE BAY ROYALTY GAS AVERAGE DAILY SURPLUS
MOST LIKELY CASE AT 2.0 BCF/DAY PIPELINE THRUPUT

FIGURE 2

AGO 800764

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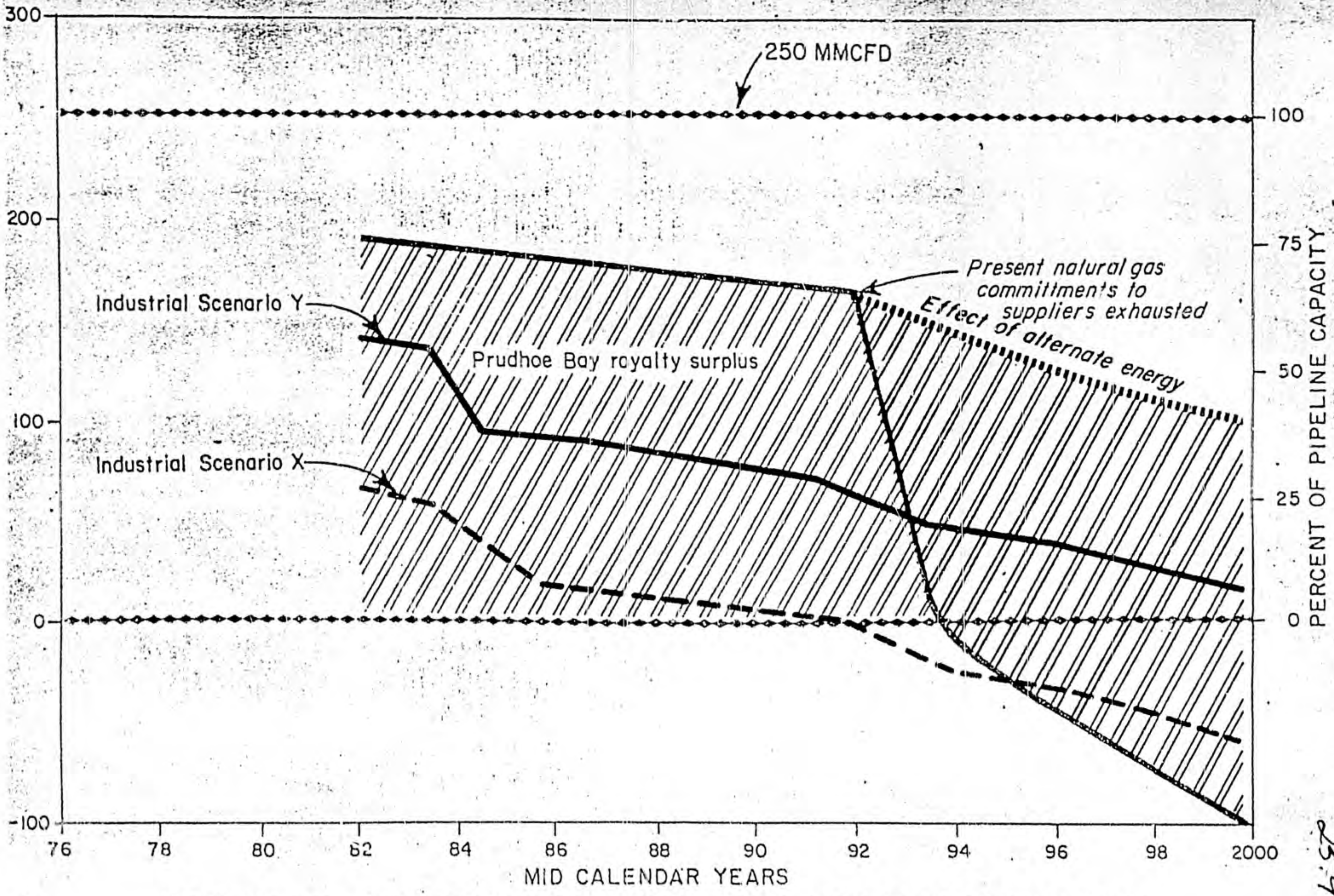

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PRUDHOE BAY ROYALTY GAS AVERAGE DAILY SURPLUS MOST LIKELY CASE AT 2.0 BCF/DAY PIPELINE THRUPUT

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

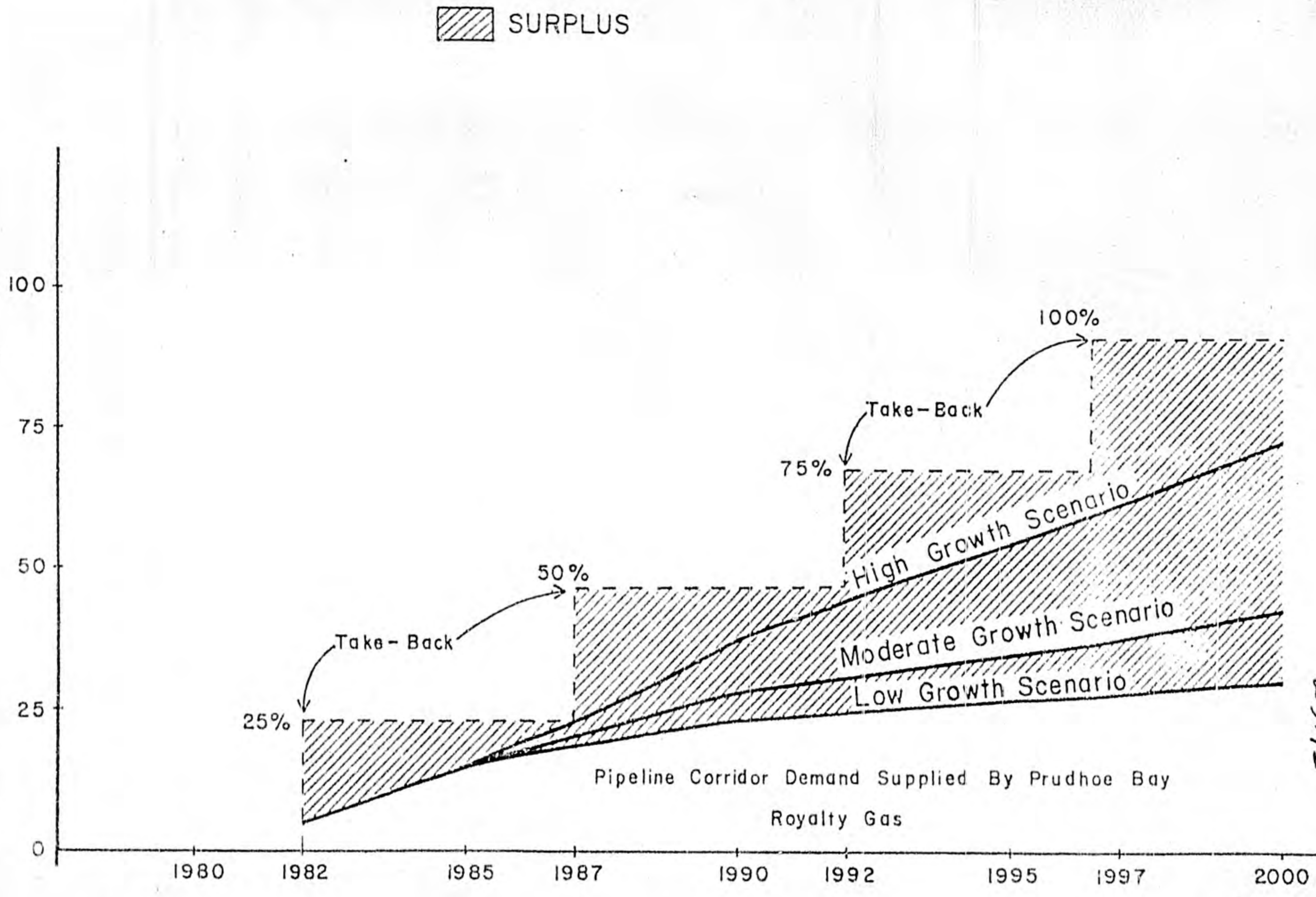

FIGURE 3

25.12

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 amount 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

Bewley, G.A.; Dobey, P.L.; and Klein, R.M., 1975, Future Alaskan natural gas demand, a study for the Alaska Royalty Oil and Gas Development Advisory Board: State of Alaska, Div. of Geol. and Geoph. Surveys, October 1975, AOF 92.

Bewley, G.A.; Dobey, P.L.; Klein, R.M.; McConkey, W.; O'Connor, K.M.; Quinlan, C.; and Welch, J.K., 1975, Alaskan oil demand 1975-2000: State of Alaska, Div. of Geol. and Geoph. Surveys, August 1975, AOF 91.

Bewley, G.A.; Dobey, P.L.; Klein, R.M.; O'Connor, K.M.; Renaud, C.M.; and Welch, J.K., 1975, Present and historical demand for oil and gas in Alaska: State of Alaska, Div. of Geol. and Geoph. Surveys, August 1975, AOF 90.

Department of Labor, Annual population and employment projections, 1961-1980: State of Alaska, Dept. of Labor, Research and Analysis Section.

Department of the Interior, 1975, Alaskan natural gas transportation systems, A report to the Congress pursuant to public law 93-153: U.S. Dept. of the Interior, December 1975.

Division of Oil and Gas, 1974, Statistical report for the year 1974: State of Alaska, Div. of Oil and Gas.

Dobey, P.L.; et al, 1975, Progress report, Alaskan oil and gas demand (present and future) for the Alaska Royalty Oil and Gas Development Advisory Board: State of Alaska, Div. of Geol. and Geoph. Surveys, August 1975.

Dobey, P.L.; et al, 1976, Projected Alaskan Royalty Gas Production and its Relationship to Projected Natural Gas Demand, April 1976.

Dobey, P.L.; Kelin, R.M.; Lyle, W.L.; and O'Connor, K.M., 1974, Energy and mineral resources of Alaska and the impact of federal land policies on their availability, oil and gas: State of Alaska, Div. of Geol. and Geoph. Surveys, June 1974, AOF 50.

Dobey, P.L.; O'Connor, K.M.; and Welch, J.K., 1975, Capps-Beluga coal economic resource analysis: State of Alaska, Div. of Geol. and Geoph. Surveys, November 1975.

Dobey, P.L.; and Welch, J.K., 1976, Projected Alaskan royalty oil production and its relationship to projected Alaskan oil demand, a study for the Alaska Royalty Oil and Gas Development Advisory Board: State of Alaska, Div. of Geol. and Geoph. Surveys, February 1976.

Fullen, R.E.; Pelline, J.E., 1975, Natural gas demand and supply to the year 2000 in the Cook Inlet Basin of South-central Alaska: Pacific Alaska Lng Company, December 1975.

Harrison, Gordon S., Ph. D., 1975, El Paso Alaska Company, Preliminary survey: The potential market in Alaska for North Slope natural gas: Alaska Editorial Services, Fairbanks, Alaska, March 1975.

25.14

References (Cont.)

Klein, R.M.; and O'Connor, K.M., 1975, An evaluation of energy alternatives, Alaska and the Western United States and review of EIS 74-90, Section F (Energy Alternatives): State of Alaska, Div. of Geol. and Geoph. Surveys, February 1975, AOF 75.

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 (h) (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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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.

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)

26.4

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;

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(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.

AGO 800777

exhibit 2

27-a

24 JAN 77 21 59

TELEGRAM
RCA Alaska Communications, Inc.

#

Ø2Ø48 TDA VALDEZ ALASKA 2Ø Ø1-24 15ØP AST

PMS OMAR 278-9615

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

ANCH 995~~100~~01

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

JK LYNN CHRYSTAL MAYOR OF VALDEZ

AGO 800778

TELEGRAM

RCA Alaska Communications, Inc.

27 JAN 77 3 3 03

27-6

#

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

27 JAN 77 3: 04

TELEGRAM

RCA Alaska Communications, Inc.

27-C

#

Ø2Ø68 TDA VALDEZ ALASKA 13 Ø1-27 23ØP AST

PMS O M-A R 2504

63Ø WEST 4 AVE RM 2ØØ

ANCH

URGE PROMPT APPROVAL OF ROYALTY GAS CONTRACT

TO ASSURE SUCCESS OF TRANSALASKA PIPELINE

C W ELLIS VALDEZ AIRPORT TERMINAL VALDEZ AK

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AGO 800780

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@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

//

AGO 800781

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TELEGRAM

RCA Alaska Communications, Inc.

27-e

23 JAN 77 8:26

Ø2Ø14 TDA VALDEZ AK 3Ø Ø1-28 8Ø1A AST

PMS OMAR - 2546

63Ø WEST 4 ST SUITE 2ØØ

ANCHORAGE AK 995Ø1

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)

AGO 800782

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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

27-9

TELEGRAM

RCA Alaska Communications, Inc.

#

Ø2Ø85 NL TDA VALDEZ ALASKA 5Ø Ø1-27 412P AST

PMS OMAR

2515

63Ø WEST FOURTH SUITE 2ØØ

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

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

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

(over)

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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.

(continued)

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 gu..antees 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

[redacted] 29

FEDERAL POWER COMMISSION

NEWS RELEASE WASHINGTON, D.C. 20426

Exhibit 29

IMMEDIATE RELEASE
February 1, 1977 No. 22869
El Paso Alaska Company, et al. (accompanies FPC
Docket No. CP75-96, et al. 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 3,30C 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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AGO 800797

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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.

(continued)

29.2

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

29.4

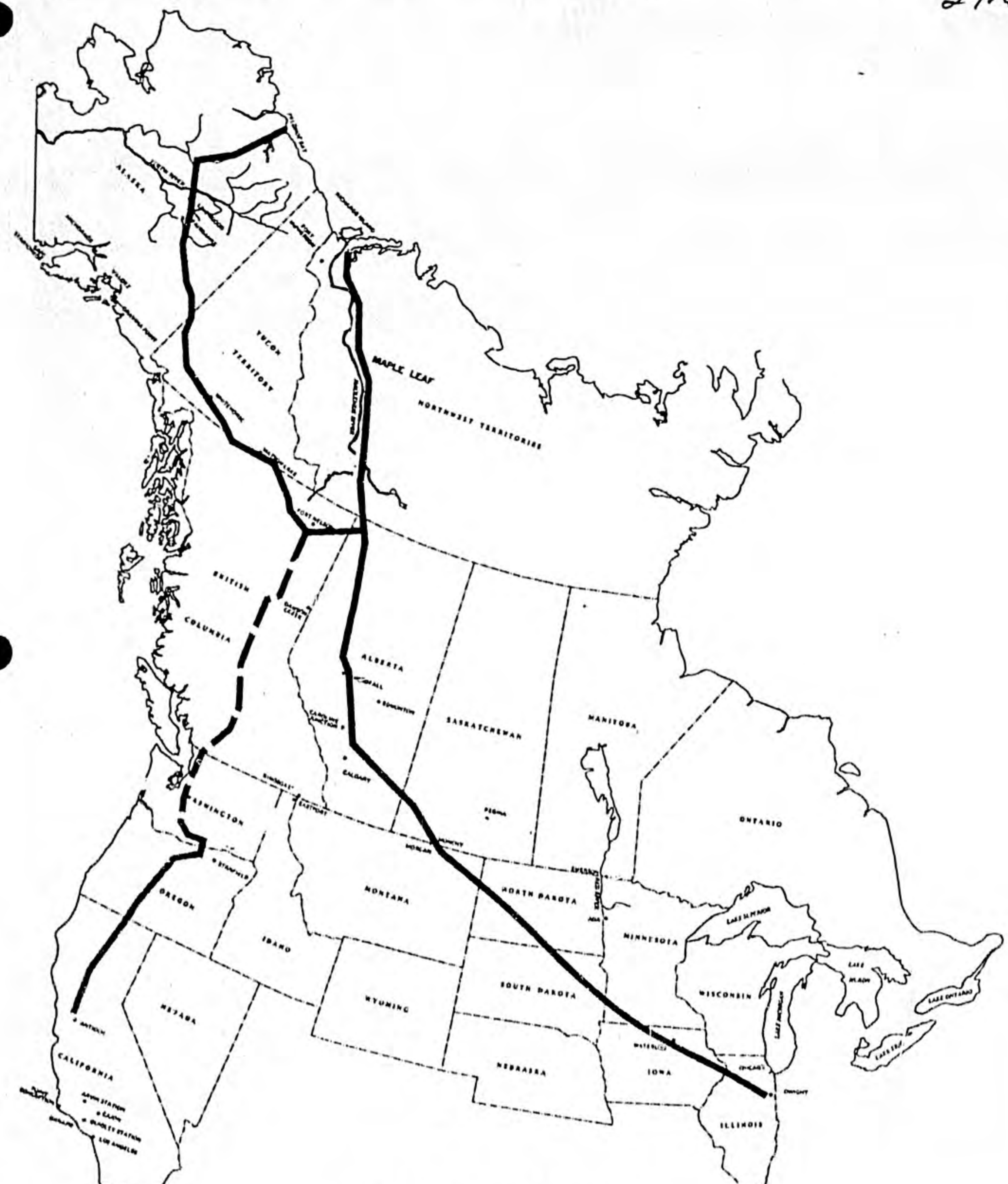
ARCTIC GAS PROJECT

AGO 800801

29.5

EL PASO ALASKA PROJECT

29.6



ALCAN - MAPLE LEAF PROJECTS

AGO 800803

30

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 routes 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 safequards 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, hydro-trains, 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 STILL is providing most advantages of an All-Alaska route.

Respectfully,

Ruth A. M. Schmidt

Ruth A. M. Schmidt, AIPG 352

AGO 800805

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.

Very truly yours,

John W. Pemberton

JWP/csf

RECEIVED
Lieutenant Governor

RECEIVED
FEB 1977
Lieutenant Governor

State of Alabama

31.1

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.

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

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EG/nl

AGO 800808

Exhibit 33

Alaska
STATE CHAMBER of COMMERCE
~~205 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.

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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

STATE OF CALIFORNIA

Exhibit 34

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

AGO 800812

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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 <u>El Paso/Alaska</u> 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) Pr[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

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.

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.

36.1

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

TELEGRAM

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

Anch.
Exhibit #37

#

Ø2Ø1S ANCHORAGE ALASKA 45 Ø2-Ø9 11Ø7A AST

1977 FEB 9 PM 1 53

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 TENNECO ALASKA, INC. SOUTHERN NATURAL GAS CO. AND EL PASO NATURAL GAS CO.

DAVE ROSE CHAIRMAN

AGO 800829

TELEGRAM

RCA ALASKA COMMUNICATIONS, IN
PHONE: 5[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

#

AGO 800830

O+G Suppo

TELEGRAM

Exhibit #39

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

1977 FEB 7 PM 4 24

PMH 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

#

02011 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 # 71

CITY OF CORDOVA

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

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

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 Cumming
President
Juneau Chamber of Commerce

ATTEST:

Ilicta Boucher

Exhibit # 43

1977 FEB 11 PM 4 30

TELEGRAM

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

CJ

12024 FAIRBANS ALASKA 103 02-11 1130A AST

PMS JOHN RADER

JUN 833

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 Mole %	a) Field Inlet LPG Content BBL/day	b) Pipeline Gas Mole %	b) Pipeline Gas LPG Content BBL/day	c) NGL to Alyeska Mole %	c) NGL to Alyeska LPG Content 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 Mole %	a) Field Inlet LPG Content BBL/day	b) Pipeline Gas Mole %	b) Pipeline Gas LPG Content BBL/day	c) NGL to Alyeska Mole %	c) NGL to Alyeska LPG Content 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.

44.6

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 5

Docket No. CP75-________

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EXHIBIT H

TOTAL GAS SUPPLY DATA

Application of

EL PASO ALASKA COMPANY

AGO 800843

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Docket No. CP75-___
Exhibit H

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.

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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

EL PASO ALASKA COMPANY

Total Gas Supply

Reservoir and Volumetric Data
Prudhoe Bay (Sadlerochit) Field

Line No.	(a)	Main Area Oil Zone (b)	Main Area Gas Zone (c)	West Area Oil Zone (d)	West Area 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

AGO 800848

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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.		In Place			Recovery for 25 Year Period		
		Main Area	West Area	Total	Main Area	West Area	Total
	(a)	(b)	(c)	(d)	(e)	(f)	(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.

Line No.		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

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Docket No. CP75-___
Exhibit H
Schedule 4

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.

	Oil Production, MBbls/D			Wellhead Gas Production, MMcf/D			Gas Available to Pipeline, MMcf/D
Year (a)	Main Area (b)	West Area (c)	Total (d)	Main Area (e)	West Area (f)	Total (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	23.3

1/ Gas injected.

AGO 800850

44.15

UNITED STATES OF AMERICA

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

44.20

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-______ (MKOT-1) through EP-______ (MKOT-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

A. M. Derrick

SUBSCRIBED AND SWORN TO before me, the undersigned authority, on this 22nd day of March, 1975.

Janis E. Kuhn

Janis E. Kuhn
Notary Public in and for
El Paso County, Texas
My Commission Expires June 1, 1975

AGO 800861