

ALASKA LEGISLATURE SPECIAL COMMITTEE / SUBJECT FILES 86 / 2

518 SCOM115: HOUSE/SEN. SP. COMM. SALE ROYALTY GAS 1977-78

REPRESENTATIVE CHATTERTON: If that through put were to be less or interrupted, this would be completely in error. This would not be correct.

ADGER: Yes, it would be different.

REPRESENTATIVE CHATTERTON: Now, I am paranoid, however, I am told that paranoia is the mother of discretion. Do you interpret the Alaska Gas Transportation Act of 1976 as it or by itself being permissive to the Federal Government to override the Alaska oil and gas conservation package?

ESSLEY: Could you be more specific?

REPRESENTATIVE CHATTERTON: The Title 31 of the Alaska Statute, Chapter 5 thereof, by manditory of our Department of Natural Resources in the estereest of the people and, Article 8 of our Constitution also speaks to it, that we shall maximize the coverage of oil and/or gas or land. Now at this point in time there is no human on earth that can predict, in order to live up fullfill that manhood, that a deliverability each and every day for twenty years of natural gas from the Arctic North Slope can be guaranteed, without possibly and very probably without _____ with ultimate recovery of those reserves. My question is to you, does the Natural Gas Transportation Act of 1976 or is there anything in your knowledge connected with this where the Federal Government believes or feels that they can override, in the national interest, our own statutes or constitution?

ESSLEY: Well to begin with I think we look first at the Natural Gas Act which is the enabling Legislation for the Federal Power Commission, the Energy Regulatory Commission. I think that the Courts have made clear, for a long time, and there have been a number of recent decisions that the Federal Government has a certain relationship with the State Conservation or Railroad Commission, or however you will have it, to respect those decisions but its not total preemption by any means and the decision, the operating decisions of the field really are not in our domain. I don't read anything in the Alaska Natural Transportation Act of 1976 to change that. I think that its the duty and the responsibility of the Government in certificating facilities, especially one that is rather expensive, to make every effort to assure that its within the frame work of the normal and legal responsibilities of the State Commission to assure itself that the reasonable certainty of deliverability at a certain level will be forthcoming. I think, nonetheless, there is invariably certain reasons be they force majeure or decisions on the part of the State to alter that deliverability depending on certain operating characteristics of the field. I hope that answered your question and I hope that a lot of the uncertainties can be resolved before the final certificate is...

ADGER: Let me pick up there. I think that the answer was no.

And let me say this on that point. The Regulatory system that we have for natural gas pipeline is fortunately poorly suited to betting on the come, if you will. I'm a geologist by training so I'm a natural optimist. I don't think and I don't believe that very many other people think that the only thing that is up there is the Prudhoe Bay accumulation, but there again, the regulatory system, the financing and tariffs system that we have to put together to make this thing go, is a function discovered in proven reserves. We have a responsibility under our statutes to size the system to the available deliverability. Now I think, today, where we stand is that we've got a state conservation authority's approval of production plans which calls for deliverability of 2 billion cubic feet a day from the main pool reservoir in the Prudhoe Bay field. We have had a estimate from the geological survey and this was in the context of a report to the President in the course of last summer on supply and demand questions in this decision. The geological survey indicated that they felt that it was an additional 3/10 of a billion cubic feet a day of deliverability from other reservoirs in the field and extensions of the main pool reservoir. So between what the State has done in its conservation order last May and what the Geological Survey feels is there in addition to that, in this field, is almost 2.4

billion cubic feet a day. You know that the Geological Survey is prepared to go on from there and tell you what they think the estimate of speculative reserves are up there. Its rummored that Exxon has got some more discoveries up there and I think that we want to try to get, as we go into some final deliverability finding that is related to the sizing of the system, the best estimate of your Department of Natural Resources, what the deliverability is and try, if we need to change the size of the system then change the size of the system. But based on the evidence that is available to us now, this seems to be the appropriate size of the system.

We've also studied how the economics of various systems changes as you change through put volumes. We haven't studied the downside as closely as we have studied the upside because our most careful studies of the upside were in the course of the negotiations with the Canadians on what the addition of the Canadian McKenzie Delta gas volumes did to our operating efficiencies in the 48 inch 1260 line. On the downside, in the course of the Congressional Hearings process, we did take a quick look at what reduced volumes, reduced through put volume did to operating economies and, if I remember right, we will get you these numbers, reduction of this number by an 1/8, takes it down to 2.1 billion, increases the transportation costs,

the twenty year average transportation cost, by 10% or 15%. And it starts to really go up if you get that \$2.1 billion down to about \$1.8. I think that is right. When you get to a 1/4, if you are down a 1/4 from the \$2.4 billion then we probably ought to be looking at a different size system.

REPRESENTATIVE CHATTERTON: One final question, somewhat unrelated but from the same page. I noticed down here in footnote 2, when you come up to the severance tax estimate to the State and footnote 3 coming up to the royalty, you use two different prices. I presume and I think that you have already mentioned that the \$1.58 is a well head value and the \$1.28 obviously subtracts 30¢ from that well head value to give us a royalty value of \$1.28 per barrel. I've been told in past practice that on the federal level anyway that field price and well head price are almost interchangeable. Can you give me a little bit of elaboration on why 30¢ in MCF is used and does it make a difference whether it would be used, that's one question. Does it make a difference whether the processing plant is built by the operating company or built by the transmission company?

ESSLEY: Ok, since I prepared that number I think that I should explain why I did it that way. What I found out was that there is some uncertainty as to whether or not the royalty would be calculated before or after deduction of processing costs. And I decided to be conservative here and not over-estimate the state's royalty revenues

and so I took the interpretation that the processing costs would be deducted before the royalty value. I have since been told by people here in the Administration that, in fact, it needs to be entered in litigation and no one really knows for certain how it will be handled but that is where that number came from.

ADGER: You can look at the number for royalty benefits then as a minimum and then it would go up from there?

ESSLEY: I was, on the other hand, told that the severance tax, that was fairly clear cut, that that would be taken prior to any deductions, at the inlet to the pipeline there would not be any deduction or tailgate.

REPRESENTATIVE CHATTERTON: Very quickly, and you can almost give an answer yes or no. First of all, if my understanding of the federal _____ practice at the well head price and field price are interchangeable.

ADGER: Ned, I think you probably know as much as any of us about the FERC practice on this matter.

NED HENGERER: If you are defining field price as the well head price plus additional costs I think it depends on the facts and each situation depending on the location of the plant, the nature of the gas, there are a number of different....

ADGER: It is very hard to find an adequate precedent here because of the gathering and conditioning costs are typical

in the order of a cent and MCF maybe 2¢ in MCF, and you know, this argument is on all sides of the question of what the appropriate precedent is and I think that we are just going to start some sort of inquiry into the question and try to do the best we can.

CHAIRMAN MILES: While we are talking about numbers and this sheet you handed out, you indicated that the Federal Corporate Income Tax seems to be \$90 million. Is that... *Is there any other income for the Fed Gov'ts?*

ADGER: Well I think that there is some money involved for rights of ways on federal lands but I think that the amount of money there...

ESSLEY: I think that we give away the right of way.

ADGER: Do we. Oh, its the state that charges. I think that the federal income taxes is the biggest part of it.

CHAIRMAN MILES: There was an earlier estimate of the total federal income tax which, I just multiplied it out here very quickly here and \$90 million times twenty years is a billion eight. And Secretary _____ estimated it at \$3.8 billion. I don't understand where that difference comes from?

ADGER: One could be current dollars versus constant dollars, but we'll find that estimate and we can....

CHAIRMAN MILES: Are you in current or constant dollars?

ADGER: This is constant. Constant 1975.

CHAIRMAN MILES: We don't know what the Secretary is referring to?

ADGER: No, I don't. I know who put the estimate together but I don't know how he got it. We will find out what the basis of that estimate was and give you an answer on that.

CHAIRMAN MILES: And then there is no federal right of way fees at all.

ESSLEY: My understanding is that the Federal Government does charge or ask for compensation for monitoring expenses but I don't believe that they charge more than a nominal fee for the right of way. I may be mistaken about that. Other people here know that better than I do. A filing fee or something like that.

CHAIRMAN MILES: Is there an excise tax?

ADGER: Not that I know of. There may be an indirect excise tax on the tires on the truck.

CHAIRMAN MILES: It seems that the theory was that the beneficiaries to be the financial participant, it would seem like, to me anyway, that the Federal Government would be as big a beneficiary as the State of Alaska, if not substantially bigger with all the consumers. But I guess that that is a point that is over the dam already.

SENATOR HUBER: Thank you Mr. Chairman. I have several questions that haven't been answered yet. The first one is your estimate of Alaska net Corporate Income Tax. 1¢ per MCF or \$13 million. On what basis is that, how did you arrive at that figure?

ADGER: We just pulled those numbers out of our cost of service estimates that were based in turn on the filings by the project sponsors on this, adjusted for our estimate for cost. But probably the fundamental estimate of the state's corporative income tax comes from the project sponsors.

ESSLEY: I don't know what income tax rates were assumed by the applicants in their cost of service calculations. I could find out but I don't happen to know off hand.

SENATOR HUBER: Well I asked you the question because the same thing was being computed for the Trans-Alaska Oil Pipeline. The financial community and the Federal government both looked at Alaska's tax structure and found that we had a 9.4% corporate income tax in the state of Alaska and this was charged as a contingent liability to the _____ of the line and we found yesterday, we heard there were some other figures that in terms of the _____ and I was trying to find out where it came from. This other figure must of came from Northwest Pipeline, Is that right? What they estimated they would pay?

ADGER: This is based on the Northwest filings with us in March of 1977 and then are adjusted for the cost overruns that we make. In terms of benefits to the State, even if it were two or three times as high. It is overrwhelmed by strictly royalty and severance tax in terms of its size.

SENATOR HUBER: (Indiscernible) That there is a little bit of a misnomer in comparing it with the states. In most of the states the gas is owned by the people that own the property and here, in this particular field, is the property of the people of the State _____, and so you are adding the farmers share into the taxable revenue as though they were in one pot. You realize that you are doing that don't you?

ADGER: Well we were just counting the farmer as a beneficiary.

SENATOR HUBER: Well, but that wouldn't be done in a state where the farmer actually owned the gas. The state's revenues would be in one column and the farmer's share would be in another.

ADGER: I understand that. I think that we want to point out that the state's interest is, in effect, is a producer here. In the royalty share. From our perspective, really adds to the State's interest in having this project go forward sooner.

SENATOR HUBER: I wanted to look into another item and we are having a little trouble getting into it. The Federal Government has decided by some report, I think you mentioned the Synthetic Fuel Study, do you have copies of that? You apparently made some major decisions, the Federal Government to stay of energy financing in spite of its importance to the nation as a whole.

ADGER: We haven't brought that study with us but we can make it available to you.

SENATOR HUBER: Would you make a copy of that.

ADGER: I tell you that its such an incredibly sophisticated study, only PhD type economists can make any sense out of it, I'm afraid. And not many of them.

SENATOR HUBER: I was once told, since I have been involved, that only certain kinds of geologists have enough sense to understand the reservoir studies and that I should shut up and not ask the questions. I usually throw those kinds of reports in the garbage can. If I can't understand them I've found that other people can't understand them either.

ADGER: That's right I think that Bob will tell you that he had a pretty hard time with it.

HUBER: Question Indiscernible

SENATOR RADAR: The expectation that the Vice President advise the financial community that Alaska will participate in financing, no matter how it was developed, it apparently exists. We need to consider, I think, the ability of Alaska to respond to that expectation and be more precise in detail as to the nature of that expectation. For example when we were talking yesterday with the Alcan people, they were talking in terms of the State participating by pledging its royalty in some manner or another on a revenue bond which the state would sell and then reinvest

those funds in either equity or debt position along with all other investors that would like to invest in the pipeline. At the same time we have had people tell us that our general obligation rating, our bond rating, will deteriorate pretty badly if we go above \$270 million a year. At least this is the advice the Administration has received. The Governor, in his State of the State message to us, the budget statement, stated that, and last year, as a matter of fact, vetoed a large number of items that would have called for bonding, in excess of what he considered to be prudent, what \$240, \$250-\$270 million, I guess my equation breaks down into, does the Federal Government expect us to, if there is an expectation here and by the financial community and by other investors, do they expect us merely to try to take royalties and pledge those to revenue bond issues if that revenue bond issue is unacceptable in the market place, then Alaska would be relieved of its expectation that it would participate or is that expectation that we participate go so far as to expect Alaska to tie up its general obligation bonds in debts. I think clearly, under anybody's analysis, it would mean that we had no bond capacity for any other purchases for schools, highways, roads, ferry systems, airports, whatever the cup of tea is. Or that we take it directly out of our general fund. Does the expectation address itself to those kind of problems or not?

ADGER: I don't think that the expectations, particularly on the part of the Federal Government, is developed nearly to that extent. I think that were it developed to that extent I don't think that the Federal Government expects the State of Alaska to stop everything else in order to do this. I think the Federal Government is pointing out that there are very substantial benefits to be realized here and encouraging the State to participate in realization of those benefits, and suggesting that negotiations with the project sponsors you work out a deal that is consistent with your interests and theirs. I don't really feel that the Federal Government is really adequate for or would it be appropriate for us to really get involved in the nature of your participation. I really think that it's up to the State and the project sponsors.

SENATOR RADAR: You're familiar I think probably in general terms as to the proposal suggested by Alcan Northwest people as to how the State would get involved by pledging its revenues from its royalty gas to secure these bonds. Do you think that there is expectation by anybody that we would go beyond that?

ADGER: I don't think so at this point. I think that, in fact, listening to Senator Stevens yesterday, that his support for the concept of state participation really is based on the fact that that participation would be supported

by this project. And that seems to me a principle which if acceptable to the lenders, the project and its financial advisors, if its acceptable to them then it seems to me that it is a sound principle for the State to use.

SENATOR RADAR: Getting off that subject a little bit. Going back to something that we discussed before, privately, but I think that it should be discussed here too, and that is the capacity or the ability of the Federal Energy Commission people, your people, to deal with the problem which would arise in the event the State has no market for its gas at the initial stages of the pipeline, but they develop the market five years later, whether or not we can negotiate with you at this time, with Alcan, and with the other sponsors, a tariff which would give the State, in the event the State gas goes through the line but is recalled, under 13(b), recaptured or whatever for instate use and instate processing, whether or not we could expect you to give us some assurance as to the nature of the tariff that we would pay and whether or not we could expect to negotiate with you or them in any matter which would be firm enough have any meaning. A tariff which would not include the tariff for the full length of the pipeline, but just Prudhoe Bay to Fairbanks if that were to be the point of takeoff?

ADGER: Let me answer that with two kinds of thoughts. One

is that these would be the kinds of questions that we discussed with the Department of Natural Resources people, a cross section of State Administration people yesterday, in the context of what is the appropriate size of the system. And of course the fundamental issue here, which I'm sure that you recognize, is that when the State takes its royalty gas for its purposes, what does that do to the operating economics of the system. And the way that we talked about trying to get some resolution on the question of the appropriate size of the system was to try to get an expression from the state of expected deliverability, expected gas deliverability which might be available in different time frames and the size of expected or possible demand for gas within the state during those same time frames. Such that we could try in our deliverability findings, in our findings about appropriate sizing of the system, to take the state's intentions with respect to its royalty gas into consideration. We will certainly be glad to send the same kind of enquiry to you all to have you participate in the inquiry to the State Administration.

And the second thing that I would say about this is that I think that this is the point for negotiations between the State and the project sponsors. I think that this is the kind of thing that could be made part of an agreement with the project sponsors. I think that their

primary concern as well is going to be what the State's intentions with respect to the royalty gas due to the economics of the system. We discussed in your office briefly the question of, well, would they really be all that concerned, but as we pointed out, the people who will be the project sponsors are the shipper companies who are involved in selling gas in their market areas in the lower 48, and the impact of the withdrawal of the Alaska gas on the delivery price of the gas in the lower 48 I think is going to be a concern to them. Now on the point of the tariff within the State of Alaska and what the possibilities are there, Ned correct me if I'm wrong, but I think that it, dependent on the nature of the State's participation, it might be able to file its own tariff of the shipper company.

HENGERER: Its a possibility.

RADAR: That's all I have, Mr. Chairman.

Summary: One comment that I might make to this question. I certainly, at least in my _____, would not want to create the impression or leave the impression in any circumstances whatsoever, that I'm laboring under any implied obligation of the State to participate in this loan, but am at absolute freedom to attempt to negotiate, on a mutual basis, benefits that might inure to the Northwest pipeline people, and benefits for such a loan or such

financing that might inure to the State of Alaska in terms of employment opportunities and job sharing within the State of Alaska and for the people of Alaska. I see that as maybe the making of such a union. But I certainly am going to question or quiz every time there is that implied obligation. I don't see it, I don't share it, I don't believe it. From your standpoint, so that at least however you compute these into future decisions or recommendations, you can at least be advised, at least from one person.

ADGER: My own view on that, I think, is that we found that the State is a major beneficiary of this and we are hopeful that the State will find a basis on which it would participate. I think that you have perfect freedom to negotiate the deal that you are happy with. My personal plea in this would be that, given that we get resolution of the well head price of the gas issue, that we get resolution of that issue pretty soon, that you enter into active negotiations pretty soon on what form your participation might take.

Sumner: I am concerned about the reaction of what the public might take if they are led to believe or they conclude that somebody has obligated the State either morally or in some other manner to finance this. There is some emotional issues out there that have not been settled

yet and I would hate for a bias to arise that would impede down the road of negotiations, that might in the long run bring some positive benefits to the State and to the people. That's the point that I would like really underscored.

ADGER: I think that I understand that perfectly well and I would only try to add for you that I think it is important for the State to work for a deal that it is satisfied with. But I think it is also important for the State to realize a certain amount of down side risk here, that the State has something to lose if it doesn't go forward now. And that is really all that needs to be said.

Sumner: Let's follow that one step further. In terms of what the State has to lose, have you evaluated at all the increase of the gas if it stays in the ground in terms of twenty years down the road. Somebody talked about some figures yesterday. Have you concluded what figures might be available, what price this product might sell for in two years or fifteen years. And compared that and the benefits to be gained against the benefits to be gained at this time?

ADGER: We have not completed our evaluations on that point and as you can well imagine, the ultimate answer to that depends on what sort of price trajectory you want to assume for world oil prices. But our expectation is that on a net present value basis, people who are producers

would be better off going ahead now. If you want to assume that world oil prices are going to go up faster than we assume they will, then you draw probably a different conclusion. But, our sense now, not having completed those evaluations, is that here again it depends on what kind of discount rate you want to use and the price projectory you want to use for the world oil prices. You are better off going forward now.

7. Sumner: It would tend to minimize the down side risks.

ADGER: Reduce them?

7. Sumner: Reduce them yes.

CHAIRMAN MILES: Why don't we take a break until 3:30.

(BREAK)

CHAIRMAN MILES: We will call the Joint Hearing back to order now.

SENATOR RADAR: Yesterday the Northwest people were talking in terms of a 15% rate of return that would be permitted on the equity owners? Does that jive with your understanding, is that a reasonable rate of return to expect in this situation?

ADGER: That has been the basis of all of our calculations is a 15% rate of return on equity. I think that it is recognized that this is a project with substantial risk for equity investors and therefore the rate of return is commensurate with that degree of risk is appropriate.

SENATOR RADER: The President's finding and the posture that beneficiaries of the line, so to speak, should participate financing of it. Should the beneficiaries not participate in the financing of it, would that effect the setting of wellhead prices in your view or the Administration's posture as a recommendation to Congress? In other words if the beneficiaries are the State of Alaska and the other owners of the gas, in otherwords they get their gas to market this way, they receive the value but they wouldn't have the right _____. If the beneficiaries failed to respond to your thoughts that they should help finance, would it be reasonable then to assume that the Administration, through the Administrative structure or through the organization or otherwise, that that would be taken into consideration in the setting of the wellhead prices or tariffs for future purposes? Or, in otherwords, if this has to be done without the help of the beneficiaries, there is another way to get the beneficiaries help involuntary and that is to set a different tariff or different price on the wellhead.

ADGER: I just don't see how that could be the process. On the one hand the wellhead price will or will not be set by the Congress, probably based on their own set of considerations and I don't think that the wellhead price for the Prudhoe Bay gas will be set for that deposit specifically. I think

it will be captured in a definition that will apply to gas across the country, broadly across the country. Our expectation is that that would lead to a well head price that is related to what the administration has proposed for the categories that I know as "old gas." It is a number now in the \$1.45, \$1.48 range. And it is related to the national rate set by the Federal Power Commission in 1976. So I think the Congress sets the wellhead price, or they don't. And on the tariffs, I think that we approve or disapprove what is presented to us. I don't think that we get involved in what rate of interest on debt is paid, we have to have some sort of finding on rate of return on equity -- the appropriateness of rate of return on equity. But this finding is completed before money is put up. It is completed after commitment are made on that basis, but before money is actually put up. And if you were an equity investor you wouldn't be the only equity investor. And to try to ratch it down to your rate of return on equity in order to try to press you into some sort of financial commitment, runs off of everybody else, you only have...

SENATOR RADAR: But of course, marking down my wellhead price might not hurt everybody else. It would only hurt other producers.

ADGER: I think the Congress is going to set that though. I

think your question was that if the federal government, which it does in this instance, is going to take it out on you if you don't participate financially, I think the answer is no. Because a different set of people are going to set that.

SENATOR RADAR: If I was the President and I felt that the producers have an obligation to participate in the financing, and the producers did not rise to that obligation, did not meet that obligation, then I think, if I were the President, and I felt confident in my position, I would look for a way to where they fulfilled that obligation in another way, through a regulatory _____ of some sort, or through Congress, by recommendation of Congress, or something else. And say, you have failed, producers, to meet the obligation that I have printed out here, that I have sent out to you. I have sent my people to Alaska and have talked to Alaskans and have talked to other producers and they haven't responded. Now there is another way to get them to contribute to this and that is to set the wellhead price. That way they contribute to the financing of it because they make it more feasible. The less you have to pay Alaska and the other producers for the gas at the wellhead, the bigger the spread between the market in the southern 48 and the producers in Alaska. Why wouldn't you do that? It seems to me that if you were certain of

what you are doing that you would automatically do that. I would. If you refused to share the responsibility that I genuinely thought that you had, voluntarily, I think I would go ahead and say to the Public Service Commission, look, you have a decision here in setting this rate, or wellhead or something else, and those fellows haven't responded. It seems to me like we get their cooperation or assistance in another way.

ADGER: What I started to say was that, Oh no, we wouldn't do that because that's not fair. But if you would do it, I don't want to put that kind of... I wouldn't want to pass judgment on what Senator Stevens says either, but... Hopefully, regulatory determinations are made on the basis of higher considerations. I think regulatory determinations are made on some sort of assessment of the public interest.

SENATOR RADAR: (Question Indiscernible)

ADGER: Well, I think that the fundamental point here is that your financial participation is important to the atmosphere surrounding the project now. And to my way of thinking, that's important to have the project go forward on schedule now. And I guess, I just question the wisdom of posing some kind of a threat that the state might be punished if it didn't step forward.

SENATOR RADAR: Let's not talk about punishing the state, let's

talk about punishing the oil, the producers. That's not hard to conceive. If you said, okay, you producers didn't come through and finance this thing, and so and so forth, so we are going to make it financible by knocking down the wellhead price. That will make it financible.

ADGER: Well, I just don't think we would do that. I think on the one hand we are making some progress with the producers on participation in some way. As I think we discussed in your office earlier today, the producers are not really _____ on this issue, and they have different degrees of interest in this project and different feelings about it. Make no mistake, they have been very stand-offish about the whole thing, at this point. And I don't mean to imply for a minute that any of them are racing to sign up, but we think that we are going to be able to make some progress with the producers when the wellhead price is set.

SENATOR RADAR: Thank you Mr. Chairman.

SENATOR SUMNER: I wanted to talk to one instance; going back to some discussion earlier, that we do look forward to having a petrochemical industry or at least we want to maximize the opportunity of having one in Alaska... (indiscernible) I think that is going to have to be _____ in quantitative terms or estimates, or ballpark figures, before there will be a lot of willingness to

commit to funding and and other commitments that are necessary. I think we need to address that and that's the area that you are primarily involved in. Will you respond to what is likely to happen in the future, as to consideration given in terms of tariffs, rates for the _____?

ADGER: There again, I think you said before, the primary responsibility there, I think, is on negotiations between you-all and the project sponsors, as participants in the project in some way. Then you have the right to determine the conditions, the basis on which you would participate. Now, I think that...

SENATOR SUMNER: Suppose we came in with a mutually agreed tariff for this section of the pipeline. Is it reasonable to assume that you would approve that (indiscernible)

ADGER: I think if both sides agreed on a tariff, what we would do would be to send the proposed tariff to a hearing, probably as soon as we could, to find out whether or not there was any opposition to doing it that way.

SENATOR SUMNER: (Question indiscernible)

ADGER: Well, no. I am not sure that...

? Adger: ...accepted to the tariff if Alcan didn't object to it. That would be a major...

SENATOR SUMNER: (Question indiscernible)

ADGER: I think a distinction I want to draw here is that if

something on the tariff is important to the State's decision, on whether or not it would participate, I think we would do everything that we could to expedite a decision from the regulatory body on that point. And you're suggesting that if you didn't do it, we would go the same route. I don't think we'd feel anywhere near the urgency to get that particular point resolved. Am I being clear there?

Summer: Well, I won't pursue it now, but I want you to know that that is a point that brings to my mind, must be defined in quantitative terms before a commitment would be made.

?? Adger: One thing that may not be clear is that the case of taking Alaskan royalty gas out of the line before the Canadian border at some point, is not all that new or unprecedented. In the lower 48 gas pipelines, not all the gas is delivered to the ultimate end of the pipeline. It's taken out all the way along the way. So there is an abundance of past techniques that have been used, or procedures, to set the tariff of gas that's taken out at intermediate points.

Summer: (Indiscernible) In your opinion, can the current gas line meet demands, with conventional financing, if the state does not participate?

ADGER: I'd say that, number one, I would go back to something that you said earlier today about the ease of doing this

at all. I would agree with you 100%, it's going to be very difficult to do, no matter what. Now, having said that...

Sumner: Explain that.

ADGER: Well, it's a whole lot of money. And it's going to have to be done, probably, on a sort of unconventional basis. Maybe somebody back there knows that better than I do.

Sumner: Has any other state been involved in similar sort of financing before?

ADGER: I don't know of another right off hand. I heard rumors for a while that the state of California was toying with the idea of financial participation.

Sumner: (Question Indiscernible)

ADGER: I don't know of any right now.

Sumner: Okay, are you saying it's going to be difficult even with Alaska's participation?

ADGER: Yes. I think I want to emphasize though that it's going to be even more difficult without.

Sumner: In your view, is it impossible without Alaska's participation, is it improbable without Alaska's participation?

ADGER: I would have to refer you to Alcan, the project's financial people. Or better yet, probably the State has its own financial people, I'm sure.

Sumner: (Question Indiscernible) President's Decision found that the project could be privately financed. But now you have changed your conclusion, finding that State participation is needed. Why did you initially decide it was privately financeable?

ADGER: Well, our finding, were that it could be done privately, and that was based on an analysis of the oil pipeline experience, the relevant conclusions, I think, there that are set out in some detail in here, are the relationship of the financing, the size of the financing to the total amount of capital that's raised in any given year, I mean, this would represent about the same proportion of private financing that Alyeska was in its peak years.

Sumner: Is the data that you based your conclusion on then, is that data still active, still current?

ADGER: Well, you're privately financible.

Sumner: (Question Indiscernible)

Anderson
or
Anderson
ADGER: Yes. Let me see what it specifically said. If I may read you this, it would be the largest privately financed energy project ever undertaken requiring between \$10 and \$15 billion by the time it is completed. To effectuate such a private financing, a plan that equitably and carefully balances the budget, the benefits and risks is required. The conclusion that Alcan can be privately financed is founded on the basic economic desirability of Alaska gas and the desirability of the Alcan transportation system. Nevertheless, skillful financial packaging and risk/benefit balancing will be required. It is therefore necessary to explore the boundaries of the financing problem by considering Alcan's likely capital needs and sources, relating

those needs to the capital market in general and reviewing the list of beneficiaries and examining the roles each might be expected to play in the financing. Then we go into a discussion of those items.

Sumner: (Indiscernible)

ADGER: Well, I think I question your conclusion that the thing is running into some problems. And I would say this about that. We concluded that it was privately financible though difficult to do, but it could be done. And we also proposed that the project's beneficiary should have a big part in that. That would help a lot.

Sumner: When you define private financing, does that include Alaska participation? Is that part of the definition of private financing?

ADGER: Yes. Well, private financing did not, I think, automatically assume that Alaska would participate. I think privately financible was a separate conclusion from Alaska participating.

Sumner: Trying to bring this thing back because I get a little confused. I think you told me just a few minutes ago that it was difficult, even with the State financing, and you would assume even more difficult, if not improbable, if the State does not participate. Now you are saying that it is only difficult if there is private financing involved. So I am trying to determine whether the definition of

private financing includes the State since you said it was difficult for private financing. I'm trying to determine your conclusion. Have you always anticipated that Alaska would have no option but to finance this line. Was that any part of your active conclusion in the Senate?

ADGER: No.

Sumner: Alright. If there has been no new ingredient, are you still under the impression that it is still only difficult to finance it privately?

ADGER: Yes. There are degrees of difficulty.

Sumner: Alright. In your view, how long would it take assuming the State of Alaska did not participate? How long would it take before the project would be under way, in your view, encountering the degree of difficulty as you understand it, to complete this project, to move ahead with it. Move ahead as a result of having obtained private financing?

ADGER: I just have not worked through the set of circumstances that would be involved there. I don't know if I could really speculate on that. I think, as the sequence goes, that the sponsoring company consortium has started to come together now, and we feel like that if the State of Alaska could see its way clear to participate in the financing, then we feel sure that the Province of Alberta would also be willing to participate in the financing. And we think

that we'll get to the producers down the road somewhere and we build on an atmosphere of confidence...

 : ^{If Alaska financing was} part of the game plan all along, and I'm ^{were not} wondering why doesn't we hold before?

ADGER: I think there's sort of a real distinction between a conscious game plan at the time this was written, and observing how the thing might be coming together now. I would think that it would be a big mistake to assume that this was all planned out when this document was written. I think you'll find that we said in here some things that were not exactly dictating the script. We didn't anticipate that the Province of Alberta.

Sumner: And do you want to restate for me your definition of private financing?

ADGER: Private financing I would say would be the private capital market.

Sumner: Inclusive or exclusive of the State of Alaska?

ADGER: What you are saying to me is, do you think that the implication is that Alaska resources is part of the private capital market, in the sense that Alaska has money available to invest like other private investors.

 : (Indiscernible)

Adger: Part of this may be the egocentric view of the federal government. Anything that is not the federal government is private. That is sort of the way the term

was used. And it is quite fairly explicit in the President's decision. Tradition and equity suggests that the parties who tend to benefit directly from a transportation system participate in the financing and share the burden of these risks. The direct beneficiaries include the equity investors, the producers of the gas, and the State of Alaska.

Sumner: You would agree that there are other ways of saying that other than in terms of private financing. I think you will agree. I don't care in the definitions and I don't care in some of the conclusions, and in some of the ways that Alaska got obligated. So I am not going to pursue it any farther. But I think you should, and I'm going to recommend that you seriously reevaluate how you got in the box that you are in and see if you can't find a way out.

ADGER: Okay. Let me just say on this point about what is private financing. I think when we contemplated what private financing is, we think not about the State of Alaska diverting necessarily tax revenues away from schools or this kind of thing. I would consider that private financing, but to the extent that the State of Alaska or the Province of Alberta has investable funds, the Heritage Fund in the case of the Province of Alberta. I would consider them a private investor.

_____: (Indiscernible)

ADGER: We were talking about what is private financing as opposed to what is the obligation of the State. That is what I was talking about. And then you shifted to what the obligations of the State were and the projects.

? Miles : Earlier in the State's testimony, you concluded that or seems to imply though that you didn't expect us to share the same degree of commitment that you had concluded that there was a commitment, an express interest which implied some commitment on the part of Alaska to finance the program.

ADGER: I think that I said that I felt that that was a perception of the financial commitment. That's what I meant to say.

? Miles : Just so I understand it, you're not saying that the project hinges on investment of Alaska's resource dollars? In your opinion?

ADGER: I think that the financing of the project is made enormously easier if the State of Alaska is a private investor. Make private investment decisions on available investment funds.

Miles : (Question indiscernible)

ADGER: I think I would refer you to the ultimate answer to your own financial advisors and the project. But from my own perspective, I don't think that that is the only consideration. If the only thing that happens is that Alaska does

or does not participate, that is not going to make or break the project. If Alaska does participate, a whole bunch of other things are going to have to fall into place as well.

SENATOR HUBER: *Did you consider Alaska's problem of the constitutionality of dedicating resource revenues, except Permanent Fund money, that it would be competing with* (Question indiscernible)

ADGER: We did not exclusively consider that because we did not *other Alaska projects?* get into, except to take note of, take note of Commissioner Gallagher's estimate of what the order of magnitude of the State's participation might be. We just pointed out that the State of Alaska, as a beneficiary, it would be nice if they would participate.

SENATOR HUBER: (question indiscernible) *What are the four portions of the pipeline?*

ADGER: The Alaska portion, the Canada portions and the two southern portions?

SENATOR HUBER: (Question indiscernible)

ADGER: I don't know about that. I think that you would have a difficult time buying a piece of the Canadian segment. Actually I think you could buy a piece of the Canadian segment, you just couldn't buy a majority.

SENATOR HUBER: (Question indiscernible) ... then you would have to deal with how desirable this investment is. How does the desirability of the Alaska portion of the pipeline segment stand up with the desirability of the other two segments?

? Adger : Well, I think this is the kind of thing that you have got to take up with the project sponsors. I just

can't really do any good in terms of telling you how it ought to go. You all have got to come up with a basis on which it's satisfactory to you, and if it is put to you in a way that this looks better than that, and you don't have a shot at that, then I think that is something that you take up with them.

SENATOR HUBER: (Indiscernible)

ADGER: Well, I would absolutely suggest that this investment ought to be evaluated against all of the other possibilities that the State has got. But I suspect that this investment would be an attractive one, relative to some of the others, and I would point out to you that this investment, there's always the possibility of very substantially enhancing the amount of money that are in the permanent fund. I think there is a pretty substantial amount of benefit there to be had.

SENATOR HUBER: (Indiscernible)

ADGER: Yes. I think what you are talking about is the constraint on the amount of participation, the availability of funds through the proportion of the funds that are allocated to the permanent fund. Certainly the size of that fund and the prospective size of that fund, given the additions to it of the proceeds from the sale of gas, are going to limit the degree of your participation.

SENATOR HUBER: (Indiscernible)

Rep.

Greening: Senator Radar asked a question earlier about...
Producers want to wait to see what the well head price will be.
(Indiscernible) In consideration, do you think that is a reasonable stance?

ADGER: Yes. I said that I thought that the state would likely want to wait for the setting of the wellhead price before making its decision.

Greening: When is that likely to transpire. I missed your presentation.

ADGER: Well, what I said there, we've been saying for 90 days now that it would be any day now. We still expect that it would be any day now. That's under the legislation that's before the Congress. I think, in the alternative, that if a decision on gas pricing is not forthcoming out of the Congress then we're all on a whole different time scale.

Greening: If it were to arrive in 90 days, do you (INDISCERNIBLE)
think producers would start negotiating gas sales contracts?

ADGER: We would certainly expect them to start negotiations on the gas sales contract. I think that some aspects of the gas sales contracts might well affect the financibility of the project. Now, I'm not sure exactly what the nature of their spectrum might be and wouldn't want to speculate on it. But I think that negotiations over the gas sales contract are...

_____: (Indiscernible)

ADGER: Well I just think that -- I'm afraid I know where you are leading me because I'm afraid I know that conclusion of

that sales contract for the State's royalty share can't finally be concluded until the next session of the legislature, isn't that right.

_____: (Indiscernible)

ADGER: I think that the negotiations over the gas sales contract, the setting of the wellhead price, is going to fundamentally determine the producer's interest in this whole thing. But then the producers also have expenses associated with producing the gas that they've got to consider. The allocation of costs associated with some sort of conditioning facility which is to be considered as well. I think it's going to be hard for the producers to really establish where their interests lie before they know some more on those things.

_____: (Indiscernible)

ADGER: You mean on the state's conservation?

_____: (Indiscernible)

ADGER: I guess so, yes. My only hesitation is that I'm not sure what... Well, I think it's a level of the ceiling process. I think that we anticipate that the ceiling price for that gas would be set at the old gas price, which is about \$1.48 now, I think. And we just assume, our marketability studies are not completed but we assume that the producers would be able to sell it at that price. There the open question...

Questioning: You use the contract after its financed, to help

finance. And I'm wondering whether that doesn't have some parallel with the State of Alaska... (Indiscernible)

ADGER: I'm sorry that I'm not enough of a financial expert to know whether or not that is a possibility. We hope to have a financial guy on our staff sometime soon that would be able to speak to that. I can't.

Butrovich (Conversation Indiscernible)

7 Adger: It's on page 115, if you have access to a copy.

It is simply tradition and equities suggest that the parties who stand to benefit directly from a transportation system participate in the financing and share the burden of these risks. The direct beneficiaries include the equity investors, namely, a consortium of gas transmission companies, the producers of the gas and the State of Alaska with its royalty interests in the gas.

Butrovich: *Would producers participation be just as important as State participation? Perhaps we should put more emphasis on the producers.*
(Question indiscernible)

ADGER: We've got a little problem here with the Justice Department and the Justice Department has put some pretty severe limits on the ability of the producing companies to participate in the thing. I think it is spelled out in here some, but they generally prohibited the producers from equity participation in the thing and pretty much limited their participation to debt guarantees. So they're sort of working out of producer participation. It's going to be a complicated matter.

Butrovich
SENATOR HUBER: (Indiscernible)

ADGER: Well, the statement was that the beneficiaries should participate. And what I'm saying is that the Justice Department has put some unusual conditions on the participation of the producers who are named by President Carter as a beneficiary. I think President Carter still believes that they ought to participate, but... (Indiscernible)
The Justice Department just hasn't put as much in the way of constraints on the nature of your participation as they have on those who are the producers.

Butrovich
SENATOR HUBER: Would you repeat that please.

ADGER: The Justice Department has not put as much in the way of constraints on the nature of the State of Alaska's participation as they have on the nature of the possible producers participation.

?
Butrovich
SENATOR HUBER: (Indiscernible)

ADGER: Well, I'm just not, by any stretch of the imagination, an anti-trust expert, and I know that the Justice Department's concerns are rooted in anti-trust considerations. I'm sorry. I'm just inadequate on that.

?
Butrovich
SENATOR HUBER: (Indiscernible)

REPRESENTATIVE CHATTERTON: Thank you Mr. Chairman. Mr. Adger, I could not help but catch the Nixoneze you used quite a while ago. But I'd like to change a little bit there, the line of questions. Do I understand correctly that you are

in charge, you and your staff, in effect, is this right, to come up, sooner or later, with a (Indiscernible) I gather that you are still in the fact gathering mode. Is that right?

ADGER: That's right.

REPRESENTATIVE CHATTERTON: And why we're here right now is the fact gathering mode on the financibility situation?

ADGER: Yes. I was up here talking to the State Administration people and we thought it would be useful for me to come and talk to you all as well.

REPRESENTATIVE CHATTERTON: Do you feel that even beyond the financibility, so to speak, because I gather that you are going to have to be sure, before you issue a certificate, that there is indeed a viable project that can be properly funded in some form or another and _____?

ADGER: Right.

REPRESENTATIVE CHATTERTON: Okay. Now, are you planning to gather facts on other things other than financing? Do you still have many facts left to gather?

ADGER: Yes. And I wish that I had said that more completely in my opening statement. I am really here to find out the facts on a lot of things.

REPRESENTATIVE CHATTERTON: You are still willing to, and in fact are seeking more facts upon assurances of the daily rate of deliverability uninterruptable over a 20 year period? You are seeking facts now, right?

ADGER: The one word answer is yes. We are scheduled to meet with the State Conservation people in Anchorage tomorrow.

REPRESENTATIVE CHATTERTON: Now did you have, in this fact finding PROCESS, where you were out _____, and by so doing though why you can fairly well select with whom you talk. Did you ever come to a point in a public hearing, in the process before you made your determination on whether or not to issue a certificate of Necessity and Public Convenience?

HENGERER: I think we are, at this stage, gathering information as compared to facts. There will be a public hearing on the record with full adjudication of the issues, assuming that they are contested. I think maybe information gathering is a better... Just for the benefit of the Commission at this point, just to help it understand the issues, there will be public notice, obviously. And I know the state has participated accurately in prior proceedings and they would have notice as all other potential parties.

REPRESENTATIVE CHATTERTON: Do you gentlemen have a rough guestimate of the time frame as to when you will be in a position to make a judgment decision as to whether or not to issue a certificate?

ADGER: Ned, here again, my understanding is that we are shooting for final filings. We would like to try to get the final filings for the Certificate of Public Convenience and Necessity sometime during the first quarter of 1979, about

a year from now, or since the wellhead price _____
90 days, but once we have the final filing then we go to
hearings on the complete package. Now, between now and
then there may be issues that we turn up that we need to
get some resolution on in order to proceed to the next
step. And we might have to go to a formal proceeding and
some more narrowly defined issues, between now and the
first quarter of 1979 when a public on the record proceeding
would start on the whole package.

REPRESENTATIVE CHATTERTON: Am I clear in gathering from what
you say, that the earliest would be the first quarter of
1979 before you would feel in your own mind,...

ADGER: I suspect that final filings on the whole thing could
not be completed before the first quarter of 1979.

REPRESENTATIVE CHATTERTON: May I ask you one last question. Can
construction or even any scratching of the earth... along
this petrochemical right of way that the President selected
take place until the issuance of the Certificate of Public
Convenience and Necessity?

ADGER: Yes. There is some project development expenditure
contemplated between now and then in anticipation that the
certificate will be granted. We have, in fact, granted a
conditional certificate. But I think that the major commit-
ments to the project, the ordering of the pipe, for instance,
will wait for the issuance of the final Certificate of

Public Convenience and Necessity.

REPRESENTATIVE CHATTERTON: Any expenditures at this point in time are pure and simple risk?

ADGER: They are at risk.

HENGERER: There will be certain geotechnical work done on the right of way which would go through the Department of Interior and through the State perhaps, but as far as actual construction, no.

REPRESENTATIVE CHATTERTON: Thank you. Thank you, Mr. Chairman.

? Sumner: (Question Indiscernible)

ADGER: Well, alternatively there is a possibility of commitment of gas funds, which you wouldn't put out any money for in quite some months. Probably not until...

? Sumner: (Indiscernible)

ADGER: I think the project development expenditures between now and the time of issuance of the final Certificate are a little over \$200 million. And if you would come in as an equity participant now, you might be involved in some sort of pro-rata share of those project development expenditures. But unless there was that kind of a circumstance, they are not, as I understand it, going to draw against... The final financing commitments are not binding until the Certificate is issued. Is that right? Equity is considered the first money spent.

? Sumner: In your information gathering, is there question

of any possibility that as you gather this additional information you will find that indeed you can't honestly issue a Certificate? Have you ever considered that possibility, that your findings may be such that you can't issue a Certificate?

ADGER: I think that we just, right now, can't conceive of a situation where we wouldn't be able to issue any certificates. Certainly, there are uncertainties in the area of deliverability which might affect the sizing of the system, but we would just anticipate the ultimately certificated system, it would just be a different size.

Sumner: My mind is not closed, but it's only a narrow crack.

Adger: It's not within the first choice at this point because we do have the Congressional Act which says you shall issue a Certificate. You may quibble about exactly what is in the Certificate but we are sort of obliged to issue it. Unless Alcan just doesn't ask for it.

Sumner :: Thank you, Mr. Chairman. I apologize for interrupting.

SENATOR POLAND: You have mentioned ^{What is the feasibility of taking out royalty} several ^{gas} somewhere else besides Prudhoe Bay? times today and many of us up here are... (Indiscernible)

Esley: Before I start, let me say that I wear a hearing aide and I tend to speak to my hearing aide sometimes and my voice drops off. So if it does, please don't hesitate to tell me to speak up. The system was designed to the

1260 psi maximum operating pressure. And with the 1260 maximum operating pressure we cannot get all of the gas liquids through the line at that pressure without actually having liquids drop out which could actually destroy the turbines and the compressors. So, given the 1260 psi maximum operating system, we are limited to pretty well taking out the liquids at Prudhoe Bay, at least some of the liquids. We can get all the propane through and a little bit of the butane, but we can't get the rest of the liquids through. So, if we start with a limitation that we are going to go with the 1260 psi system, then we have no choice but to remove some of the liquids at Prudhoe Bay. The pentanes plus can go through the oil lines, and all the propanes can go through the gas lines. That leaves the problem of the butanes. Now, to address your specific question, could we take them out elsewhere. Yes. It is technically feasible to take the liquids out elsewhere. We have 12%, 13% CO_2 in this gas and CO_2 has no heating value. And we didn't, particularly the project sponsors, do not want to move a large volume of the CO_2 to the states because automatically that creates a fuel penalty, moving something all the way down to the states. But, theoretically, if we were to put a high enough pressure line in we could move all the gases, other than dehydrated them initially, we could move all the gases to

the states. And remove all the liquids and the CO_2 at that point. Or, alternatively, we could move all the gases, except for the dehydration facilities which were necessary on the slope, we could move all the gas to, say, the Fairbanks area and process it at that point, and remove the CO_2 and all the liquids at the Fairbanks area and then process the gas. So, specifically, your question, could we process it elsewhere, yes, we could. If we altered the design of the line and go to higher pressure system to the point of processing.

? Miles :: In order to get the CO_2 out, you've got to go ahead and take the liquids out.

Esley : So this is one of the problems we are looking at right now and several people have brought it up. To remove the CO_2 from the Slope, the process that the producers are looking at right now involve first removing the water. Secondly, removing the gas liquids. We are going to take them out as a whole, not try to separate them. And thirdly, then we would take out the CO_2 . Now, at that point, we either separate the liquids, the gas liquids, and move some of them through the pipeline and burn some of them on the Slope, and put some of them with the gas, or we can put them all back into the gas if we have a high enough pressure system. At that point we bring the process to Fairbanks. Now, at this point, if the State of Alaska wishes to extract some of the ethane

and set up a petrochemical plant, we would have to again extract the liquids. After we extract the liquids, we go through a further extraction where we take the heavier part out which leaves the ethane. We put the heavier liquids back in the line and then the propanes and butanes back in the line, which would then be transported to the United States, at which point we would again extract the liquids. We are talking about where do we take these liquids out and how would the most economical, where would the most economical point of extraction be? We are looking at the pressure of the system. If we go with the 1260 psi system, it puts very severe restrictions on where we can extract these liquids. We have to take some of them out of the North Slope with the 1260 psi system. Did I confuse you or help you?

SENATOR POLAND: Can you have one pressure for part of the line and then reduce it to a lower pressure? What I am thinking of is could we have a high pressure line in Alaska, and as I understand it, Canada builds its lower?

Easley: Yes. It would be technically quite feasible to move all the gas, including the liquids to Fairbanks through a high pressure line, reduce the pressure at that time and move just the gas the rest of the way to the states, take the liquids which are extracted at Fairbanks and either utilize them there or move them to the coast.

SENATOR HUBER: Mr. Chairman. Let me ask a question. By a high enough pressure line, do you mean talking about liquifying everything and bringing it down as far as the point where you extract (cough)?

Essley : Well, gasifying everything. You could.

Huber : What do you mean liquifying everything? If you go to a high pressure line, all the liquids would be in a vapor phase.

SENATOR HUBER: I'm sorry, my physics is giving me some problems.

I have got some real problems with physics because the higher the pressure we put on a gas, the closer it is to turning into a liquid. For instance, the methane is something over 3,000 pounds per square inch, while the propane is about, at room temperature, or less than 200 pounds per square inch, before it turns to a liquid. Now, can you explain that to my... What you are telling me is contrary to my physics and I'd like to know why.

Essley : Well you get into a phenomenon known as retro-grade condensation. And it is called retro-grade because it is contrary to what you learn in beginning physics. But what we are getting into is, at a high pressure we have a single phase, and if we drop the pressure and at a certain temperature we reach a point where we call the dew point and some of the liquids will condense and will form two phases then, both a gas and a liquid. Now, the

peculiar nature of any gas is that we can make laboratory experiments, or if we know the composition of the gas from previous laboratory experiments, we can determine very closely what the pressures and temperatures are in which we will have those two phases. And what it amounts to in this system, that with the operating temperatures that we are going to be bringing this gas down -- in other words, we are going to bring it down below 32 degrees to avoid melting the permafrost. So with these type of temperatures we have, for any given composition of gas, a certain envelope which we have to stay outside of. Basically, this means we have to stay at a fairly high pressure. I know this is contrary to your basic physics and this is why we call this particular phenomena retro-grade condensation.

SENATOR HUBER: Rather than confining it to self supporting laws and a few other such things, does it have to do with the fact that it is a mixture of gases?

Easley: It is a mixture of gases and we depart from ideal gases. We can take a liquid and we can, through manipulating temperature and pressure, we can take a substance and we can go from a gas and put the pressure up to real high value then drop the temperature, then drop the pressure back down, we can go from a gas to a liquid without ever seeing a phase change. Or we can go back from a liquid

to a gas. Now, instead of going that route of going to the real high pressure and dropping the temperature and coming back down, if we just went straight across at a lower pressure, we'd go through a very definite phase change at some point where we would have liquids formed and then the amount of liquids would continually increase, and we reach another point where we would have the bubble point when we would have all the gas disappear and we would have a single phase of liquids. So we are getting into some phenomena of how we transfer from a liquid to a gaseous state.

SENATOR HUBER: Within a mixture of gases.

Essley: Within a mixture, yes. But what we are talking about here is if we are going to carry all of the liquids, we have to go to fairly high pressure. If we carry just part of the liquids, we can get a lower pressure and end up fine.

SENATOR HUBER: That clarifies something that has never been clarified before. Thank you.

? Chmn. Miles: Mr. Adger, the questions surrounding the conditioning plant hasn't really been brought up and we really couldn't get an answer because there apparently is no answer to the question. Who is going to build the conditioning plant? (Indiscernible) Where does it stand now, and if your agency is going to make a ruling on it, what

factors are going to be important in that?

ADGER: I'm sorry that I'm not right up to speed on what the precedents are in the lower 48 on processing and conditioning facilities. I am informed by the producers that there is a dramatically different set of precedents for conditioning facilities than those for processing facilities, but I haven't been too thick to understand what the difference is between the precedents on those things. One of the things that we have been trying to do while we're up here was to start an inquiry, an informal inquiry, into what the issues are associated with the gas liquids and try to define better for ourselves what those issues are and set up a procedure for getting those issues resolved. We talked to the state people yesterday, really kicking off our inquiry into these matters, and we will be proceeding to talk to the producers and the pipeline company in the coming weeks in order to try to get this thing resolved and find out who it is that ought to pay for it. Ned, do you know enough about conventions in the lower 48 to sort of know what the precedents are?

NED HENGERER: I am not totally conversant with the specific applications of the rules, but I do know that they really do depend on the specific factors of the case at hand, depending on the location of the plant and the characteristics of the gas and the relative interests of the parties as

to the liquids and such matters as that. At this stage, I really couldn't give a definitive answer. I don't think anybody could.

ADGER: I think we have a closet expert.

Essley: I wouldn't say I am an expert but we have a little different problem here than the commission is normally used to addressing. In most of the plants in the lower 48 states we are quite often dealing with multiple owners, and if any processing is... Generally when we have a processing plant, we quite often have quite a few owners, the processing plant will be built separately and process gases from different owners, and we quite often have quite different ownership in the processing plant than we do in the gas and the oil. And so these kind of conditioning costs will almost always be excluded from the consideration of the costs of the owner of the gas. And only those conditioning costs that are done before it leaves the lease, will be considered part of the conditioning. And the processing will be, normally, considered separately. Here we have a different situation. Previously, in all the rate cases before the Federal Power Commission, we were dealing with non-associated gas. Associated gas was always just handled to fall under the rules that they set for non-associated gas. And here, for the first time, the FPC, now the FERC will

be dealing with setting a rate, or setting a conditioning and processing for an associated field, gas, where the gas is a by-product of producing the oil. We are going to be getting into totally new grounds here and we are going to be closer to the precedent where in the state where the processing costs may have been associated with producing the gas, other than the conditioning cost where there was a separate plant with separate ownership. It's really undetermined yet how this is going to rule, but we're on new ground as I understand it. Is that correct?

Chmn. Miles : Well what this comes down to then is a \$2 billion precedence.

Adger : That's right.

Chmn. Miles : This is roughly a \$10 million project. If the \$2 billion precedent added on to it, this is a tremendously significant factor. Equally significant fact as the pricing determination.

ADGER: Well, let me just refer you to the numbers here. I think that the order of magnitude of the wellhead price, in that determination, is on the order of \$1.50. Whereas the order of magnitude in comparable terms of the conditioning costs, I think is on the order of 30¢. And 30¢ is a smaller number than \$1.50.

Chmn. Miles : Yes. But it is still quite substantial.

Adger : That's right.

Chmn. Miles : That is a substantially significant factor.

When might this decision be made? It will obviously be made by FERC.

Adger : Not obviously. It is conceivable that legislation now before the Congress would decide whether or not the gas processing costs were included within the set wellhead price or in addition to the wellhead price.

Chairman Miles : If Congress doesn't resolve it, roughly how long would it take your shop to resolve that question? I realize it is a ballpark shot, but...

Adger : I addressed this same question to the professionals at FERC who actually make this determination. And they said that once the decision is made to go ahead and we know for sure that we have to make such a determination, it would probably take a minimum of three months.

Chmn. Miles : And a maximum?

Adger : Well, he didn't say, but he thought we could do it in pretty close to three months. We have quite a bit of information on the previous commission. It would be three months from the time we get the data from the producer on the cost of this. And that may be, the way the schedule is now, it would look like it will be at least August or September before we get information from the producers on the cost conditioning.

ADGER: But we've got some things that we can do on that issue between now and then.

Chairman Miles: If Congress does not come to terms on the pricing bill, that will also fall into your hands. How long do you figure, again ballpark figures?

ADGER: Would you care to guess on that one?

? Hengerer: On what?

ADGER: On the wellhead price. At least the end of the summer?

? Hengerer: The gentleman I addressed the question to at the FERC, was up to his ears in making that determination, said that it would take at least a year.

Chairman Miles: (Indiscernible)

? Hengerer: Now they are doing a study on that. Conditioning facilities could go on simultaneously.

_____: Yes, but no resolutions would be made. (Indiscernible)

ADGER: Updating an estimate of the basic costs involved in a conditioning facility is going on now. And the producers have a study of that going on, sort of in parallel with this whole wellhead pricing thing. We would have to come up with our own process to satisfy ourselves that their estimates of the cost of gathering and conditioning were the right ones. But the timing of the variance, the ultimate resolution of the gathering and conditioning cost thing is probably related to the timing of that study. The wellhead pricing question, on the other hand,

is either related to the _____ of the Congress or the FERC proceeding and the problem there is the difficulty of the allocation issue. Allocation of expenses between oil production and gas production. If we had to set a cost base rate.

Senator Sumner: (Indiscernible) lead to the conclusion that there is too many variables and too many decisions yet to be made. (Indiscernible) I don't know how one could be expected to make an intelligent decision unless one wants to assume that _____ sort of all work out in the end.

ADGER: I think that what we've said all afternoon is that you really are not in a position to decide unless the wellhead price is roughly settled. We wouldn't argue with that at all. And if the wellhead price is not settled by the Congress, I think we all recognize that all of us are on a different time frame. The project sponsors, I don't think would argue with that. They know that the FERC and the price setting under that then becomes a critical _____, and it's just a matter of how fast we can do that. But our stance is that when the wellhead price issue is settled, the State can come up with a fair estimate of what's in it for the State and have a fair idea of just how important it is to the State for the thing to go ahead now. I think that the kind of commitment

to the project that even the project sponsors would like to have within the next few months is not one where everything is finally said and done. I think that is more an expression of intent which is related to computations of a benefit that is available in the time frame of the commitment is made or expression of intent is given.

Senator
Sumner: That question was pursued yesterday and they said that they would like to have some sort of a commitment of expression or interest this session and it seems to me like the only thing they could get from us is that maybe we are interested if the following _____.

ADGER: Well I think that you would be in a position to do a pretty good job of enumerating those ifs in the wellhead prices is settled. In my own, and I haven't talked him in any detail about this, you know, its none of my affair, something where you were to assess the order of magnitude of interest in this thing and make some sort, give them some sort of an indication based on that assessment. I think that that would be what it would take.

7. *Senator*
Sumner: (Indiscernible). You're saying now as well that there are many other things that may cause delay.

ADGER: The wellhead pricing thing could certainly cause delays.

Rep.
Osterback: I have a couple of questions that I would like to ask. Suppose that we give them \$1.4 billion for the

pipeline and a large part of the pipeline won't be in Alaska. Suppose Canada struck a big oil or gas flow there. What assurance would we have that we could still run our Alaska gas through that gas pipeline ...(indiscernible).

ADGER: The decision and the agreement between the United States and Canada is for a joint system that contemplates them hooking up McKenzie delta reserve to the system shortly after the Alaska gas reserve. The Alaska portion of the system is completed and in the agreement we made provisions for a higher capacity system between the portions of the system that would transport both Alaskan and Canadian gas volumes. That was a feature of the agreement and we will be a part of the system that's built. There will be extra capacity in the system for that part which carries Canadian gas.

Rep. Osterback: (Question Indiscernible) *Trading North Slope royalty gas for Cook Inlet gas*

ADGER: The State Department of Natural Resources has mentioned to us a scheme whereby the State would trade their North Slope royalty gas for Cook Inlet gas. And I just told you everything about it that I know. They have explored this, I guess, in a bit more detail and ought to be able to tell you what the benefits and costs associated with that are.

SENATOR RADER: Mr. Chairman. I don't have a question but, aside from the grilling, I want you to know that we

appreciate you coming here. We are really merely fishing for information, but we understand that you are here really at our invitation, and we appreciate that.

ADGER: Let me just say for all of us that we are delighted to have the opportunity to come up here. I wish I had ended up with more output but our mission in coming up was really an information gathering one. We came up at the invitation of the Executive Branch to discuss a whole range of mutual interests with them, and they suggested that we have a session with some of the important legislative people and I am delighted that you all had the time to spare.

CHAIRMAN MILES: Thank you very much.

(END OF MEETING)

APPROXIMATE DISTRIBUTION OF BENEFITS AND COSTS
FROM ALASKA HIGHWAY GAS PIPELINE
(\$ 1975, 2.4 BCF/D, 20 Yr. Average)

	Per 1000 cubic feet (\$/MCF)	Annual Total (Millions \$)
Market Value	\$2.62	\$2,295
- Federal Corporate Income Taxes	0.10	90
- State Corporate Income Taxes		
Alaska*	0.01	13
Other	neg.	4
- State Property Taxes		
Alaska*	0.05	46
Other	0.03	22
- Other Transportation Costs ^{1/} including cost overruns	0.84	736
= Prudhoe Bay Value	1.58	1,384
- Processing Costs	0.30	263
- 10% Severance Tax* ^{2/}	0.14	121
- 12½% Royalty* ^{3/}	0.16	140
= Producers Net Revenue	0.98	860

* Alaska Revenue Total	\$0.37	\$ 320
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^{1/} \$1.04/MCF total transportation costs, President's Report to Congress

^{2/} .10 X .875 X \$1.58

^{3/} .125 X \$1.28



Alaskan Pipeline

ALASKA HIGHWAY PIPELINE PROJECT

Alaska Financial Participation

Fact Sheet

BENEFITS TO ALASKA

Economic Benefits*

- Royalty Income of \$10 Billion
- Severance Tax of \$7 Billion
- Other Taxes (Ad Valorem and Income) of \$1 Billion
- Total Royalties and Taxes (Including Taxes Related to Gas Processing Plant and Corporate Income Taxes Related to Sale of Gas) Would Exceed \$20 Billion

25
years

*Amounts represent estimates of minimum benefits based on assumed production of 2 billion cubic feet of natural gas per day at a wellhead price of \$1.45 per Mcf escalated at 6% per year over 25 years.

Employment Benefits

- During Construction Years 1979-1982 Jobs Created Will Range From 1,300 to Over 10,000
- Project Is Committed to Hiring Qualified Alaskans
- After Completion Project Will Employ a Permanent Staff in Alaska

Development Benefits

- Project Will Stimulate Further Development of Alaska's Natural Gas
- Project Will Allow for Distribution of Prudhoe Gas to Alaskan Communities Along the Route Thus Providing for Future Industrial Development

Indirect Benefits

- Housing, Communications, Transportation and Other Services Supporting the Project Will Provide Additional Employment and Revenues
- All Economic Benefits Will Be Multiplied as They Circulate Through State's Economy

NEED FOR FINANCIAL PARTICIPATION

- No New Energy Supply Will Be Financed on the Basis of Federal Government Guarantees
- Capital Funds to Be Raised on a Project Financing Basis - Cash Flow Generated From the Project Will Service Debt and Equity Requirements
- State's Participation Would Assist in Demonstrating to Financial Community that Project Is Economically Viable. A Negative Response Would Hinder Efforts to Develop Confidence in Private Capital Markets

HOW STATE CAN PARTICIPATE

- General Financing Plan Contemplates a Committed Pool of Capital Large Enough to Assure All Investors and Lenders that There Are Sufficient Funds to Complete the Project. Committed Pool of Capital Would Consist of Equity (Approximately 25%) and Remainder in Debt
- Project Encourages State's Financial Support in the Amount of \$1.2 - \$1.4 Billion Consistent With Support Previously Suggested by State for the El Paso Project, Adjusted for Inflation
- Commitment Would Include Purchases of Both Debt and Equity
- Project Also Plans to Offer Equity Participation to State's Citizens, Native Regional Corporations and Other State Organizations
- State Will Receive a Rate of Return on Its Investments Identical to All Other Lenders and Investors
- State's Commitment Will Not Be Binding Until All Capital Necessary to Assure Completion of the Project Has Been Committed
- Ultimate Backing for State's Participation Will Be Revenues Generated From the Project

SCOMM

#15:6

FEBRUARY 4, 1977

SENATOR RADER: The joint hearings of the Alaska State Legislature relative to the sale of royalty gas will come to order.

We've been asked to announce that smoking in the courtroom is absolutely prohibited, and no beverages are permitted in the courtroom, or food either. I don't know if that's any problem, but if it is, be advised.

Today, as we announced yesterday, we're going to go first through our experts, the committee experts that have not yet testified. At the conclusion of that testimony we will consider further public testimony. I'll leave it up to the committee at that time to decide what they want to do, if they want to reopen public testimony at this time, or else request those members of the public who have not testified to submit their testimony independently to the Senate Finance, or Senate Resources Committee, or to the House Resources Committee.

This will be the last session of the joint hearings. Representative Gruening will hear from the Department of Resources and such others as the House determines, I guess next week or thereafter, at their pace; and the Senate will do the same, except that the Senate Committee will at least reconvene here at 10:00 o'clock Monday morning, primarily for the purposes of a

1 review and a rebuttal by our Department of Administration,
2 Attorney General's office, and whatever, concerning
3 misstatements that may have been made or positions that
4 are unclear, and also submit themselves to questions
5 by the committee members and, of course, other Senators
6 on any questions of which we have reason to question
7 their earlier statements or need clarification.

8 Representative Gruening, did you have any further
9 announcements as to your committee?

10 REP. GRUENING: I guess not.

11 SENATOR RADER: We'll first take up Dr. Carl Swanson. Doctor,
12 would you please identify yourself, give us a resume of
13 your background, your position, and I would suggest that
14 you go through your report and outline to us those portions
15 of your report which you think are most important to us,
16 and then open it up for questions. Would that be
17 appropriate with you?

18 DR. SWANSON: That would be very appropriate. I have some
19 remarks that I've outlined here which I'd like to give
20 to summarize the report, as well as a few remarks on issues
21 that have been raised during these hearings upon which
22 I'd like to comment. Would that be appropriate for me
23 to do?

24 SENATOR RADER: That would be appropriate. I'd like to have
25 your background read into the record first.

1 DR. CARL SWANSON: My name is Carl Swanson, I am Executive
2 Vice President of Jensen Associates, Inc., which is an
3 economic consulting firm with offices in Boston, Washington
4 and Geneva, Switzerland. The company specializes in
5 economic analyses, forecasting, pricing, analysis of
6 investments, advice on contracts, occasionally testimony
7 before various Congressional regulatory bodies, or
8 Legislative bodies, in matters of world oil, natural
9 gas, natural gas liquids, and occasionally some work on
10 electricity prices.

11 My educational background is at Massachusetts
12 Institute of Technology where I received a Bachelors Degree
13 in Economics and Engineering, and a PhD in Management.
14 I taught for five years at the Sloan School of Management,
15 at M.I.T. as an Assistant Professor. More recently I
16 have been a consultant, since that time.

17 In my consulting, relevant to the issues that you
18 face, I have assisted in the staff work, backing up,
19 price negotiations on long-term LNG projects, I have
20 performed analyses for computer simulation models of the
21 logistics of moving LNG from the liquefaction line across
22 the Atlantic Ocean to receiving terminals, into distribution
23 systems, and to the burner tip. I have assisted industrial
24 buyers under Order 533, analyzed supplies of natural gas
25 and contracts that are offered to them. We have assisted

1 producers in analyzing their contracts, producers in
2 analyzing their gas contracts, in order to see if they're
3 well protected. I have looked at supply and demand of
4 natural gas in the United States and impact upon curtail-
5 ments. I have forecast the world-wide supply and demand
6 to 1985 of propane and butane, that is liquefied petroleum
7 gases, and lastly, relevant to your concerns my firm and I
8 have analyzed the gaseous fuel markets in the states in
9 the northeast quadrant of the United States in order to see
10 the impact of price upon the demand for natural gas and
11 for propane by industrial consumers.

12 That's my background, and I think what I'd like
13 to do is briefly summarize the report which has been,
14 I believe, distributed to the committee and is available
15 to anyone else. Should I identify this report, Mr. Chairman?

16 SENATOR RADER: I would like to have the report made an exhibit
17 in our proceedings. Would the reporter inform us as to
18 the exhibit number.

19 MS. SANDERS: 16.

20 SENATOR RADER: Exhibit No. "16" will be the "Economic Analysis
21 of Alaskan Royalty Gas Contracts" to the State of Alaska
22 by Jensen Associates, Inc., consisting of some forty-four
23 pages, dated January 1977. Therefore, any matter which
24 the Doctor omits in his testimony will be available in
25 the supplement, or in the exhibit. Would you proceed,

1 Doctor?

2 (Whereupon Exhibit "16" was duly marked.)

3 DR. SWANSON: First let me summarize the report. There is a
4 summary of the report on the first four or five pages,
5 which you may already have read, and I will essentially
6 go through that summary.

7 Let me first, before I continue, identify who
8 I'm representing. We were hired, Jensen Associates, Inc.,
9 were hired by the Legislative Affairs Agency on behalf
10 of you ladies and gentlemen, the Legislature, to assist
11 you in analyzing the contracts that you are now considering.
12 Our mandate was to see if the contracts protect the
13 interests of Alaska. We did not address ourselves to the
14 legal issues; we confined ourselves to economic issues
15 as appropriate to business ---

16 SENATOR RADER: Excuse me, Doctor, let me interrupt you.

17 I do see some members of the Legislature, and I want to
18 invite you to seat yourselves at the front tables here,
19 if you would care to. It will be easier to participate
20 in the questioning and also address the witness.

21 I'd ask, do we have a page. We're supposed to
22 have a page here. When we get one I was going to ask
23 the page to invite other legislators who may come in
24 at a later time to come forward.

25 Proceed, Doctor, I'm sorry for the interruption.

1 DR. SWANSON: Thank you. We looked at this contract from two
2 points of view, or we asked two questions. One question
3 we asked was, if the El Paso project is not approved
4 has the State preserved itself the right to protect its
5 royalty gas and interest through provisions which allow
6 it to terminate the contract. The answer to that question
7 is yes.

8 The second question we asked is, if the El Paso
9 project or any pipeline project which the Governor would
10 like to support is approved, does this contract protect
11 the economic interests of Alaska; that is, if this contract
12 is in force is Alaska protected. We examined three dif-
13 ferent respects in which Alaska might be protected, and
14 one of them is, can Alaska use the gas within its own
15 state. Secondly we asked, are its interests in the natural
16 gas liquids protected. Thirdly we asked, will Alaska,
17 under the terms of this contract, receive a favorable
18 price.

19 Let me take those questions in order. First, I
20 think this contract has extremely well designed provisions
21 to allow Alaska to reserve natural gas from Prudhoe Bay
22 for its own use. The terms on reservations are unambiguous,
23 and Alaska with what I consider to be short notice, two
24 years, can take back to itself one hundred percent of the
25 royalty gas.

1 Secondly, there is a provision in the contract
2 which allows Alaska to exchange royalty gas for gas which
3 may be more proximate to its markets and use the royalty
4 gas, taking back the royalty gas in paper at least, in
5 order to trade for gas which may be more available to it.
6 This exchange provision provides a great deal of flexibility
7 to the State of Alaska.

8 Thirdly, the provisions of the contract do not
9 set any limit to when in the future the State could
10 determine it will need the royalty gas which is in
11 Prudhoe Bay. I interpret this to mean that the State
12 could decide today or sometime when this contract is in
13 force five years downstream gas which is currently being
14 delivered, or part of the gas which is currently being
15 delivered, would be needed in the future and thus Alaska,
16 as I interpret this contract (and you probably should ask
17 others about this) could at any time reduce deliveries .
18 to the purchasers. Now, since the Prudhoe Bay field has
19 a gas cap, it would appear to me -- I am not a reservoir
20 engineer and your reservoir engineers could comment on
21 the reality of what I'm about to describe -- but it seems
22 to me that Alaska could work out a deal with the producers
23 to reduce slightly the production of gas from the gas cap
24 and, in effect, store Alaska royalty gas for future years.

25 The second question we've addressed is, are the

1 rights of Alaska to the natural gas liquids well protected
2 and the answer is, I think very well protected. Alaska
3 has the right to extract ethane and heavier components
4 at any time before or after delivery to the purchasers.
5 I would interpret this to mean that if a gas processing
6 plant were to be built in Canada or the United States and the
7 liquids extracted there, that the rights of Alaska to
8 the liquids would still be retained. I would suggest
9 you ask Mr. Moody the same question.

10 Furthermore, within the contract, statements on
11 quality of the gas of the contract, I saw no limitations
12 to the btu content of the gas delivered to the consumers.
13 To be sure, there is a price adjustment clause built in
14 the contract for the btu content of the gas, but I believe
15 there is no quality limitation to the delivery of methane
16 or the natural gas which would restrict removal of liquids.

17 Third, I think the more important question and
18 lengthier analysis in our report, is what price will
19 Alaska receive for its royalty natural gas under the terms
20 of this contract. I think in order to understand the
21 terms of this contract as written I need to review for
22 you very, very briefly what I believe to be the course
23 of energy prices over the terms of this contract.

24 This contract has a term of twenty years,
25 beginning upon initial deliveries of natural gas, which

1 will occur sometime close to 1985 very likely, meaning
2 this contract will exist from sometime around 1985 to about
3 2005. As we look downstream at the price of energy in
4 the world, I think most energy consultants agree that
5 the Organization of Petroleum Exporting Countries is not
6 likely to lose control of world oil pricing between now
7 and 1985 certainly. I think most agree that the price
8 of oil will continue to increase in world markets. I
9 think the price of energy within the United States is
10 going to rise more rapidly than the price of world oil,
11 largely because at the current time the price of energy
12 in the U.S. is controlled below world levels. As these
13 controls are relaxed, particularly as more and more new
14 oil, as it's defined in the regulations, is produced,
15 and as more imported oil is brought into the United States,
16 the oil prices should increase in the United States more
17 rapidly than world oil prices.

18 Secondly, I think that it's very clear that there's
19 a consensus developing in the United States that the con-
20 servation of energy is a very, very important national
21 objective. There is yet no means that have proven to
22 be effective by which this conservation is to occur.

23 Europe and Japan have imported oil in great
24 quantities for many years, and they have very actively
25 for many years used taxes to increase the price of energy

1 to their consumers in order to force conservation and this
2 conservation, through the use of the price mechanism,
3 has proved to be effective. I would expect the U.S.
4 would begin to follow such policies of using prices to
5 bring about conservation.

6 In sum then, I think that to 1985 we should within
7 the U.S. and the world see increases in the price of energy.
8 After 1985 we believe, Jensen Associates, Inc. believes,
9 there is a very good likelihood, as long as industrialized
10 nations do not fall into worldwide depression, that the
11 production limits of the OPEC nations will
12 begin to be strained by the demand for oil in the indus-
13 trialized nations, and the chances after 1985 for very
14 sharply rising prices will exist. Between now and 1985
15 we would expect oil prices to essentially track inflation
16 in the industrialized nations.

17 This is the price scenario under which we need
18 to examine the price terms of this contract; that is,
19 prices rising gradually to 185 and with sharply rising
20 financial prices thereafter.

21 The question is, do the price terms of this
22 contract protect the interests of Alaska, its revenues
23 essentially, with sharply rising prices after 1985.
24 I think the people who framed the contract recognized
25 that there is a fair amount of uncertainty about energy

1 prices, which there are, and they designed the contract
2 to adapt to prices established outside the contract.
3 There is not a price, there is not a set price, a certain
4 number, in this contract for royalty gas. But prices
5 are established within the contract under two different
6 types of regulation that may occur in the future. One of
7 them is deregulation.

8 If the price of natural gas at the wellhead is
9 completely deregulated the terms of this contract, in my
10 opinion, protect the interests of Alaska well. There is
11 an annual redetermination clause which has been clarified
12 by the purchasers as applying to both Section 6.3 and
13 6.4 within this contract, which will allow the contract
14 to try prices on the North Slope of Alaska.

15 Now, the North Slope of Alaska is expected to
16 be producing oil and gas in many other locations in the
17 future. The terms of the deregulation clause in the
18 contract allow the price to attract the highest price
19 paid on the North Slope. One would expect that there
20 will be continuing discoveries on the North Slope, and
21 under deregulation continuing new fairly well market
22 base pricing of natural gas which will be tracked by
23 this contract.

24 Under deregulation this contract protects the
25 revenues and the prices Alaska will receive for its

1 royalty gas in interstate commerce very well.

2 The second scenario one can view with a future
3 is continued regulation of wellhead prices by the Federal
4 Power Commission and possibly by Congress. The shape
5 of that regulation is, hard for -- it's certainly hard
6 for me to discern as regulation has changed from time to
7 time with some fairly sharp shifts. Mr. Moody can explain
8 that to you better than I can. We attempted to indicate
9 it in our report.

10 But the contract does state clearly that Alaska
11 will accept the regulated ceiling prices for the natural
12 gas which the regulatory agency will set. It also says
13 that the price that Alaska will receive for the gas will
14 never exceed that price which the purchasers can include
15 in their cost of service to their customer. This is the
16 clause which protected purchasers. I would assume that
17 the contract could not have been written without that
18 clause in it. It essentially says that, given the very
19 large volumes of gas which we're discussing in these
20 contracts, that the purchasers will not have their share-
21 holders pay part of the price of the gas if the regulatory
22 agencies do not allow the full price of Alaskan royalty
23 gas to pass to the consumers. I think it is probably
24 likely that the purchasers would not have signed the
25 contract without such protection for their shareholders

1 and their bankers.

2 Now, Alaska under regulation, you and anyone
3 else who attempts to understand what the regulated price
4 for gas will be from Alaska, will be faced with some
5 difficulty, and that is because the recent national rate
6 decisions from the Federal Power Commission have clearly
7 excluded Alaska from the national rate, both in the appli-
8 cation of a national rate and secondly, in the calculation
9 of the proper national rate for new natural gas. Thus,
10 it's not clear, the precedent is not clear the calculation
11 of the procedures which will be applied under regulation
12 if regulation persists to this North Slope royalty gas.

13 In our report we've attempted to show that there
14 is a great deal of uncertainty, very significant uncer-
15 tainty about what this price might be. In 1980 if the
16 current pricing mechanism or the vintaging of 77-A, using
17 the vintaging of 77, and I'm sorry if I'm using some terms
18 with which you may not be familiar, the price which might
19 apply to new natural gas, a Dollar Fifty-Six a million
20 btu's. But Alaska has characteristics which are very
21 different from the characteristics of the Lower 48 States
22 in its gas production, and that is in the calculation of
23 the national rate the calculation is based upon the costs
24 of finding and developing non-associated gas. The reason
25 for this is the Federal Power Commission has had a very

1 great difficulty in pricing associated natural gas because
2 it had difficulty in allocating costs of drilling, explora-
3 tion and development between oil and gas.

4 Thus, the Federal Power Commission, and there's
5 an expert to my left and to your right who can describe it
6 more fully than I the reasons behind it; the Federal
7 Power Commission recently has said that the national
8 rates for non-associated gas, and it simply said that
9 the prices for associated gas will be equal to that
10 calculated for non-associated gas.

11 Non-associated gas comprises perhaps seventy per-
12 cent of the Lower 48 gas supply. Such is not true of
13 Alaska. The Prudhoe Bay field is the largest field in
14 North America and it has the predominance of the reserves
15 of Alaska, and it's an associated gas field. If the
16 Federal Power Commission were to apply cost based pricing
17 to Alaska, particularly to the Prudhoe Bay field, you
18 would have to face the issue of how to allocate the costs
19 of drilling, development and exploration between the
20 gas and the oil. The fact about the Prudhoe Bay field
21 which is very delightful for Alaska in its sales of
22 oil is that it is the largest field in the world. From
23 the point of view of selling gas, if a rate were to be
24 applied to Alaska, the fact that it's the largest field
25 in the world may not give you the highest price because

1 the costs of finding and developing the gas per thousand
2 cubic feet are relatively low.

3 We've calculated, using some very rough estimates,
4 and ignoring the costs of water flood that may be attributed
5 to the taking back of natural gas and the costs of
6 extraction of carbon dioxide, that the Alaska rate might
7 be somewhere between Twenty and Forty-Five Cents per
8 million btu.

9 The question remains, however, does this contract
10 protect your interests in your royalty gas, and I think
11 that we can safely say this contract is not going to
12 influence too greatly, with one exception (I'll talk
13 about that in a second) the regulated price of natural
14 gas. This contract can only adapt to prices set by the
15 Federal Power Commission or other regulatory bodies.

16 Under regulation, the contract clearly states
17 it will accept the regulated price (a), and (b) it says
18 that it can receive a price no less than the price received
19 by any working interest owner. Both clauses, I think,
20 protect your interests reasonably well.

21 However, there is one concern we had, which we
22 described in the report, which is that most royalty interest
23 owners, and certainly working interest owners, are
24 usually private investors. The State of Alaska is a body
25 different from the private investor. It has social

responsibilities to its citizens.

One question that has been raised is, could Alaska under regulation claim, because of its unique responsibilities as a state, get a higher price for its royalty gas than the price given to the working interest owners. If such were true, this contract does not distinguish Alaska from the working interest owners, it clearly states it will accept that price which will be received by the working interest owners. I think you need to assess, and I would like to help you assess, the probability that Alaska might receive a higher price for royalty gas under regulation than working interest owners.

Let's do it in the following way. If Alaska were to state that it will ask for a price different from the working interest owners, and if Alaska were to ask for a higher price, I think the response could be a varied response. One response might be, and I'm sure there are some people who would make it within the courts and certainly before the Federal Power Commission, is that since Alaska has incurred no costs whatsoever in the discovery and production of its natural gas that if it wishes to separate itself from the working interest owners, it should accept prices based upon its costs, and its costs were zero. This would be unfavorable to Alaska.

1 The other possibility is that Alaska would claim
2 it should receive a higher price for its gas because of
3 its unique responsibilities to the State, to its current
4 citizens and future generations. The likelihood of such
5 an argument being accepted is one which I have difficulty
6 judging. I think, however, that as we look at the decision
7 of Administrative Law Judge Litt, he did not appear to
8 have an attitude which would be favorable to giving the
9 State of Alaska higher prices for its royalty gas than
10 working interest owners were to receive under regulation.
11 You may wish to ask me some more questions about that
12 point later.

13 Let me go on. One of the concerns of the contract
14 that we had as we first read it was that since the State
15 of Alaska does not collect severance taxes from itself
16 that under regulation it might be possible for the pur-
17 chasers to pay a price higher to the working interest
18 owners, higher by the value of severance taxes, than the
19 State of Alaska. I think the testimony certainly before
20 these two committees by the purchasers was that right in
21 the contract they did not intend to not pay an amount
22 equal to severance taxes to the State of Alaska for
23 royalty gas. Your legal staffs may need to judge whether
24 or not you need to change your severance tax laws in order
25 to insure that under litigation and under regulation, if

1 regulation occurs, if in fact Alaska will be able to
2 accept a payment in lieu of certain taxes from the pur-
3 chasers under its current law.

4 At this point I think I have finished my summary
5 of the contract. The contract overall, I think, is a
6 very good contract. It does protect the interests of
7 Alaska. There has been one clause, which I've described
8 earlier, about Alaska separating itself from working
9 interest owners under regulation.

10 The thing, however, which is very clear in
11 examining this contract and your sale of natural gas
12 is that the provisions of this contract do not set a
13 price for natural gas. The price of natural gas is going
14 to be set by forces outside of this contract, perhaps
15 market prices. More important, they're going to be set
16 by regulation and legislation.

17 If Alaska wishes to return to itself favorable
18 revenues for its royalty gas it should, we think, focus
19 its attention more upon regulation and legislation than
20 upon the terms of this contract. The terms of this
21 contract will stand Alaska in good stead, but you need to
22 deal with regulation and legislation in order to increase
23 your revenues from the sale of royalty gas.

24 I would like to comment now on several issues,
25 three issues, that came up during the course of these

1 hearings if it's appropriate to do so at this time, or
2 would you like me to stop, Mr. Chairman, and entertain
3 questions about our review of the contract?

4 SENATOR RADER: Why don't you go ahead and answer those
5 questions that you think are pertinent and we will
6 question you later on it.

7 DR. SWANSON: Thank you, sir. Several of the witnesses,
8 including Natural Resources Commissioner Guy Martin,
9 stated that, and I believe I quote Commissioner Martin,
10 that very likely a higher price could have been attained
11 in this contract for the royalty natural gas. I thought
12 that was a very important statement that came out in his
13 testimony. A number of other witnesses made the same
14 statement.

15 I have asked myself can a higher price, in my
16 judgment, be obtained than under the terms of this contract,
17 and I must confess that I think it's highly unlikely. I
18 think the pricing terms of this contract have been very
19 well designed, again with that one proviso that I mentioned
20 earlier. Let me review with you why I came to that con-
21 clusion.

22 I think, first of all, we must understand that
23 royalty gas that Alaska has to sell now is 2.6 trillion
24 feet; it's a large package of gas. I think it is possible
25 in the future that Alaska could sell maybe a billion cubic

1 feet in a spot market for a higher price than you will
2 get under this contract. But a billion cubic feet is not
3 the same as 2.6 trillion cubic feet. It is possible,
4 for example, under certain shortage conditions to receive
5 a very high price, but not for the volumes of gas, I think,
6 that you have here.

7 It has been suggested by some other witnesses
8 that Alaska could have received a higher price for its
9 gas had it sold gas directly to gas distributors and then
10 had the gas transported by interstate pipelines, and
11 that gas distributors would be willing to pay a higher
12 price. I think Mr. Moody should discuss this with you
13 more than me, but it is my impression of the Natural
14 Gas Act that if a gas distributor in Boston or Chicago
15 who is not now subject to the jurisdiction of the Federal
16 Power Commission, if that person were to purchase gas
17 in Alaska, move that gas across state lines and resell
18 it in the Lower 48 states anywhere, that gas distributor
19 would be subject to the jurisdiction of the Federal
20 Power Administration. I think no gas distributor would
21 subject himself to such regulation and thus would not
22 purchase gas directly.

23 Secondly, it was stated that Alaska may be able
24 to receive a higher price for gas if they were to sell
25 it directly to an end user such as, I believe Pacific

1 Gas and Electric was mentioned, or large industrial
2 consumers of gas. Again, I think Mr. Moody can comment
3 on this with greater knowledge and with greater competence
4 than I. It's my impression, however, the Federal Power
5 Commission currently does not allow direct users of
6 natural gas to transport gas through interstate gas lines
7 for their own use except under Order Number 533. Order
8 Number 533 is a very highly restrictive order which sets
9 the term of any contract to two years and it says that
10 only industrial high priority direct end users of gas
11 may purchase the gas, and they may purchase the gas on
12 a monthly basis, or perhaps on a daily basis, only to
13 that extent of their high priority use is curtailed.
14 Thus, when a winter is very cold and many home owners
15 are burning a great deal of gas, such industrial purchasers
16 could buy a great deal of gas. In warm winters such as
17 we had in 1975 and '76, many industrial purchasers had
18 their full needs of high priority gas met and thus they
19 couldn't receive delivery of gas under direct purchase.

20 I don't think that any direct user of natural
21 gas will be willing to sign the term of this contract,
22 which says that they will take delivery as you receive
23 delivery from the working interest owners, depending upon
24 the gas production and upon the oil production, and pay
25 for it because the timing of their needs for gas under

1 Section 533 is probably quite different from the timing
2 of the delivery of gas from the working interest holders
3 to Alaska and thus to your purchasers.

4 Secondly, let me address one other possible
5 purchaser of your gas. It was suggested that an electric
6 power and generation utility might be willing to purchase
7 gas directly from you and burn it underneath its boilers.
8 I am very, very doubtful if the Federal Power Commission
9 would allow interstate transportation of gas to be burned,
10 purchased in such a way, under boilers.

11 In fact, in some of its opinions on the purchase
12 or the retention of gas by producers in the Gulf Coast
13 to be used in refineries, the Federal Power Commission has
14 very explicitly stated that gas may not be burned under
15 boilers; in fact, it went beyond that. But I think it's
16 unlikely that anyone who would burn gas under boilers
17 can buy substantial quantities from Alaska or anyone else
18 to be transported through interstate pipelines when high
19 priority users in parts of the pipeline system in units
20 are denied gas.

21 Let me go on to another issue. We have heard
22 from two or three witnesses descriptions about the setting
23 of price for natural gas under deregulation. The gist
24 of their testimony has been that it's very difficult to
25 set a price at the wellhead under deregulation. We have