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Alaska State Legislature

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TRANSCRIPT OF TESTIMONY OF

DR. ARLON TUSSING

March 16, 1978

BEFORE THE SPECIAL COMMITTEE ON ROYALTY OIL AND GAS

Committee:

Senators:	Representatives:
Chairman Mike Colletta	Chairman Bill Miles
Pat Rodey	Chat Chatterton
Bill Sumner	Joe McKinnon
John Sackett	Charlie Parr
Kay Poland	Al Osterback

DR. TUSSING:

You all know who I am, and I won't waste time on introducing myself. I have a number of questions I intend to address myself to this evening, and let me run through the questions which I would deal with, if I have the time, which I won't, and we'll try to be selective. What I'll do is I'll take up one issue at a time, and let you discuss....let's have some interchange during the discussion. I won't have a formal presentation. We'll just take these issues up. Feel free to interrupt me if there is something you are not following.

Here are the issues that had been identified as possible areas for my treatment on which I'm ready to comment. First, what is the likelihood that the ALPETCO project will be commercially viable? And under that, comment on the Alaska disadvantage and how ALPETCO might overcome it. Second, comment on the realism of ALPETCO's marketing plans for Japan and for the U. S. West Coast. Third, is it possible, or likely, ALPETCO could get its project financed without an overwhelming assurance of its commercial feasibility? Fourth, what would happen if the ALPETCO facility were financed and built and, after its completion, it were to be unprofitable? What would be the consequences for ALPETCO's sponsors, for the bond holders,

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for the employees, for the community in which the plant was located, and for the State? Fifth, if ALPETCO were to encounter difficulties, either in financing the project or in operating it profitably, what other assistance, if any, would ALPETCO be likely to ask from the State, apart from a discount on crude oil prices? What would be the cost risks or other implications for the State from any of these measures? Sixth, what will be the likely impact of the ALPETCO project on the West Coast oil market and on the value of Alaska crude oil generally, both before and after the proposed facility goes on-stream. Seventh, comment on Sections 2.3 and 2.4 of the contract, specifically the option to buy non-Prudhoe royalty oil. Seven, comment on the procedures by which the Commissioner of Natural Resources and the Royalty Board decided to negotiate this contract. And eight, how can the Legislature best resolve the factual, legal, analytical, and policy questions presented by this contract.

Of all of these things, I think that the Battelle presentation has set the background for discussing some of the issues which relate to the West Coast surplus. Firstly, let me say that the West Coast surplus will have, and is having, a consequence that the Battelle study did not point up and that is in exerting downward pressures on West Coast oil prices. And, as the West Coast surplus increases, those downward pressures will increase. I will want to show you in a brief scheme how these downward pressures are likely to work.

Taking a series of hypothetical prices at Valdez - these are net back prices at Valdez for shipments to various parts to various markets based upon what net back prices were posted by the company in September of 1977, with some modifications, but, essentially, the sales in Alaska to Alaska refiners were at $12.50 a barrel; that is, as of Valdez. West Coast sales were at an average of $12.63. Gulf Coast sales were at $10.72. And this reflects the differences in transportation costs to those markets, as the average transportation cost from Valdez to the Gulf Coast was $3.05, while the average transportation cost to California was $.82, and to Cherry Point $.60. And this is what results in the difference in Valdez price.

Okay, now let's move forward to 1980 and assume that nothing changes in terms of the real prices of oil, that the OPEC price in real dollars, remains constant, and the transportation costs remain constant. And that, of course, assumes that for the Gulf Coast price to remain constant and assumes there will be no higher prices.

CHAIRMAN MILES:

Doctor, are you sure that your figures are right there - $12.50

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at Valdez price for sale in Alaska and a higher sale for the West Coast?

DR. TUSSING:

Yes. I'm not sure these are right. I took this figure from Bonner and Moore, who claim to have derived it from state revenue figures. Since I had just one day to prepare this, I had to grab the only materials I had at hand. I didn't have a chance to go to the original data. Whether or not this is precisely right is irrelevant to the thrust of my explanation. What I am dealing with is the large difference between the West Coast and the Gulf Coast net back, and Battelle set out the same thing. They had different numbers, but they were in the same order of magnitude - roughly, a $2.00 difference in the net back price from the West Coast and the Gulf Coast.

As you know, ARCO was able to market most of the oil through its own West Coast refineries; EXXON, a somewhat smaller proportion; and SOHIO, with no outlets of their own on the West Coast, must ship most of their crude to the Gulf Coast markets. Now projecting ahead the shares of the various markets to 1980, and assuming 1.2 million barrels per day, which is more than is going to be produced at this stage - but, again, it's a minor....I'm not trying to predict the future in this - but, projecting the differences, we have for ARCO an average net back price at Valdez of $12.23, for SOHIO, an average net back price of $12.21 - not for SOHIO....for EXXON, SOHIO - $11.46, and for a total, including the other minor companies, a weighted average price of $11.79.

Alright, now, what we see here is that the cost of oil for SOHIO is more than a dollar under the West Coast price. It's an interesting situation, which in our competitive textbook economics would say would not last very long because SOHIO, rather than accept this price for its oil, would want to penetrate this market for every barrel, additional barrel, that SOHIO could put into the West Coast market. SOHIO would make $1.17 more. Our textbook market economics would say SOHIO would keep trying to sell oil on the West Coast until - what would happen if SOHIO tried to sell more oil out on the West Coast? They would drive this price down. In other words, to make room in the market, they would have to offer a discount because ARCO and EXXON are selling all they can at this price, or moving all they can at this price - the biggest customer is SOCAL - to displace more Saudi crude out of SOCAL's supply, or, for that matter, to convince refiners to not to take oil somebody else. So, SOHIO would have to offer a discount. Now, SOHIO would be ahead as long as it could get more than $11.46; that is, on the last barrel. The reason SOHIO doesn't do this is that by pushing more crude into the West Coast they are not just making....suppose they offer it on the West Coast for

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$11.63, for a dollar discount. Well, they are making the difference between $11.46 and $11.63 on that incremental barrel, but, in the meanwhile, they are provoking the others to cut their prices, too, to maintain their market share. The California independents will cut their prices to maintain their market share. So, all the producers would end up worse off than they were before, as they would all end up selling roughly the same amount of oil into the West Coast market. But all of them would be getting less, and the state would be getting less. So, SOHIO, because it's such a big element in the market, suffers most from its own competitive actions. SOHIO is not about to start a price war which will drive the West Coast price down.

Other than that, with the growing surplus, SOHIO really does want to market this. One of the things that came out in the suit of the Maritime Unions against the Virgin Island Exchanges - what was doing was SOHIO was swapping its oil with SOCAL; it was delivering its oil to SOCAL and taking SOCAL's Saudi crude and selling the Saudi crude in the Virgin Islands at a discount. They weren't discounting on the West Coast. They were posting their net back prices in Alaska as if they were selling it in competition with Saudi crude on the West Coast. Yet, they were taking a loss on the Saudi crude they sold in the Virgin Islands. So, in effect, they were discounting without it appearing on the books, and the State of Alaska was getting royalties and severance taxes on the basis of a crude price which was higher than the true value - the market value - of the crude. In other words, SOHIO was willing to pay a higher royalty and a higher tax than it had to, based on the true value of the crude in order not to appear to be pushing down the West Coast price.

This was what was happening with production at less than 700 million barrels a day - 700 thousand barrels a day. As production gets up to 1.1, the downward pressure of the temptation of any of the producers to try to get more of the West Coast market. All of them can do better on the West Coast than they can.... Their average price is lower than the West Coast price. They can all do better so long as that's the case.

Now, if competition broke out, what would happen is the West Coast price would be driven down to $10.72. The competition that each of these producers, say SOHIO, would keep trying to sell more oil on the West Coast. It could keep making more oil on the incremental barrel, on the last barrel, by selling it on the West Coast at a discount until they got it down to this price.- until they were making no more from selling on the West Coast than they made on the East Coast. If they could receive $10.73 by selling an extra barrel on the West Coast, instead of $10.72 by selling on the Gulf Coast, they would do it, if there were competition. Now, where does ALPETCO come

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into this?

In a situation where the surplus is going to be increasing, at least until 1985, and I suspect it's going to continue to increase faster than that - the projections that were cited by Battelle that show it falling off are both pessimistic about future discoveries. By 1985 we are going to have the (indisc.) Sea sale, the lower Cook Inlet sale - will have been taken place long enough that if there are any discoveries to be made there they will ready to go on-stream. There will be, according to the Interior Department's schedule, seven more OCS leases off Alaska in that time, so that the supply may continue to expand far beyond the highest of those projections. While it's my belief we are in for a long period of low economic growth and low increase in energy demand, for reasons which you can see.

Now the economic management of the United States and the Free World is not really at its optimum, and I think that we're going to see very low rates of growth - of economic growth and energy growth, generally. So, we're going to have an increasing surplus on the West Coast, increasing downward pressure on prices if exports aren't authorized and if none of these proposed transcontinental pipelines are authorized. And I think the odds are against all of them. Anyway, you have continued downward pressure.

What does ALPETCO do? If it comes in as a petrochemical plant, it removes some of the surplus crude that otherwise tends to depress the West Coast price. It does not go into the petroleum market as such. And so a crude-base petrochemical facility in Alaska, or anywhere on the West Coast, if it used Alaska-type crudes, would reduce the surplus of crude on the West Coast, it would reduce the amount which has to be pushed through to the Gulf Coast. The weighted average price, the price that ALPETCO would have to pay under these assumptions, would be $11.79. They would be paying $11.79 essentially for oil that would otherwise have to be marketed on the Gulf Coast for $10.72. So there would be two effects of that. One is that the pressure on the part of the other producers to market their surplus on the West Coast, and drive down the price, will be reduced. The second is that the weighted average itself will tend to go up because some of this will be pulled out. Some of the $10.72 will be pulled out of the weighted average and replaced.... say, this is oil that SOHIO pays $10.72 for, will be reduced.... and, instead, ALPETCO will be paying the $11.79. So the weighted average will go up, and ALPETCO's price will be more than $11.79.

So everybody's price will be....the total price will be higher. So, (indisc.) in that context, any facility which removes oil from the West Coast market and reduces the pressures on the West Coast market, the surplus is favorable to the state. Now, as the Battelle people pointed out, the thing that is over-

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whelmingly most favorable to the state would be exports to Japan. I think that they made a good case that this is the best thing, under any circumstances, that could happen to the state. I think that the state has not devoted it the attention it might have to overcome the political bottlenecks. This is something that is a subject for another discussion, but I believe that exports could be authorized with the proper political strategy.

But, getting back to this.... Second best would be a petrochemical plant as opposed, say, to a products refinery which would simply push more oil into a West Coast market that's got more oil in. Now, (indisc.) from the petrochemical plant, however, to the ALPETCO proposal as a whole, there is another problem and one sees another picture. The proposed contract entitles ALPETCO to take up to 150,000 barrels, or up to its full Prudhoe Bay entitlement, of crude oil for re-sale up until the time their plant is ready to use it. Let's see what the effect of their taking that oil in (indisc.) will be. According to their pro forma financial statements, they intend to market their oil on the West Coast of the United States, and they intend to mark it up by two percent. Then they expect to earn a two percent margin on it and they give a puchase price of $7.00 at the well head, plus shipping costs to the West Coast of $.85, plus an ALPETCO margin of $.25, and tax (indisc.) for $5.40, and give a $13.50 sales price on the West Coast. Well now they're starting with different numbers - and I won't quarrel with those, because they are based on other assumptions as to what the actual tax tariff will be and what the net back will be. But the problem here is ALPETCO takes oil that costs the $11.79 at Valdez, that is, well head price plus tax tariff, and there is no way that it can sell it on the Gulf Coast. ALPETCO gets 150,000 barrels, 140,000 barrels, of oil for $11.79. They lose money unless they can sell it for $10.72 plus transportation to the Gulf Coast, which is $3.00. So there is no way that ALPETCO can consider marketing on the Gulf Coast. ALPETCO, if it takes this oil, has to go into the West Coast. What can ALPETCO afford to do? ALPETCO says that it is looking for a two percent margin, so that brings its price at Valdez to $12.03. And, in that case, they can undersell the West Coast price by $.60. In other words, the value of North Slope crude oil on the West Coast as set by what the other producers are charging is $12.63. ALPETCO is getting its oil and is willing to sell oil for $12.60. I mean $12.03.

I really doubt whether, out of roughly 6 to 700,000 barrels per day of Alaska crude, which can be marketed on the West Coast, they are going to push in 130 or 140,000 barrels a day of it for only a $.60 discount. If you recall, ARCO will be moving all of its own oil through its own refineries. There is no way they could push ARCO's crude out of ARCO's refineries. EXXON

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is going to be running a substantial amount of its own crude in its own refineries. Essentially, if ALPETCO is going to market this, they are going to have pretty much mop up the independent refiners who could accept the backing out of a very large portion of California independent production. And they are going to have to butt heads with SOHIO. They are going to have to undersell SOHIO at the CHEVRON refinery. Let's go back, There is no way they can sell Alaska royalty oil on the Gulf Coast. The only way they can sell it on the West Coast is to undersell SOHIO. And, essentially, they've got to undersell SOHIO at CHEVRON's refinery.

CHAIRMAN MILES:

Why would a CHEVRON refinery, an independent refinery, be willing to strike a temporary agreement with ALPETCO when they know that essentially they are going to have to go back to producers once the proposed facility starts producing petrochemicals?

DR. TUSSING:

Because there's a surplus of oil.

CHAIRMAN MILES:

Simply because of this?

DR. TUSSING:

Well, if you had a seller's market, which you don't have now and you won't have in 1980, and, very likely, you won't have in 1985. You certainly will have a buyer's market on the West Coast of the United States, at least through 1985. They are going to shop around.

Now, I'm not saying that the process is going to be perfectly competitive just because there's one seller. But now we've got a wild card in the deck. We have a different kind of seller. SOHIO will not behave competitively, will not use its full market power to capture its maximum market share on the West Coast because it knows it's spoiling its own market.

ALPETCO's in a different position, because to the extent ALPETCO drives down the West Coast price and can make a profit in doing so. Next month the composite average goes down if ALPETCO sells for $12.03. You can see SOHIO's getting their oil cheaper than ALPETCO is. SOHIO can defend its market position. SOHIO will not initiate a price war, but SOHIO will not be backed out, either. So SOHIO will go as low as ALPETCO can go, and it can go lower for the purpose of protecting its market

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share. Some of the California independents can't. And you're having this problem right now that Alaska oil is backing out California independent production. The Economic Regulatory Administration just gave an additional $1.79 entitlement benefit, or reduced the entitlement penalty, for the California producers by $1.79. And, thus, oil is still backing up California production. So those people, some of them can't back down. Some of them will make room for additional North Slope production, but you bet they will be in Washington and trying to get some new entitlements (indisc. - cough) or some other thing that prevents them from being backed out.

So, if ALPETCO can't afford to drive the West Coast price down to $12.03 and still make money. Unlike SOHIO, unlike ARCO, and unlike EXXON, they don't lose a penny by doing it, because they have no stake in the production of the rest. They have no production. They are a middle-man. And, to get this market share, they will go in and compete - they will engage in what textbook economics calls arbitrage (ph). And they will make their two percent, or they will make more than two percent on the arbitrage (ph). They don't have to take the full 150,000 barrels at once. They can start with a minimum of 10,000 barrels. You find a home for 10,000 barrels today. Give me 10,000 barrels of oil today at the composite average price, and I can find a home for it in California at $12.00. No question. I can find some California crude, or some SOHIO crude, that I can back out. So you take that next month. Meanwhile, you have driven this down a little bit and you've got a greater price advantage. Where does the process end?

If this becomes $12.03 - the West Coast net back price becomes $12.03 - the in-value price becomes $11.48, and here we get another round. And, so, where the process ends....it probably won't go all the way, but the only place that brings it to a definitive halt is when the West Coast price gets down to $10.72, which is the competitive equilibrium price. That is what your textbook economics would say is the natural price. That is the value of North Slope crude oil on the West Coast. Because, why should any producer on the West Coast accept this price, ship it to the Gulf Coast, and take a lower price if they could sell it for even a penny more on the West Coast? So the end of the process is this.

People tell me, or I have been told by people who are in these negotiations, that ALPETCO has no intention of taking this oil and marketing it. I know that Sea Train (ph) and Alaska Consolidated Shipping, which was the predecessor organization, had this as the main thrust of their participation, and they were most interested in getting an option on the royalty oil for the purpose of marketing. Now, I'm not urging any, or suggesting there's any bad faith here, I see no evidence that

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any of the ALPETCO participants have ever thought this through. I know when I was on the Royalty Board the submissions (indisc.) asked of Consolidated Shipping, with respect to their proposal, were totally unrealistic because they were expecting to take oil at the in-value price and sell it on the Gulf Coast. They had professed letters of intent from purchasers on the Gulf Coast; they gave this as evidence they could do it, saying that we would take it at a price no higher than the lowest price at Prudhoe plus transportation cost.

Anyway, I don't know what their intentions are, and we'll get to how I think that the Committee ought to proceed in looking at some of these things a little later. But I can tell you that....with confidence, that just as Battelle sets out the case it would be a disaster for the state to market its own royalty crude oil, for the same reason, and perhaps even more so, a disaster if you let somebody like ALPETCO market the state's crude oil. The West Coast consumer will benefit, the national economic efficiency will benefit, but the tendency is to introduce into that market a major seller who has no stake in the business of an orderly market, who is not an oligopoly, profit maximizer.

Now, this moves on to something else. Let me put my statement to the Royalty Board in the record at some point. At that time I'd be reported on a survey I did for the Commission, mainly on the realism of ALPETCO's plans for marketing in Japan.

CHAIRMAN MILES:

Representative Chatterton.

MR. CHATTERTON:

Thank you, Mr. Chairman.

Doctor, did you say you wanted to....were willing to be interrupted before you switched to another subject?

DR. TUSSING:

Yes. Surely.

MR. CHATTERTON:

I have one question of you. This exercise we have gone through.... I think it's great, but aren't you analyzing just a small portion of the total system and not analyzing the system? Is not, with about 14 million barrels a day producible capacity today that Saudi Arabia has, and yet they're only producing about

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8.7 million barrels per day....don't you think that they are the ones that control the West Coast price and not SOHIO? If you look at the total system?

DR. TUSSING:

If you look at the total system you see who controls the level of world prices. But the prices in individual markets vary according to transportation arrangements and local supply-demand situations. The Saudis control the price at the North Slope. If Saudis decide to cut back further on production to raise the OPEC price, the net back at the North Slope will go up. But it's not true from that to say the tax tariff doesn't determine the price on the North Slope. So, here you've got the OPEC price here at this level and, depending on the distance from Saudi Arabia and from the Persian Gulf, you'll have prices in various markets in the world like this - prices at the refineries. And then there will be other places that feed into these refineries, and you'll have to subtract transportation costs from the price there. This is the.... If this is the West Coast price, then the transportation cost from Prudhoe Bay to the West Coast influences the West Coast price. Now suppose Prudhoe Bay, plus California, put in more oil than the California can use - than the West Coast can use. That, in a sense, begins to free it from the OPEC price, because California is no longer importing OPEC oil. The only way that Calfornia price is determined by OPEC is - what is the transportation cost beyond California to the next market, which is the Gulf Coast, or to Japan? That is, it's the OPEC price in a third market that then begins to determine the Prudhoe price.

So, yes, it's true. OPEC moves the whole structure up and down. But what goes on on the West Coast of the United States determines whether this is wide or narrow and determines whether the West Coast price is above or below the OPEC price. I think it is inevitable, as long as there's a surplus on the West Coast, that the West Coast price, particularly for middle-sulfur, middle-gravity crude oil, like Prudhoe Bay crude oil, will be below the OPEC plus transportation. It's got to stay below that or we won't even absorb all the North Slope and California crude. The price situation can't be such that refiners are indifferent to whether they use Saudi twenty-seven degree, one percent sulfur crude or North Slope twenty-seven degree, one percent sulfur crude. So the West Coast price is going to be lower than the OPEC price for as long as we can forecast in the future.

I think that Battelle is reasonable in saying, we really don't want to forecast beyond 1985, because both supply and demand.... there are so many uncertainties in both supply and demand. The general concensus is that world oil prices are going to go down until some time in the 80's, and then they'll start

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turning up again some time in the 80's, but there's enormous disagreement about when that is. Some....the C.I.A. and Dr. Schlessinger (ph) and EXXON say 1982, there are other people who say that the crunch is like the horizon, as you get close to it it recedes because the geologists and the government officials have always, historically always, underestimated the new discoveries. The Paley (ph) Commission in 1946 had us running out of oil by 1949, the Geological Survey had us - in 1921 - running out in before 1929. That's why they set up the Naval Petroleum Reserve in Alaska, so the battleships would have some oil to run on in World War II.

Anyway, up to 1985, the West Coast price is going to be below the OPEC price - how much below the OPEC price depends on the market behavior of the producers and sellers on the West Coast, among other things. If the oil is closely held and flows through controlled channels - the North Slope oil is controlled overwhelmingly by ARCO, EXXON, and SOHIO - the effect of competition is going to be minimum. They don't have to violate anti-trust laws, they just have to behave like gentlemen toward each other. They just have to avoid getting into price wars that they know would be mutually ruinous.

The state royalty oil sold to an independent marketer has no such constraint. And, if one of the non-majors came in with a discovery out in the Western Arctic, or something like that, and it was somebody who was not tied in by intimate relationships with the (indisc.) agreement, and things like that, somebody came in with a large field - it could be Occidental, or even a major - Texaco or Gulf - they could break the market, too. Let's say that if ALPETCO attempts to move 150,000 barrels to the West Coast market, they are almost certain to break the market, and the bottom is somewhere in the vicinity of $2.00 below the present price. Now it won't hit bottom. Maybe the SOHIO pipeline will be built which would mean the bottom would be in the vicinity of $1.25 below the present price.

MR. GRUENING:

Does that mean that this is money that ALPETCO is going to lose if forced to sell it, so this is money to pay the state if, supposedly, they lose? Let's say they lost $1.00 a barrel, and it takes seventy-two months, I think in the contract, before they are actually putting it in a form where it could be sold. But, as a refined product, you're talking about over $300 million.

DR. TUSSING:

They don't lose any money. They sell it at above cost. Their cost is $11.79. When it first comes in they can sell it on

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the West Coast. The West Coast refiners are paying $12.63 for that kind of oil.

MR. GRUENING:

You're saying that they won't prolong if they get....

DR. TUSSING:

Okay. Now the question is....the contract does not compel them to refine in Alaska or to process into petrochemicals any specific amount. So they don't reach full production. In their pro forma, their financial statement, they assume that they reach full capacity of 150,000 barrels a day in the fourth quarter of 1985. There is nothing that prevents them from continuing to sell. Suppose their petrochemical production contract is slower, and suppose they are making a good deal of money on these West Coast.... There is nothing in the contract that compels them to refine all that oil.

Now, I'm not trying to predict what they are going to do, because they don't know. I'm sure if you asked them, they'd say - well, these are the projections we're working on, but we don't know what markets will be like; we haven't even got our products laid down. But I would say, in general, that the existence of a crude-based petrochemical facility benefits Alaska in terms of the tax and royalty (indisc.).

An independent marketer very much hurts Alaska. It cannot do anything but hurt the state, and the state would be much better off to say - we'll keep the oil until you go on-stream, but we'll pay the two percent margin that you expected to earn on it. Let's just give them the money and let the producers.... The state would be far better off just handing them the two percent outright.

Okay. Well, let's go on and get back to the Alaska disadvantage. You've all heard about the Alaska disadvantage. I don't need to repeat it. You've got transportation cost disadvantages, higher construction costs, higher operating costs. And virtually everybody in the business, whether it's in the oil business or the chemical business, except this group, believes the Alaska disadvantage can't be overcome without some sort of subsidy. Now this group believes that....ALPETCO believes that it can.

I haven't worked through their economic analysis, and I don't know. I just know that it's a minority point of view. It's virtually a minority of one....

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UNIDENTIFIED SPEAKER:

You've been there before.

DR. TUSSING:

No, I'm not the minority. I'm with the majority. They are the minority of one. And even their marketing consultant at the Royalty Board agreed that Joe Moore's assessment of the probability of success is fifty percent, at best - agreed that that was a fair assessment. Let's say they are going against the entire weight of industry sentiment, and I won't quarrel with that. But there is an Alaska disadvantage. Now, how can it be overcome?

The marketing plan we talked about has two elements. One is the expectation of getting long-term, hell or high-water, take or bake contracts from Japanese chemical consumers - Japanese industry. I did an investigation of this for the Commissioner and found no reason whatever to believe that there was any possibility that they would accomplish that, and I would say that the odds on that part of their program are - maybe they are finite - very close to zilch. Now it is conceivable that the notion that they can market on the West Coast....there is a substantial possibility that, given their cost structure, they can market on the West Coast. There is no basic petrochemical-producing facility on the West Coast.

Given any reasonable assumptions about economic growth, the demand will increase, and there is a gap that they could fill if they could overcome the cost disadvantages of operating in Alaska. They realize that the alternative sources for the West Coast are, for example, the Gulf Coast - the expansion of the existing petrochemical industry there - and there is part of the cost disadvantage, the transportation cost disadvantage, the transportation cost component of the Alaska disadvantage, is offset by the fact that if that crude has to go to the Gulf Coast and the products come back to the West Coast. So a West Coast petrochemicals plant would have a substantial advantage for the West Coast market over the Gulf Coast. Now it's quite conceivable, even though a California-based petrochemical facility would be in better economic shape than an Alaska one, that because of air-quality problems, site problems, it may simply be impossible to get a site for a petrochemical plant in California. So given those two considerations, they might be able to offset on the West Coast a good portion of the Alaska disadvantage.

The remainder of the equation is an interesting one - that if the West Coast price for Alaska-type crudes were substantially below world market price, below the Gulf Coast price, if there were no SOHIO pipeline, if exports to Japan weren't allowed, then we'd have a price for a North Slope crew. There would be a price advantage for a West Coast producer, whether in Alaska

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or in California of a dollar more per barrel over its competition in the Gulf Coast region or, for that matter, competition on a crude- or naphtha-based facility anywhere in the world. Here's where the marketing fits in, and, again, I don't believe this is ALPETCO's game plan. But, if by marketing crude independently between now and 1985 they broke the West Coast price, pushed it down to a level $2.00 below the world market equivalent, they would have gotten their subsidy from the state. They would have gotten that $2.00 by the back door. Now, why, when they go on-stream, doesn't the price go back up again? And that's an interesting question. Would it go back up when they take the crude out of the crude market and start marketing petrochemicals. I suspect it's a one-way downward rachet, because the equilibrium price - that is - the normal situation and the absence of some sort of anti-competitive behavior, is the same for all destinations at Valdez. And that the big three would have to collude, and they'd probably have to get the California independents on board. They would have to engage in per se violations of the anti-trust laws to re-establish the differential price structure. I think that once this differential price structure is knocked down by competition it would take a positive intervention - anti-competitive intervention - for the market to restore. So....

UNIDENTIFIED SPEAKER:

Dr. Tussing, just a moment. If we're talking about a time-frame of 1984-85, which is to unscrew their oil from the West Coast market, this is the time when the shortages, or the surpluses, appear to be diminishing. And if we further diminish it by 150,000, which is hypothetically injected into that under your scenario, doesn't that have to drive the price back up?

DR. TUSSING:

Well, as long as there's a surplus, there is no force driving the price back up; that is, there's a surplus now that is having downward pressure on the price. And that downward pressure is being resisted by the fact that the oil is moving in controlled channels. So long as the surplus exists, I don't think there can be any upward pressure on the price on a price structure that's been established previously by competition.

Secondly, I don't think we can count on, say, 1985 being the time in which the surplus is diminished. All we can do is say with confidence that the surplus will increase until 1985. After 1985 we don't know whether it will level off or diminish or what. So the.... I'm not trying to forecast the future.

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I'm just.... The case I've established, with respect to the erosion of the price, is a worse case. As I said, I think there is a substantial possibility there will be some export outlet. For example, they could....the Federal Government could go half-way on it by allowing the export of residual oil from the West Coast. And it's the heavy high-sulfur resid which is creating a good deal of the glut. The top-end of the barrel can be used. If the California refiners could export their heavy fuel oil to the Far East, that would take a lot of.... There are things that would minimize the danger of the scenario, but the point I want to make is that the scenario which is worst for the state is best for ALPETCO in the sense that the best way of overcoming the Alaska disadvantage is with a lower price for crude. And that is one way I can see, without going dollar per dollar through their cost projections, and I'm not a chemical engineer or a cost engineer, and I can't assign costs to the various elements of their proposal, but just in broad general terms to overcome this cost differential, this is the only way I can see it working on the West Coast is they are relying on a West Coast price that's lower than the import equivalent price. And that is a way of overcoming the disadvantage. I want to repeat - I don't think that this is their game plan, because I've seen no evidence that there's been any long-term or any sophisticated view of the crude oil market on the part of their proponents. They certainly haven't put it on the record. And conversations with the participants over some time haven't betrayed any indication that this is what they are looking at. But I think that it is something the state really ought to take into consideration.

Now, if you have any more questions, I want to first ask how long you want to go.

UNIDENTIFIED SPEAKER:

I think we should just keep going.

DR. TUSSING:

Okay. One of the issues that was raised to me is....

UNIDENTIFIED SPEAKER:

Doctor, would you like to take a five-minute break?

DR. TUSSING:

Yes.

(FIVE-MINUTE BREAK)

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DR. TUSSING:

I think the most important of the remaining questions is.... two of them that go together - is it possible or likely ALPETCO could get its project financed without overwhelming assurance of its commercial feasibility? And I address this one, in particular, because I think there has been an assumption all along, and certainly Commissioner Leresche stated this, that the ability to finance the project is a good test of its commercial viability and, although we of the state can't make a really accurate assessment of it, the financial community will, and their ability to put the financing together is probably the best test of its commercial viability. I would think that would be the conventional wisdom, and I address the problem only because Milton Lipton said to you that it was not necessary to demonstrate overwhelming likelihood of commercial feasibility in order to get the thing financed. But it is quite conceivable the thing could get financed and still go belly-up. I don't think he was talking about the fact that bankers and underwriters sometimes make bad judgment, but I think he was saying that it's not necessary to show that it would be profitable to get the....to obtain long-term debt. And this is true with certain assumptions about financing, with what we call conventional financing, where there's a big equity component.

The financial markets, the bond underwriters, and the insurance companies, and the other institutional investors are not interested in the profitability of the project, per se. They could care less about the health of the equity of the owners. The health of the owners....the financial health of the owners concerns them only to the extent it affects the ability of the enterprise to pay interest and to re-pay the debt.

So, in conventional financing, if there is a sufficient equity component - that is, if the owners put up enough of their own capital - it's quite possible for them to get financing. In the worst case their cash flow is going to be sufficient to cover debt service. Suppose we're going fifty percent equity and fifty percent debt - I'll just use round numbers and not say....and I'm not going to claim these are the numbers of the ALPETCO project, but just to show the principle. Suppose you have a one-billion-dollar facility. So it's $500 million debt borrowed money. And the owner has put up $500 million in equity. Suppose the interest is nine percent, so it's got to pay $45 million here in interest. And it's got to pay.... Suppose it's got twenty-year life, and so it's got to pay $25 million a year in depreciation - in amortization - in debt repayment. All right, so you've got a total of $70 million that this company has to come up with in addition to its operating costs to pay off the debt. Now, to make money, to make it a worthwhile investment for the equity investors, they

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probably have to make fifteen or, say, twenty percent before taxes, at least. So it's probably twenty-five percent before taxes. So, to make it profitable, to make it worth doing, they have to come up with a cash flow of $195 million a year; that is, in profits, allowance for interest, and depreciation they have to come up with $195 million a year.

The equity investors probably won't go in unless they think they can make $195 million a year. They won't start the plant unless it shows on their pro forma statement that the cash flow is going to be $195 million. The bond sellers will go in, and they really have to be convinced that there is for sure going to be $70 million. And, if the $70 million is there, the owners could be losing money every year and they are still meeting their debt obligation. So it's true that a non-profitable....that the financial community is willing to invest in projects which may turn out....which have a good possibility of turning out not to be profitable and of pouring in money and lending money to PAN AM, or Penn Central, or God knows what. All sort of Chrysler companies lose money year after year after year after year. So long as there is some security, and they'll look at it in terms of the debt service coverage. They'll say.... They'll project the income and say the cash flow is how much percent of the debt service. Now, in evaluating utility bonds you look at what is their income as a multiple of the amount of interest and repayment they have to pay.

CHAIRMAN MILES:

Dr. Tussing, the equity owners aren't going to sit by and let that happen year after year after year.

DR. TUSSING:

What can they do? What can they do? They, most likely, have a situation, and this is true of many of these companies, this is true of Chrysler, for example, where they lose money year after year. They lose more by shutting down than they do by continuing to operate. They have to.... If they shut down they still have to pay that $70 million debt service. They still have those fixed costs.

If their revenues exceed their operating costs by even a penny, it pays to minimize your losses. And so, generally, when a facility is worth more as a going business, even to the trustees in bankruptcy.... Well, let's look at some numbers here. Suppose the fixed costs are $250 million a year and the variable costs, that is operating costs, are $250 million, so the total cost is $500 million. Okay, now....suppose your revenues, that is the sales, are $400 million with a loss of $100 million. What happens if you shut the plant down? You do away with

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$250 million operating costs. You reduce your costs by $250 million. You reduce your sales by $400 million. And so your loss goes from $100 million to $250 million. So what happens is these fixed costs include payments to bond holders, and so on, creditors. The same when you get the drain of $100 year after year and pretty soon the equity of owners is wiped out. And suppose they get to the point where they can't meet their....they can't pay their operating costs? The thing goes into bankruptcy. The bond holders become the owners. And they see this enterprise can't pay $250 million any more. What can it pay with sales of $400 million? All it can pay $150 million in interest and repayment. So, they take a bath on that, put the thing up for bid, and somebody buys it at a price which reflects this situation. That is, the old owners are wiped out, somebody comes in with a lower capitalization - he comes in owing less money - so he has to pay only this much.

First, in answer to the first question. With conventional financing it is possible to finance a project that has a large risk of losing money. And conventional financing is one where the owners either put up a substantial amount of equity or where this is a subsidiary corporation where the parent corporation, or somebody, is willing to guarantee the debt. So, to the first question....yes, with conventional financing where there's a substantial equity cushion, where even if the owners are losing money year after year, there's enough surplus revenue to pay the debt service. Yes, you can.

Second, in that sort of situation, the company can go on losing money for years and years and, as long as the owners, or the creditors, or the trustees in bankruptcy, or a potential other owner see that its sales are going to be more than its operating costs, it will continue operating. Now the owners may lose everything they've got, but it will continue operating. So, let's look at some of the consequences of this situation.

Suppose ALPETCO does get its financing together. Now, let's pass, for the time, on how they can do it, because they aren't proposing conventional financing. Suppose they do get the financing together and then they start losing money. Does that mean it's going to shut down....the plant is going to shut down and throw out the people who are working for it? Does it mean it can't pay its operating costs, which include the cost of feedstock, any more. No. Not so long as the sales exceed the operating costs. And in a capital-intensive operation of this sort, you really have to get into a bad situation before it pays to shut down or dump the plant before its value as scrapped is greater than its value as a going concern. So the chances of the state being compelled, from the point of view of keeping the jobs flowing, of bailing out a conventionally financed plant, are minimum.

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I think the problem with ALPETCO is that its proposal is a little different. It proposes, rather than conventional financing, what is called project financing where the companies that own ALPETCO are putting up any their own faith in credit. They are not proposing to support the thing. So the bond holders have no recourse against Alaska interest. They can't take Anchorage Natural Gas; they have no recourse. They can't put a lien on Sea Train's ships, they can't put a lien on a native corporation's lands or future income, or anything of that sort. So, their only recourse is against the project itself. So they are going to look with even greater scrutiny than they would at the income statement and whether there is enough income to cover the debt service. Again, the problem here is that the owners don't propose to put up any capital. They propose one-hundred percent debt financing, or, if I read it correctly, there is something like a hundred....seven percent financing. When the thing goes on-stream the facility will have a negative net worth. That is, they will owe more than the plant is worth. And so the only security....the thing that they have to do, since there is no security in terms of an equity cushion, say all the cash flow has to be available for debt repayment - there is no equity cushion - they're not taking any bath, there's no recourse against the owners. Then what is absolutely essential is there be somebody that they can have recourse against. Well, I've convinced the Commissioner and his staff of adequately protecting the state against any legal recourse against the state, or against its revenues, or its royalty oil.

The only other alternative is that the sponsors get these take-or-pay, these iron-clad, hell-or-high water contracts where they have contracts with credit with the purchasers; that is, major chemical companies whose contracts are bankable. And these contracts may not have a fixed price, but they assure that have a....called hell-or-high water, or it's like the (indisc.) tariff we were talking about last year with respect to the gas pipeline where the purchasers have to promise, have to contract, to put up enough money, regardless of whether the plant is on-stream, whether it's producing, whether the producers are able to re-market the product to cover the debt service. Now it may be a formula price for the final price is determined by the world market price, or an index, or something like that. But there is no way that you are going to get institutional investors to go a hundred percent, or even seventy-five percent debt. In project financing, again, there's no recourse against the owners. Project financing....there's no way that the institutional investors will do that unless there are contracts that will provide for an assured revenue stream equal to the debt service charge - to the interest and amortization.

So, I'd say I don't know what Milton Lipton, what the assump-

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tion of the questions to him, but I would say that the conventional wisdom is more right in this case; that is, that unless they can show the (indisc. - cough) that they've got contracts to sell the stuff, and contracts that are enforceable against credit-worthy purchases, then they are not going to be able to put it together. And I think that's what they've been saying....that ALPETCO's been saying all along. And their ability to finance the project is a measure of viability. If, for example, as against the conventional wisdom in the oil and chemical industry, and practically everybody I've talked to, going against that they are able to execute hell-or-high water contracts for the sale of their product, they will be financed. And they've got no marketability problem. They will be profitable because they have no equity to.... their rate of return on equity will be infinite regardless of how much money they make. So, if they can get it financed, they'll get it financed according to the plan here. If it's going to be project-financed a hundred percent debt, the only way they can do it with hell-or-high water contracts for most of their proposed output, and, if they've got that, they are home-free. They're not going to come back to the state and ask for special deals.

MR. PARR:

Dr. Tussing, what you are saying is if they have assured sale contracts....

DR. TUSSING:

Yes....

MR. PARR:

....they have an assured supply of raw material feedstock from the state, and they've got a physical plant, the bond holders aren't risking very much.

DR. TUSSING:

That's right. Well, they don't even have to have a physical plant. I think that they have to have the kind of hell-or-high water contract that as of such and such a date the purchasers will pay as if they were receiving the product even if they aren't. This is like (indisc.) Gas was proposing and El Paso was proposing for the pipeline financing; that the customers would start paying for the project and would start paying off the bond holders even if the thing were never finished. Say, they don't need the plant but they shouldn't have trouble getting the plant. They could run into cost overruns. That's a danger. And there are lots of scenarios in which I'd insist in coming back to the state for assistance.

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And, if it were conventionally financed, the risks on the state would be minimal because that equity cushion would allow them to operate at a book loss for years and years without laying off employees or without needing to have a discount from the state.

I just don't see where they are going to get these contracts. And practically nobody I've talked to, except those associated with the project, think that they can do it. But I think the argument, and the approach of the administration, is what harm does it do to give them the chance? To give them a hunting license to go out and look for those contracts. If they can get the contracts, if they can get the financing, the state is ahead. If they can't, all we've lost is the time and the effort of the state officials and the Legislature in going over it.

MR. PARR:

Dr. Tussing, you said a minute ago that with conventional financing the state didn't have anything to worry about. By implication, one could assume that on this project financing we do. But, in actual fact, if isn't making it, the bond holders would take over to keep the operation running to get their money back. Isn't that correct?

DR. TUSSING:

Well, that's the most likely.

MR. PARR:

In other words, I'm thinking in terms of the loss of jobs and so forth and the dangers of (indisc.).

DR. TUSSING:

I don't want to say there is no danger of loss of jobs, because it is conceivable if we move into the middle 1980's with a big world surplus of petrochemical-producing facilities everybody else is going to be looking at operating costs, and we're going to have new plants on-stream in Saudi Arabia where they can back down the feedstock costs, where the Saudi government owns fifty percent of it. And, in order to minimize their losses, they're willing to cut back on the feedstock cost to cost of production, which may be forty cents per million B.T.U. or something like that. So, in that situation, you've got two things. Who's got the lowest operating costs, and this plant will certainly not have the lowest operating costs worldwide, and who's got the contractual market to share? Again, if the purchasers go on for twenty-year contracts, hell-or-high water, and the purchasers are credit worthy, they are

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the biggest chemical companies in the United States or Japan, or wherever, then you really can't ask for better security and the dangers are normal commercial risks. I don't think there's any exceptional danger in it.

Now, on the other hand, let's look at some of the things that are likely to happen if they run into problems, if this group does not make its schedule. It's not going to roll over and play dead and say that well, sorry, that's the way.... you lose some....you lose a few, you win a few.

The first thing they're going to do, and they are going to do it whether they get into trouble or not, is they are going to go to municipalities or to the state and ask for industrial development bonds to finance their terminal facilities. It's ridiculous not to, because you can get a tax-free rate on.... and the City of Valdez did it with the terminal there.... And they can go to the City of Noorvik (ph), for that matter. It needn't be the City of Valdez, it needn't be where the terminal is, to get Noorvik (ph) to issue industrial development bonds rather than bonds which will be evaluated on the basis of the project. And they'll sell them the tax-free market. The City of Noorvik (ph) will get a fifty-thousand-dollar commission, or something like that. And, so, that's the first type of aid. Well, it seems to be costless unless the project goes belly-up. Unless it can't meet the bond obligation, the state has no legal obligation to come to the rescue of that, and it's just that Noorvik (ph) will never be able to sell any bonds again in the future, and the state will feel a moral obligation because if Noorvik (ph) defaults on $350 million dollars of industrial development bonds, it's going to affect the state's rate.

So, they're going to ask for that, and they're going to get it. They're going to find some jurisdiction in the state who will take the fifty thousand dollars. There's no question. And there's a certain amount of risk. For Noorvik (ph) if it couldn't be a better deal, or whatever, it couldn't be a better deal. They will ask for that, and they will get it. So, that's the first additional aid, and they are going to get that whether they get in trouble or not. There is no question in my mind they will.... I don't know - have you started talking to people about industrial development bonds?

CHAIRMAN MILES:

Anyone want to comment on that?

DR. TUSSING:

Well, maybe that's unfair....

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CHAIRMAN MILES:

Yeah, I'd prefer to comment on all your (indisc.).

DR. TUSSING:

I don't know that they have, but they'll start soon enough.

What other assistance? Suppose they're just a tad from getting the financing together. They've got eighty-five percent of it. and you're going to be here like the North-west Alaska pipeline. We need the back-stopping to put us over. After all, we have demonstrated that the benefits to the state are enormous. And, look, they are paying 10.9 percent interest on this last bit. The earnings on the permanent fund portfolio is 8.3 percent, something like that. If the state buys their bonds at 9 percent, or markets their bonds, or guarantees 15 percent of them for a commission, how can you lose?

Otherwise, we're going to lose this multi-billion-dollar project and all of these four-hundred, or four-thousand, jobs. And, so, it's an offer that's very, very hard to resist. It doesn't require.... If it's the permanent fund, the permanent fund managers look at this as a straight commercial decision. It meets the constitutional requirements for the permanent fund investments, and it will probably meet the statutory requirements. And it can be done without a vote of the Legislature and a vote of the people, unless the Legislature wants to say that no single investment of the permanent fund for certain.... But, that's the next thing.

Now, suppose the facility gets financed and gets into trouble. We have the same kind of thing. I'm not saying these are going to happen, but, you understand, the owners with their commitments are not going to, at some point, say well, we haven't made the schedule, or we haven't made the financing, or that's the way the ball bounces, or we're losing a million dollars a year - that's the way the ball bounces. And, so politically, they've signed a loyalty oath they're not going to ask for a reduction in the well head price, and there are certain moral commitments on the part of the state government to the people that they are not going to do it. So, how about re-financing? How about re-financing the thing? We're paying 10.9 percent. We can show....our pro forma shows that we'll break even. Otherwise we are going to be in bankruptcy and we're going to shut down, and so on. Would you....would the permanent fund re-finance our debt? Well, at that point we've bought the whole package and it's all sort of a re-finance (indisc.). This has happened time and again, not with these people, but with local industrial facilities. And I think if you haven't read the history of the (indisc.) Refinery in

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Newfoundland, there are some very disruptive....terrible. So, again, I don't know whether these risks are excessive. I haven't calculated the benefit to the state of this project. And if it went through, if the ALPETCO people's optimism is justified, the benefits would be significant. I don't deny that, and I don't condemn them for wanting to draw to an inside straight when the ante is so low in the pot and the pot is so big. But these are things you've got to consider.

One remark that might be a concluding one in this respect - what the significance of the whole project is. I believe that the Administration, that the Governor and Commissioner, have tried to give Alaska what the polls, and what the Alaska Forum, and what the Legislature has indicated the people want. That is, we want a petrochemical plant, but we don't want to pay for it.

All the assembled industrial wisdom, all the big oil companies, the big chemical companies, and all our consultants say they can't do it. It can't be done. Here you've got one company, one group of people, who says it can be done. So, why not give them a chance? That's fundamentally what the Administration's logic is. And, if you buy that logic, I think it's nit-picking to talk about the question of pledging undiscovered oil or the option on the rest of the royalty oil. We have nothing to give. All we have to give them is high costs, a horrible logistical place from the point of view of transportation costs - that's high labor costs, high construction costs, a god-awful climate that makes it harder to operate these things, and we've got some oil an assured supply of which is worth nothing now; that is, there is no premium for an assured supply. And these people are willing to come in.... I'm sorry they left, because (indisc. - laughter). They're willing to come in and gamble more time and money than the state has putting together this....I think it's pie-in-the-sky. They're willing to take a chance, and the Governor is saying to you well, what harm is it?

It is not true that it is a riskless contract. It's not true that it's a perfect contract given all things. But since we're unwilling to give them anything on outright, they're going to get every little fringe benefit they can. Nobody else has ever thought of the state furnishing them fill for the pipeline and the bottoms of the tanks. Well, we'll give them that. We'll give them the right to veto any other project we intend to use royalty oil for. But we read the fine print and we take it back, because it's on the same terms and conditions as the others. But we've given them a lot of things that seem like gold-plating. But, after all, we're not giving them anything else, and they've got all the odds against them.

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So, if you want a petrochemical for cheap, for nothing, you probably won't get it with this contract. You probably won't get a better contract that's going to give you one. You've got a chance at it. As I said, I think the....giving them the right to sell royalty oil in advance of building a plant is dangerous. It's particularly dangerous, if, as is likely, the state's position on the value of oil is not upheld - the (indisc.) formula in the back of the contract does not prevail. Because the spread among prices is going to be greater.

But, other than that, and say you want something for nothing, you get what you pay for.

CHAIRMAN MILES:

Dr. Tussing, your most recent remarks seem to discount the fact....or discount it as being important the fact of an assured supply. We've heard quite contrary testimony to that. Could you go through your reasoning again on that?

DR. TUSSING:

Right now, and at least for the next five to eight years, there is a buyer's market in crude oil world-wide. There is an enormous surplus of crude oil-producing capacity. But right now nobody will pay a premium for an assured supply. A long-term contract is worth less than a short-term contract, because a long-term contract pins the buyer down to a single source of supply when it's in his advantage to shop around in this market. Now what the other people have been saying is that sometime in the future the world crude oil demand is going to overtake producing capacity, and supplies will get tight. And, as a hedge against that time, a supply contract going out in the future may have some premium value.

Now, the present does reflect future expectations, but people give lip service to the value of an assured supply in the future but they're not willing to pay anything for it. And, again, that tells you whether they're really serious or not. You can....nobody will pay premium over the OPEC price to any of the OPEC countries in exchange for a secure supply. And, in fact, the OPEC countries have to accept a discount against the price to get a guaranteed long-term off-taker.

CHAIRMAN MILES:

Under that line of reasoning, though, it would seem that what you're saying is that it may be wise to delay this decision until the surplus is reduced or the shortage is intensified, however you might want to term it.

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DR. TUSSING:

Well, the surplus may increase and the price go down. The thing is that ALPETCO is guaranteed against that if the price goes down with everybody elses. So you're not taking advantage.

Two years ago....three years ago people were panicked and they still remember the embargo, and you probably could have gotten a premium for a long-term supply, and you probably could have gotten.... In fact, I think the Alaska Petroleum Company, the Coastal State subsidiary, was willing to offer....two years ago was willing to offer a premium for a long-term supply contract. And a premium over the in-value price, and that reflected the perceptions then. Now there's still some hangover from the embargo, but it seems to me that what people are legitimately concerned about in the future is, not reliability of supply, but price. That is, as virtually nobody anticipates another embargo for a whole series of reasons, even when the supply gets tight again. By that time all the OPEC countries will have been so co-opted into the world capital system they will such enormous domestic import demand, they will be so integrally tied in with the Western financial system that they just wouldn't....that it's almost out of the question they'd participate in something like that. There are a whole number of reasons why what people are concerned about is if the price turns up again. And, unless you give a fixed price contract.... I don't even know whether you could get somebody to pay a premium for a fixed price contract, because the world oil prices are going down now. And virtually nobody expects them to go up faster than inflation until.... for the next five years, at minimum. The question is - when does it turn up? And that depends on a lot of things that we can't predict.

Now the ALPETCO group is operating on the premise that there are chemical purchasers, particularly in Japan, that will offer a premium for an assured supply of petrochemicals. I think they're a minority of one in that respect. They may be right, but none of the major chemical companies and none of the major oil companies believe. And they're going to have to beat their way into a market which is pretty much tied up by the majors already and in competition with a great number of new petrochemical facilities that are going in in OPEC countries and in third-world countries that want to have them for just the same reasons Alaska does. They want them for diversification of their economies, they want to create jobs, they want it as a symbol of national prestige, and in every case that I've looked at they are willing to subsidize. So they're willing to take a substantial amount of the risk. In Saudi Arabia, Saudi enterprises are taking fifty percent of the thing.

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In Korea, which is has no feedstock advantage, the Korean government is undertaking to back-stop them on any operating losses. In Singapore, again, there seems to be....the government seems to be willing to share the risk. In Iran the government is contributing the feedstocks as its equity. And so, then, if there's a ....they are in a position to do so. So we're looking at competition in the world market with a lot of jurisdictions where they're willing to offer something more than Alaska is to beat their way into the market. And there's a large ethylene-producing surplus in the world today. All the projections show that it will be greater in 1980 than it is today. Now that that surplus would be worked off in 1985 if we have normal rates of growth and if no new facilities are planned in other countries between now and then.

So, I don't know whether it pays to.... If these people will take the crude, and if they can get these hell-or-high water contracts, and get the thing financed, this may be the last chance. Now, if they tell you it's the last chance, that means they know they're in a sliding market. If they told you you'd better do it now or you'll never be able to do it again, they would suggest they have the conventional view of the wisdom of the project and that they'd better convince the bankers before the bankers know what's really happening to the market. too. But, as I say, it's....I don't know....

MR. PARR:

Let me ask you.... One of the previous witnesses of the day, I made this statement and the answer was yes. About the time this project should go on-line in 1983 you'll have a seller's market. Now, you just referred to a buyer's market. And the answer was yes. This was another one of the expert witnesses. Do you disagree with that, or are you agreed?

DR. TUSSING:

No, I would say that is the earliest possible....and I suspect it will be much later than that.

MR. PARR:

Well, that's when the facility goes on line?

DR. TUSSING:

Okay. Okay. But the state's not getting any premium for this oil. If it was going to be a buyer's market in 1983, a seller's market in 1983, in which security of supply becomes important, then your conclusion would.... If that's the case, then the state would do better not to sell its oil under terms now that

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it gets only the in-value price.

MR. PARR:

That leads to my second point, then. You said that oil prices are going down. I'm not an economist, but I understood that we were using more oil than is being produced - supply and demand should be driving the oil prices up, not this year and I don't say next year, but isn't the long-range thing that involve prices like everything else be going up?

DR. TUSSING:

Well....

MR. PARR:

....and the more that the demand outstrips the supply, the more they'll go up?

DR. TUSSING:

Well, demand is not outstripping supply now.

MR. PARR:

This year, this year.

DR. TUSSING:

This year or next year. So, until the mid-80's, sometime in the mid-80's at the earliest, the pressures on world oil prices will be down. I think there's pretty general agreement that until 1982 or 1983 there are not going to be any increases in the world price of oil above the rate of general inflation.

How long after that it goes you get the C.I.A. saying 1983, and you get the U.N. saying 2,000, and there are other people who say that it's like the horizon - the closer you get to it, it withdraws. Say, if you get out past 1990, not only are the.... there may be large developments of conventional oil but, if these high prices maintain all that time, we end up re-defining petroleum, or changing our definition of petroleum.

There are three deposits of heavy hydro-carbons in the Western Hemisphere that I can name, and there may be others, each of which have more oil in them than all the conventional crude reserves of conventional oil in the world. Any one of them - they're all in the vicinity of a trillion barrels of crude reserves - the (indisc.) tar sands, the Colorado oil shales, the Orinoco (ph) tar belt in Venezuela. Those have not been economic resources in the past because it's always been far cheaper to produce or purchase....

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/Whereupon the tape recorder apparently ran out of tape/

I don't see anything the state gains by selling now on a long-term contract at the in-value price, because they are going to get that anyway. In terms of selling, the state is not getting any premium for the long-term sale. The state may get a petrochemical plant. I personally doubt it, but it may get a petrochemical plant. Now, if it wants it, it's got to take some risks. Any enterprise that comes in, whether it uses state royalty oil or anything else, is going to ask to be bailed out if it gets into trouble. If ALPETCO went to SOHIO....incidentally, if SOHIO's oil is cheaper than in-value price, SOHIO's really got a problem. Ask them why they don't try to buy it from SOHIO. Well, because of the political involvement of the state it has a symbolic value, and the state selling its royalty oil may.... SOHIO probably just doesn't believe that the thing's got any potential and won't be involved in it, but they would do better going to.... Suppose they did go to SOHIO and got the oil and got a jump. If they got in trouble they'd still come to the state, whether it's the state royalty oil or not. If they couldn't meet the debt service, they would come to the permanent fund and ask for re-financing. Here this project for, what is it, four-thousand jobs, and they had that last fifteen percent of financing to put together, and they were buying SOHIO's oil, of course they'd come. Or, if you've got a big bottom-fish processing plant, they've evidently got no objections to the state taking some of the risks and providing capital subsidies for bottom fisheries. So, what's so sacred about something that uses the royalty oil? Every business is going to have to be bailed out, and we're going to have the pot full of money to bail them out with. The risks to the state on ALPETCO aren't that much worse than the risks on anything else.

Let me wind up with one thing....with one suggestion to the Committee. One of my terms of reference here was how the Legislature does resolve the actual legal, analytical policy questions presented by the contract. When I was working in U. S. Senate in the Energy Committee, the Interior Committee, we had a procedure for hearings of this sort in which the staff would make up a long series of written interrogatories organized into the factual questions, the statistical background, things like that, legal questions, analytical questions, and things like projection of future trends and how things work, and policy questions. And these could run....sometimes there would be four or five questions, sometimes there would be four or five pages of questions, and the witnesses, governmental witnesses or the industry witnesses, would be sent these over the signature of the Chairman some weeks in advance, or

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far enough in advance of the hearing as was practical. At the same time the hearing was scheduled the interrogatories would be published along with the official notice of the hearing. Then the witness would be required to bring a prepared statement responsive to these things and to deliver it to the Committee twenty-four hours before they appeared.... before the witness appeared. So, again, the members of the staff would have a chance to look at it, because a lot of the questions revolved around very difficult legal points or complex statistical and analytical problems that you really can't cope with just off the top of your head, and which the witness can't cope with off the top of his head. At the same time you get the witness on the record as to what he means and it's very difficult for him to back out or change his premise.

Now, this would be particularly useful with this contract where there is some....the question, what does the contract mean. Section 2.3 has the phrase....ALPETCO can exercise its option to purchase as under circumstances which are triggered by a proposal to offer the oil for sale to another purchaser at a lower price. Well, what is proposed to be offered mean? Does that mean the Commissioner has simply asked for proposals? Now, some people say we need a fancy legal expert to do this. You don't need a fancy legal expert to find out what that means. Because, if the thing gets to court, if it's ever going to be litigated, if it gets to court, what does the judge want to know? The judge wants to know what is the intention. What did the contracting parties intend by this? He doesn't go to his legal dictionary and look up propose to be awkward. He goes to the men of the Royalty Board or he takes testimony from the two parties as to what was said in negotiations, and they present whatever they can. And, so, if you ask the question, if you have a series of interrogatories and say, what does this mean - does it mean that such and such? - and you ask both the Administration and ALPETCO to answer it, either they get together on the answer, which is perfectly proper, in which case they give you an answer, and you know what that means. Henceforth, that is what it means. Because if anybody questions it, the other side just goes into court and say before the Joint Committee of State Legislature they say their understanding of it was this. So, that's what it means. If they come up with different answers, and it's a serious thing, you've got to reject the contract because you can't ratify a contract when the two contracting parties don't agree on its meaning.

This list of questions prepared by Legislative Affairs, questions to be answered in these hearings, is exactly the kind of thing you've got in mind. They've got to be sharpened, but there are some very good questions in there that are going to fall between the cracks in this hearing. Or, for instance,

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Fred (indisc.) will tell the Chairman the answer to one of them. But he's not on a public record in such a way that you've also asked ALPETCO the same question, or, if it's a question having to do with what's going to happen under what circumstances where you've asked the consultants to respond to the same thing on the record where you can compare their answers. And I would strongly suggest that you get your Committee staff, or Legislative Affairs, to put together a series of questions of this sort which can be directed, above all, to the two sides that are contracting this but, also, to the extent they're appropriate, can be directed to the consultants. And you can ask the consultants, to within their particular competence, to respond to these various questions.

CHAIRMAN MILES:

Are there any questions for Dr. Tussing?

Thank you very much. It was exciting and enlightening.

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