

ALASKA LEGISLATURE SPECIAL COMMITTEE / SUBJECTS 86 / 2
653 SCOMM21: ROYALTY OIL & GAS FILES 1977-78

Each day, Tenneco's interstate system supplies an average of 3.2 billion cubic feet of natural gas to their customers. This volume is insufficient to meet demands. As their demands are growing, our reserves in our traditional supply area of the Gulf Coast are declining.

To meet this demand, Tenneco is working in many different areas to secure energy supply from non-traditional sources. These sources include liquefied natural gas from Algeria, Trinidad, Nigeria, the USSR and other countries. We are also pursuing synthetic natural gas to be manufactured from domestic coal deposits and additional natural gas from the Canadian Arctic Islands.

We are vitally interested in purchasing natural gas in Alaska, not only because of the large volume of currently proven reserves, but because we feel Alaska will be the most active area in the U. S. for the exploration for major new energy supplies for the next 20-30 years. We want to be a part of this future activity. We also believe there are substantial advantages in purchasing domestic, as opposed to foreign, gas.

These facts explain our needs. The fulfillment of needs, however, inevitably encounters obstacles. The securing of natural gas supply from Alaska was no exception.

Tenneco looked at these obstacles from the viewpoint of the largest natural gas transmission system in the United States that was uncommitted to any of the competing proposals for delivery of Prudhoe Bay gas to market. The State also made it very clear that the primary condition in any sales agreement would be support for the Trans-Alaska delivery systems.

We considered carefully three fundamental questions before determining we could undertake such a commitment:

1. Would there be sufficient reserves available, either now or in the future, to justify our efforts;
2. If we committed our resources of time, money, and people to the project, was there a substantial likelihood it would succeed;
3. Would such an effort adversely affect substantial business interests in Canada which we intend to maintain and to further.

Our analysis concluded that we could not only agree to support the Trans-Alaska route but could also agree to condition our right to purchase the royalty gas upon the eventual designation of that route by the Federal Government. These terms are in the agreements before you.

Our conclusion was based upon the belief that with a strong, responsible team supporting the Trans-Alaska project and making objective arguments in its behalf, the Federal decision makers, after extensive and careful analysis, would conclude the Trans-Alaska system would get the North Slope gas to the lower 48 States at the earliest possible date. While early delivery is the most important element of national interest, other issues such as jobs and taxes clearly favor the Trans-Alaska route.

It has always been our firm opinion, however, that Federal acceptance of the Trans-Alaska delivery system and therefore the benefits to the parties, depends upon prompt approval of the royalty sales agreement by this Legislature.

Another major factor crucial to your deliberations is the strength that Tenneco can add to the team dedicated to the securing of a Trans-Alaska route. Let me give you a brief summary of our technical capabilities:

1. Tenneco maintains a staff of approximately 140 engineers in it's pipeline headquarters in Houston. This department not only supervised the construction of our 15,000 plus miles of interstate pipeline, but was also involved in the construction of the existing Trans-Canada pipeline of which we were a part at that time. Our operations people routinely run an interstate system transporting up to five BCF on peak days.
2. Tenneco is dedicated to the conduct of its operations within the proper environmental framework. The Corporation maintains a staff of approximately 60 environmentalists.
3. Tenneco maintains a staff of cryogenic, process, and LNG systems engineers plus the services of numerous consultants with expertise in LNG projects. We have had much experience in the planning of major LNG programs.

4. As a corporation, Tenneco has annual capital expenditures in the range of \$500 million. In the 34 years of our existence, our assets have grown from zero to approximately \$7 billion. The strength and the financial experience gained through this evolution is invaluable in the planning and execution of multi-billion dollar energy projects.

All of these areas of expertise are now being readied in preparation for our participation in the Trans-Alaska project.

There has been a great deal of reference during the negotiation of these agreements to the "political influence" to be contributed by each party. It is unfortunate that this gives some people the impression that the purchasers control votes in the Congress or in the Executive Branch to be used on behalf of the Trans-Alaska project as soon as this agreement is ratified. This, of course, is not true.

No amount of so-called political clout or pressure is going to determine the federal decision on this matter. We are convinced that the decision will be

made on the merits of the issues. Neither we nor the new Administration have incentive to proceed in any other way. This approach is also assured by the detailed and comprehensive provisions of the Alaska Natural Gas Transportation Act of 1976.

For these reasons, it is essential that all the issues involved be thoroughly discussed at both regional and national levels with all parties having input into the final decision. This will present a monumental job of planning and coordination to insure that knowledgeable staff, both technical and non-technical, be made available to discuss the issues with people needing this information.

From a regional standpoint, it is essential that the issues be reviewed and discussed as they affect different parts of the lower 48 states and Canada. The perspective and needs of these different regions vary and their views must be analyzed and effectively answered.

We feel we are best qualified to present the Trans-Alaska merits in our market area. Our market area covers 25 states in New England, New York-New Jersey, Appalachia and the Upper Midwest. These states

embrace 65% of the U. S. population and much of its industrial capacity.

We feel that Southern and El Paso will be most effective in their market areas. All three companies will be effective on the national scene.

The combined facilities of Tenneco, El Paso and Southern with minor modifications could deliver Alaskan gas to at least 42 states. It is improbable, perhaps impossible, that any other group of three or more companies presently uncommitted to any pipeline route could equal this coverage.

El Paso has made and is continuing to make a tremendous effort on behalf of the Trans-Alaska project. More help is needed and we are prepared to provide this help.

We believe it essential that the Legislature act promptly to approve these agreements. The time available to make all the necessary contacts is becoming short. The U.S.-Canadian pipeline treaty was signed last Friday. The Presiding Administrative Law Judge of the FPC will issue his decision tomorrow. We expect his decision to favor the Arctic Gas proposal. All the participants

before the FPC, of which we are one, will be permitted to file comments on this decision by March 1.

The Alaskan Transportation Act provides that the FPC must submit its recommendation to the President by May 1. Federal agencies are now preparing their comments to the FPC and Federal and State officers and agencies may submit their comments to the President by July 1. Our views must be made known to all of these people as soon as possible in order to have any effect on their comments. The President's decision is due September 1 and the Congress has 60 days in which to approve this decision.

There is much to be done and the Federal timetable leaves no time for delay.

In anticipation of your approval, Tenneco has already taken substantial steps in preparation for the support of this project.

1. We have had many meetings with representatives of the State, El Paso and Southern to insure maximum cooperation, coordination and effectiveness in this combined effort.

2. El Paso has given our engineering, environmental, LNG and financial experts a detailed review of their plans. We will work closely with them toward assuring the best possible project and to answer the questions that will be raised in Washington, California, Canada and elsewhere concerning the physical, environmental and financial integrity of this project.
3. We have designated a project manager within Tenneco with authority to call upon and coordinate activities of all our involved departments.
4. We have retained counsel in Alaska and in Washington to assist in the planning and the execution of our overall plan to insure adoption of the Trans-Alaska delivery system.
5. We have communicated to the State of California our reasons for supporting the Trans-Alaska project. I will be happy to make a copy of this letter available for your record.

These efforts are only a beginning. However, further efforts to implement a detailed plan to secure adoption of a Trans-Alaska route will not be credible if the State of Alaska does not act promptly to approve the agreement which provides the reason for our support.

In summary, Mr. Chairman, Tenneco is prepared to invest their time, money and people in a maximum effort to secure a Trans-Alaska route. We are prepared to begin as soon as our agreement with the State is approved by the Legislature.

The State has retained the ultimate assurance of our performance. If the Trans-Alaska route is not approved, the State has the right to terminate this agreement. Should that happen, we will have wasted our money, manpower and time.

The State has assembled a strong team, the contest is in progress and we are ready to participate when we receive your approval.

El Paso ALASKA
COMPANY

310 SUPPLY BUILDING
1775 K STREET N.W.
WASHINGTON, D.C. 20008
PHONE 202-872-8133

JOHN C. BENNETT VICE PRESIDENT

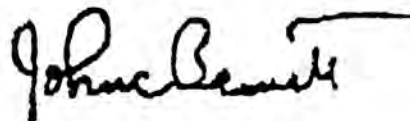
February 23, 1977

Dear Mr. President:

I understand that in the Senate's discussion of the State's royalty gas contracts, some question has been raised about our company's intent to support the State of Alaska in retaining the provisions of section 13(b) of Public Law 94-586 in the statute.

In order to clear the air, I would like to record El Paso's support for section 13(b) and to assure you and your colleagues that, should any effort be made in Congress to modify that section, the State can count on El Paso to make every possible effort to retain this provision in Public Law 94-586.

Sincerely,



The Honorable John Rader
President
Senate of the State of Alaska
Anchorage, Alaska

AGO 668026

El Paso ALASKA
COMPANY

POUCH 7009
ANCHORAGE, ALASKA 99516

PHONE: 907-279-6501

February 27, 1977

*Why E.P.
needs go*

The Honorable Joseph H. McKinnon
Alaska State House of Representatives
Pouch V - State Capitol Building
Juneau, Alaska 99811

Dear Representative McKinnon,

During our conversation in your office last week, you asked for additional information respecting the value of a commitment of the state's surplus royalty gas to El Paso Natural Gas Company in eliciting support for a trans-Alaska gas pipeline route.

We note that the report published by the House Special Committee on the Sale of Royalty Gas states that El Paso needs no additional incentive to work in behalf of its own proposal, and suggests that the value of committing 25% of the state's surplus gas to El Paso is questionable. While we are certainly dedicated to doing everything within our ability to secure approval of the trans-Alaska route, the persuasive force of additional gas supplies for the eight-state El Paso market area is of no less significance than that for Tenneco and Southern. In fact, many knowledgeable experts involved in the gas line issue have singled out California as the state most critical to the success of the trans-Alaska route (next to Alaska, of course!)

As you can see from the attached description of the states served by El Paso, over 55% of the total volume of gas consumed in California is supplied by that company. Moreover, in recent years, El Paso has, through its natural gas deliveries, provided more energy to California than any other company involved in supplying energy of any kind. Nonetheless, it is well known that the State of California does not support our project. The reasons for this fact are complex, but the simple problem we have experienced in persuading California to back the trans-Alaska route is that we have nothing tangible to offer them. For over four years, we have attempted to elicit support on the basis of our friendship and goodwill with our California customers. At the same time, sponsors of the trans-Canadian route have argued successfully that approval of their project with its "western leg" could mean that additional gas supplies from some unnamed source (presumably Mackenzie Delta) would be available to California markets. We know that such argument has no

factual basis, since testimony before the NEB has been that Mackenzie Delta gas will not be exported to U.S. markets. However, Arctic Gas has very effectively used the suggestion of additional Canadian gas via its project to gain California's endorsement.

With the commitment of Alaska's surplus royalty gas to El Paso, we will have at least three means of turning California around on this issue.

- 1) Senators Stevens and Gravel and Congressman Young can write "Dear Colleague" letters to California's U.S. Congressional Delegation, asking for their support on the basis of Alaska's surplus gas offsetting part of the severe curtailments facing California markets.
- 2) The State of Alaska will be able to send representatives to California with the message, "Fellow Americans, we understand your critical needs for natural gas. We will have some royalty gas which will be surplus to our own needs in Alaska, and we are willing to make this excess gas available to your markets provided the trans-Alaska route for the North Slope gas pipeline is approved."
- 3) El Paso itself will be provided with a tool for use in mounting an extensive state-wide public campaign in California. Given this tool (additional natural gas) and sufficient time, we believe that we can generate sufficient public support for our project to reverse the stand of the California administration. We have hired the necessary public relations expertise but it is now up to the Alaska House of Representatives to provide us with the tool to work with. We have encountered several congressional representatives who, after hearing our presentation on the trans-Alaska route, have said, in essence, "Gentlemen, I can see that your project will provide some real benefits for the American gas consumer and the U.S. economy, but until 51% of my constituents tell me to do so, I can not support you." Obviously, our mission in California is to persuade 51% of the population to support the trans-Alaska route. And, as I have said, we have not been able to do it with friendship and goodwill.

The foregoing plans have been described on the basis of their application in California alone. We would, of course, work throughout our 8-state market area.

The Honorable Joseph H. McKinnon
February 27, 1977
Page 3

I don't want to leave you with the impression that we intend to claim that El Paso's share of Alaska's surplus royalty gas would solve all of our customers' gas problems. However, you can see from the attached document that we estimate 15% curtailment in Priority 1 (household) uses in 1981. Alaska's surplus royalty gas could offset a major portion of that curtailment, to the tune of supplying over 190,000 homes which would otherwise be without gas.

Alaska has an opportunity to present itself as a concerned, generous number of the U.S. energy community by offering to share its surplus resources. While we do not wish to suggest anything that is more properly the right of those with the constitutional authority to establish state policy, such as yourself, it would certainly seem that the "generous" approach would be a far more effective means of generating support for Alaska's programs than the "dog in the manger" attitude which some elements in the lower 48 perceive on the part of a few Alaskans.

One final point. The debate in the Senate last week was centered around an amendment which would have compelled El Paso, Tenneco and Southern to support the retention of section 13B of the Alaska Natural Gas Transportation Act of 1976. As you know, section 13B gives Alaska the right to recall its gas from interstate pipelines as Alaska's own needs develop. There are some who fear that the Act may be amended and section 13B repealed. For the record, El Paso supported section 13B when it was first proposed, and we intend to continue to support its retention in the Act. No action by the Alaska Legislature is necessary to force us to do so.

I have attempted to be as brief as possible and still be responsive to your request. If you should want any additional information on this matter, please let me know.

Best regards.

Sincerely,

EL PASO ALASKA COMPANY



Michael C. Holland
Assistant to the Vice President

Attachment

cc: Speaker Malone
Representative Cowper
Representative Gruening

Representative Parr
Representative Hayes
Representative Chatterton

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

<u>STATE</u>	<u>EPNG SALES</u>	<u>TOTAL CONSUMPTION</u>	<u>EPNG PERCENT OF TOTAL CONSUMPTION</u>
Arizona	164,704 MMCF ¹	164,704 MMCF	100.0%
California	1,008,158 MMCF	1,807,604 MMCF	55.8%
Colorado	120 MMCF	290,798 MMCF	<1%
Nevada	28,590 MMCF	60,446 MMCF	47.3%
New Mexico	43,336 MMCF	167,220 MMCF	25.9%
Oklahoma	11 MMCF	639,575 MMCF	<1%
Texas	34,627 MMCF	3,911,026 MMCF	<1%
Utah	19 MMCF	123,098 MMCF	<1%

¹ MMCF = millions of cubic feet

NATURAL GAS CURTAILMENT IN 1976
AND ESTIMATED CURTAILMENT IN 1981
1976

	<u>VOLUME</u>	<u>% OF REQUIREMENT</u>
P 1	0	0
P 2	1,731 MMCF	1%
P 3	35,666 MMCF	16%
P 4	2,862 MMCF	21%
P 5	219,809 MMCF	65%
TOTAL	260,068 MMCF	19%

1981

	<u>VOLUME</u>	<u>% OF REQUIREMENT</u>
P 1	83,071 MMCF	15%
P 2	143,261 MMCF	52%
P 3	254,693 MMCF	100%
P 4	11,440 MMCF	100%
P 5	348,723 MMCF	100%
TOTAL	841,188 MMCF	58%

El Paso ALASKA
COMPANY

310 BUFFUMER BUILDING
1775 K STREET N.W.
WASHINGTON, D.C. 20006
PHONE 202-872-8133

JOHN C. BENNETT VICE PRESIDENT

February 23, 1977

Dear Mr. President:

I understand that in the Senate's discussion of the State's royalty gas contracts, some question has been raised about our company's intent to support the State of Alaska in retaining the provisions of section 13(b) of Public Law 94-586 in the statute.

In order to clear the air, I would like to record El Paso's support for section 13(b) and to assure you and your colleagues that, should any effort be made in Congress to modify that section, the State can count on El Paso to make every possible effort to retain this provision in Public Law 94-586.

Sincerely,

John C. Bennett

The Honorable John Rader
President
Senate of the State of Alaska
Anchorage, Alaska

AGO 668031

JOSEPH R. HENRI
ATTORNEY AT LAW

907 586-3669

203 WEST THIRD AT DIXON
JUNEAU, ALASKA 99801

AGO 668032

3 March 1977

Mr. President

*John Bennett wanted you to have this,
which we gave to the House this morning.
Joe*

*File
El Paso Oil*

March 3, 1977

To: Honorable Hugh Malone
Speaker of the House
Alaska House of Representatives
Juneau, AK

Dear Mr. Speaker:

The purpose of this telegram is to express my reaction to the vote of the House yesterday disapproving El Paso's contract for surplus royalty gas.

The El Paso Company came to Alaska five years ago at the invitation of Alaskans to pursue the Trans-Alaska Gas Pipeline Project. The approval of our projects by all legislatures and governors since our arrival in the State led us to believe that the considerable investment and risk to which we were exposing ourselves were being made in an environment where we were a welcome member of the Alaskan community.

If yesterday's decision is confirmed by the State today, I can only interpret the rejection of our contract in favor of other companies, who have made virtually no investment in the future of Alaska, as an abrupt and significant change in the atmosphere in which we have worked on the Trans-Alaska Gas Pipeline until now. Our company, as a matter of policy, has never attempted to intrude in situations where we are less than a welcome partner. I sincerely hope that the common interest and cooperation that have characterized our efforts in the past will be restored by the House in view of the very important common objectives which have enabled us to work together thus far.

Sincerely,

Howard Boyd
Chairman of the Board
The El Paso Company

In the summer of 1883, a gigantic explosion echoed across the world. The island of Krakatoa, off the coast of Indonesia, simply disappeared into the sea. Its remains were blown 17 miles into the sky and dust particles filtered around the globe, causing extraordinary sunsets remembered by all who had seen them for years afterward. Tidal waves were observed as far away as the English Channel. The noise of the explosion was heard 3000 miles away. Thirty-six thousand people in the near vicinity were killed.

The cause of this catastrophe was a mighty volcanic eruption. Scientists now speculate that the unparalleled intensity of the blast was caused by the sudden mixture of lava with seawater, leading to the creation and release of vast amounts of energy. This theory carries a startling message for modern times. For scientists now worry that the modern industrial age may have unwittingly developed the conditions under which the "Krakatoa effect" could be repeated on a smaller scale hundreds of times around the globe.

What frightens these scientists is not the specter of nuclear explosions with which mankind has lived since World War II, but an entirely new menace: liquefied natural gas. Natural gas, often found in the search for oil, is one of our most valuable fuels. It provides about one-third of all energy consumed in the United States. It is clean and, until recently, cheap. Now U.S. companies that produce and sell natural gas from the Southwest claim the resource is fast being exhausted and, in order to meet demands, they must look further and further afield.

Solution: import gas

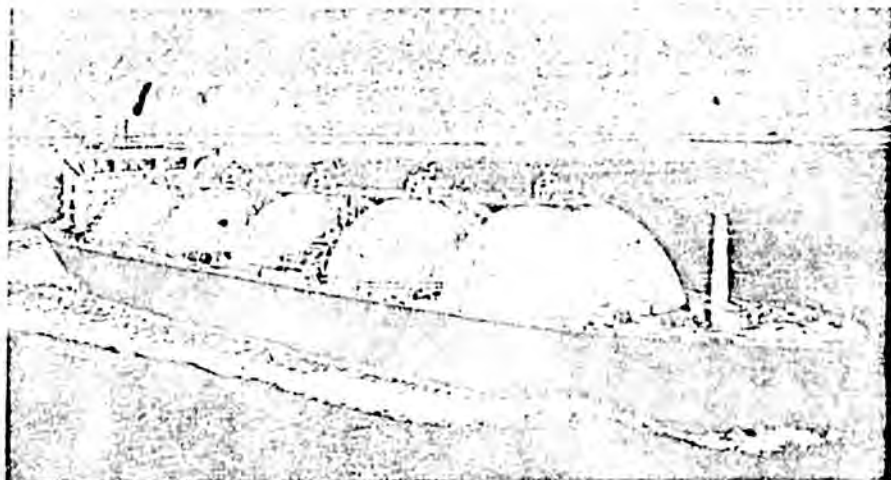
While gas is a precious fuel in the U.S., in other parts of the world—the Middle East, Africa and Asia—it is regarded as of little use and burned off at the wellhead, its usefulness lost to mankind. One solution now being adopted by the oil and gas industries is to ship this foreign gas to the U.S.

Gas, of course, is an impractical cargo in its natural form. The solution has been to freeze it down into a liquid form at a temperature of about -260 degrees Fahrenheit. In this state, the gas is 1/600th of its original volume and becomes a practical shipping proposition.

Within the next few years, specially built tankers will begin transporting the liquefied gas from North Africa to ports up and down the Eastern Seaboard of the U.S. There are schemes to ship the gas from Asia and even Alaska to the West Coast by these tankers. Other countries are making similar plans. The small trade from North Africa to Europe is expected to increase, and a \$3 billion project is well under way to ship liquid gas from Indonesia to Japan. The U.S. government, in fact, is issuing \$730 million in loan guarantees to General Dynamics Corporation—the largest guarantee ever made to a single com-

Liquid Natural Gas Tankers Rouse Fears of Catastrophe

by Alexander Cockburn & James Ridgeway



Mammoth tankers carrying liquefied natural gas may soon visit American ports. Artist's concept of the 936-foot-long ship shows five spherical tanks which together can hold some 33 million gallons of the potentially explosive fuel.

pany—for the building of tankers to carry the gas from Indonesia. The U.S. also is negotiating with the Soviet Union to bring in gas from Siberia.

If all goes according to plan, within a decade or so, scores of these odd-looking ships will be crisscrossing the ocean and routinely sailing in and out of busy American ports with their cargoes of desperately needed fuel. As much as 15 percent of the nation's gas may soon be imported in this manner.

Both in government and industry, experts hail this development as an innovative answer to the energy crisis. But these same experts now are meeting with growing opposition to their plans. At the center of debate is the question of safety and the stark fact that the explosion of just one of these gas tankers in a U.S. port could kill upwards of 100,000 people.

Little real testing has been done on

the safety of the new tankers that will carry the liquid gas in huge cylinders embedded in their hulls. In 1970 the U.S. Bureau of Mines mounted a brief experiment. A small quantity of liquid natural gas was dropped into an aquarium, which promptly blew up. Later the liquid gas was dropped into a pond, with equally explosive results. The bureau concluded in a report that no assurances can be offered "that these explosions could not scale up to damaging proportions in a massive spill." The scientists engaged in these experiments all recalled one of the few cases in which the effects of an accident involving liquid natural gas could actually be observed.

On Oct. 20, 1944, in Cleveland, Ohio, 2 million gallons of liquid natural gas burst from two storage tanks belonging to the East Ohio Gas Co. and created a firestorm. Liquid gas flowed



In Cleveland, rescue workers dig through ruins after giant 1944 firestorm—caused by 2 million gallons of escaped liquid gas—gutted 29 acres, killed 131. Experts say the explosion of a liquid-gas tanker would do far worse.

down the streets and into the sewers. The slightest spark exploded it. Manhole covers sailed into the air and fell like bombs on the fleeing crowds. So intense was the heat that birds above the city burned alive as they flew. The streets became rivers of flame. Houses exploded. In the end, 29 acres of homes and stores were gutted and 131 people lost their lives. And the liquid gas tanks in Cleveland held only a small fraction of the amount carried by a modern tanker, which ranges from about 33 to 42 million gallons.

Safety studies urged

In recent months anxiety over the dangers of liquid natural gas has spread. No less a figure than Dr. Edward Teller, the nuclear physicist often viewed as the father of the H-bomb, is concerned: "The gas shortage is apt to become very serious and therefore the importation of liquid natural gas may become really necessary. . . . Time and money spent on the safety of liquid natural gas is less than one percent of what has been spent on the safety of nuclear reactors. I am suggesting that, in view of our need for liquid natural gas, very greatly increased attention be paid to safety studies."

The Coast Guard is so concerned that it has established special procedures protecting gas tankers. In Boston, where small shipments of the liquid gas are already being off-loaded, the shipping lanes are cleared of other traffic long in advance. Fire departments are placed on standby alert. Tankers may only enter the harbor if visibility exceeds two miles. At the first sign of a thunderstorm, all unloading ceases.

Congress concerned

Citizens' groups around likely liquid natural gas terminals (such as Staten Island, N.Y., and Los Angeles) are opposing the building of such facilities. In the Congress, in the Federal Power Commission and in the Department of Transportation, politicians and officials are nervously considering improved safety precautions. Committees in the House may begin public inquiries shortly and could well involve testimony on the likelihood of the "Krakatoa effect" occurring in the event of an accident.

Over the last few months, this concern has been redoubled. Oil tanker disasters, including the explosion of one tanker in Los Angeles harbor and the wreck of another off Nantucket, have brought home in brutal fashion the result of lax safety measures on fuel shipments to the U.S. These calamities would pale in comparison with any accident to a liquid natural gas tanker. It is a race against time in more ways than one: the race to head off another energy crisis; the race of the tanker men to get their new fleets under way; the race of government regulators to catch up on safety precautions and head off what could be a terrifying catastrophe.

PARADE

FEB. 20, 1977

GAS

High Hurdles for Imports

For Americans flying over the deserts of the Middle East, it is a doleful sight: mile after mile of flaring wellhead fires burning off natural gas, a fuel that has become painfully scarce in many parts of the U.S. Equally bounteous reserves of gas exist in many other parts of the world, from Soviet Siberia to the marshy fields of Holland—and several of the nations with the biggest reserves must export gas if they are to tap the potential wealth, because their populations are too small to use all they have (see chart). Yet apart from a trickle of imports flowing in by pipeline from Canada, the gas deposits in most other countries might just as well be on Mars for all the help they offer in easing American shortages any time soon.

Unlike the relatively simple procedures for shipping crude oil across vast stretches of ocean, importing foreign gas to the U.S. poses a cluster of complex problems—financial, political, technical and environmental. Though some imported gas is now seeping in from distant points, and efforts are under way to bring in more, it will probably be five years at least before any appreciable supplies of such fuel enter the U.S. to help warm homes and run factories. Even then the amount is unlikely to fill more than a small fraction of U.S. demand.

Giant Fireball. A key problem is that the wildly expensive technology needed to ship gas over water requires long start-up times and makes the fuel extremely costly to import. For example, Algeria, which has taken the lead in trying to boost exports to the U.S., is spending billions of dollars to build six liquefaction plants, but they are not expected to be fully operational for a decade. These facilities freeze the fuel into liquid natural gas (LNG), which is then loaded on specially constructed tankers that cost up to \$150 million each.

A fleet of nine newly constructed LNG ships owned by El Paso Natural Gas Co. will begin carrying gas from Arzew, Algeria, to Cove Point, Md., and Elba Island, Ga., early next year. That gas, for which El Paso signed a contract before the Arab oil embargo, will sell in the U.S. for about \$1.25 per 1,000 cu. ft., a top federally controlled price of \$1.44 for domestic gas shipped across state lines

and \$2 or more for uncontrolled intrastate gas. Algerian gas bought under a post-embargo agreement, however, will cost Americans \$3.30 per 1,000 cu. ft. The Algerians are expected to lift the price even higher in future contracts.

Another drawback to increased gas imports is the danger of a ship spilling some of its cargo in or near a port. That could result in a catastrophe far worse than the oil spills from tankers that have worried many Americans this winter. As the frozen LNG warms into gas, it could ignite, creating an immense fireball threatening lives and property in the vicinity. Last year New York, New Jersey, Delaware and other coastal states petitioned the Federal Power Commission to promulgate national safety standards that would keep LNG port facilities out of populous areas. The agency is still considering the request. On top of that, independent gas producers, who fear competition from imports, loudly argue that buying from foreigners would only make the U.S. more dependent for its energy needs on unreliable sources. Asks Dallas Gasman D.K. Davis: "Do you want Chicago to become dependent on Algerian gas so that they can shut the pipe some day?"

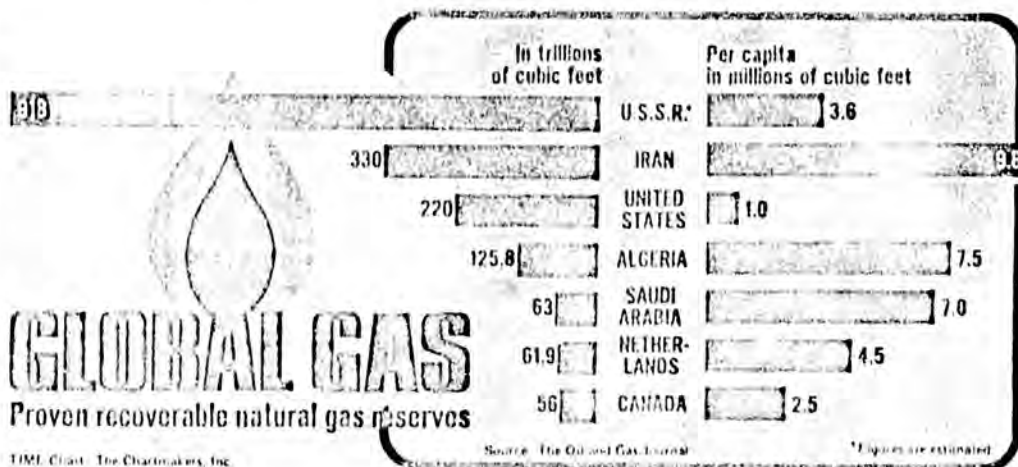
Despite the hurdles, however, a growing number of gas-producing countries are making plans to cash in on the rich American market. For example, Saudi Arabia recently decided to pipe its gas instead of simply flaring it off. To get the job done, the Saudis signed a \$7.5 billion contract with the Arabian American Oil Co. (Aramco), which eventually intends to export gas to the U.S. Iran is sinking \$6 billion into liquefaction plants and a fleet of 35 LNG carriers to ship gas to its American and

European markets beginning in 1982.

The Soviet Union, which is believed to have the world's largest deposits of gas, could become a major source of U.S. imports. The Russians have been pushing hard in recent years to exploit their vast gas reserves in Siberia, including the northern Tyumen Oblast, near the Ob Gulf, and the Urengoy field, reportedly the world's largest. Their aim: to make the Soviet Union a major exporter by 1980 (at present, so few of the reserves have been tapped that the Soviets themselves import gas from Iran). The only deal involving Americans, however, is a tentative agreement between the Soviets, Occidental Petroleum, El Paso and a group of Japanese firms to develop a major field near Yakutsk in Siberia. After years of negotiating, the Soviets are still surveying the area. If the deal finally goes through, gas would be piped 2,000 miles to Vladivostok for shipment to the U.S. and Japan.

Mixed Blessing. By contrast, the U.S. will probably not be importing much gas from Europe. Holland, the Continent's leading producer and exporter, is phasing out shipments to other countries in an effort to conserve its supplies. Britain, too, intends to hold on to most of the gas that it is beginning to pump from underneath the North Sea. Indeed, according to the Paris-based Organization for Economic Cooperation and Development, European demand is already outstripping its reserves. By 1985, the organization estimates, European gas imports from Iran, Algeria, the Soviet Union and elsewhere will total almost 3 trillion cu. ft. a year, six times the 1975 figure.

For the U.S., however, the cost and difficulties of shipping LNG long distances will, for the foreseeable future at least, keep gas imports from becoming the major energy prop that oil imports now are. At a time when the Government is striving to lessen dependence on foreign energy, that could be at least an ironically mixed blessing.



El Paso COMPANY

2727 ALLEN PARKWAY
P. O. BOX 2185
HOUSTON, TEXAS 77001
PHONE: 713-524-3911

HOWARD BOYD CHAIRMAN OF THE BOARD

April 25, 1977

The Honorable John L. Rader
Alaska State Senator
State Capitol Building
Pouch V
Juneau, Alaska 99811

Dear Senator Rader:

Sometime this summer the President is expected to make a decision, subject to Congressional review, on which project to move Alaskan natural gas to market best serves the national interest. Because of your interest in this important decision, it might be helpful to summarize the economic benefits of the El Paso project, compared with the two trans-Canadian alternatives.

First, El Paso's commitment to purchase all possible goods and services within the American economy will provide a direct infusion of \$8 billion--\$4-5 billion more than either of the trans-Canadian projects.

Second, the El Paso proposal (over the 20-year financing "life" of the project) will pay more taxes to American entities than will either of the trans-Canadian projects--by a margin of up to \$10 billion.

Third, El Paso will avoid an outflow of taxes to Canadian authorities (at present tax rates) of up to \$7 billion.

There is no question where these dollars come from--the American gas consumer's pocket. But where the dollars end up shows a difference of more than \$20 billion lost or added to the American economy.

I am enclosing a study just completed by Robert R. Nathan Associates, detailing by region and state the new American jobs to be created by the El Paso project. The total of 765,000 man-years of additional jobs--three times that provided by either trans-Canadian project--would be generated wholly within the private sector.

As the decision-making process proceeds, I think you will agree that, in addition to delivering the Alaskan natural gas at the earliest date, minimizing adverse environmental impacts, and maintaining U. S. control of costs to the consumer, the El Paso project certainly benefits the American economy much more than either of the trans-Canadian schemes.

Thank you for your continuing interest in this important decision. Should you wish any additional information on any aspect of our proposal, please let me know.

Sincerely yours,

A handwritten signature in cursive script, appearing to read "Leonard Boyd". The signature is written in dark ink and is positioned below the typed name "Leonard Boyd".

April 4, 1977

The Honorable John L. Rader
Alaska State Senator
Pouch V, State Capitol Building
Juneau, Alaska 99811

Dear Senator Rader,

Congressman Tino Roncalio (Democrat, Wyoming) has convened a series of meetings of his Sub-Committee on Indian Affairs and Public Lands to hear testimony on the subject of how best to transport Prudhoe Bay natural gas to market. A number of parties have appeared before the sub-committee to date, including representatives of the State of Alaska, the project sponsors and environmental groups. Of particular significance were the statements made by officials of three Canadian native organizations respecting the status of land claims negotiations and the position of the native membership regarding the trans-Canadian pipeline proposals of Arctic Gas and Alcan. As you know, sponsors of those proposals have repeatedly claimed that Canadian native claims would not be an obstacle to either route, and Judge Litt was of the same view, although he at the same time denied responsibility for such "political matters."

Testimony of the Dene people was that no pipeline would be allowed in the Mackenzie Corridor until their land claims were settled and implemented. The Dene representative said that his people's opposition to such a pipeline is "unanimous," and that disregard for the rights of the Dene by non-Dene would be "genocide." Also, he sharply criticized Judge Litt's report as "based on misinformation" and "total misunderstanding" of the Dene position.

Mr. Sam Raddi, speaking for the Inuit (Eskimos) in the Yukon and Northwest Territories, said that "there will be no pipeline in the Western Arctic until the government of Canada settles the Land Claims." Furthermore, he called Judge Litt's opinion "alarming," and charged that Litt has prejudiced land claims negotiations.

Testimony for the Council of Yukon Indians was given by Mr. Daniel Johnson, its Chairman. CYI, which has laid claim to the entire Yukon Territory, wants no pipeline across the southern Yukon "until the land

The Honorable John L. Rader

April 4, 1977

Page 2

claims of the Yukon people have been settled and implemented." And it wants the northern slope area of the Yukon "closed for purposes of pipeline construction forever."

Obviously, we are gratified that the land claims issues facing both Alcan and Arctic Gas is finally receiving the public airing they deserve. The statements made by the native representatives reflect their insistence that claims not only be settled, but also implemented prior to pipeline construction. While no one has a good handle on how long this process will take, CYI believes 6 years would be optimistic, and the Berger staff has suggested 10-15 years.

Clearly, because of the hardships of last winter resulting from the natural gas shortage, the American gas consumer will not wait for an additional 6-15 years for the Prudhoe Bay supplies. The trans-Alaska route faces no such delays, and this is another reason that our project is best for all-America.

Enclosed are copies of the prepared remarks of all three Canadian native leaders. Feel free to pass them along to influential friends and Congressmen!

Best regards,

Sincerely,

EL PASO ALASKA COMPANY



Michael C. Holland
Assistant to Vice President
John C. Bennett

Enclosures

STATEMENT OF

SAM RADDI

PRESIDENT OF

COPE

BEFORE THE

HOUSE INTERIOR AND INSULAR AFFAIRS COMMITTEE,---

SUBCOMMITTEE ON INDIAN AFFAIRS AND PUBLIC LANDS

FEBRUARY 17, 1977

I am Sam Raddi, president of the Committee of original peoples entitlement. "Cope" is incorporated as a nonprofit society under the Company Law of the Northwest Territories of Canada. Cope represents the Inuvialuit of the Western Arctic of Canada. This is an area that includes the North Slope of the Yukon right to the Alaskan Border, the Mackenzie Delta and east to Coppermine, including Banks and Victoria Islands. Cope was formed on January 28, 1970, to protect the rights of the native peoples in Canada's western Arctic. We became a regional association of Inuit Tapiritsat of Canada (National Eskimo Brotherhood) when it was formed. I.T.C. was handling the Land Claims for the Inuit of the Northwest Territories and presented to the Cabinet of Canada a Land Claims proposal "Nunavut" on February 27, 1976.

In September of that year the proposal was withdrawn from the Federal government and Cope followed the wishes the Inuvialuit of the Western Arctic and proceeded on its own Land Claims proposal for the settlement of Inuvialuit aboriginal Land Claims with the Government of Canada. It was our desire to have a just settlement of our Land Claims before any pipeline was built. It was also our desire to secure an agreement in principle with our Federal government before a pipeline decision was made. This would serve the best interests of Canada and the Inuvialuit.

The Inuvialuit are ready to begin our Land Claims process with the Federal government to secure that approval in principle by that time. Our Federal government has always stated that it was willing to settle our land rights question. However, I am increasingly skeptical that they have the ability or the desire to in fact deal with our aboriginal rights fairly. I want everyone to know that the Inuvialuit are enthusiastic Canadian citizens. Our Land Claims will only be considered just if we are able to bring our lands and our knowledge into Canada to participate fully in Canada's future.

Our lawyers tell us that Native rights are protected with the British North American Act, and that is a matter of public policy in both U.S. and Canada.

The construction of a pipeline through our land and a decision to proceed with construction prejudices the just settlement of our Land Claims. To proceed with a pipeline before our land rights question suggests our Canadian government is planning to extinguish our rights to our land by a process other than what applies to all other Canadian citizens (i.e., expropriation).

There will be no pipeline in the Western Arctic until the government of Canada settles the Land Claims with the Inuvialuit.

Judge Litt's decision which has created a cause of action for Inuvialuit to be here. We are alarmed that Judge Litt supported the Arctic gas proposal at the cost of the Inuvialuit rights and Land Claims process. I understand that in U.S. that only Congress can extinguish aboriginal title not an administrative judge of the U.S. This pipeline is a private interest that will be trespassing on our lands, if our rights and Land Claims are not settled by that time. Judge Litt has prejudiced that process of negotiating the land rights between the Government of Canada and the Inuvialuit. At this time I wish to state that we are opposed to any ruling of an administrative judge of the U.S. on the proposed gas line routes prior to the resolution of the Inuvialuit land rights question. The Inuvialuit do not wish a lengthy court battle which will further delay peaceful energy coexistence between Canada and the U.S. We are asking the patience of the U.S. to avoid this situation.

We wish to commend Congress for the fair treatment that they gave to our Inupiat brothers in resolving their land rights prior to construction of the trans Alaska pipeline. We understand the best the need for energy because of our 10,000 years of occupation of a cold land space in the Arctic of Canada. To prevent an undue delay of the energy requirements of both nations I would recommend to Congress speedy negotiations of this particular problem with Canada and our native people as the number one priority in determining energy policy.

I am leaving with you a copy of Cope's final argument to Justice Thomas Berger. There were other interveners who provided evidence that supported Cope's position on Land Claims, environmental and social issues. I am distressed to hear again the Arctic gas treatment of the environmental issues to this Congressional Subcommittee. I would recommend that Congress hear what Justice Thomas Berger, who has held exhaustive hearings from all of the experts, thinks about the environmental and social issues.

STATEMENT

**TO THE
SUBCOMMITTEE ON
INDIAN AFFAIRS AND PUBLIC LANDS**

**BY THE
INDIAN BROTHERHOOD OF
THE NORTHWEST TERRITORIES**

**WASHINGTON, D.C.
MARCH 17, 1977**

We represent the Dene People of the Mackenzie Valley. It is our custom at home to thank people who take the time to listen. We wish to thank you for inviting us here today to tell you our position on the proposed Arctic Gas pipeline down the Mackenzie Valley.

The Dene people are very concerned about the proposed Arctic Gas pipeline. It is the official position of our people that there will be no pipeline in the Mackenzie Valley until we have completed negotiations on a land settlement agreement with the Federal Government of Canada, and have had the time necessary to implement that settlement to our satisfaction.

Who are the Dene?

The Dene are the original inhabitants of the Mackenzie Valley. From time immemorial, we have lived on, and made our living from, this land. Unlike the rest of North America, native people

.../2

are still a majority in the N.W.T. There are about 15,000 people of Dene descent; 15,000 Inuit (Eskimos), and 13,000 whites. The Canadian government has divided Indian people into categories of status or registered Indians, non-status, and Metis. But the Dene do not recognize these artificial divisions. In our delegation today we have status, non-status, and Metis, all representing and supporting the Dene position.

Through countless generations of living on our land, we have developed a complete Dene society, with our own institutions, our own government, our own religion, our own ways of educating our children. Our traditional values and our way of life are still strong.

The Dene Position:

After years of research, of community meetings and workshops, of consultation with the elders, and discussions at our assemblies, the Dene presented our official position on our land claims to the Government of Canada last October 25, in the form of an Agreement-in-Principle. We are submitting copies of this document as evidence with your committee.

As Dene, we are the owners of our traditional lands in the Mackenzie Valley. The treaties which the Government of Canada signed with the Dene - Treaties 8 and 11 - have been proved

virtually fraudulent by the Supreme Court or the N.W.T. We

maintain that our aboriginal title to the land has never been extinguished, and that a new agreement must be negotiated with the Canadian people, one which is not based on the treaties.

The agreement that we are proposing to the Government of Canada is one where our aboriginal rights are not extinguished, but are protected by legislation. Our political rights must be recognized and guaranteed - the right to be a self-determining people, and to control development on our land. This is the only way we can survive as a people, and preserve our land for future generations.

We are proposing that a large area of our traditional lands will be under the exclusive jurisdiction of a Dene government, with powers similar to those of a province.

The Dene position on the proposed pipeline:

We do not want to see a decision made without a full and clear understanding of the situation in the Mackenzie Valley on your part.

The statements made by Judge Litt in his report to the Federal Power Commission, and statements by our own Federal Government officials, may have left you with the impression that the Dene land claims will not be a significant factor in the decision about whether to build a Mackenzie Valley pipeline, and that the details and implementation of a settlement with the Dene can be

worked out during construction of a pipeline. Such statements are based on misinformation and are a total misunderstanding of our position.

Dene opposition to a pipeline down the Mackenzie Corridor at this time is virtually unanimous. The Dene as a people cannot survive the social, economic, and environmental impact of pipeline construction at this time. We need time - time to negotiate an agreement with the Federal Government, and time to implement that agreement, to develop our own political and economic institutions further.

Should the decision to build a pipeline be made by non-Dene, before the right of the Dene to collectively decide their own future has been fully recognized by the Federal Government, it is obvious that the right to self-determination of the Dene will have been ignored. Such disregard for the right of self-determination of a people is genocide.

Evidence for support of the Dene position:

There is no doubt that the Dene position, as presented to the Federal Government and described here, is a majority position among our people. We Dene have stated unanimously to the Berger Inquiry at the community hearings that the land is ours. We have said over and over that the land has always been ours, that we

have never sold or surrendered it and that we want recognition as property owners. We have expressed the intention to decide our own future on our own land. We have stated that we do not want a pipeline and we do not need it. We have voiced the belief that in fact the pipeline would destroy our people. This position is also supported by the evidence of Chiefs and elders, including eye-witnesses to the negotiation of the treaties, before the N.W.T. Supreme Court.

Almost 1,000 Dene people testified to Justice Berger at the community hearings. Fewer than 5 said that they were in favor of a pipeline.

At our joint general Assemblies, including non-status and Metis, over the last three years, we have stated that we do not recognize Treaties 8 and 11, that we do not wish to sell our land but want to have our rights recognized and protected by the Federal Government.

We are filing as evidence over 2,000 pages of research done with and for the Indian Brotherhood by top Dene and non-Dene experts, in the fields of economics, the Canadian constitution, Canadian and international law, education, and other areas, that supports and elaborates on our position. We will be filing a set of these research volumes with your committee as evidence.

.../6

In addition, there is overwhelming public support for the Dene right to self-determination, and to a land settlement before discussion of a pipeline, in southern Canada. We are submitting as further evidence a list of individuals and organizations who appeared before Justice Berger's southern hearings to state their support for the Dene, and opposition to a pipeline.

There is a small minority of our people, represented by the Metis Association of the N.W.T., who do not support the Dene position as we have presented it here. They are willing to accept the existing colonial structure of government, and would be willing to sell their rights for a certain amount of money, title to some land, and limited rights governing the use of that land. They have stated publicly that they would welcome construction of a pipeline immediately after land claims are settled.

We recognize the right of this group to define their own interests. However, we do not accept their right to undermine the political rights of the Dene by pretending to represent more than a very small minority of the native people of the Mackenzie Valley.

Summary:

You should not underestimate the strength and determination of the Dene people. Our position is clear - there can be no consideration of a pipeline on our land until we are ready to discuss such a development on our own terms.

We have legal avenues open to us. The Supreme Court of Canada rejected our application to file a caveat on a technical point, but they have not yet dealt with the whole question of aboriginal title to Dene land.

We have the strong support of the Canadian public. In addition to the evidence we have submitted about support for our position, many southern Canadians are opposed to the proposed pipeline for other reasons - because they are convinced that it is not in the public interest at this time.

We ask you to consider the effect a decision by the U.S. Government to go ahead with the Arctic Gas proposal would have on the Canadian situation at this time. It would create undue pressure on the Canadian government to negotiate a hasty land settlement with the Dene.

We understand that your Committee was instrumental in making certain that the Alaskan natives were given time to negotiate a land settlement before construction on the Alaska pipeline got the go-ahead. We ask the same consideration for the Dene people. Read our position, listen to what we have to say, and believe us when we say that the Dene cannot survive the construction of a pipeline at this time. We intend to survive.

INTRODUCTION:

MR. CHAIRMAN AND MEMBERS OF THE SUB-COMMITTEE, I WOULD LIKE TO SAY THAT IT IS WITH PLEASURE AND PRIVILEGE THAT I APPEAR BEFORE YOU ON BEHALF OF ALL YUKON INDIAN PEOPLE.

IN THIS PRESENTATION I WILL TELL YOU OF OUR ORGANIZATIONAL STRUCTURE, OUR OBJECTIVE OF SETTLING AND IMPLEMENTING LAND CLAIMS AND FINALLY OUR POSITION ON PIPELINES IN THE YUKON TERRITORY. HOWEVER, BEFORE I DO THAT, I WOULD LIKE TO GIVE SOME BACKGROUND ON THE YUKON TERRITORY. THE TOTAL POPULATION OF YUKON IS 22,000 PEOPLE AND OF THAT WE REPRESENT APPROXIMATELY 7,000 INDIAN PEOPLE. IN CANADA, THE INDIAN PEOPLE HAVE BEEN CLASSIFIED BY THE CANADIAN GOVERNMENT AS EITHER STATUS INDIANS OR NON-STATUS INDIANS. STATUS INDIANS ARE GOVERNED BY A PIECE OF FEDERAL LEGISLATION CALLED THE INDIAN ACT. AND UNDER THE MEMBERSHIP SECTIONS OF THE INDIAN ACT THE INDIAN PEOPLE WHO QUALIFY ARE UNDER THE JURISDICTION OF THE FEDERAL DEPARTMENT OF INDIAN AND NORTHERN AFFAIRS. THE INDIAN PEOPLE WHO COME UNDER THE FEDERAL GOVERNMENT HAVE CERTAIN PRIVILEGES AND RETAIN A CERTAIN STATUS IN THE CANADIAN SOCIETY. HOWEVER, THE NON-STATUS INDIANS ARE TREATED AS THOUGH THEY ARE NON-NATIVE AS THEY ARE NOT ON THE INDIAN BAND LISTS WHICH ARE ADMINISTERED BY THE INDIAN ACT. THERE ARE MANY FULL-BLOODED INDIANS WHO HAVE BEEN ENFRANCHISED BECAUSE THEY WERE SEEKING PRIVILEGES WHICH WERE NOT GRANTED TO NATIVE PEOPLE WHO WERE ON THE BAND LISTS OR WHO ARE GENERALLY CALLED STATUS INDIANS. I DO NOT WISH TO DWELL ON THIS AREA VERY LONG, HOWEVER, TO GIVE YOU SOME IDEA AS TO WHY STATUS INDIANS GAVE UP THEIR STATUS, HERE ARE A FEW EXAMPLES: THEY WISHED TO SEND THEIR CHILDREN TO PUBLIC SCHOOL; THEY WISHED TO BE GRANTED THE RIGHT TO VOTE IN FEDERAL AND TERRITORIAL ELECTIONS; THEY WISHED TO ENTER THE

BUSINESS WORLD AND BE GIVEN A BUSINESS LICENCE; THEY WISHED TO GO INTO AREAS WHERE LIQUOR WAS SERVED. IN THE YUKON THIS DISTINCTION BETWEEN STATUS INDIANS AND NON-STATUS INDIANS IS BEING DEALT WITH IN A MANNER IN WHICH WE DO NOT RECOGNIZE THIS DISTINCTION WHICH THE FEDERAL GOVERNMENT, THROUGH THE INDIAN ACT, HAS PLACED UPON THE INDIAN PEOPLE THROUGHOUT CANADA. INSTEAD THE COUNCIL FOR YUKON INDIANS IS NOW NEGOTIATING TO SETTLE THE LAND CLAIMS OF ALL YUKON INDIAN PEOPLE REGARDLESS OF STATUS.

THE INDIAN PEOPLE OF THE YUKON HAVE NEVER CEDED OR SURRENDERED THEIR LANDS AND THEY HAVE NEVER SIGNED A TREATY WITH THE GOVERNMENT OF CANADA. THERE ARE MANY AREAS IN CANADA WHICH ARE COVERED BY TREATIES. HOWEVER, THE YUKON IS NOT ONE OF THESE AREAS. THIS IS WHY WE WISH TO SETTLE OUR LAND CLAIMS BEFORE THERE ARE ANY OTHER MAJOR DEVELOPMENTS. IN 1973 WE BEGAN TO NEGOTIATE WITH THE FEDERAL GOVERNMENT ON OUR LAND CLAIMS AND WE HAVE ATTEMPTED TO SETTLE BY NEGOTIATING WITH THE FEDERAL GOVERNMENT THE BASIS AND THE MEANINGS OF OUR LAND CLAIMS. THE PROCESS OF NEGOTIATIONS IS STILL CONTINUING. I WOULD JUST LIKE TO SAY THAT THE NEGOTIATING PROCESS IS A SLOW ONE AS WE MUST SEEK APPROVAL ON THE MAJOR ISSUES FROM OUR TWELVE INDIAN COMMUNITIES AND THE FEDERAL NEGOTIATORS MUST ALSO SEEK INSTRUCTIONS FROM THE FEDERAL CABINET OF CANADA. WE DO NOT SEEK ONLY TO SETTLE OUR LAND CLAIMS WITH THE FEDERAL GOVERNMENT PRIOR TO THE CONSTRUCTION OF A PIPELINE ACROSS THE YUKON BUT RATHER WE INSIST UPON IMPLEMENTING OUR SETTLEMENT AND OBTAINING BENEFIT FROM IT BEFORE WE WILL CONSIDER ANY PIPELINE DEVELOPMENT.

I WISH, AT THIS TIME, TO TELL YOU SOMETHING OF THE STRUCTURE AND PURPOSE OF THE ORGANIZATION THAT I REPRESENT. THE COUNCIL OF YUKON INDIANS CONSISTS OF TWELVE MAIN INDIAN COMMUNITIES IN THE YUKON TERRITORY. EACH YEAR EVERY COMMUNITY ELECTS FIVE

PERSONS TO THE GENERAL COUNCIL. THE GENERAL COUNCIL IS RESPONSIBLE FOR MAKING ALL OF THE MAJOR POLICY DECISIONS FOR OUR ORGANIZATION.

ONE OF THE FIVE MEMBERS ELECTED TO THE GENERAL COUNCIL FROM EACH COMMUNITY, IS ELECTED AS A BOARD MEMBER AND IT IS THESE PERSONS WHO ARE RESPONSIBLE FOR CARRYING ON THE DAY-TO-DAY ADMINISTRATIVE AFFAIRS OF OUR ORGANIZATION, AS WELL AS, CARRYING OUT THE DIRECTION AND POLICIES OF THE GENERAL COUNCIL.

FROM THESE TWELVE BOARD OF DIRECTORS, THERE ARE FOUR PERSONS ELECTED TO THE EXECUTIVE POSITIONS OF CHAIRMAN, VICE-CHAIRMAN, TREASURER AND SECRETARY. I HAVE BEEN ELECTED IN THE POSITION OF CHAIRMAN OF THE COUNCIL FOR YUKON INDIANS, AND IT IS WITH HONOUR AND PRIVILEGE THAT I AM ABLE TO PRESENT TO THIS SUB-COMMITTEE OUR POSITION IN RELATION TO PIPELINE DEVELOPMENT IN THE YUKON TERRITORY. I SHOULD ALSO ADD THAT THE COUNCIL FOR YUKON INDIANS WAS FORMED ON NOVEMBER 15, 1973 TO NEGOTIATE A LAND CLAIMS SETTLEMENT, BASED ON OUR ABORIGINAL RIGHTS, IN THE YUKON TERRITORY, WITH THE GOVERNMENT OF CANADA.

THE COUNCIL FOR YUKON INDIANS REPRESENTS ALL PEOPLE OF INDIAN ANCESTRY AND TO ENSURE THAT ALL INDIAN PEOPLE ARE INFORMED OF THE COUNCIL FOR YUKON INDIANS' ACTIVITIES, WE HAVE INCLUDED THE PRESIDENTS OF BOTH MAJOR INDIAN ORGANIZATIONS, THE YUKON NATIVE BROTHERHOOD REPRESENTING STATUS INDIAN PEOPLE, AND THE YUKON ASSOCIATION OF NON-STATUS INDIANS, REPRESENTING NON-STATUS INDIAN PEOPLE, AS EX-OFFICIO MEMBERS OF THE GENERAL COUNCIL.

AS YOU CAN SEE FROM OUR CONSTITUTIONAL STRUCTURE, THE BOARD AND EXECUTIVE MEMBERS ARE DIRECTLY RESPONSIBLE TO THE GENERAL COUNCIL WHO ARE THE POLICY MAKERS OF THE COUNCIL FOR YUKON INDIANS. ON TWO OCCASIONS WE HAVE APPEARED BEFORE THE NATIONAL ENERGY BOARD OF CANADA TO CONVEY OUR POSITION CONCERNING PIPELINES TO THEM.

ON SEPTEMBER 27TH, 1976, I PRESENTED TO THE NATIONAL ENERGY BOARD A SHORT HISTORY OF THE INDIAN PEOPLE IN THE YUKON TERRITORY.

PRESENT POSITION:

ON MARCH 4TH, 1977 THE COUNCIL FOR YUKON INDIANS PRESENTED ANOTHER BRIEF TO THE NATIONAL ENERGY BOARD IN WHITEHORSE, YUKON. THE BRIEF UPDATED THE POSITION OF THE COUNCIL FOR YUKON INDIANS IN RESPECT TO PIPELINE DEVELOPMENT. IN THE FIVE MONTHS BETWEEN SEPTEMBER 27TH, 1976 AND MARCH 4TH, 1977 THE COUNCIL FOR YUKON INDIANS HAS HAD SUFFICIENT TIME TO CONSULT WITH THE TWELVE INDIAN COMMUNITIES ON THE QUESTION OF PIPELINE CONSTRUCTION. THE RESPONSE WE HAVE RECEIVED HAS BEEN CLEAR AND UNEQUIVICAL. THE YUKON INDIAN PEOPLE ARE OPPOSED TO ANY PIPELINE IN THE NORTHERN YUKON IN PERPETUITY, AND IN THE SOUTHERN YUKON WE ARE OPPOSED TO PIPELINE CONSTRUCTION UNTIL THERE HAS BEEN A LAND CLAIMS SETTLEMENT WHICH HAS BEEN IMPLEMENTED. THIS POSITION WAS RATIFIED AT OUR GENERAL ASSEMBLY MEETING IN WHITEHORSE, YUKON ON FEBRUARY 17TH, 1977, BY A MOTION THAT WAS UNANIMOUSLY PASSED BY THE GENERAL COUNCIL DELEGATES.

THIS MOTION READS AS FOLLOWS: "THAT THE COUNCIL FOR YUKON INDIANS ARE 100% OPPOSED TO THE BUILDING/CONSTRUCTION OF A PIPELINE UNTIL SUCH TIME AS A LAND CLAIMS HAS BEEN SETTLED AND IMPLEMENTED BY THE COUNCIL FOR YUKON INDIANS AND WITH RESPECT TO THE OLD CROW AND NORTH SLOPE AREAS, THERE SHALL BE NO PIPELINE IN THIS AREA, FOREVER."

THE PIPELINE PROPOSALS PRESENTLY BEFORE YOU ARE NOT THE FIRST LARGE SCALE DEVELOPMENTS THAT WE HAVE ENCOUNTERED. OUR FIRST MAJOR CONTACT WITH NON-NATIVE PEOPLE OCCURRED DURING THE

KLONDIKE GOLD RUSH WHEN 30,000 PEOPLE WHO WERE PRIMARILY AMERICAN, DESCENDED ON DAWSON CITY IN THE YUKON TERRITORY. THEY LEFT AS QUICKLY AS THEY CAME, LEAVING OUR PEOPLE TO COPE WITH EPIDEMICS, LOSS OF LAND, CULTURAL DISLOCATION AND NO CONTROL OVER THEIR POLITICAL DESTINY. WE HAVE YET TO REGAIN THAT CONTROL OVER OUR OWN DESTINY AND REMAIN A MINORITY IN A LAND THAT BELONGS TO US.

LARGE SCALE DEVELOPMENT OF THE YUKON WAS NOT TO STOP WITH THE KLONDIKE GOLD RUSH. IN 1943 THE CANADIAN AND AMERICAN GOVERNMENTS DECIDED THAT THE ALASKA HIGHWAY WAS A NECESSITY. THE POPULATION OF WHITEHORSE SKYROCKETED FROM 300 PEOPLE TO 40,000. OUR PEOPLE ARE STILL SUFFERING FROM THAT IMPACT. THE TERM SOCIAL IMPACT MAY BE RELATIVELY NEW BUT THE DISEASE, ALCOHOLISM, FAMILY BREAK-UP, VIOLENCE AND DESPAIR SUFFERED BY OUR PEOPLE CONTINUES TODAY. WHAT NON-NATIVE YUKONERS SEE AS PROGRESS, WE SEE AS DESTRUCTION OF OUR WAY OF LIFE. THERE HAVE BEEN MANY OTHER DEVELOPMENTS IN THE YUKON TERRITORY SUCH AS THE AISHIHIK HYDRO POWER PROJECT, THE ANVIL MINING PROJECT AND THE CONSTRUCTION OF THE DEMPSTER HIGHWAY. EACH OF THESE HAVE PREJUDICED OUR POSITION IN RESPECT TO A LAND CLAIMS SETTLEMENT. THERE WERE ASSURANCES GIVEN FOR MANY OF THESE DEVELOPMENTS, IN THAT OUR RIGHTS WOULD NOT BE PREJUDICED IN ANY MANNER, HOWEVER, WE HAVE LEARNED OTHERWISE. WE ARE DETERMINED THAT WE WILL NOT NOW COMPROMISE OUR POSITION. WE WILL NOT AGAIN HEAR OF HOLLOW ASSURANCES AND GUARANTEES. WE WILL NOT TOLERATE ABUSES OF OUR PEOPLE AND OUR LAND FOR THE SAKE OF DEVELOPMENT ALONE. WE WILL DEDICATE OUR ENTIRE RESOURCES TO THE COMPLETION AND IMPLEMENTATION OF A LAND CLAIMS SETTLEMENT BEFORE WE CONSIDER ANY MAJOR DEVELOPMENT IN THE YUKON.

ONCE OUR LAND CLAIMS HAVE BEEN RESOLVED, WE WILL BE IN A POSITION TO CONSIDER OTHER MAJOR CONCERNS.

YOUR CONCERN TODAY IS A PIPELINE ROUTE. OUR CONCERN IS IN MANY OTHER AREAS, BUT ONE WHICH YOU CAN CONSIDER IS YOUR ILL TREATMENT OF OUR PEOPLE IN YUKON OVER THE SALMON FISHING.

OUR WATER HAS BEEN THE TRADITIONAL SPAWNING GROUNDS FOR SALMON THAT LATER GO TO THE SEA THROUGH ALASKA, WHEN THEY RETURN FOUR YEARS LATER TO SPAWN, THE ALASKANS CATCH THEM, LEAVING ONLY A FEW FOR US.

YOUR PEOPLE APPARENTLY HAVE LITTLE OR NO CONCERN FOR OUR PLIGHT, WE HAVE BEEN TOLD BY THE CANADIAN GOVERNMENT FISHERIES REPRESENTATIVES THAT THE TALKS WITH YOUR PEOPLE ARE UNSUCCESSFUL,

THIS HAS RESULTED IN A GREAT DEPLETION OF OUR FOOD SUPPLY IN THE YUKON,

WE ASK YOU, WHY SHOULD WE CO-OPERATE WITH YOU TO PROVIDE A ROUTE FOR A GASLINE THROUGH OUR LAND WHEN YOU CUT OFF OUR SALMON FOOD SUPPLY?

WE HAVE CONSIDERED OUR POSITION VERY CAREFULLY, WE REALIZE THAT THERE ARE SOME TOKEN BENEFITS THAT WE AS INDIAN PEOPLE MAY TAKE ADVANTAGE OF IN CASE OF PIPELINE CONSTRUCTION WHICH WOULD ALLOW AMERICAN GAS TO FLOW OVER OUR LAND, HOWEVER, THESE TOKEN BENEFITS ARE NOT ENOUGH TO OUTWEIGH THE PREJUDICIAL EFFECT A PIPELINE WOULD HAVE ON OUR PEOPLE, WE FEAR THAT THE IMPACT OF ANOTHER LARGE SCALE DEVELOPMENT EVEN AFTER OUR LAND CLAIMS ARE SETTLED AND IMPLEMENTED, THE PAST EXPERIENCES THAT I HAVE CONVEYED TO YOU AND THE PRESENT EVIDENCE OF MODERN DEVELOPMENTS ARE WHY WE INSIST ON THE SETTLEMENT AND IMPLEMENTATION OF OUR LAND CLAIMS BEFORE ANY LARGE SCALE DEVELOPMENT TAKES PLACE, THIS POSITION IS NOT ONE OF TACTICS

OF NEGOTIATION OR A DESIRE TO SETTLE OUR CLAIM WHILE THE DEVELOPMENT PRESSURE IS ON BUT RATHER IT IS FOR THE SURVIVAL OF OUR PEOPLE.

IT IS NOW OUR PARAMOUNT POSITION TO FIRST OF ALL, SETTLE AND IMPLEMENT THE LAND CLAIMS SETTLEMENT BEFORE ANY CONSIDERATION OF CONSTRUCTING A MAJOR DEVELOPMENT AND THIS INCLUDES A PIPELINE. WE WILL NOT BE SWAYED FROM THIS POSITION. WE WILL CONTINUE TO OPPOSE PIPELINE CONSTRUCTION, AND IN THE EVENT ONE IS AUTHORIZED BY THE FEDERAL GOVERNMENT BEFORE THE SETTLEMENT AND IMPLEMENTATION OF OUR LAND CLAIMS, WE WILL GATHER OUR COLLECTIVE RESOURCES AND FULLY UTILIZE THESE RESOURCES IN COMPLETE OPPOSITION TO THE CONSTRUCTION OF A PIPELINE. IF THIS OPPOSITION MEANS USE OF THE COURTS, WE WILL USE THE COURTS. WE ALSO FEAR THAT THERE WILL BE PHYSICAL PROTESTS BY MANY OF OUR PEOPLE. BUT WE SHALL NOT COMPROMISE OUR PRESENT POSITION UNTIL OUR LAND CLAIMS HAVE BEEN IMPLEMENTED. WE DO NOT VIEW A MORATORIUM ON CURRENT NORTHERN DEVELOPMENT AS NEGATIVE BUT RATHER WE VIEW SUCH DEVELOPMENT AS POSITIVE, IN THAT WE, THE ORIGINAL INHABITANTS OF THIS LAND, WILL BE ABLE TO CONSIDER IT AND COMPETE ON AN EQUAL BASIS. I DO NOT FEEL THAT I HAVE TO REPEAT TO THIS SUB-COMMITTEE THE NATIONAL TREATMENT THAT WE AS INDIAN PEOPLE IN CANADA HAVE RECEIVED, BUT WE IN THE YUKON ARE DETERMINED THAT WE WILL NOT BE SUBJECTED TO CONTINUED DEGRADATION AND HUMILIATION IN OUR OWN LAND. WE ARE DETERMINED TO ATTAIN THE NECESSARY AUTONOMY AND CONTROL OVER OUR LANDS AND OUR LIFESTYLES, AND WE FEEL THAT AN EQUITABLE AND JUST LAND CLAIMS SETTLEMENT WOULD AFFORD THIS OPPORTUNITY. CONTINUED DEVELOPMENT IN THE YUKON TERRITORY WITHOUT SETTLEMENT AND IMPLEMENTATION OF THE LAND CLAIMS SETTLEMENT WOULD ALSO WIDEN THE ECONOMIC AND SOCIAL GAP WHICH PRESENTLY EXISTS BETWEEN INDIAN AND NON-INDIAN COMMUNITIES IN THE YUKON TERRITORY. CONTINUED DEVELOPMENT BEFORE OUR LAND CLAIMS SETTLEMENT WOULD DEPRIVE US OF THE OPPORTUNITY TO MEANINGFULLY CONTRIBUTE TO FUTURE NORTHERN DEVELOPMENT.

IN CLOSING, WE RECOMMEND THAT: 1) NO PIPELINE BE CONSTRUCTED ACROSS THE SOUTHERN YUKON UNTIL THE LAND CLAIMS OF THE YUKON INDIAN PEOPLE HAVE BEEN SETTLED AND IMPLEMENTED. 2) THE NORTHERN SLOPE AREA OF THE YUKON AND THE AREA THROUGH THE OLD CROW COMMUNITY LAND BE CLOSED FOR PURPOSES OF PIPELINE CONSTRUCTION FOREVER.

THESE RECOMMENDATIONS AND INHERENT POSITIONS WHICH WE HAVE CONVEYED TO YOU TODAY, IS A POSITION WHICH WE FEEL WOULD ALLOW US THE OPPORTUNITY TO CONTRIBUTE TO ANY MAJOR NORTHERN DEVELOPMENT, AND TO REGULATE TO SOME EXTENT FUTURE DEVELOPMENT IN ORDER THAT IT IS MORE COMPATIBLE WITH OUR YUKON INDIAN CULTURES. FROM OUR POINT OF VIEW, THIS CAN ONLY BE POSITIVE, NOT NEGATIVE.

THANK YOU MR. CHAIRMAN AND MEMBERS OF THE SUB-COMMITTEE.

JOHN C. BENNETT VICE PRESIDENT

6 May, 1977

The Honorable John L. Rader
Alaska State Senator
State Capitol Building
Pouch V
Juneau, Alaska 99811

Dear John:

As we move toward the final decision concerning an Alaskan gas transportation system, I thought that you might be interested in reviewing El Paso Alaska's final documentary presentation before the Federal Power Commission. This document addresses several important issues concerning new proposals made recently by both Alcan and Arctic Gas.

For your convenience, we have highlighted those sections that are of particular interest.

- | | | |
|-------------|---|---|
| Pages 1-2 | - | The Federal Power Commission has adopted procedures which preclude adequate examination of the new proposals. |
| Pages 2-4 | - | Alcan's new proposal suffers from critical omissions of pertinent information. |
| Pages 4-11 | - | Alcan's schedule ignores preconstruction activities; therefore, the Alcan claim that it can deliver gas sooner than any other applicant is untenable. |
| Pages 11-21 | - | Unrealistic construction schedules will increase Alcan's costs and delay completion. |
| Pages 22-26 | - | Inadequate environmental preparation will further delay the Alcan project. |
| Pages 27-36 | - | Alcan's new 48-inch proposal will increase costs and severely strain capital markets. |
| Pages 36-37 | - | The Arctic Gas so-called frost heave design is actually a new construction plan for almost 2,000 miles of its Canadian line. |

- Pages 43-44 - Arctic Gas' redesign indicates a lack of confidence in its engineering and geo-technical presentations.
- Pages 48-49 - Arctic Gas has erroneously overestimated Mackenzie Delta reserves.
- Pages 50-51 - Two separate studies, one commissioned by the Environmental Protection Agency and the other by the Department of Interior, predict time schedule slippage is significantly more likely for Arctic Gas than El Paso.

I hope you find this document a useful reference. Should you need more information, please let me know.

Sincerely yours,

A handwritten signature in dark ink, appearing to read "John", with a horizontal line underneath the name.

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL POWER COMMISSION

El Paso Alaska Company, et al.) Docket Nos. CP75-96, et al.
)
Order Providing for Suspension) Docket No. RM77-6
of Proceedings, et al.)

RESPONSE OF EL PASO ALASKA COMPANY TO
THE SUBMISSIONS OF ARCTIC GAS AND ALCAN

PAUL R. CONNOLLY
RAYMOND W. BERGAN
J. ALAN GALBRAITH

Williams & Connolly
1000 Hill Building
Washington, D. C. 20006

Of Counsel for
EL PASO ALASKA COMPANY

April 8, 1977

TABLE OF CONTENTS

	<u>Page</u>
The Alcan Project	2
A. Preconstruction Schedule	4
1. Prepare a preliminary detailed route selection	4
2. Accumulate field data on a site-specific basis	4
3. Prepare a final detailed alignment	5
4. Acquire rights-of-way and permits for land use	5
5. Prepare detailed design	5
6. Apply for and obtain authorizations to construct	6
7. Arrange for procurement of long delivery items of materials and equipment	7
8. Acquire granular materials	9
9. Start civil construction	9
10. Select pipeline contractors	9
11. Mobilize pipeline contractors	9
B. Optimistic Alcan Schedule	11
1. Pipeline Construction	11
2. Production Rates	14
3. Cost Impact	15
C. Construction Manpower	17
D. Environmental Considerations	22

TABLE OF CONTENTS (cont'd.)

	<u>Page</u>
E. Financing the 48-Inch Alternative	27
1. Negative Impact on Financial Feasibility on All Counts	27
2. Higher Capital Costs	28
3. Higher External Financing Requirements	28
4. Required Financing Expanded Most in Weaker Markets	31
5. Previous Criticisms Still Valid	32
 The Arctic Gas Project	 36
A. New Frost Heave Design	36
B. Financing	45
C. MacKenzie Delta Gas Supply	45
D. Risk Analyses	50

UNITED STATES OF AMERICA
Before the
FEDERAL POWER COMMISSION

El Paso Alaska Company, et al.	)	Docket Nos. CP75-96, et al.
	)	
Order Providing for Suspension	)	Docket No. RM77-6
of Proceedings, et al.	)	

RESPONSE OF EL PASO ALASKA COMPANY TO
THE SUBMISSIONS OF ARCTIC GAS AND ALCAN

The actions of this Commission in accepting submissions of additional materials under Order No. 558-C from Arctic Gas and Alcan, especially the latter's submission of an entirely new proposal, and the attempt to provide an opportunity for the testing of that new material by the interrogatory and response process of Order No. 558-E and by argument offered under Order No. 558-D, are violative of due process of law under the Fifth Amendment to the Constitution if these actions result in the Commission's use of the newly filed materials in the decisional process by which the Commission makes a comparative judgment among proposals for an Alaskan gas transportation system under Section 5(b)(1) of the Alaska Natural Gas Transportation Act of 1976.^{1/}

The time afforded and the procedures offered are inadequate to test the newly filed materials for accuracy, candor, bias

^{1/} If it be contended that the procedures adopted are authorized by Section 5(b)(2), then El Paso Alaska submits that such an interpretation would make this latter section unconstitutional. Section 5(b)(2) also provides for a delegation of authority which is itself unconstitutional.

or completeness. We have not been afforded adequate opportunity for discovery, confrontation and cross-examination. The procedure adopted permits a decision or recommendation outside a record made in the course of a due process hearing.

While our responses to many new matters are not complete, and with protest to the procedures adopted, El Paso Alaska nevertheless submits the following in response to the Commission's Orders Nos. 558-C and 558-E.

THE ALCAN PROJECT

The new Alcan 48" project continues to suffer from all the problems which inhered in its original 42" filing. With respect to that 42" filing, El Paso Alaska had made the following observations:

"As El Paso Alaska noted earlier, the Alcan project is in such an incipient state of development that no real meaning can be given to its schedules, cost estimates or pricing suggestions. At this stage, they are nothing more than an 'educated guess.' Tr. 221/38,538 (Hauser). Given that state of events, there is no way in the world that a fact finder can conclude that the Alcan project can and will complete within the time proposed or within the cost figure suggested.

* * *

" * * * The Alcan project sponsors clearly prepared their schedule before either knowing or solving the problems which a critical path analysis for the proposed Alaskan gas delivery system would have revealed. No lawyers' brief can develop a critical path analysis. The assignment of duration time, probability and interrelating nodes requires an exercise of

engineering judgment. However, it takes no such expertise to realize that the absence of coordinated and comprehensive engineering judgment for the entire Alcan project is a major defect." Reply Brief of El Paso Alaska Company With Respect to Cost, Scheduling and Economics, filed December 13, 1976, pp. 112-113.

Responsive to that and other criticisms, the Administrative Law Judge arrived at the following well-founded conclusions:

"Construction is another matter. Assuming that Alcan could demonstrate that it would be permitted to build on the Alyeska right-of-way, it could not say how close to Alyeska's line it would be permitted to come, and construction costs -- when a line cannot be specifically placed -- begin to be vague. Not that its costs elsewhere can be accepted with confidence. Its engineers are excellent; Westcoast's in particular displayed a great knowledge of their art. But, given the time constraints and magnitude of the job to be done and the vagueness of much of the specific alignment at the time their estimates were made, they were not able to support costs in more than a general way in either the U.S. or Canada. Blind faith in its engineers' expertise cannot replace the ability to independently check figures against known plans of pipeline construction on fixed right-of-way." I.D., at 345.

The new 48" filing does nothing to alleviate these problems. It is a totally new system design, with new hydraulics, a new construction schedule, new project planning and a new route over almost 500 miles. Alcan offers no additional project planning evidence and no additional evidence by environmental, geotechnic or engineering consultants to show why any more credence should be given to its 48" proposal than was previously given to its 42" line. Even on the issue of system expansibility, the

Alcan 48" alternative departs from an optimized design and results in an ultimate system of low efficiency with high fuel consumption, which approaches the same inefficiencies of their original 42" system. Moreover, even the most cursory examination of the Alcan filings, together with what materials were submitted in response to interrogatories, reveals the following problems.

A. Preconstruction Schedule

Alcan has seriously underestimated the length of time required for preconstruction activities. This period can be defined as the time between receipt of approval of the application (Congressional approval of the Presidential decision) and the start of construction. The functions that Alcan omitted and must complete are:

1. Prepare a preliminary detailed route selection:

The present route selection is merely a line drawn on a map. Details, such as crossings of Alyeska, river crossings, specific locations on terrain features, use of the Alyeska haul road, and utilization of the Alyeska guidelines for distances between pipelines are non-existent.

2. Accumulate field data on a site-specific basis:

This includes negotiations for and purchase of existing Alyeska data, geophysical surveys of permafrost limits, environmental studies,

archeological studies, soil borings and laboratory analyses on compressor station sites, at river crossings, and along the pipeline route, weather data and the hydrological data and stream characteristics necessary to design stream crossings.

3. Prepare a final detailed alignment: This includes the preparation of completely detailed alignment sheets on orthophoto mosaics.
4. Acquire rights-of-way and permits for land use: Assuming Congressional approval of the Presidential decision automatically carries with it a permit for right-of-way on federal land, it will still be necessary to determine title to every parcel of land crossed by the pipeline, prepare property plats and obtain easements from the BLM, the State of Alaska, native villages and corporations and private individuals. Mining claims must be settled and the Haines pipeline rights-of-way (including the existing products pipeline) must be purchased from the GSA.
5. Prepare detailed design: This includes a safe and reliable design of the pipeline, compressor stations and all ancillary facilities. Details must be prepared for mitigating permafrost

degradation and protecting the environment. Stream crossings, road crossings and pipeline crossings must be individually designed and drawings and applications for permits must be prepared. The route of the pipeline must be analyzed by use of an acceptable thermal simulation computer model to determine if the proposed mitigative measures are sound and effective. A thorough, effective quality assurance program must be developed.

6. Apply for and obtain authorizations to construct:

These must be prepared and submitted to the DOI, DOT, State of Alaska and the various subagencies having jurisdiction such as the State Highway Department, Joint Fish and Wildlife Advisory Team and the State Department of Natural Resources. The most serious aspect of this phase is that a denial of authorization at any level will mean a complete revision of that particular phase, and a major denial from DOI, DOT, or the State could mean a complete revision of the entire project and a return to Item No. 1 on this list for a recycle through the entire process. Prior to issuance of authorization to construct, site-specific field archeological investigation must

take place. A significant archeological discovery on the pipeline right-of-way would require a re-route and a recycle of the pre-construction activities.

Concurrently with the above procedures, the Canadian companies (Foothills, Westcoast and AGTL) will be concerned with similar agencies in Canada plus the time required to settle the Yukon native claims. The time required to settle these native claims is not easily estimated. It can range from several years down to the time frame approximately equal to the time required to process the other permits.

7. Arrange for procurement of long delivery items of materials and equipment: This includes preparation of specifications, bidding, negotiations of purchase contracts, and issuance of purchase orders. The various suppliers must fit the orders into their production schedules, acquire raw materials, convert these raw materials into the basic components such as steel plate, castings, and electronic parts, and manufacture and test the finished products.

Compressors, refrigeration equipment, electrical generators and switch gear, electronics,

and computer controls ordinarily require the longest lead times. However, all these items are installed on the pipeline in the later years of the schedule, and should not be critical items.

Pipe, then, becomes the critical item. This is especially true of the Alcan project because the pipe to be used must be rolled from arctic grade steel in larger than normal size (48") and with greater than normal wall thicknesses. Special items such as this require longer lead times than normal.

But the production of pipe is not the final step in this process. A sample of the finished pipe must be thoroughly tested to the satisfaction of the governmental agencies. Welding procedures must be developed and radiographic inspection techniques set up. A failure anywhere along the time in this process will send the metallurgists and purchasing agents back to the beginning of this item.

The various applicants in these proceedings have indicated that pipe specifications have been drafted and initial contacts have been made with the pipe mills. No one has testified for Alcan that a commitment has been made which will start

the processes described above.

8. Acquire granular materials: This will probably be a combination of purchase of excess materials stockpiled by Alyeska (if any) and mining borrow sources after receipt of permits from the DOI (BLM) and the State of Alaska.
9. Start civil construction: This includes preparation of storage yards, double jointing yards, work pads, access roads, camp sites, and sites for ancillary facilities. This item requires the receipt of many permits described in Item No. 6 above.
10. Select pipeline contractors: This procedure can start after Item No. 6 has proceeded to a point of confidence that permits will be awarded and can be continued during the processing of Item No. 7 -- acquisition of materials and equipment. But this item must be completed prior to the start of Item No. 11.
11. Mobilize pipeline contractors: This is the prelude to the start of construction. It has a controllable flexibility and must be fitted into the critical path whether first pipe delivery or receipt of governmental permits becomes critical. It is, in fact, the "bridge" that connects the

"paths" followed by the two possible critical items, pipe and permits, and they converge on this item.

Thus, it can be seen that preconstruction activities are complicated, detailed, and time consuming. Alcan has done none of them and has scheduled none. The above listed items must be done in sequence except where noted otherwise. The preconstruction schedules of the various proposals can be found in the record in the following references:

<u>Company</u>	<u>Reference</u>
Westcoast	Vol. 1A, Tab 11
AGTL	Vol. 1, Fig. 3-D-1
El Paso	Ex. EP-172
Arctic	Ex. AA-35

From these references, it can be seen that the time required for preconstruction activities should be approximately 24 months to the start of civil construction and approximately 31 months to the start of pipeline construction. Two of the applicants, Alcan and Foothills, have not provided for such time in their project schedule. This conclusion is verified by the cash flow schedules in the capital cost estimates of the applicant. This analysis does not include the time required to arrange financing for the project and obtain approvals of tariffs. It is possible for these two items to require more time than all of the other preconstruction activities described. However, for the

purposes of this analysis, time for financing and tariff approvals has not been included.

Alcan has simply omitted adequate preconstruction time from its schedule. Alcan's claim that it can deliver gas sooner than any other applicant is simply lawyer's puffing.

B. Optimistic Alcan Schedule

1. Pipeline Construction

The Alcan 48" express proposal plans to install the following mileages of pipeline, including Northern Border and PGT-PG&E.

1979 - 561 miles
1980 - 2367 miles
1981 - 1816 miles

By comparison, the total amount of large-diameter pipeline (30 inches and larger) installed in the U.S. and Canada in 1976 was approximately 1900 miles. Alyeska installed 496 miles or 28% of the 1976 total. The total large-diameter pipeline installation planned for 1977 in the U.S. and Canada is only 1055 miles. Thus, Alcan is grand in scale.

The Alyeska project attracted five joint venture companies consisting of most of the major big-inch pipeline contractors operating in the U.S. and Canada. The gathering line construction at Prudhoe Bay required by the Alyeska project attracted three other major pipeline construction companies. These companies committed all available equipment, their best management personnel,

and attracted the most productive manpower available in the North American pipeline labor pool to complete the Alyeska project. The result of this effort was that the large demand for equipment caused equipment prices to increase at nearly twice the national wholesale price index. Management personnel and productive skilled labor were in short supply. Pipeline contractors working in the lower 48 in 1976 experienced productivity much lower than estimated or previously experienced and costs higher than estimated. Labor rates for operators, teamsters and laborers in Alaska increased 51% between January 1, 1974 and January 1, 1977, an annual inflation rate of nearly 15% (compared to an annual increase of the wholesale price index of 8.5%).

The over-optimism of the Alcan construction plan is summarized below.

Proposed Alcan Mileage U.S. Industry
(30-Inch Diameter and Larger)

	<u>Year</u>	<u>Miles</u>	<u>% Alyeska 1976 (496 Miles)</u>	<u>% Total 1976 (1800 Miles)</u>	<u>% Estimate Total 1977 (1055 Miles)</u>
Alcan	1979	561	113%	31%	53%
(Total	1980	2367	477%	132%	224%
System)	1981	1816	366%	101%	172%
Alyeska	1976	496	100%	28%	---

The pipeline construction industry is an extremely cyclical industry. Many pipeline companies are owned by parent companies who achieve financial stability by diversification. Most pipeline contractors own very little equipment, meeting

their requirements by leasing from dealers from each project. Naturally, no pipeline contractor retains hourly labor on the payroll between projects. Second tier supervision also is released to work for other contractors between projects, although many of these people have primary allegiance to a single general superintendent.

A pipeline contractor, then, offers experienced key management personnel, limited owned equipment, a capable organization, knowledge of the labor pool and project financing ability. Second tier supervision (spread superintendents, foremen, administrative help, etc.), skilled hourly labor, and most equipment come from a pool common to the entire industry. The ability to meet industry's requirements from this common pool is not unlimited.

During periods of low economic opportunity, such as will be experienced in 1977 with the shutdown of Alyeska, the pool shrinks. Equipment is junked, sold to foreign markets, converted to other use, deteriorates while idle or becomes obsolete. The labor pool shrinks from diversion to other fields of opportunity and by death or retirement.

During economic buildup the equipment pool is not able to increase as quickly as demand. This results in over-inflated prices and the use of less than efficient equipment. Similarly, the labor pool is not able to expand with trained and experienced manpower until incompetent and inefficient members of the pool are fully employed.

Given the huge demand on the industry planned by Alcan, its construction schedule and cost estimate are not worthy of consideration. The high level of activity that Alcan expects to achieve simply will not commence without a great deal of difficulty. If it is achieved, project completion will only be obtained after massive cost overruns and significant delays. Significant cost overruns on the Alcan project must be assumed.

2. Production Rates

Alcan, based upon the Alyeska experience, has filed a construction plan for installing 48" pipe in Alaska at the rate of 0.43 miles per calendar day. Such a rate compares favorably with the final rate experienced by Alyeska and generates a cost estimate that is comparable with the El Paso Alaska estimate.

However, the Canadian applicants indicate a much higher rate of progress. The Canadian companies, who will not be using a work pad for the most part and plan to snake their line through the rugged Canadian Rockies, plan a winter installation rate for 48" pipe from 79% to 142% of the Alcan Alaska rate and a summer rate of 128% to 212%^{2/} of the Alcan Alaska rate. While experience in constructing big-inch pipelines in Canada indicates better performance records by Canadian welders than by their U.S.

^{2/} Planned by AGTL in the summer working only six days per week. Effective rate per scheduled work day in 247%.

counterparts, this experience does not reflect installing pipelines when the demand on the labor pool exceeds 100% of the supply as stated by AGTL in its application (3.D.5-1). If the industry in Canada is fortunate in training or attracting welders, they may experience a 10% production advantage over the U.S. portion of the project. To plan on anything more is imprudent to say the very least.

The Northern Border project, presumably based on comparable continental U.S. pipeline construction experiences, plans an average rate per calendar day per spread of 0.55 miles for its 42" line. The Canadian applicants again plan a more optimistic rate, ranging from 122% to 182% of the Northern Border rate.

On the 36" western leg, PGT and PG&E plan a rate equal to 147% of the Northern Border rate for their looped line. West-coast's construction rate on the 36" leg is 191% of the Northern Border rate and AGTL plans 182% in the valley and 113% in the Rocky Mountains. No credence can be given to any such construction scheduling.

3. Cost Impact

Failure to meet production rates will cause increased construction costs and schedule delays. Failure to mobilize 24 pipeline spreads concurrently will impact costs and schedule. Should the Alcan system be planned with a five-year construction schedule instead of the three years now planned, the impact on

the North American pipeline industry would only be twice the impact caused by Alyeska.

Presently the Canadian wage rates used by the applicants in their estimates are approximately 50% of the Alaska wage rates. Present Canadian economic conditions and future pressure by labor to approach parity with their counterparts across the border will result in higher labor costs -- that's what can be expected from projecting historical trends. Foothill's consultant, Canuck Engineers, has predicted exactly this outcome during its cost critique of the Arctic Gas project as filed before the NEB. This increase may be added to the omissions category.

Other omissions are:

1. No provision for work pads in Canada;
2. No cost for air support for mobilization and re-supply of labor and emergency supplies. (Alcan Answers to Interrogatories, Vol. I, pp. 9-12);
3. Only meager provisions for supply of granular material (12 inches for pads in the Yukon Territory) (Ibid., pp. 3-5); and
4. Inaccurate representation of Northern Border cash flow and inconsistent and inaccurate de-escalation of Canadian costs (Ibid., pp. 112, 76, 77).

Three substantial items of cost will impact the computed cost of service for the Alcan 48" project.

1. Rate of construction - overestimated in Canada.
2. Duration of construction - A minimum of five years instead of three, increased AFUDC.
3. Omissions - underestimated in Canada.

The minimum expected impact on cost of service of these omissions would be a 20% increase in costs.

C. Construction Manpower

It is clear that the Alcan project stretches beyond belief the available construction manpower in Canada. The following tables, extracted from the Alcan filing, reveal that in one construction season, the summer of 1981, they require 24 mainline construction spreads, 18 compressor station crews, or a total of 42 separate crews.

48" Alternative

Mainline Spread Requirements 1/

<u>Segment</u>	<u>1979</u>		<u>Year/Season</u> <u>1980</u>		<u>1981</u>	
	<u>Summer</u>	<u>Winter</u>	<u>Summer</u>	<u>Winter</u>	<u>Summer</u>	<u>Winter</u>
Alcan	-	-	6	-	6	-
Foothills-Yukon	2	2	2	1	-	-
Foothills-Saskatchewan	-	-	1	-	1	-
Westcoast:						
48"	-	2	2	1	2	-
36"	-	-	-	-	1	-
AGTL Canada	-	-	4	2	4	-
PGT-PGE	-	-	2	-	4	-
Northern Border	<u>4</u>	<u>-</u>	<u>6</u>	<u>-</u>	<u>6</u>	<u>-</u>
Total Mainline Spreads	6	4	23	4	24	-

Compressor Crews 2/

<u>Segment</u>	<u>Year/Season</u> <u>1980</u>		<u>1981</u>		<u>1982</u>
	<u>Summer</u>	<u>Winter</u>	<u>Summer</u>	<u>Winter</u>	<u>Summer</u>
Alcan	4	-	4	-	-
Foothills	4	-	4	-	-
Westcoast	2	-	2	-	-
AGTL Canada	-	-	4	-	4
PGT-PGE	-	-	-	-	-
Northern Border	<u>4</u>	<u>-</u>	<u>4</u>	<u>-</u>	<u>-</u>
Total Compressor Spreads	14	-	18	-	4

1/ Does not include catering.

2/ Does not include camp or catering--Alcan indicates eight camps will be needed for two seasons.

ALCAN PROJECT
48" Alternative
Manning Requirements
(Pipeline Spreads and Compressor Crews)

<u>Type</u>	1979		1980		1981		1982
	<u>Summer</u>	<u>Winter</u>	<u>Summer</u>	<u>Winter</u>	<u>Summer</u>	<u>Winter</u>	<u>Summer</u>
Welders	396	330	2,034	295	2,199	-	120
Welder Helpers	<u>404</u>	<u>387</u>	<u>2,269</u>	<u>364</u>	<u>2,391</u>	-	<u>120</u>
Subtotal	800	717	4,303	659	4,590	-	240
Foremen	86	60	407	60	440	-	20
Operators & Mechanics	835	867	4,802	700	4,910	-	120
Teamsters	240	224	1,389	220	1,434	-	20
Laborers	<u>1,049</u>	<u>797</u>	<u>5,399</u>	<u>796</u>	5,984	-	<u>192</u>
GRAND TOTAL	3,010	2,665	16,300	2,435	17,358	-	592

Their total pipeline manpower requirement during that construction season exceeds 17,000. This is far in excess of even the most optimistic estimates as to availability within the North American labor force. It may be recalled that even Arctic Gas has admitted that its project, requiring only 9 mainline construction spreads in any given season, depends upon marshalling manpower from Canada in a number never before imagined, a number which will require the "upgrading" of existing skills to meet the manpower requirements. Tr. 23/3,385 (Dau). Even accepting the manpower requirements posited by one of the Canadian partners (AGTL), the existing work force is woefully inadequate to meet the necessary manpower. The following table, at page 3.D.5-1 of AGTL's portion of Alcan's 48" alternate filing, makes that point even more clear than we could attempt to do. Note the disparity between the last two columns.

3. FACILITIES

D. CONSTRUCTION PLAN

5. CONSTRUCTION RESOURCES

5.1 INTRODUCTION

The construction program will require the use of four construction spreads during the 1980 summer construction season. Manpower and equipment for this program are not extensive but must be included as a segment of a major project involving construction by other companies simultaneously.

5.2 MANPOWER REQUIREMENTS

The following table shows estimated peak manpower requirements for AGT (Canada) and the estimated manpower requirements for others for pipeline construction in connection with the Alaska Highway Project - 48" Alternative during the 1980 summer construction season and an estimate of the number of experienced people presently available in Canada.

	Applicant	Foothills (Y)	Westcoast	Total Required	Existing* Work Force
Supervision	150	120	150	420	250
Welders	260	210	190	660	350
Operators	505	430	580	1,515	800
Teamsters	195	160	170	525	525+
Skilled Labour	320	200	310	830	480
Others	770	450	700	1,920	1,920+
TOTALS	2,200	1,570	2,100	5,870	4,325+

* Construction Problems - Arctic Pipeline

W. Gant - R. D. Meeres

Canadian Northern Pipeline Research Conference (February 1972)

Upon receiving a permit the Applicant will initiate an extensive training program in conjunction with the Pipe Line Contractors Association of Canada, Unions, Canada Manpower and other government agencies utilizing construction of the AGTL system.

D. Environmental Considerations

At the end of the cross-examination on Alcan's 42" filing, their environmental testimony was left in a shambles. In describing their environmental case, El Paso Alaska wrote as follows:

"The Alcan presentation in this proceeding shows that the environmental consultants did not have adequate input into the selection of the pipeline route. Further, the environmental consultants acknowledged that the collection of additional baseline data will lead to further environmental assessments which, in turn, may require changes in pipeline alignment. Such changes could affect the engineering design of the Alcan project; the likelihood that there will be such changes makes uncertain the reliability of Alcan's cost estimates. These points emerged during the cross-examination of nearly all the Alcan witnesses.

"Alcan's hydrologist, Dr. R. F. Carlson, who undertook a hydrological reconnaissance between Delta Junction and the Canadian border (Tr. 194/32,748 (Carlson)), testified that about a year would be needed to do the necessary hydrological work at major crossings. Tr. 194/32,767 (Carlson). Such data is necessary both to determine where to cross a river and how to design the crossing. Dr. Carlson had not participated in the costing of the Alcan pipeline. Tr. 194/32,755 (Carlson). In the stretch between Delta Junction and the Yukon Border, Alcan fisheries' biologists have catalogued the streams but have not gathered baseline information on the fish using them. Tr. 193/32,676-32,678 (Holden and Van Hying). Such information is necessary to arrive at a construction plan that mitigates impact on fish. It could also affect the siting of stream crossings.

"The Alcan environmental witnesses (Gordon, Foster, and Mathewes), who addressed both

Alaskan and Canadian portions of Alcan's environmental report (Tr. 194/32,780 (Mathewes)), had no input into the routing of the pipeline in Canada. Tr. 195/33,039 (Gordon). Alcan did not offer other witnesses to fill this gap. As a result, the alignment in Canada, as far as the record reflects, did not take into account sensitive environmental areas in Canada. If further studies uncover such areas, costly realignments could be the result. Further, the Alcan witnesses could not address the issue of proper construction timing in Canada, as they lacked proper baseline data. Tr. 194/32,984 (Gordon). Dennis E. Baker, of the environmental consulting firm of F. F. Slaney & Co. (Tr. 195/33,067 (Baker)), who discussed land use along the Alcan pipeline (Tr. 195/33,074 (Baker)), testified that there 'has not been sufficient work done on the specific line location' to permit him to make site-specific recommendations on relocation, except that he had advised Alcan to stay generally within existing corridors. Tr. 195/33,112 (Baker). Dr. L. W. Mottus, of C. D. Schultz & Co. (Tr. 195/33,318 (Mottus)), who testified about Canadian impacts, admitted that he lacked the underlying data to advise the engineers on the timing of construction, on mode of construction, on gravel sources, and on blasting schedules. Tr. 196/33,361 (Mottus).

"The foregoing review shows that Alcan has a great deal of site-specific environmental data to collect before it can proceed to final design. Alcan's notion that it can be in operation more quickly than El Paso Alaska in view of the amount of baseline environmental work ahead of it, is just a notion. It has no predictive meaning." Reply Brief of El Paso Alaska Company on the Environmental Issues, filed November 18, 1976, pp. 61, 62.

Judge Litt completely concurred. Describing Alcan's environmental presentation in his Initial Decision, he wrote:

"As far as this record is concerned, Alcan's descriptions on brief of the story it has to tell on its environmental preparation

far exceeds the contents of the story. From Prudhoe Bay to Delta Junction, as of now, it simply relies on Alyeska work as supervised by JFWAT and a literature search by its consultants (Rebuttal Br. 23). From Delta Junction to the U.S.-Canadian border, it 'follows the Haines pipeline and highway,' even though its environmental witnesses were not sure where the pipeline would go. The corridor concept is argued as if it were on a common pipeline right-of-way -- which it is not -- leaving Delta Junction and as if merely saying the magic word 'corridor' eliminates the problems of site-specific work. In both its Environmental Rebuttal Brief and Economic Brief, Alcan argues that its ongoing studies on environment will be more complete by May 1, 1977, when the Commission's decision will be entered -- an almost bald admission that the record showing it has made so far is deficient on its face. There are no JFWAT studies east of Delta Junction, and there simply is not sufficient biological evidence in this record to find that Alcan has met the Commission's requirements under NEPA. The environmental showing made as to the Canadian portions of its project were not even used by the engineers in Canada in designing the line. On the basis of this record, the only advantage that Alcan can be found to have is that it crosses neither the Wildlife Range nor the Chugach Forest. Other than that, which is a philosophical finding, it has not made a case sufficient to make appropriate environmental findings that it is as satisfactory, and certainly not that it is superior, on environmental grounds as either Arctic Gas or El Paso." I.D. 245 (footnotes omitted) (emphasis supplied).

That description was accurate then and it remains an accurate description of Alcan's 48" alternative. They have done nothing to improve their previous environmental submissions. They were defective then and they are defective now. Moreover, to the extent that Alcan utilizes a new 500-mile

alignment through British Columbia and Alberta, even the preliminary studies made with respect to their 42" alternative are of no help to them. That 500 miles is unstudied, a fact which must disqualify the Alcan project on NEPA considerations.

Indeed, a review of the Alcan environmental filing shows that its environmental consultants are by no means persuaded that the pipeline is routed or that compressor stations are located to avoid environmentally sensitive areas in Canada. The consultants therefore recommend that management undertake further studies, that management either reroute or consider rerouting the pipeline in certain sensitive areas, and that management either relocate or consider relocating compressor stations in certain areas. Our review of the Alcan material suggests that there are a considerable number of miles of pipeline which may have to be significantly realigned and a number of compressor stations that may have to be relocated. These realignments and relocations could result in substantial redesign of the pipeline, with significant cost and schedule impacts.

We here give some specific examples illustrating our comments.

In Document 50, filed by Alcan on March 22, 1977, page 243, it is stated that compressor station C5-64 should be relocated from Hackel Hill (MP 258.5) to a less environmentally sensitive location. On the same page, it is stated that the pipeline should be rerouted around the Ibex River Valley (MP

235.75) to a less environmentally sensitive region. At page 653, it is stated that the proposed alignment from MP 45-175 should be examined to see if alternative routes are available which would avoid the proposed ecological reserves and the Kluane Game Sanctuary. In Addendum C to Volume 3, Section B, filed February 28, 1977, relating to the section of the Alcan line to be built by Westcoast Transmission Co., it is stated at page 418 that:

"With the construction of the pipeline, a significant area of land east of the [Liard] hot-springs that is presently isolated will be opened up. Of special significance is the Grand Canyon of the Liard, an area of high scenic quality An item of serious concern is the possibility of a compressor station and an all-weather access road into the Nordquist Lake area, a critical winter range for elk, and a waterfowl nesting and possible carnivore denning area. If these concerns are not resolved through avoidance or mitigation measures, a highly negative impact could result, both in the short-term and the long-term."

Indeed, at pages 424-425, this report makes the point that a detailed environmental study is needed along the southern portion of the Alcan route in British Columbia.

Except for minor adjustments, the final alignments of El Paso Alaska and Arctic Gas are known. Their compressor stations have been located to minimize, to the extent practicable, environmental impact. Alcan, on the other hand, is still engaged in the process of aligning its pipeline; the location of many

compressor stations is subject to doubt and change. This uncertainty is one of several reasons that makes suspect the engineering, cost, and schedule proffered by Alcan for its pipeline.

E. Financing the 48-Inch Alternative

1. Negative Impact on Financial Feasibility on All Counts

The Alcan sponsors stated that their 48" alternative proposal "does result in increased capital costs."^{3/} More importantly, as capital costs have increased, related external financing needs have increased more than proportionately. Financing difficulties have therefore been generally aggravated. Further, those markets least able to support higher capital demands bear the larger share of these required increases under the new Alcan plan.

The 48" alternative circumvents none of the basic impediments to financeability which beset the earlier proposal. Available capital is still limited. No new financing entities or new sources of capital have been suggested. Other major Canadian federal and municipal government projects would still compete for funds, as would privately financed Canadian natural resource projects. A sound basis of project credit support has

^{3/} Proposal of Alcan Pipeline Company for a 48-Inch Express Line Alternative for an Alaska Natural Gas Transportation System, III A, p. 5.

still not been set forth nor have any significantly stronger assurances been given that the Maple Leaf Project would not compete for labor, materials and capital.

2. Higher Capital Costs

The overall system cost estimate for the 48" alternative is \$9,630.6 million, or \$583.1 million higher than the 42" alternative. In addition, except for Northwest Pipeline, whose pipeline system would not be expanded under the 48" proposal, none of the component operating and project companies has significantly lower capital costs under the 48" proposal, and most have higher amounts. Both the Canadian and the U.S. portions of the new alternative require increases in capital costs. (See Table 1.)

3. Higher External Financing Requirements

More dramatic than the greater cost of the 48" proposal is the resultant \$1.46 billion increase in overall funding requirements. As Table 2 sets forth, the new plan provides no significant decreases in external financing needs for any security category either in the U.S. or Canada. No capital market has been relieved under the new proposal, but the pressure on several has grown significantly.

SUMMARY OF COMPOSITE SYSTEM COST ESTIMATES
FOR THE ALCAN PROJECT

Table 1

Comparison of the 42-Inch and 48-Inch Alternatives

(Dollars in Millions)

	<u>48" Alt. (a)</u>	<u>42" Alt. (b)</u>	<u>Change (c)</u>
<u>Canadian</u>			
Foothills Pipe Lines Ltd. (Yukon)	\$1,309.8	\$1,366.3	\$ (56.5)
Foothills Pipe Lines Ltd. (Saskatchewan)	192.2	-	192.2
The Alberta Gas Trunk Line Co. Ltd.	971.6	978.1	(6.5)
Westcoast Transmission Co. Ltd.	<u>1,293.5</u>	<u>1,201.4</u>	<u>92.1</u>
Canadian Subtotal	<u>3,767.1</u>	<u>3,545.8</u>	<u>221.3</u>
<u>U. S.</u>			
Alcan Pipeline Co.	3,498.5	3,116.3	382.2
Northwest Pipeline Corp.	-	350.7	(350.7)
Pacific Gas & Electric Co.	387.8	366.9	20.9
Pacific Gas Transmission Co.	363.9	140.4	223.5
Northern Border Pipeline Co.	<u>1,613.3</u>	<u>1,527.4</u>	<u>85.9</u>
U.S. Subtotal	<u>5,863.5</u>	<u>5,501.7</u>	<u>361.8</u>
 Total	 <u>\$9,630.6</u>	 <u>\$9,047.5</u>	 <u>\$ 583.1</u>

- (a) Source: Alcan Pipeline Project 48 Inch Alternative Proposal, Section 6, Exhibit 6-2, p.2.
- (b) Source: AP-15, Schedule F2.
- (c) Increase (decrease) of the 48-Inch Alternative as compared with the original 42-Inch Proposal.

Table 2

SUMMARY OF TOTAL ESTIMATED FINANCING REQUIREMENTS
OF COMPANIES ASSOCIATED WITH THE ALCAN PROJECT
(BY SOURCE OF FUNDS)

Comparison of the 42-Inch and 48-Inch Alternatives
(1978-1983)

(Dollars in Millions)

	Canadian Funds			
	48" Alt.(a)	42" Alt.(b)	Change(c)	% Change
Bank Loans	\$1,265	\$1,306	\$ (41)	(3.1)%
Long-Term Debt	1,025	1,005	20	2.0
Preferred Stock	525	310	215	69.4
Common Stock	543	448	95	21.2
Total	\$3,358	\$3,069	\$ 289	9.4

	U.S. Funds			
	48" Alt.(a)	42" Alt.(b)	Change(c)	% Change
Bank Loans	\$ 966	\$ 955(d)	\$ 11	1.2%
Long-Term Debt	6,003	4,947	1,056	21.3
Preferred Stock	246	265	(19)	(7.2)
Common Stock	1,410	1,287	123	9.6
Total	\$8,625	\$7,454	\$1,171	15.7

	Total Funds			
	48" Alt.(a)	42" Alt.(b)	Change(c)	% Change
Bank Loans	\$ 2,231	\$ 2,261	\$ (30)	(1.3)%
Long-Term Debt	7,028	5,952	1,076	18.1
Preferred Stock	771	575	196	34.1
Common Stock	1,953	1,735	218	12.6
Total	\$11,983	\$10,523	\$1,460	13.9

- (a) Source: Alcan Pipeline Project 48-Inch Alternative Proposal, Section 8, Exhibit C, as amended with Supplemental Financing Information.
- (b) Source: AP-15, Schedule C.
- (c) Increase (decrease) of the 48-Inch Alternative as compared with the original 42-Inch Proposal.
- (d) Adjusted to exclude \$400 million of U.S. bank debt for Northern Border Pipeline, originally included in AP-15, Schedule C.

4. Required Financing Expanded Most in Weaker Markets

Not only does the 48" proposal entail \$1.46 billion (13.9%) in increased total estimated external financing requirements, but the shift in overall financing burden mix is also unfavorable. Three particularly restricted capital markets would have to supply disproportionately larger amounts of funds under the 48" alternative. Table 2 shows increases in funds to be raised via sale of (1) U.S. long-term debt, primarily representing increased borrowings by Canadian participants (up 21.3%), (2) Canadian preferred stock (up 69.4%), and (3) Canadian common stock (up 21.2%). Northwest Pipeline, among the more financeable of the Alcan project participants, is not among the companies requiring external financing under the 48" alternative. However, this reduced financing requirement is offset several times over the increased capital needs of Alcan Pipeline, a U.S. project company, and the three Canadian project and operating company participants. The increased financing burden of the revised project falls, therefore, on the weaker shoulders.

The U.S. long-term debt market available to Canadian borrowers is severely restricted by the Canadian basket limitation which impacts all major U.S. life insurance companies. In spite of Alcan's arguments that a U.S. funding vehicle could circumvent the 10% Canadian basket limitation, there is no evidence in the record to support the supposition that such a

gimmick would work. This consideration, along with the probability that Alberta Gas Trunk and Westcoast would have to pre-commit first mortgage bond financing in the private market^{4/} means that the 21.3% increase in long-term debt to be raised by Canadian entities in the U.S. would be even more difficult and probably impossible to obtain.

As pointed out previously, the original 42" proposal, along with associated Maple Leaf Project financings, would have placed financing requirements on the Canadian equity market which would have been more than 300% larger than the total amounts of equity raised by all Canadian pipelines in all markets during the six years 1970-1975. The increases in preferred and common stock financing needs required by the change from the 42" to 48" project would by themselves approximately equal the total amount of external equity funds raised by Canadian pipelines in that same six-year period. This enormous demand on the Canadian equity markets is clearly unprecedented and is in no way supported by any Alcan market capacity study.

5. Previous Criticisms Still Valid

It has been shown that the 48" proposal would produce no significant decreases in external financing requirements for

^{4/} See Brief of El Paso Alaska Company Concerning Financing, pp. 91-94.

1001 Route Reg-1-100000
 1001 Route Reg-1-100000
 1001 Route Reg-1-100000

[illegible]

any security category in either the U.S. or Canada. In several security categories and on an overall basis, the external funding requirements have been significantly increased.

It follows, therefore, that all of the arguments set forth in EP-279 and in Brief of El Paso Alaska Company Concerning Financing questioning the financial feasibility of the Alcan project can be made even more strongly in the 48" case:

"Unlike El Paso Alaska, which will finance solely in U.S. markets, the participants in the Alcan Project are U.S. and Canadian entities which must rely upon a wide variety of markets and financing vehicles to supply their very substantial capital needs. Great dependence is placed upon the availability of capital to Canadian-based companies from private and public Canadian markets and from that portion of the U.S. private market available to Canadian companies. Since these are relatively limited sources of capital, the requirement to tap these markets, year after year, raises questions about the financial feasibility of the Project.

"Projected funding requirements for Alcan would press the limits of the U.S. and Canadian private placement markets. It would do as much to the U.S. and Canadian banking systems, as well as the Canadian equity market. In the absence of governmental guarantees from the United States, currently of uncertain definition and availability, there is no proof by Alcan that adequate financing will be forthcoming. Even in markets where adequate capacity seems to exist, Alcan's cost of capital, which must ultimately be borne by the American gas consumer, would be substantially higher than the cost to an American-only project of similar credit standing. Finally, the plan involves timing and coordination among a large number

of companies having various financing requirements and making competing demands in the U.S. and Canadian capital markets." 5/

No significant changes in suggested plans for implementation or in proposed credit support have been set forth by the Alcan project sponsors. The complexity of plan implementation remains. As before, no information has been filed which would suggest that key parties in Alcan's credit support scheme would feel obliged to participate in the manner which Alcan's financial advisers have proposed.

Finally, the competition for funds from the Maple Leaf Project would be even more intense, now that the Alcan project's external financing needs have been increased. The Administrative Law Judge's "Initial Decision" correctly points out that:

"While Alcan espoused a 13- to 22-month timing gap between projects as a minimum to avoid direct financing competition, the investment and lending communities could well require actual Alcan operations and cash flow before the construction of Maple Leaf to avoid the aggregation of the capital requirements of the two projects. This would mean at least a 4-year timing difference." 6/

In conjunction with this, it should be noted that:

"Recognition of Maple Leaf's first-born status is set forth for all to see in the agreement

5/ Brief of El Paso Alaska Company Concerning Financing, pp. 71-72.

6/ F.P.C. Initial Decision, p. 378.