

ALASKA LEGISLATURE SPECIAL COMMITTEE/SUBJECT FILES 8672

2965 SCOMM 129: JOINT COMMITTEE ON NATURAL GAS PIPELINES, 2001-02

the Mackenzie, so the Dempster Highway route is no longer needed, he said.

A council member asked why the Alaska Highway "southern" route has advantages over the "northern" offshore route, if that route is shorter.

Ellwood responded that Foothills conduct a 50,000 man/hour study of the northern route and concluded that it would wind up costing about the same as the southern, highway route because of potential problems with ice scour and trenching in the offshore segments, and problems of where to locate compressor stations if an onshore site is unavailable in wildlife refuges in northeastern Alaska (ANWR) and Yukon Territory. The southern route, although longer, has less risk. Also, availability of existing road infrastructure is a big asset.

Ellwood added that an additional problem facing a northern route is the commercial problem of sizing the pipeline to carry an unknown amount of gas from the Mackenzie delta that is unproven (undrilled) at this point. In contrast the North Slope gas is a proven, confirmed resource. The problem is financing a northern route pipeline with enough capacity to carry both Alaskan and Mackenzie gas without the Mackenzie reserves defined to the point where contracts for gas shipment can support the additional investment.

A council member asked about available capacity in pipelines from Canada to the U.S. that could connect with an Alaska pipeline in western Canada.

Ellwood responded that the existing pipeline grid in Canada has about 1 billion to 1.5 billion cubic/feet per day unused capacity. Even if that capacity is not available by the time an Alaska pipeline is built (production from Canada is expected to increase by that time) the pipeline grid can be expanded, as it has before, or a new pipeline can be built.

Alaska North Slope LNG Project

Steve Alleman, project manager, made the presentation.

Alleman reviewed his group's progress to date in its work on an LNG export project. Phase one, completed last fall, involved \$12 million expended in conceptual engineering, commercial and market feasibility work.

This was successful in that a scaled down project was defined that would produce a volume of LNG (7 million tons/LNG annually) that might better fit into what the sponsor group feels is the available market in the Pacific.

The project can then be expanded as the market develops.

However, even a scaled-down project was not deemed to be cost competitive, Alleman told the council. The group's current key focus, in a \$3 million phase two effort, is to find potential cost savings through synergy with the Lower 48 pipeline project being planned by the North Slope producers. This would involve the "Y" concept, or a pipeline spur connecting in Interior Alaska that would carry gas to a southern Alaska LNG plant. This would shorten the distance of new "stand alone" pipeline. The lower capital cost might improve the project's economics but whether it would be enough is still uncertain.

Alleman told the council that his group expects to conclude internal studies on an environmental assessment of the Cook Inlet route by the end of April, and to have cost estimates for a project that links with the Lower 48 pipeline as early as mid-June or July.

A council member asked about any benefits of public financing or public ownership.

Alleman said his group's analysis so far is that no compelling advantage is presented in a "public/private partnership" with an entity like the Alaska Gasline Port Authority (meaning a project partly owned by both industry and the authority). He added, however, that full public ownership of a project that can fully realize federal tax advantages may be different. Further discussions with the port authority are planned.

To illustrate the challenges the LNG project faces, Alleman showed a slide to the council that compared estimated capital costs of other proposed LNG projects, including proposed expansions and new "greenfield" (entirely new) projects, like Alaska, that are competing for the expected new demand in Asia. Figures in the chart are based on published information, he said.

The chart shows the average capital cost among the competing projects, per million tons of LNG delivered yearly, range between \$225 million to \$250 million per million tons of annual LNG delivery. The estimated cost of the Alaska project, with a stand-alone pipeline (i.e. without the link to the Lower 48 pipeline) ranges between \$610 million to \$790 million per million tons delivered. The 800-mile pipeline (in the case of a stand-alone pipeline) is about \$300 million per million tons per year, or 40 percent to 50 percent of the project total unit cost. The pipeline is a huge challenge for the project when compared with its competitors, which are at tidewater, Alleman told the council.

(Editor's note: Three of the LNG sponsor group's four members are involved in Lower 48 pipeline studies: BP, Phillips and Foothills.)

A council member asked why the existing Phillips LNG plant at Nikiski couldn't be expanded, in a case where a pipeline went to Cook Inlet.

Alleman replied the group continues to look at that, and has not ruled out exploring possible synergies there.

A council member asked about the economics of ocean shipping of LNG. With Phillips looking at importing LNG from Australia to the U.S. West Coast, wouldn't Alaska, with a shorter shipping distance, be as or more competitive?

Alleman replied that his group had compared published estimates on "total cost of service" (including shipping) from Australia to California, and penalized the Australian service with the need for additional ships because of the longer distance. The Alaska project, in shipping LNG to California, still wasn't as competitive, he said, primarily because of the 800-mile Arctic pipeline that an Alaska project must overcome.

A council member observed that some of the existing LNG projects in southeast Asia can be more competitive than a new Alaska project, even with a longer shipping distance, because the LNG tankers are already built and in service. He asked for more information on the total cost of service of supplying LNG from Australia compared with estimates for an Alaska project, which is one quarter of the distance.

Alleman said he would get the information to the council on shipping distances.

Yukon Pacific Corp.

The presentation was made by Jeff Lowenfels, president and CEO of Yukon Pacific.

Lowenfels said there are three "myths" about an LNG project, that there is "no market," that LNG is not an option, and that the overland (Lower 48) project is the only option. Alaska gas does face challenges because of its remote location and competition from other LNG projects, so any project from Alaska must be big to achieve economies of scale.

Despite all the work on gas over the years, the producers were not in a position to sell gas until June, 2000, when the realignment of ownership in the Prudhoe Bay field changed conflicting priorities among the field owners, mainly three major producing companies.

Yukon Pacific has done extensive work on permits over the years and has secured the major "deal-killer" permits, Lowenfels said. In comparison, it will not be easy to permit the Alaska Highway route with the existing requirements of U.S. and Canadian laws on a highway pipeline, he said.

As for market demand, several studies, including independent U.S. groups like Standard and Poors, feel Asian demand for LNG will grow sharply. Estimates by private industry within the three Asian nations that are most likely markets for Alaska gas, Japan, Korea and Taiwan, show strong future demand. Government estimates are lower because they assume more power will be supplied by nuclear plants, an assumption private industry discounts, Lowenfels said. India and probably China are probably not markets for Alaska because those countries can be supplied more economically by producers in Southeast Asia and the Middle East, but growing demand for LNG in both countries will take supply off the market, indirectly helping Alaska.

Lowenfels showed a chart showing results of two studies by engineering groups, one by Willbros Engineering and Micheal Baker Jr., and a second by Kellogg Brown & Root and Air Products and Chemicals, Inc. The estimates showed a "startup" project delivering 9.2 million tons/year of LNG could be built for \$6 billion (2000 dollars), expanded to 13.8 million tons/year with an additional investment of \$1.1 billion, and expanded again to 18.4 million tons/year with an additional \$1.2 billion investment.

The total "cost of service" to Japan, including shipping, at a "low" case of \$1.99 per million British Thermal Units (Btu) delivered to a "high" case of \$2.91 per million Btu delivered. This appears attractive in the context of estimates by Tokyo Gas that it will contract LNG for \$3.88 per million Btu between 2005 and 2010. "Our numbers work," said Lowenfels.

In discussion following the presentation, Lowenfels said YPC was shocked to discover that the assumptions used in the Purvin & Gertz (a consulting firm relied on by industry and the state) study for LNG relied on generic "off the shelf" data rather than estimates compiled by YPC itself. The effect is to understate the benefits of an LNG project, Lowenfels said. YPC is now discussing the report with Purvin & Gertz, and is hopeful that a more up-to-date "apples to apples" comparison can be made.

Lowenfels urged the council to question why the "highway" is its mandate. Yukon Pacific has been working on an LNG project for many years, but was not consulted, he said. He said he didn't know what information the state administration relied on in making its decision in favor of the highway route, but he suspected it was the Purvin & Gertz study.

A council member observed that he has always favored access to multiple gas markets, since individual markets will always cycle up and down. He asked if the Lower 48 pipeline now being planned helps Yukon Pacific's project. Why doesn't YPC plan a smaller project, sized to fit the market, building off the larger pipeline?

Lowenfels replied that YPC had always built in an assumption of size that would allow a pipeline to the Lower 48 to branch off at Delta. He said his company also favors some form of transparency (clear, predetermined procedures) for gas offtake, if not public ownership.

A council member asked if YPC sees a higher wellhead price for gas from an LNG project, why Phillips (lead company in the industry LNG consortium) doesn't also see that.

Lowenfels replied that individual companies may have other projects with higher rates of return, fewer partners to deal with or complexities in putting a project together, or combinations of all those. There may be other factors affecting Phillips' decision to participate in a project to import LNG from Australia rather than Alaska, such as a possible deadline on a concession in Australia.

A council member replied that it seemed odd that Phillips, with an ownership interest in Alaska gas and a motivation to commercialize the asset, doesn't see a return similar to that in Australia, which is more distant.

Lowenfels replied that projects compete for funds, and investments go to the project with the highest return and fewest headaches. "I think that's what is going on here," he said.

A council member asked if there wasn't a danger in proceeding on a parallel track with the pipeline to the Lower 48.

Lowenfels replied that he has no confidence the Lower 48 pipeline will really proceed. Even the companies

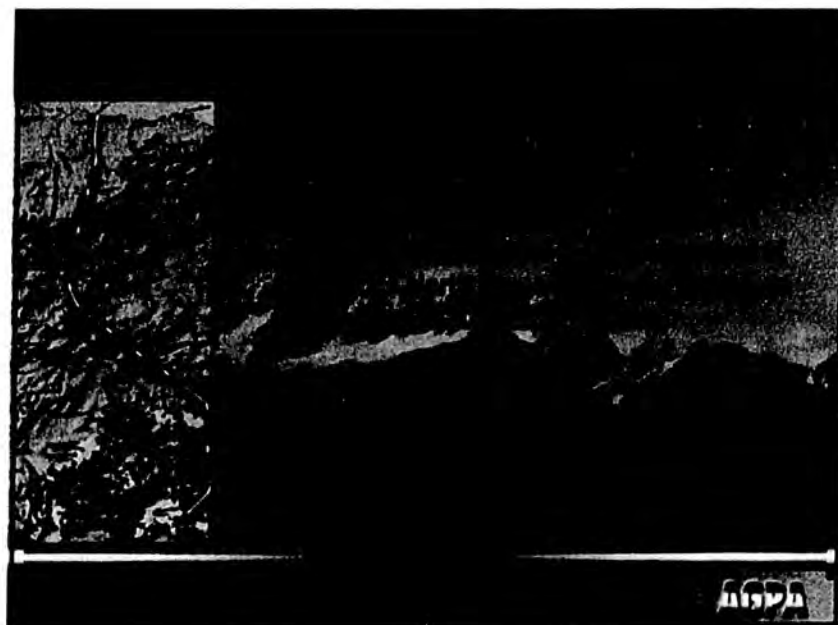
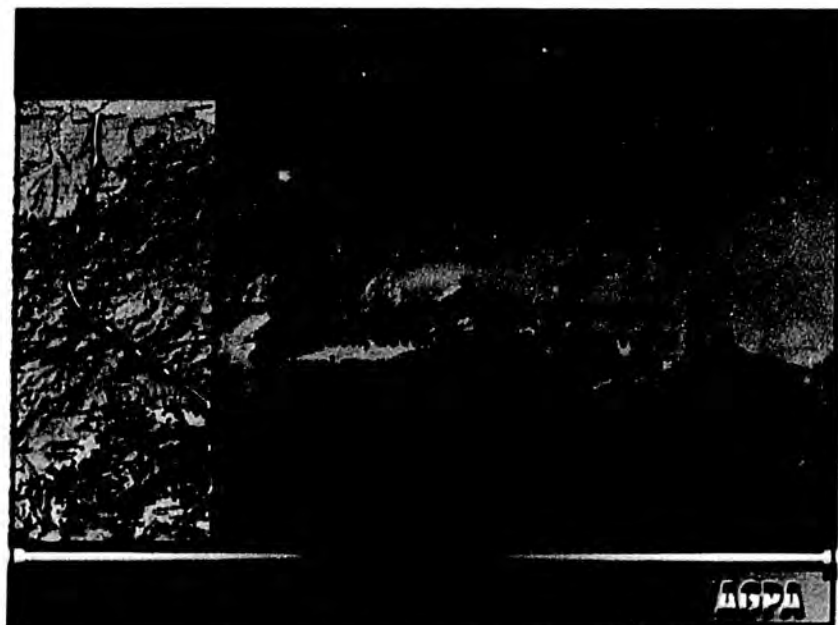
involved say they're not sure they really have a project, he told the council. That is why YPC is continuing to work on its own project. "We hopes it (the Lower 48 pipeline) does go, because we can easily piggyback on it. But we can't stop our work to wait for them," Lowenfels said.

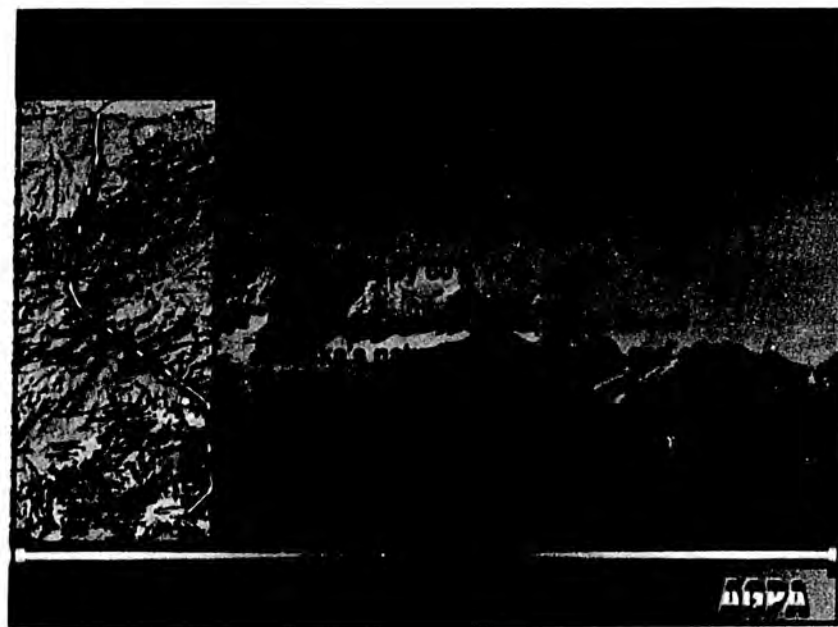
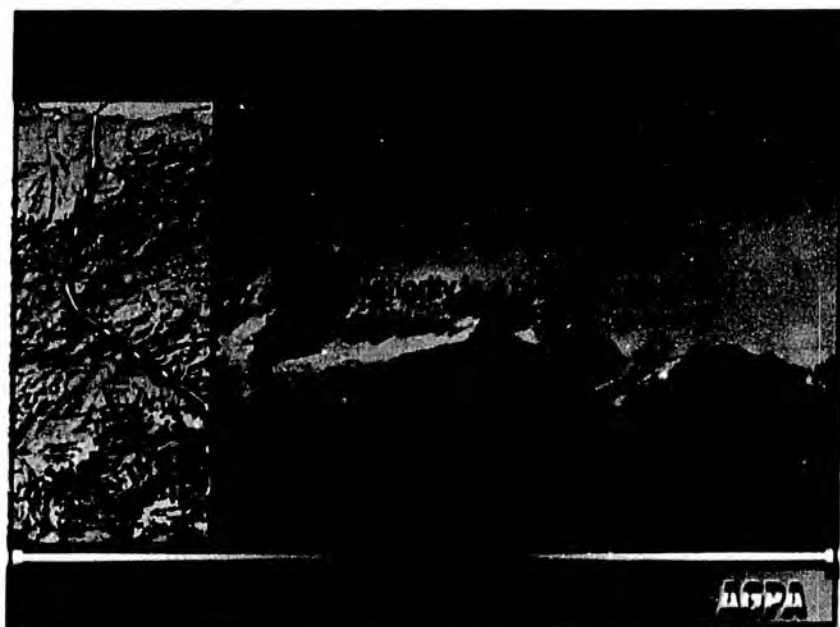
The Lower 48 pipeline, and the governor's decision to support it, has been a setback for Yukon Pacific, however. It sends a message to potential buyers in Asia that Alaska has might not be available. That is why the senior gas manager from Tokyo Gas came to Alaska a few weeks previous, to tell state and community leaders that his company is very interested in North Slope gas.

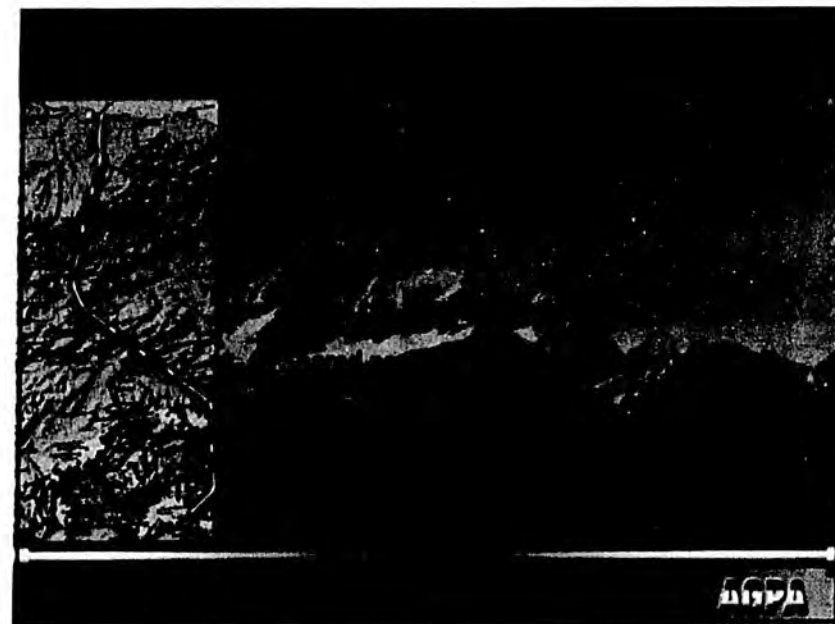
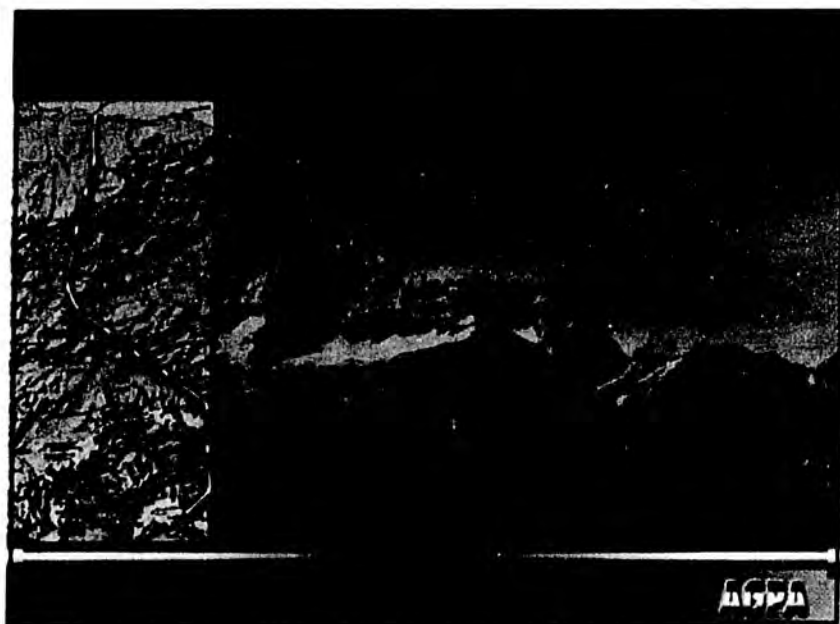
Lowenfels also observed that discussion of a 6 billion cubic feet/day gas throughput for a project (in the port authority's case) is too high. It would deplete the only current North Slope reserves in production in nine and a half years. Lowenfels said that only current production is available today. There is no assurance any other fields will be opened and hence only the 21 trillion cubic feet left in the Prudhoe Bay Unit is available for any project. YPC's project assumes a lower throughput rate of two billion cubic feet/day, which can be sustained for a much longer time.

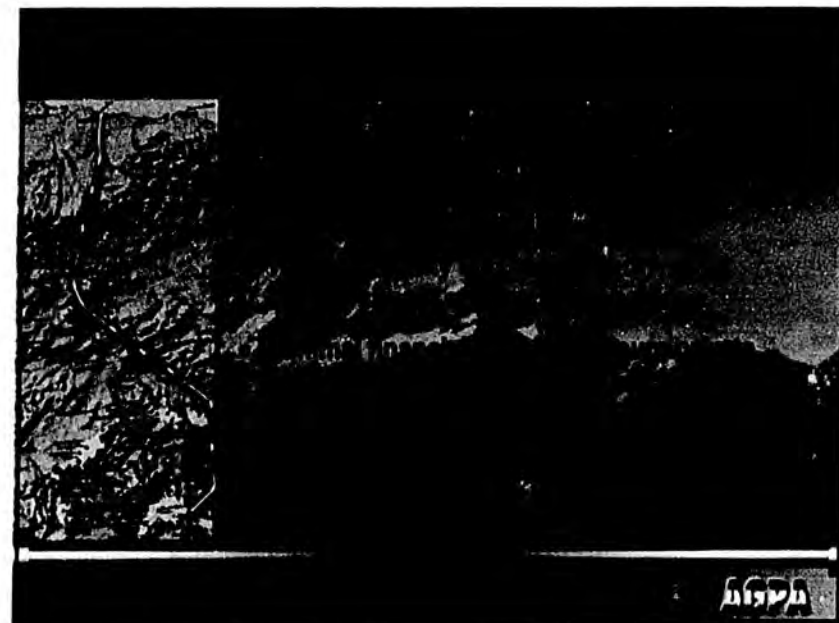
A council member asked Lowenfels' opinion of a gas reserves tax (a state property tax) on undeveloped gas on the North Slope. (The proposal has been made by a state legislator).

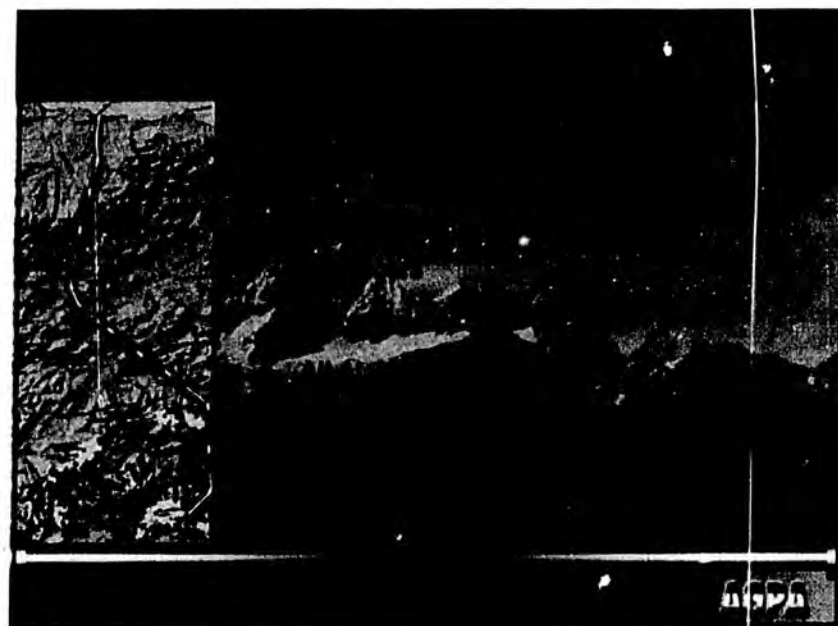
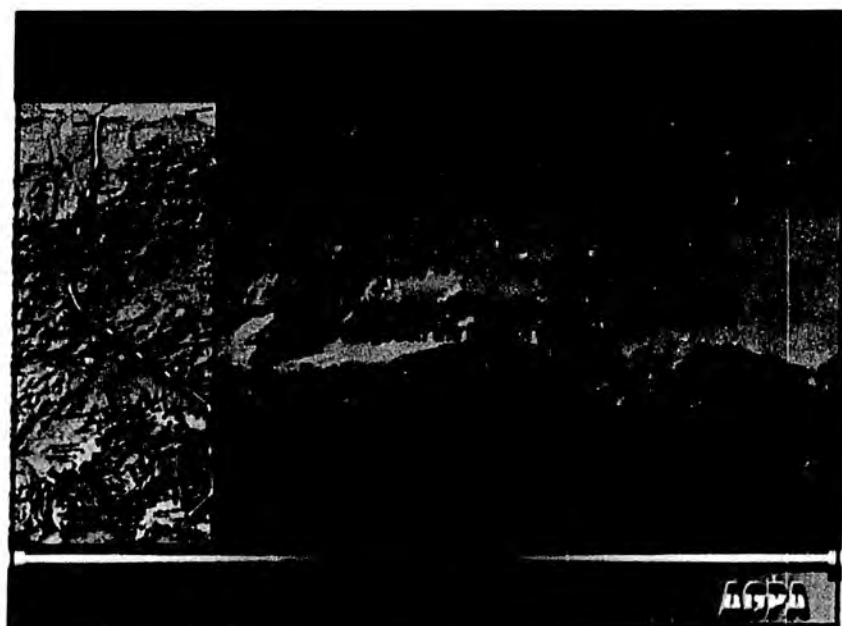
Lowenfels replied that the idea was interesting, and may be appropriate.

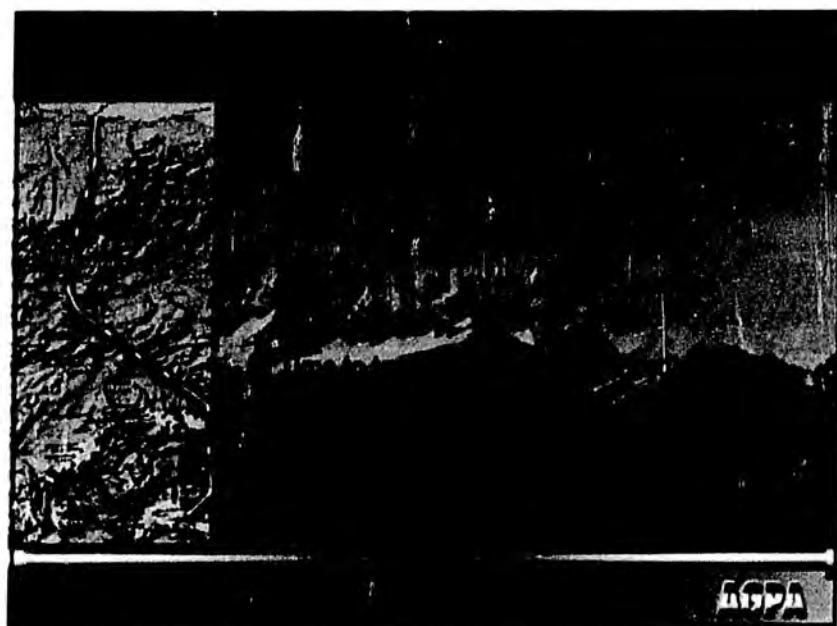


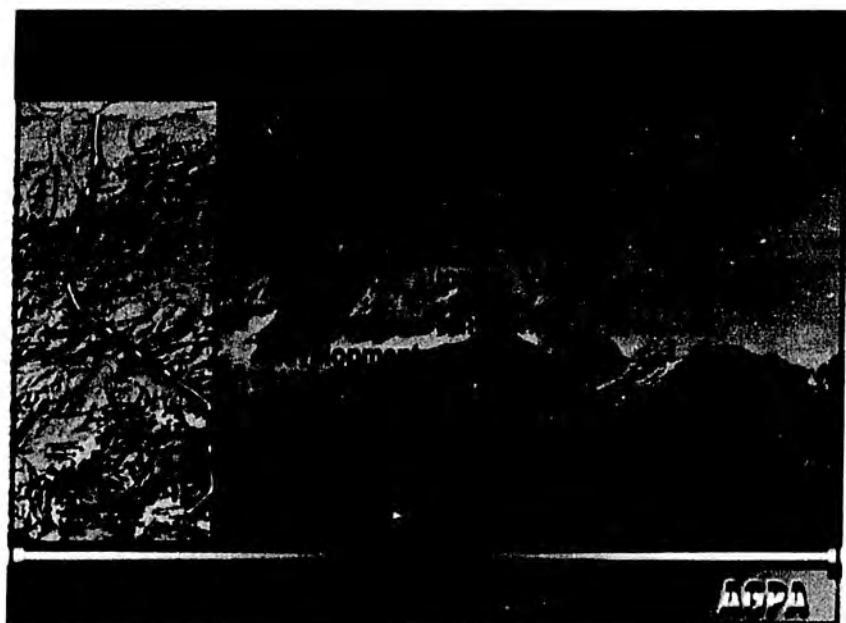




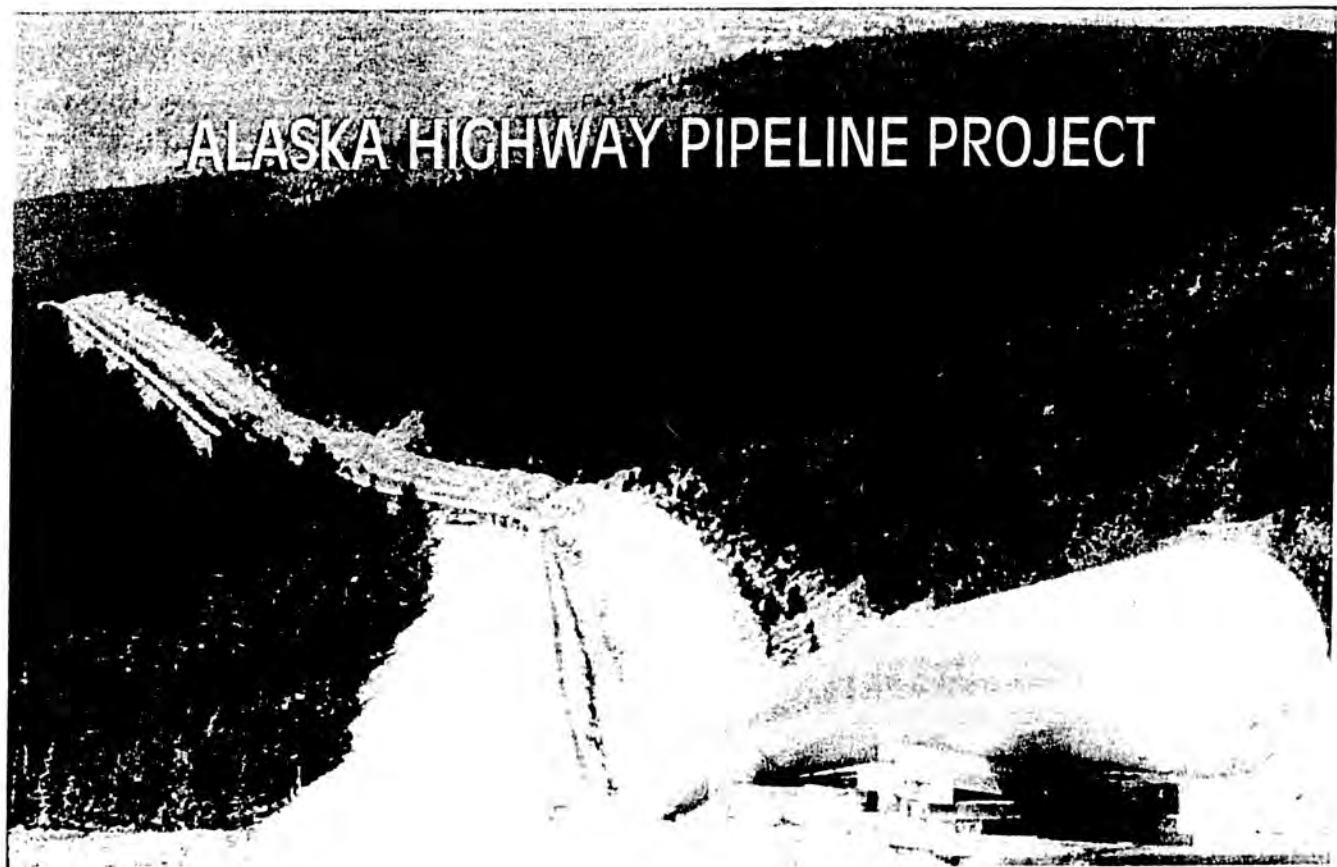








Governor's Alaska Highway Natural Gas Policy Council



April 5, 2001

Presentation by

John Ellwood
Vice President, Engineering & Operations



Foothills Pipe Lines Ltd.

Foothills Pipe Lines Ltd. / Alaska Highway Gas Pipeline Project

My name is John Ellwood. I am Vice President, Engineering and Operations at Foothills Pipe Lines Ltd. ("Foothills"). We appreciate your invitation to discuss the transportation of Alaska North Slope natural gas to markets in the lower-48 states through the Alaska Natural Gas Transportation System ("Alaska Highway Project").

Let me begin by telling you about Foothills. Our Company is jointly owned by Westcoast Energy Ltd. ("Westcoast") and TransCanada PipeLines Limited. ("TransCanada"), the two major players in the Canadian gas pipeline business. Our corporate mission is very specific: to build and operate the Alaska Highway Pipeline Project. We were leaders in the project that was conceived twenty-five years ago, and we are just as committed today.

Between Westcoast and TransCanada, we have nearly 100 years of experience in developing, building and operating gas pipeline projects. We have been involved with every major Canadian gas pipeline project built in the last fifteen years.

Our existing pipeline systems provide access to five of North America's largest natural gas markets. Together, these systems have the capability to move fifteen billion cubic feet per day of gas from Western Canada to the consuming markets. Canadian gas accounts for almost 20% of all gas consumed in the United States and all of that gas currently moves through pipelines owned in whole or in part by TransCanada and Westcoast.

Attachment 1 shows the existing and planned pipeline network of Westcoast and TransCanada.

TransCanada, Westcoast and Foothills have developed leading edge gas pipeline design, construction and operating technology, including expertise in dense phase designs. We are also well known for our development of environmentally sound design, construction and operation practices. We believe that our expertise in northern, remote and difficult terrain gas pipeline construction and operations is second to none.

Building and operating pipelines is our core business.

The Alaska Highway Project is the Alaskan gas pipeline project approved in accordance with the Alaska Natural Gas Transportation Act of 1976 ("ANGTA") in the U.S., the 1978 Northern Pipeline Act in Canada, and the 1977 Agreement Applicable to a Northern Natural Gas Pipeline between the two countries ("U.S./Canada Agreement"). The project is shown in green on Attachment 2. As approved, the Alaska Highway Project is a 4,800-mile international pipeline project commencing at Prudhoe Bay and terminating in the Midwest and California market areas. It is important to note that the southern part of this pipeline has been constructed and is in full operation. The route for this system parallels the Trans Alaska Pipeline System ("TAPS") to Fairbanks, where it angles southeast, following the Alcan Highway to the Alaska-Yukon border with Canada, down through the Yukon Territory and northern British Columbia, and into Alberta. In Alberta, the pipeline splits into two legs. The Eastern Leg proceeds southwest, crossing the U.S.-Canada border at Monchy, Saskatchewan and terminating near Chicago. The Western Leg proceeds southwest, crossing the U.S.-Canada border near Kingsgate, British Columbia and terminating at a point near San Francisco, California.

Foothills and TransCanada are the two remaining partners of the Alaska Northwest Natural Gas Transportation Company (Alaska Northwest), a partnership formed to construct and operate the Alaska portion of the Alaska Highway Project. In addition, Foothills is the Canadian sponsor of the Alaska Highway Project, and the majority owner and operator of the Canadian portions of the Eastern and Western Legs of the Alaska Highway Project.

Foothills has continuously championed the Alaska Highway Pipeline Project from the very beginning.

The Project is back **"on the list"** of possible solutions to the current North American concerns about high energy prices and the adequacy of natural gas supplies.

At the outset, there are some basic points that we should delineate:

- It is important to remember that this pipeline crosses the territory of two countries with different regulatory and political regimes.
- The Project has a long history, which adds unique attributes. The permits which have been issued are a product of this history and to understand the former requires an appreciation of the latter. Significantly, ANGTA in the U.S. and the Northern Pipeline Act in Canada create expedited procedures for completing the chosen system, the Alaska Highway Project.
- The pipeline permitting process can be very time consuming. In addition to the substantial work already completed on both the Alaskan and Canadian portions of the Alaska Highway Project, the special legislative and regulatory procedures in place in the U.S. and Canada will assist in expediting the construction and initial operation of the Project and keeping unnecessary delays to a minimum.

Historical Background

As I indicated, there are important historical dimensions associated with this project. We might focus on the time frame 1976-1982. Originally, there were three competing Alaskan natural gas pipelines proposed. As shown on Attachment 3, two of the projects were overland pipelines through Alaska and Canada. The third project would have transported gas by pipeline to tidewater, following the route of the "TAPS" pipeline, where the gas would be liquefied and transported to California by liquefied natural gas ("LNG") tankers.

The U.S Congress enacted the Alaska Natural Gas Transportation Act of 1976 with a purpose to provide an expedited process with respect to the selection of a single transportation system for the delivery of Alaska natural gas to the lower forty-eight states and to expedite construction and initial operation of the chosen transportation system.

With respect to the transportation of Alaska North Slope gas to markets in the lower 48 states, ANGTA superseded the usual Natural Gas Act ("NGA") process for granting Federal regulatory authorization to construct and

operate a pipeline. ANGTA assigned the responsibility for the overall Alaska pipeline agenda to the President and Congress. Much the same approach was followed in Canada, where the Government took an active role in the decision regarding the Alaska natural gas pipeline. The reason for the creation of this extraordinary authority was that the governments wanted to expedite a cumbersome regulatory approval process in order to move more quickly to a solution.

Prior to 1978, a Canadian Board of Inquiry (The Berger Inquiry) examined a proposal to move Alaska gas across the North Slope and along the Mackenzie Valley. At the same time the National Energy Board ("NEB") held a hearing to determine which of the two overland pipeline routes was acceptable to Canada. Both processes rejected the North Slope route (primarily for environmental reasons) and the NEB recommended the Alaska Highway (Alaska Highway Project) option, being promoted by Foothills. The Berger Inquiry recommended that no pipeline should be built along the Mackenzie Valley for at least a decade and that a pipeline across the northern Yukon should never be built.

During this same period of time the Federal Power Commission (later to become the Federal Energy Regulatory Commission ("FERC")) came to a split decision on the question of which route should be selected.

Following the enactment of the ANGTA, the President selected the Alaska Highway route and the Alaska Highway Project with his Decision and Report to Congress on the Alaska Natural Gas Transportation System ("President's Decision" or "Decision").

In 1977 just prior to the President issuing his Decision, the U.S. and Canada signed the U.S./Canada Agreement. This agreement or treaty, established the route, chose the companies who would build and operate the system, established tolling principles, and set the terms and principles to be followed in facilitating the construction and operation of the Alaska Highway Project pipeline. The President's Decision reflected the U.S./Canada Agreement. The Decision and the Agreement were subsequently approved by the U.S. Congress.

In 1978 Canadian Parliament enacted the Northern Pipeline Act. The Act:

- 1) incorporated all of the terms of the U.S./Canada Agreement
- 2) issued statutory certificates of public convenience and necessity to the respective subsidiaries of Foothills Pipe Lines Ltd.,
- 3) created the Northern Pipeline Agency to "*facilitate the efficient and expeditious planning and construction of the pipeline*"
- 4) established the methodology and rules for setting the Canadian tolls and tariffs for the pipeline
- 5) selected the route for the pipeline across Canada and
- 6) established Terms and Conditions respecting the socio-economic, environmental, construction and operations matters.

The complete Alaska Highway Project is shown on Attachment 2.

The President's Decision designated Alcan Pipeline, a subsidiary of Northwest Pipeline Company (Northwest), as the party who would construct and operate the Alaska pipeline segment of the Alaska Highway Project. This authority was later assigned to Alaska Northwest, a partnership assembled by Northwest. At one time Alaska Northwest consisted of eleven (11) partners, all subsidiaries of U.S. or Canadian pipeline companies.

Given the magnitude of the pipeline undertaking Alaska Northwest sought to recruit the North Slope Producers to join the project and assist the financing of the pipeline. The Producers expressed a willingness to join but were restricted by the President's Decision that disallowed the producers taking an equity position in the pipeline. In 1981, President Reagan submitted and Congress approved a Waiver of Law package allowing producer participation and including in the project, the North Slope gas conditioning facility.

In 1980, before the Waiver of Law was passed, Alaska Northwest and the Alaska Producers entered into a Cooperation Agreement providing for joint funding of the design and engineering of the Alaska Highway pipeline and

the gas conditioning facility. Following the approval of the Waiver of Law, the scope of the Cooperation Agreement was expanded to encompass efforts to achieve the remaining regulatory approvals and to jointly pursue financing arrangements. The two sides anticipated that affiliates of the Producers would join the Alaska Northwest Partnership.

Design, engineering, environmental, financing and regulatory work proceeded along parallel tracks in Alaska and in Canada during this period of time.

As world wide energy supply and demand came back into balance and the "energy crisis" eased, the focus of the pipeline shifted to the pre-building of the southern portions of the Alaska Highway Project as shown on Attachment 4. There was a disagreement between Canada and the United States over this issue, primarily as it related to the export of Canadian natural gas to the U.S. market.

The Canadian Government was unwilling to authorize the Pre-build or the gas exports without further assurance from the United States that the entire Alaska Highway Project, including the Alaska segment, would eventually be completed. This assurance was forthcoming in a letter from President Carter to Prime Minister Trudeau, along with a Congressional resolution. As a result the southern Pre-build pipeline section was completed by 1982. This involved constructing 650 miles of 36 and 42 inch pipeline from Caroline, Alberta to Monchy and Kingsgate on the US border. The Pre-build and subsequent expansions were constructed pursuant to the Northern Pipeline Act and it's regulatory regime managed by the Northern Pipeline Agency.

When the Pre-build construction began it was widely anticipated that North American natural gas demand would quickly resume its upward trend. However the market did not recover as anticipated and demobilization of the Alaska Highway Project soon began.

In order to remobilize, we will be required to make modifications and enhancements to various elements of the Alaska Highway Project regime. Pipeline designs will have to be modified so that that the Project can respond to capacity and gas quality requirements of the shippers. We will have to incorporate the latest technology and techniques necessary to ensure that the maximum environmental protection measures are in place. We do not

expect any difficulty in introducing these revisions which are so obviously of benefit to all parties.

Clearly there is a lot of work still to be done. It is very important to understand is that the advantages that come with the unique ANGTA and NPA regulatory regimes far outweigh the alternative of starting from scratch. Using the existing statutes and treaty we can assist in having Alaska natural gas into the U.S. market sooner, with competitive transportation costs and at the same time reducing project risks for all stakeholders.

In our capacity as the managing partner of Alaska Northwest we have maintained the Alaska Highway Project in good standing. We have kept the project alive to ensure that the advantages and benefits of the Project could be used in remobilization plans to expedite construction of the pipeline. We particularly wished to preserve what we see as the "special and unique fast track" regulatory regime.

Foothills and its shareholders have expended time and effort to keep the permits current and to optimize the project design. We do not intend to quit the field now that success is within sight.

The Alaska Permits – Federal

A substantial amount of work has been completed by the Alaska Highway Project sponsors to date. Before discussing the specific permits held by Alaska Northwest it is important to better understand the unique regulatory and legislative framework under which these permits were issued, namely ANGTA.

ANGTA and the President's Decision remain in effect and can be terminated only by another act of Congress. ANGTA does not create a perpetual priority for the Alaska Highway Project. Rather, it establishes a priority designed to ensure that the Alaska Highway Project will be completed and begin initial operation in accordance with the decision of the President and Congress. Once the Alaska Highway Project is in operation additional projects may be considered under the Natural Gas Act.

In implementing this priority, ANGTA requires that Federal agencies and officers expedite and issue "at the earliest practicable date" all permits and authorizations required by the Alaska Highway Project. In addition, ANGTA provides that applications and requests with respect to permits and authorizations required by the approved system "shall take precedence" over any similar applications and requests. Furthermore, ANGTA limits the discretion of Federal agencies and officers to include in certificates and permits for the Alaska Highway Project any conditions that would obstruct the system's expeditious construction and initial operation.

As required by ANGTA, the FERC in 1977 expeditiously issued a conditional certificate of public convenience and necessity for the Alaska Highway Project. That certificate contains no expiration date and is still in effect today.

In addition, Alaska Northwest holds a federal right-of-way grant issued in 1980 by the Department of Interior's Bureau of Land Management. That grant does not expire until December 2010, and may be renewed at the request of Alaska Northwest.

Furthermore, Alaska Northwest holds two recently extended Clean Water Act wetlands permits issued by the Army Corps of Engineers in coordination with many other agencies. Those permits were extended through September of 2007.

While these various federal permits were issued some time ago, they all are valid today. Indeed, nothing in ANGTA or in the certificates and authorizations issued for the Alaska Highway Project thereunder provides for the expiration of the chosen system's priority because completion of the Alaska segment was postponed until the U.S. domestic market could support it. Rather, the Alaska portion of the Alaska Highway Project has been held in reserve until the need for additional natural gas arises in the Lower 48 states is such that this section can be completed. As sponsors we have actively protected the preserved Alaska segment by maintaining all necessary certificates and permits and actively overseeing the rights-of-way.

We recognize that these certificates and permits need to be "updated" to capture changes in technology, markets and environmental requirements. We will do such updating, and it can be done within the ANGTA

framework. To that end, a couple of additional points need to be emphasized before I move on to the State permits.

- First, ANGTA clearly envisions and provides for the ability to condition and to amend these permits. These powers are subject only to the limitation prohibiting changes in the "basic nature and general route" and actions that will "otherwise" prevent or impair in any significant respect the expeditious construction and initial operation of the Alaska Highway Project.
- Second, the Alaska Highway Project sponsors' requests for both new permits and amendments to existing permits must be given priority under ANGTA. This priority translates into a timing advantage for the Alaska Highway Project.
- Third, the authority of the Office of Federal Inspector, as transferred to the Secretary of Energy, also continues in effect today to expedite and coordinate federal permitting, enforcement of permit conditions, and facilitation and oversight of the construction and initial operation of the U.S. portion of the Alaska Highway Project.
- Fourth, ANGTA also provides for expedited and limited judicial review of actions taken by Federal agencies and officers.
- Finally, the Alaska Northwest Partnership is well along in permitting the Alaska Highway Project.

The Alaska Permits – State of Alaska

On the state side, Alaska Northwest has a pending State of Alaska right-of-way lease application. Recently, we have initiated discussions with the State officials regarding perfecting and processing the pending application. Also at the state level, Alaska Northwest holds certificates of reasonable assurances issued pursuant to Section 401 of the Clean Water Act and a determination of consistency with the Coastal Zone Management Act.

Additional Alaska Permits

While Foothills already holds the major permits necessary to construct the remainder of the Alaska Highway Project, there are additional permits and authorizations that will need to be obtained. For example, the Alaska Highway Project sponsors will need to acquire a permit under the Clean Air Act. However, these additional permits will be procured as the Project proceeds, and such procurement will not cause a delay in the expeditious construction of the Alaska Highway Project.

The Canadian Permits

On the Canadian side, Foothills holds two unique certificates or permits:

- Certificate of public convenience and necessity.
- Yukon right-of-way.

Certificate of Public Convenience and Necessity

The certificate of public convenience and necessity ("certificate") is the Order issued following a successful hearing before the National Energy Board (NEB) of a pipeline application. The information that is required to be filed for hearing purposes is delineated in regulation and includes details about supply and markets, environmental impact assessment, engineering, construction and operations plans and details about connecting pipeline facilities.

The preparation of the required hearing information generally takes one to two years to complete and the length of the hearing will be proportional to the level of controversy surrounding the issues.

Foothills has completed this phase of the process. We have the "certificates" that entitle us to build a pipeline, subject only to terms and conditions set out in the Alaska Highway Project regime.

The "certificates" are statutory. They were issued by the Parliament of Canada when it enacted the Northern Pipeline Act and are in keeping with the principles and intent of the U.S./Canada Agreement.

We acknowledge that the "certificates" were legislated 20 years ago and that some have raised questions about their scope and validity. Others suggest that the certificates are dated and accordingly must be reissued. The "certificates" are valid. We are on solid legal ground in this regard.

Changes to the pipeline design to accommodate new technical issues and improvements have previously have been granted by the Northern Pipeline Agency both at the time of the construction of the original Pre-build facilities and later during the facility expansion.

However, fundamental changes to the Canadian "certificates" would require changes to both the legislation and the treaty. For example, another project could not be approved under the Alaska Highway Project regime. Further, the Northern Pipeline Act (incorporating the U.S. /Canada Agreement) provides that the route for Alaska natural gas will be along the route set forth in Annex 1 to the U.S. /Canada Agreement i.e. the Alaska Highway route. In the face of the provision of the Northern Pipeline Act and the U.S. /Canada Agreement, a treaty with the force of law, it is difficult to see how the National Energy Board could entertain applications either for alternative pipeline routes for delivery of Alaska gas through Canada or applications by companies other than Foothills following the Foothills highway route for delivery of Alaska gas through Canada.

Given the above, we may well ask what remains to be done before the project can proceed?

First of all, we do not have a commercial arrangement negotiated with the Alaska North Slope producers or other shippers. Achieving this commercial arrangement is our number one priority. We are confident that the mutual interests of all sides will ultimately lead to satisfactory arrangements.

Following the successful completion of such a commercial agreement, there are a number of terms and conditions that must be satisfied. These are set out in the Northern Pipeline Socio-economic and Environmental Terms and Conditions. It is our view that the terms and conditions are broad enough to accommodate modern environmental, engineering and construction practices. In fact, we addressed this issue when we pre-built the southern portion of the Alaska Highway Project pipeline.

Detailed design and engineering work also must be completed and approvals must be obtained from the Northern Pipeline Agency. It is this mechanism that I referred to when I indicated that we had a "fast track" regulatory process.

The Yukon Right-of-Way

I will take a few minutes to describe the status of our right-of-way through the Yukon. Foothills has been granted an easement in the Yukon. The current term of the easement is September 2012 and provisions are in place to renew the easement for a further term of 24 years. It is important to note that the easement is protected under the Encumbering Rights provisions of the Umbrella Final agreement which has been signed by the Government of Canada, the Government of the Yukon and all of the Yukon First Nations. The Final Settlement Agreements that have been negotiated with the Yukon First Nations contain specific provisions relating to the easement. In addition, the compressor stations locations and permanent access to the proposed stations are protected.

What does this mean? From our perspective this translates into certainty of land tenure and a significant timing advantage. Foothills has developed an excellent working relationship with the Yukon First Nations over the years and we are building on that relationship. Like the Canadian "certificates" the easements also constitutes an important asset. An asset not easily replicated.

Conclusion

Let me summarize and focus on some of the key points.

Foothills is a Company with real pipelines and real customers.

When combined with our shareholders TransCanada and Westcoast, we transport 20% of all the natural gas consumed in the United States. And we have the know-how and the where-with-all to build the Alaska Highway Pipeline.

We have been involved in this project for 25 years.

We and our former partners have invested heavily to achieve the permits, certificates, rights-of-way and much of the engineering on the Alaska Highway pipeline.

A basic message that I want to leave with you is this, we have a...very unique and solid regulatory framework, it is a very valuable framework in terms of saving money and avoiding costly delays when building a pipeline. It is more than a collection of permits. It is a package, designed specifically to expedite building the Alaska Highway pipeline.

This framework can neither be duplicated nor terminated easily. It is a one-of-a-kind regime. I urge all Alaskans to take full advantage of it.

Finally let me raise one other issue and that is the matter of the pipeline route decision. Before we can move from discussion to action this must be resolved.

Ultimately all stakeholders must find some common ground and go forward.

So where do we go from here?

A commercial agreement between pipelines and producers is the next major mile post for the Project.

Once a satisfactory commercial arrangement is achieved ... the flag drops; from that point on we believe that our regulatory framework will allow "shovels to be in the ground" within 24 months.

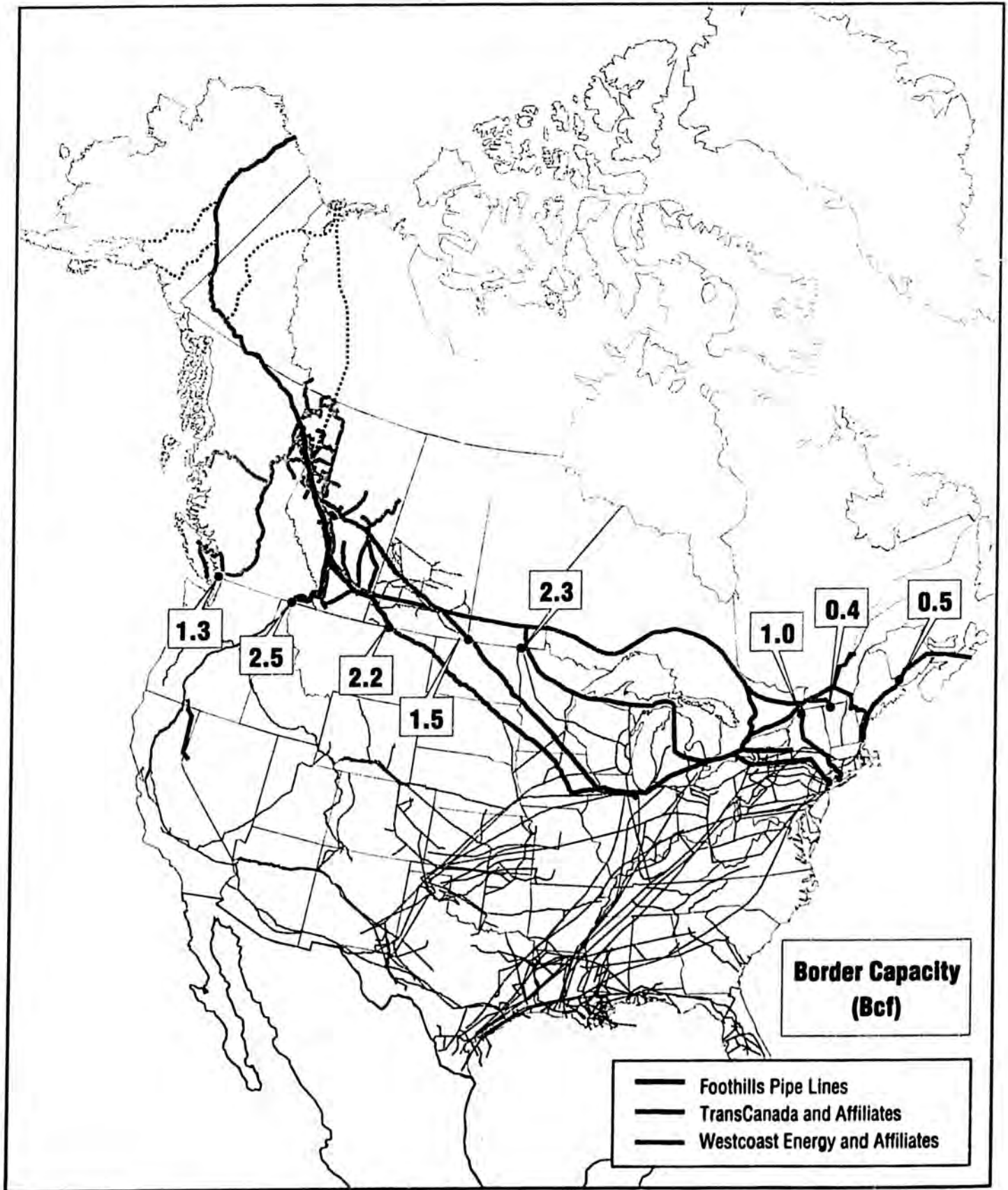
This is a very large project. It will involve many companies. It will cost a lot of money and there will be lots of issues to address and benefits to share.

Foothills and its shareholders intend to be major players in the development and operation of this important pipeline and we believe that we bring value to the Project and value to Alaska.

Thank you, and I am now prepared for questions.

FOOTHILLS PIPE LINES LTD.

NORTH AMERICAN PIPELINE INFRASTRUCTURE



CORRECTION

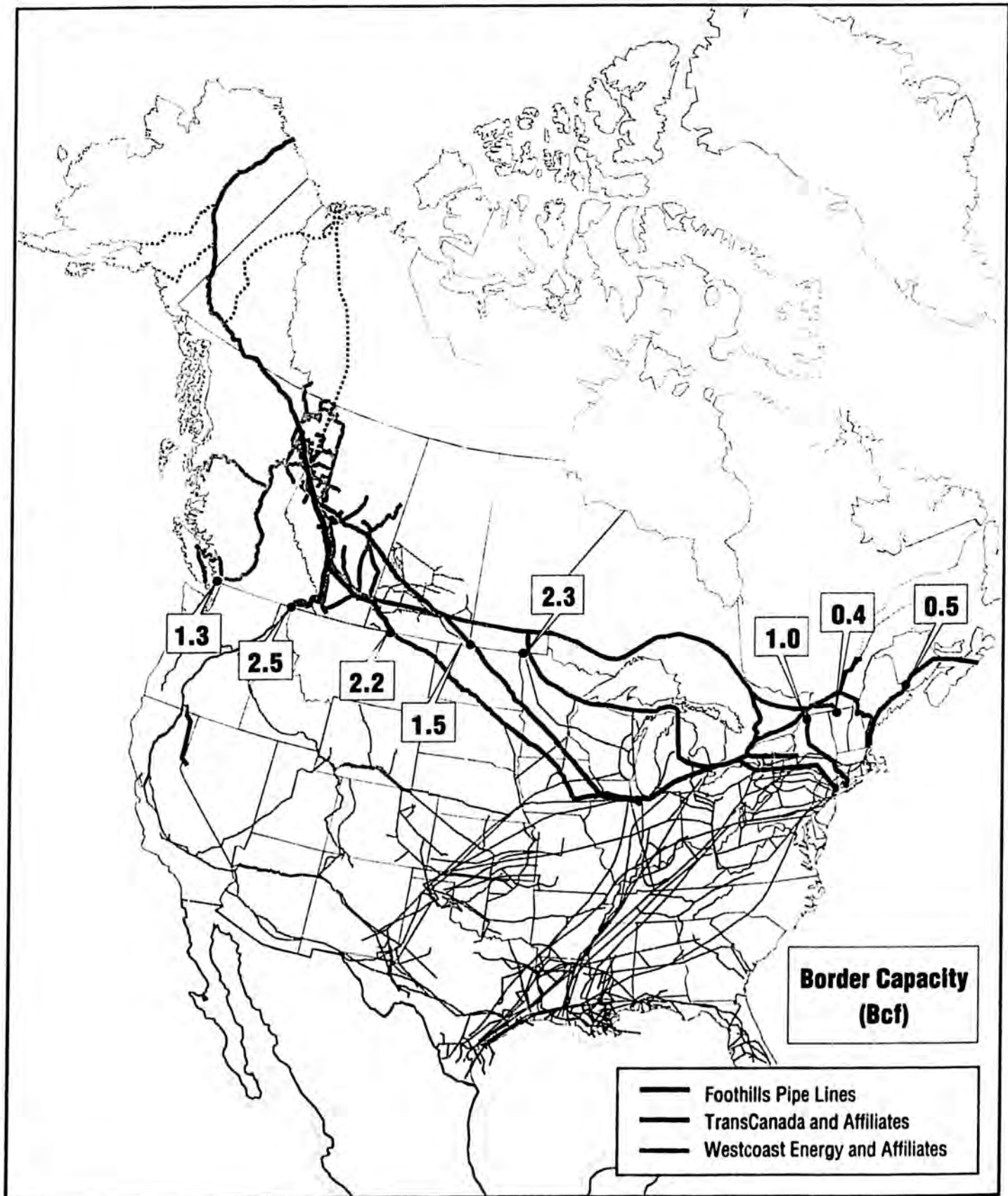
**THE FOLLOWING DOCUMENT(S)
HAVE BEEN REFILMED TO
ASSURE LEGIBILITY OR PAGINATION**



Central Microfilm Services
Department of Education & Early Development
State of Alaska

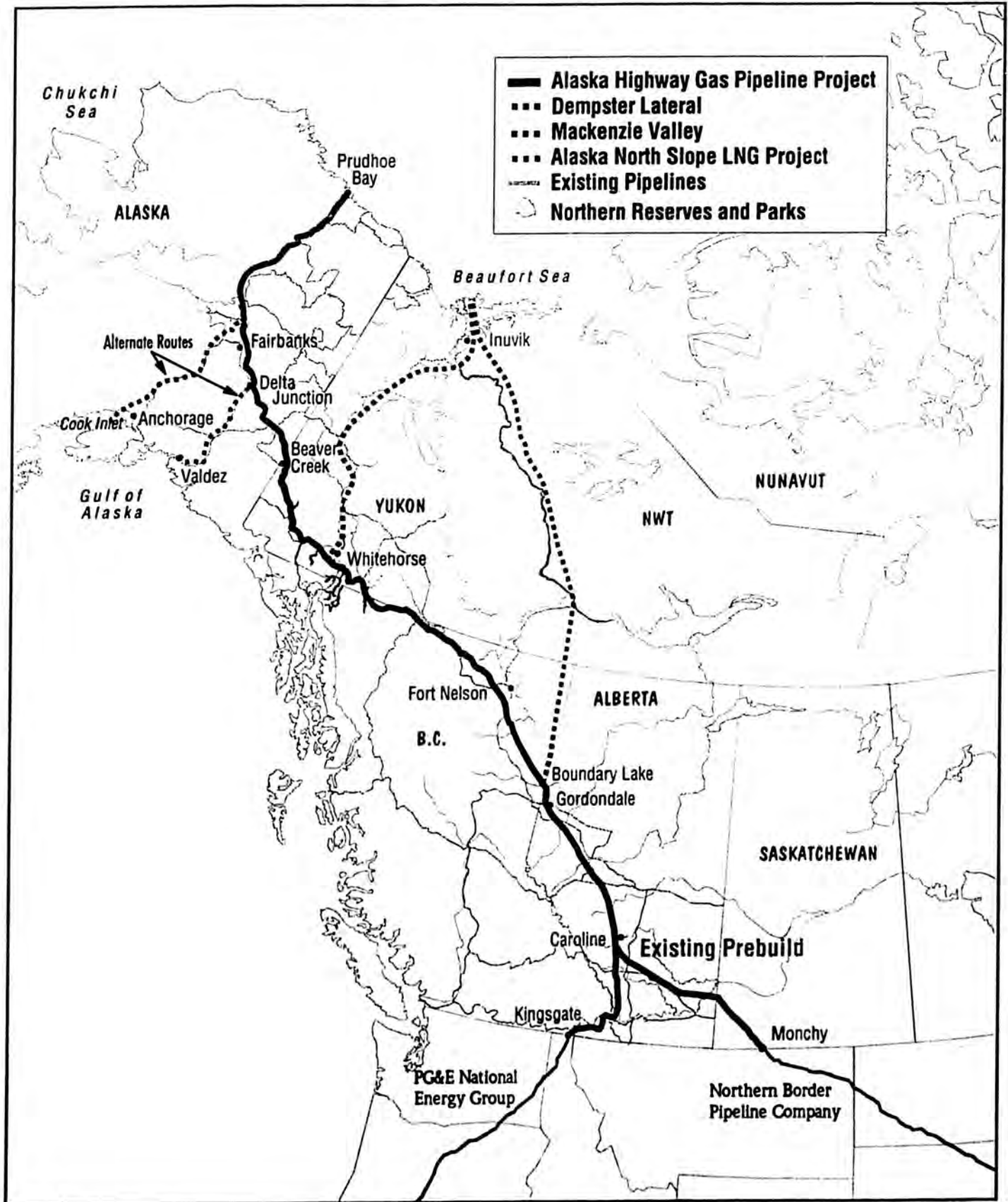
FOOTHILLS PIPE LINES LTD.

NORTH AMERICAN PIPELINE INFRASTRUCTURE



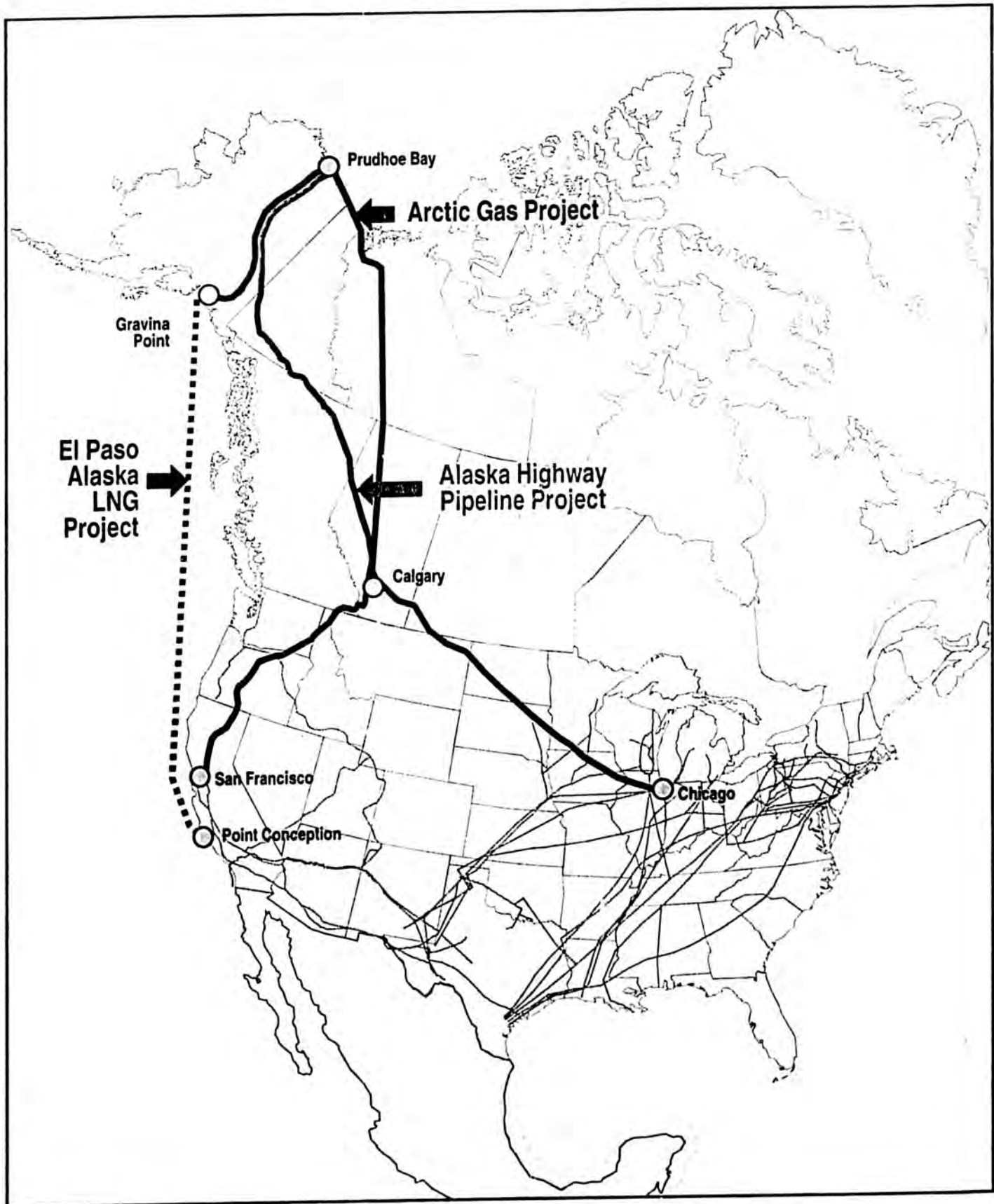
FOOTHILLS PIPE LINES LTD.

TRANSPORTATION SYSTEMS



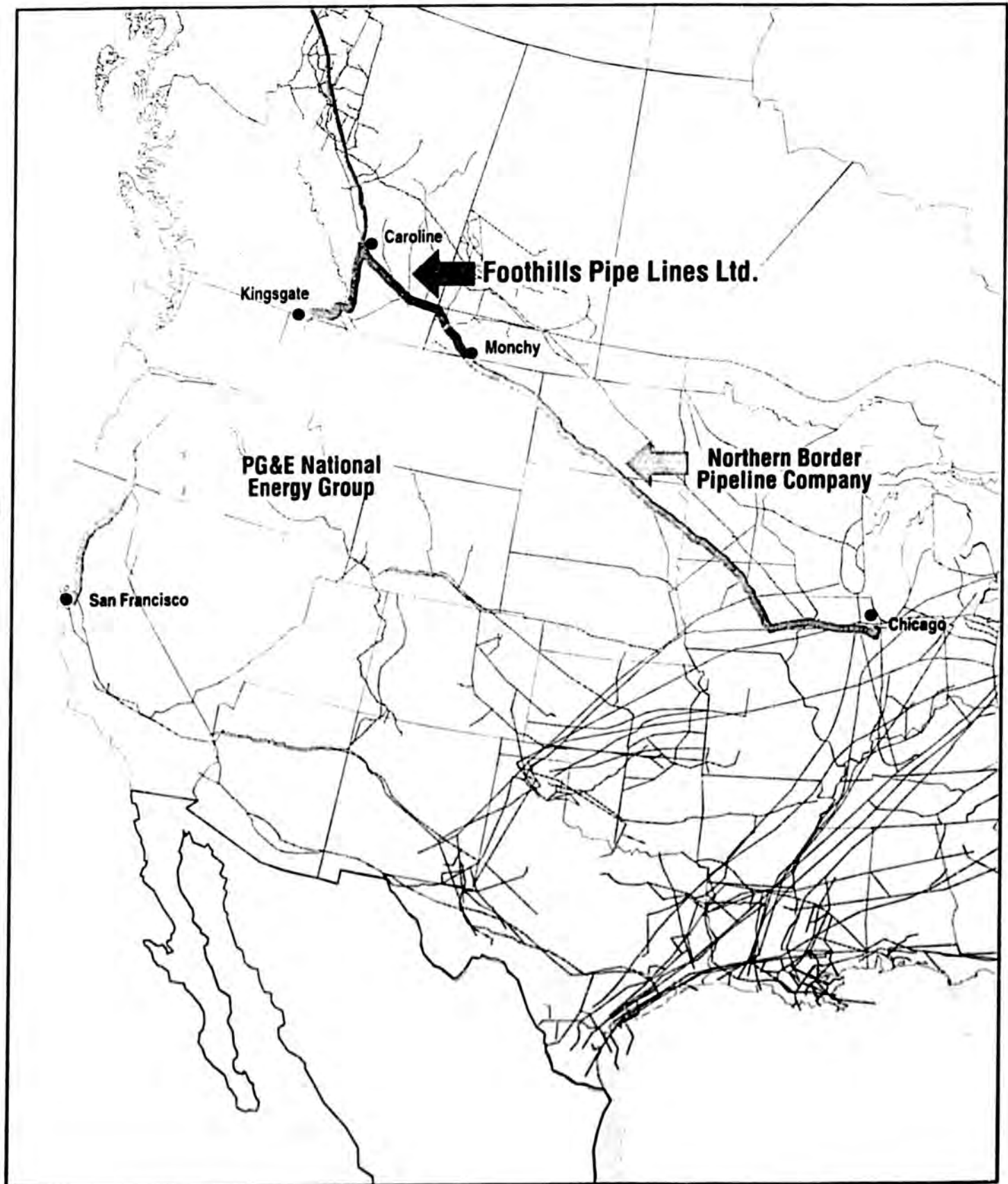
FOOTHILLS PIPE LINES LTD.

ORIGINAL COMPETING PROJECTS



FOOTHILLS PIPE LINES LTD.

PREBUILD SYSTEM

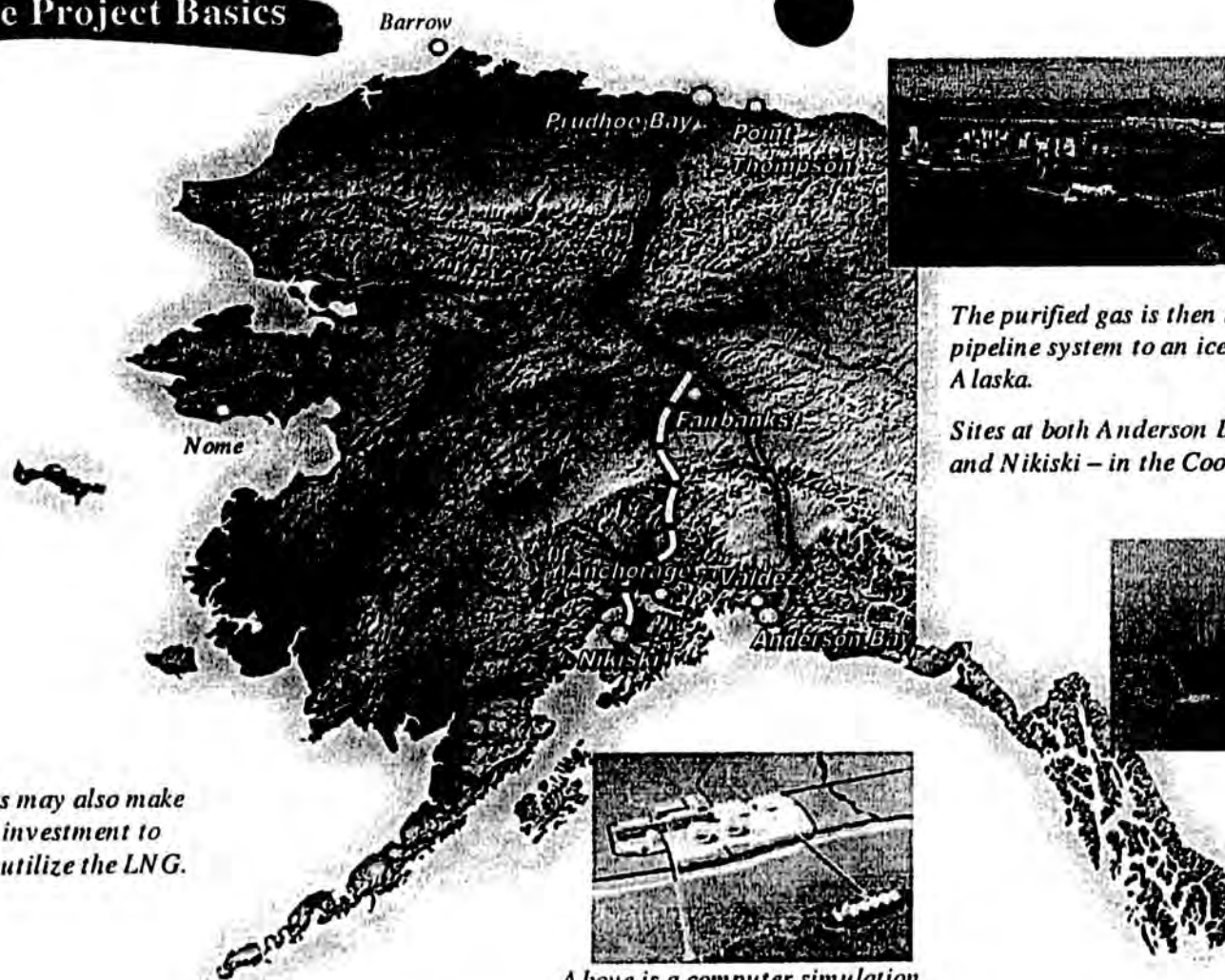




ALASKA NORTH SLOPE LNG PROJECT

Phillips Alaska
BP Exploration (Alaska)
Foothills Pipelines
Marubeni Corporation

The Project Basics



Gas from the North Slope is to be purchased and routed to a nearby gas conditioning facility where impurities and carbon dioxide are removed.

The purified gas is then to be transported by pipeline system to an ice-free port in South Central Alaska.

Sites at both Anderson Bay – at the Port of Valdez, and Nikiski – in the Cook Inlet, are viable options.



LNG buyers may also make substantial investment to handle and utilize the LNG.

The LNG is loaded onto ships (much like large Thermos® bottles) for transport to East Asian Markets.



Above is a computer simulation of the potential Nikiski LNG plant and marine terminal site.

In the LNG Plant, gas from the pipeline is chilled to -259°F (-160°C) so that it forms a safe, clean, liquefied natural gas (LNG).

■ MARKET UPDATES

- From well established, experienced and reliable

■ Marubeni

- ❖ Japanese trading company, doing business throughout East Asia and the world
- ❖ *Continuous feedback* through ANS LNG Market Liaison office
 - Providing significant input and updating to our market analysis

■ Phillips

- ❖ 30 years marketing to Asia (from Alaska)
 - Continual LNG market negotiations
 - Coordinated through international LNG group
- ❖ Offices in Asia including: Tokyo, Taiwan and China (ongoing feedback)

■ BP

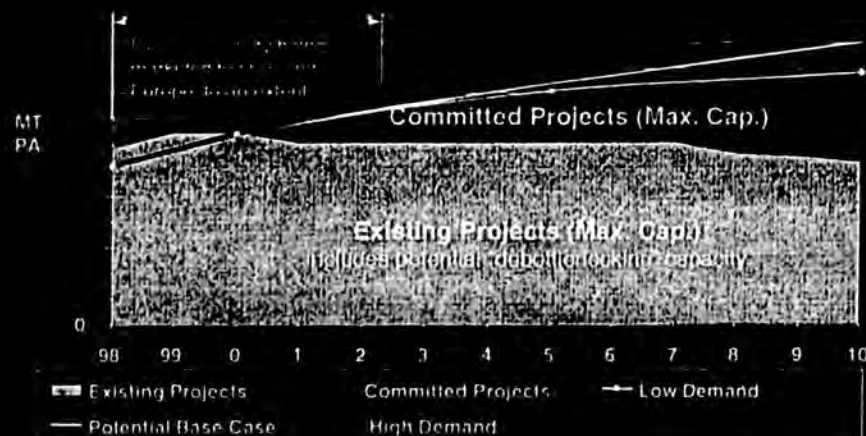
- ❖ Ongoing worldwide LNG marketing experience
- ❖ Offices in Asia (ongoing feedback)

Potential Asian LNG Projects

Country	Earliest Date of 1 st Delivery	Customers	Nominal Capacity MTPA
Australia NWS	~2003+	Asian Markets	7.5
Malaysia Tiga (III)	~2003+	Asian Markets	7.6
Tangguh (Irian Jaya)	~2003+	Asian Markets	6
Qatargas/Rasgas	~2002+	Asian Markets	7.5
Bayu	~2003+	Asian Markets	3
Indonesia "I"	~2004+	Asian Markets	3
Yemen	~2004+	Asian Markets	5
Sub Total			39.6

Total Asia-Pacific Supply/Demand Outlook

Includes Emerging Markets (India, China, etc.)



Fiercely Competitive

Market Competition Potential Asian LNG Projects (cont'd)

Country	Earliest Date of 1 st Delivery	Customers	Nominal Capacity MTPA
Gorgon	2004/5	Asian Markets	7.6
Sakhalin II	2005/6	Asian Markets	6
Alaska NS	2007+	Asian Markets	8 - 14.7
Indonesia Natuna	NA	Asian Markets	0
Sakhalin I	2007+	Japan/Asia	7
Sub Total			28.6 - 35.3

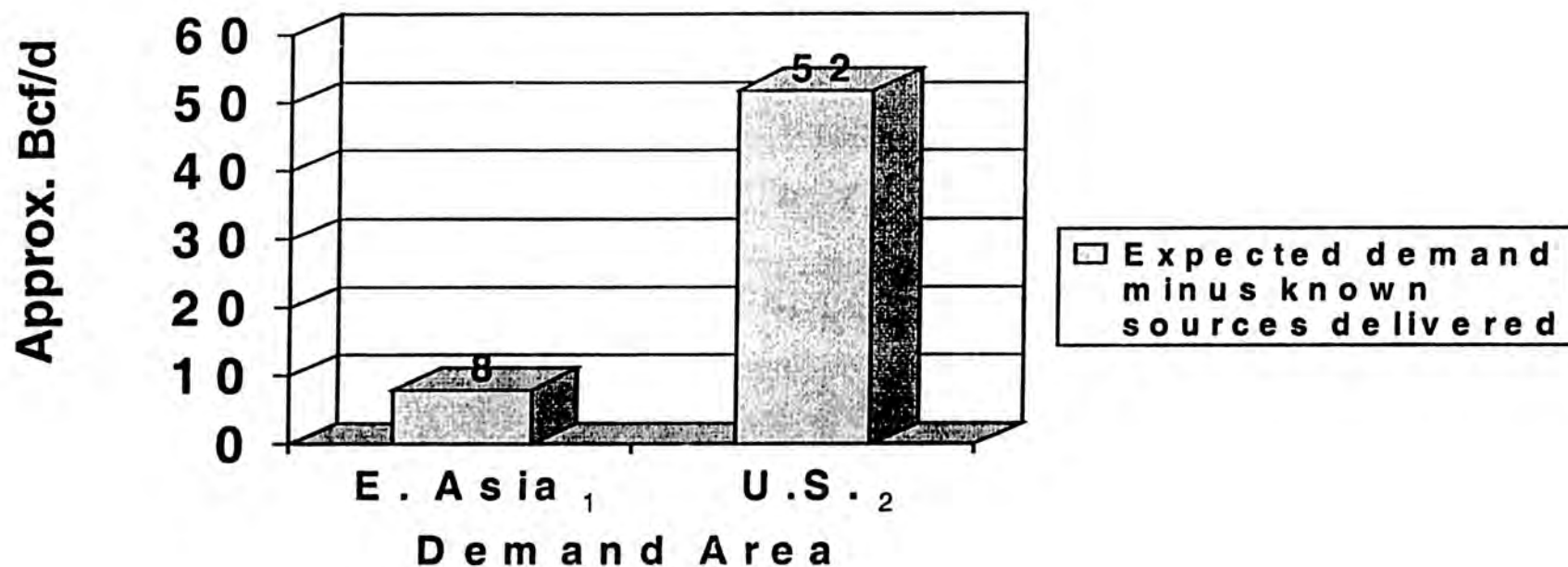
Total

~68 - 75

- **60-80 MTPA of potential projects**
 - Pursuing 20 - 40 MTPA of 2010 growth
- **Problematic trends**
 - Downward price pressure
 - Shorter contracts & spot deliveries

ANS LNG MUST ALSO COMPETE WITH U.S. GAS DEMAND

2010 New Source Needs



1 - High case LNG demand forecast of Tokyo Gas presented to 2001 HOAG
Year 2010 high demand of 135+ MTA (~19 Bcf/d) minus ~80 Mta (11 Bcf/d)

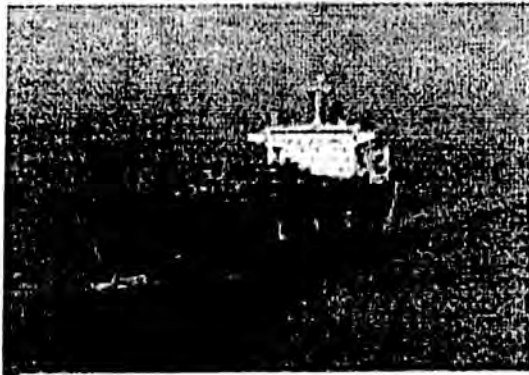
2 - National Petroleum Council, 12/99
2010 demand of 76 Bcf/d minus 24 Bcf/d of existing production

STAGE 1 WORK

Major Advance

■ **MARKET ENTRY PROJECT**

- 7-8 MM ton/year, projected \$6.8 billion project
 - *Redesigned to*
 - ❖ defer cost to as-needed
 - minimize pre-investment
 - Improves market entry probability
 - Significantly reduces capital cost (and risk)
 - Expandable to 14 MTA as market develops

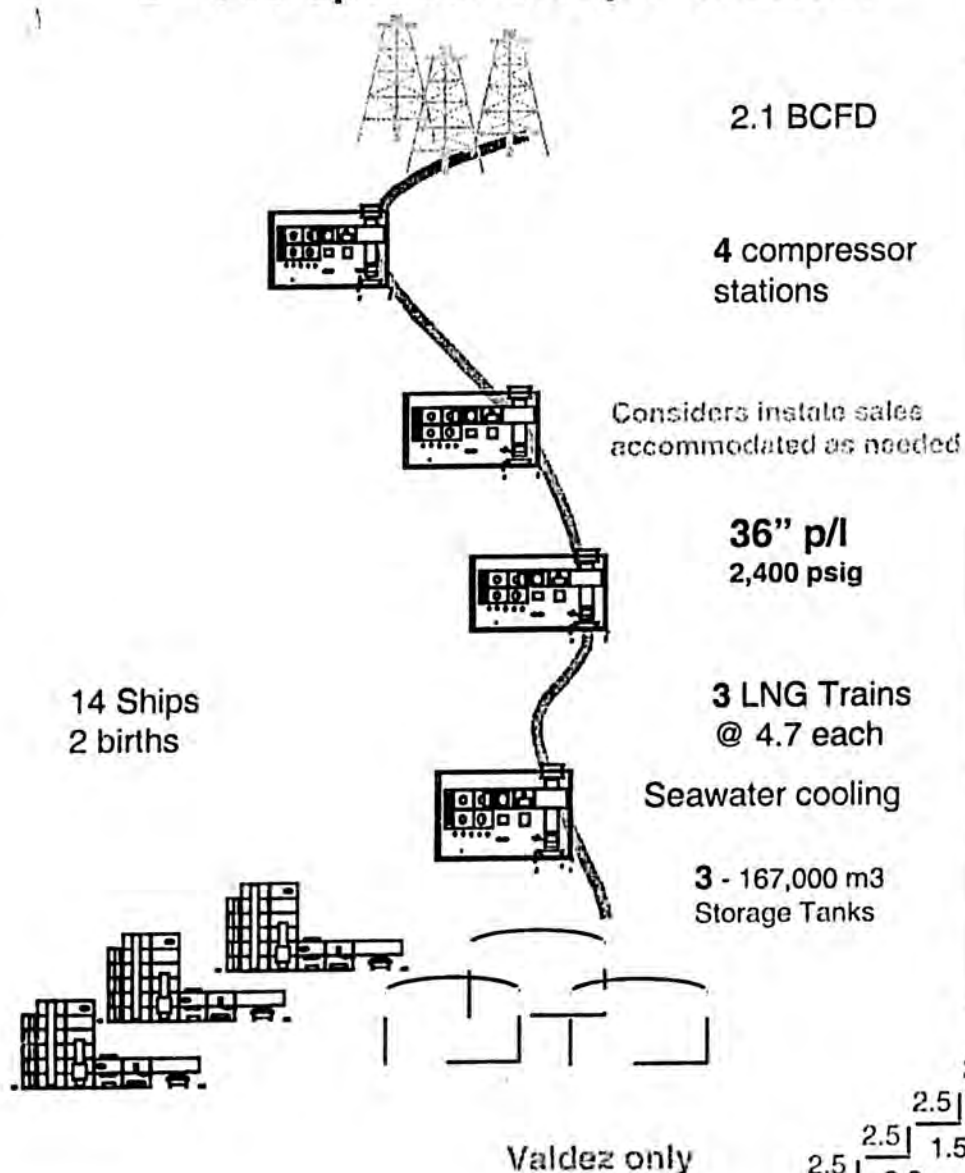


- ❖ **Mandate: to become economically sufficient at 7-8 MTPA even if future expansion never occurs**

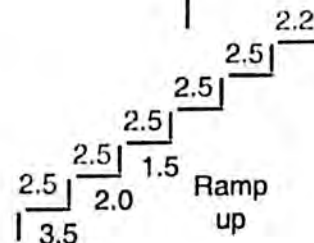
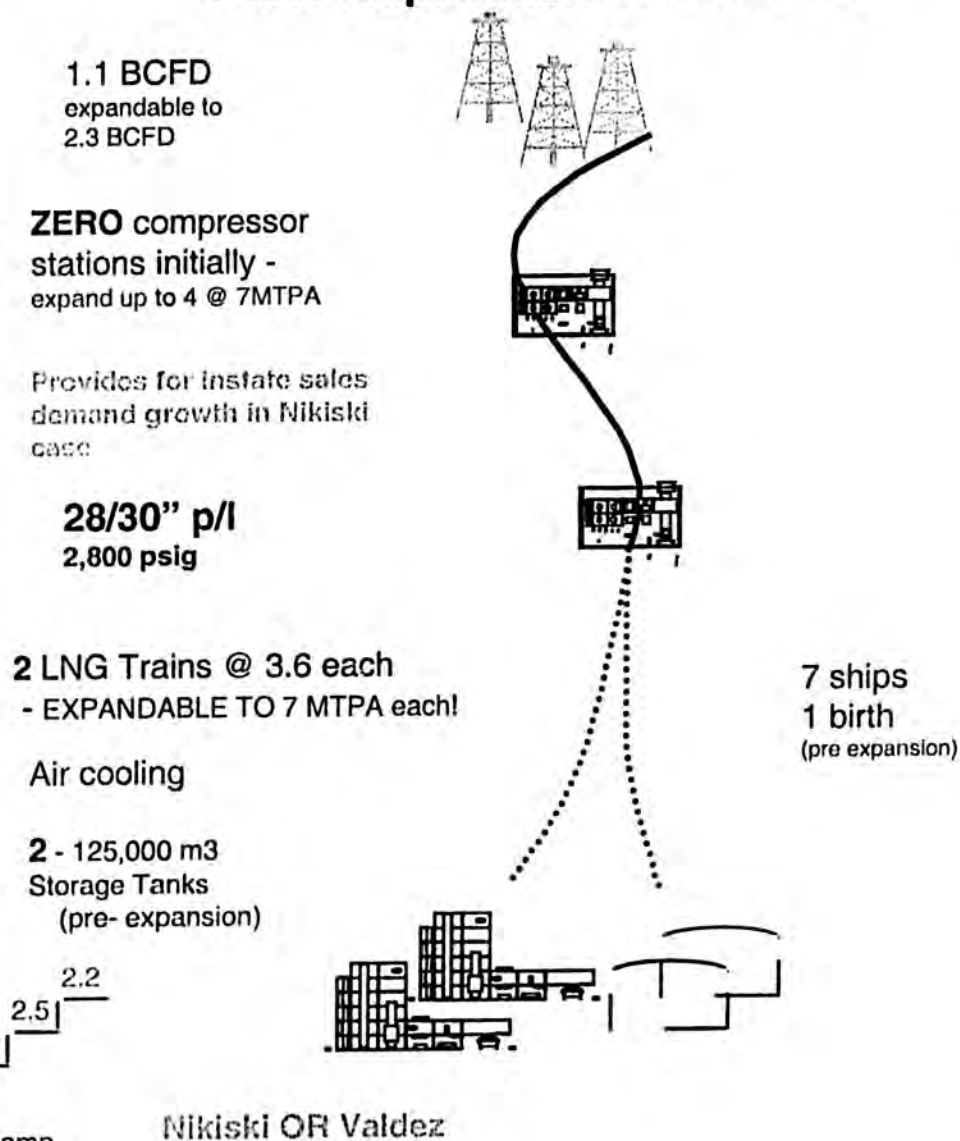
On-site Asian LNG market discussions confirm:
Smaller market entry project preferred

KEY AREAS OF REDESIGN

■ Pre-Sponsor Group 14.7 MTPA



■ Sponsors smaller, market entry, 7 MTA expandable to 14 MTPA



STAGE 1 WORK

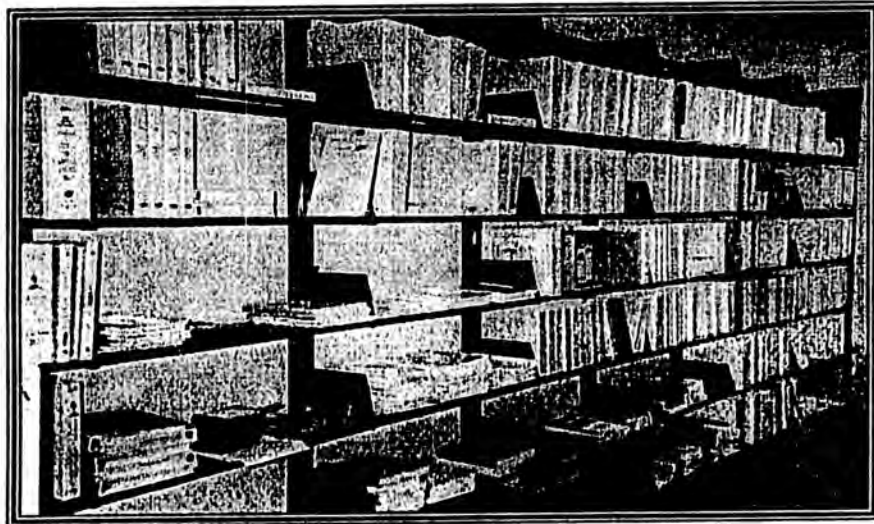


Photo: Stage 1 work library

■ Stage 1 Documented Activities

- 30+ Studies
- 10+ Cost & construction estimates
- 15+ Analysis & assessments
- 30+ Reports
- 25+ Workshops

■ 26 Outside contractors/consultants (~60% AK content)

- 15+ Engineering design & cost
- 3 Permitting
- 2 Regulatory
- 2 Federal
- 1 State
- 1 Governmental entity

\$12 Million - 18 months

STAGE 1 WORK COMPLETED:

ON TIME

WITHIN BUDGET

EXCEEDING ENGINEERING DESIGN EXPECTATIONS

PIPELINE ROUTE & LNG PLANT SITE

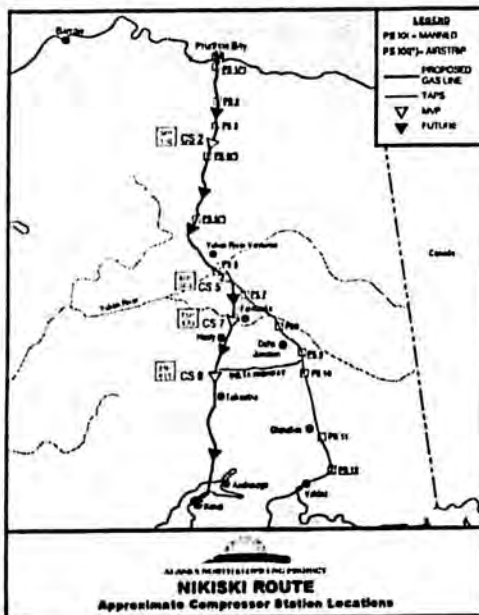
Pacing item is a cost competitive project - at either location

Neither site works if overall project isn't doable

Stage 1 engineering and construction design for BOTH

NIKISKI

- INSTATE GAS SALES POTENTIAL



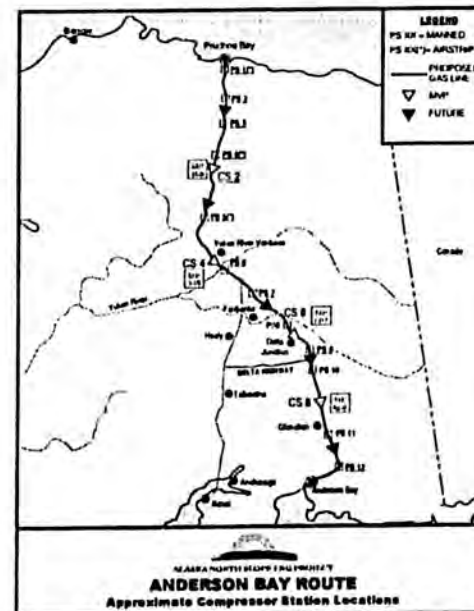
- ❖ Existing markets
- ❖ Growth opportunity & existing infrastructure
 - Including Kenai LNG Plant
- ❖ Potential lower cost instate gas
 - without need for long spur line to CI

■ **ANDERSON BAY**

- POTENTIAL FOR REDUCING PERMITTING TIME

- ✦ Existing TAPS P/L corridor

- Possibly less resistance
 - environmental
 - landowner, etc.



STAGE 1 - PERMITTING WORK

- **In depth analysis on route/site options**
 - Internal expert studies/review
 - ✦ Alaskan, Canadian, worldwide & world class experience and expertise
 - External, Alaska content consultant - extensive analysis

- **CONCLUSION: Both Anderson Bay and Nikiski can be permitted**
 - Any permitting time differences doable within current market timing needs
 - Opinion: Any existing Anderson Bay route permits will also require extensive work and cost to perfect

Note: Nikiski route does NOT go through Denali National Park

STAGE 2

KEY AREAS OF FOCUS

- **Ongoing design/cost optimization**
- **Synergy of shared cost with a lower 48 pipeline project**
- **Value of public entity or port authority concept to our project**
- **Key risks, their impact and potential mitigation strategies (including financing)**
- **Alternate LNG markets evaluation**
 - Including U.S. and Mexico West Coast
- **Further understanding and valuation of competing LNG projects**
- **Further permitting analysis and execution strategy**
 - blue print for moving crisply forward - with the regulators and agencies
- **TIMING: 12-15 months (underway)** **COST: ~\$3 million**

Key Stage 2 Highlights

To Date

- Additional capex optimization of ~\$400 Million
 - Market entry 7-8 MTPA capex now at
 - ❖ \$6.5 B - including ships
 - ❖ \$4.9 B - without ships
 - ❖ Identification of further savings ongoing
 - also exploring shared facilities with a lower 48 gas pipeline
- Public entity valuation -- current view indicates no compelling advantage to a joint public/private project
 - Generally:
 - ❖ Benefits passed to private enterprise will be taxable
 - ❖ Public borrowing rates unlikely to offset
 - private entity deduction of interest and depreciation
- Other Stage 2 activity in progress and on schedule

ECONOMICS

- Key: cost competitive with other E. Asian LNG projects
 - **at a sufficient economic return**
- ANS LNG Project
 - ❖ is not yet cost competitive
 - ❖ is not yet economic on a cost of capital basis
 - for the expected risk
- Considerable, additional efforts required
 - To reduce cost
 - To share cost or find other synergy
 - Reduce risk
 - To achieve meaningful fiscal modification (particularly federal)

- ***Axiom:***
 - **Project economic assumptions must be salable**
 - ❖ Internally - to the investment community - to the suppliers and markets

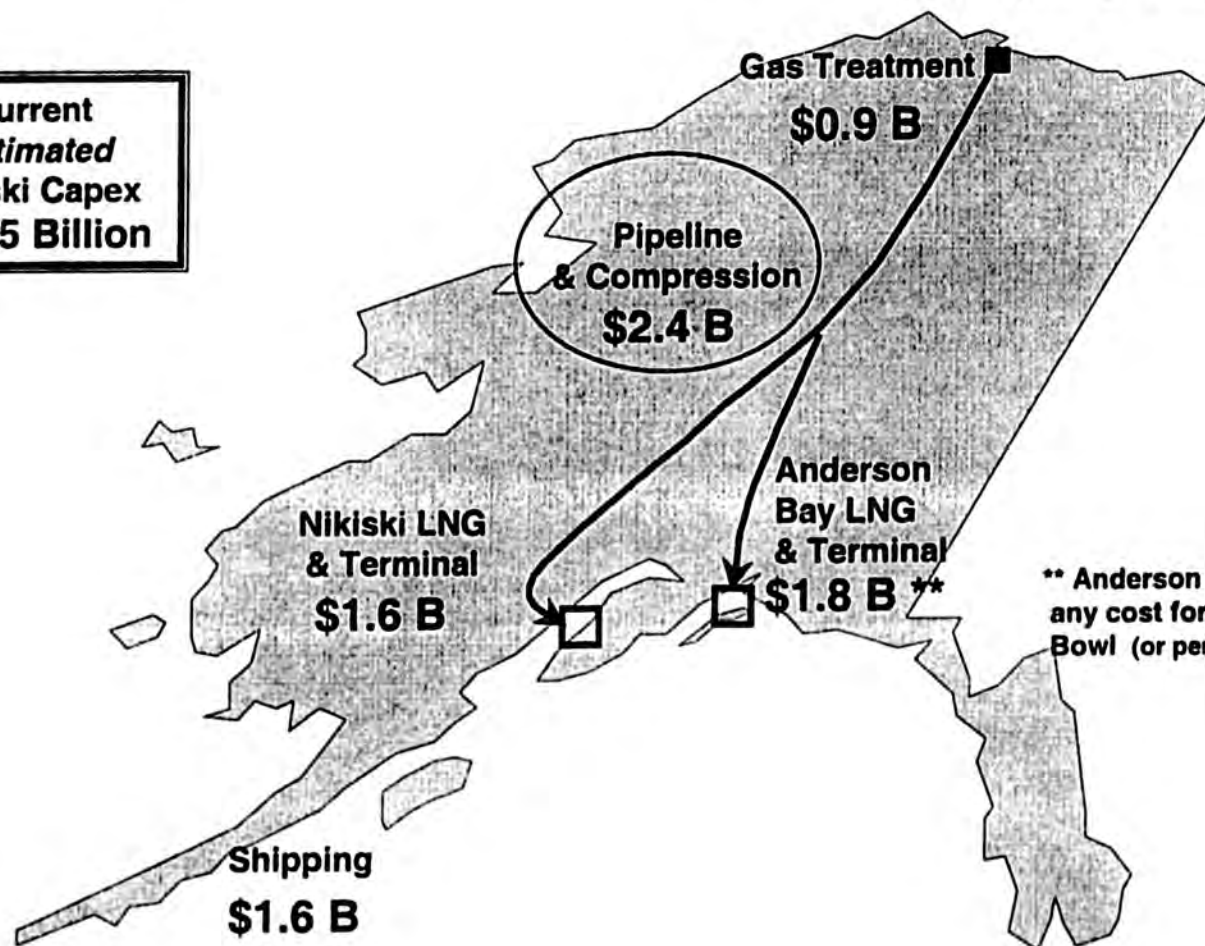
ANS LNG Project

Current CAPEX Estimate

- Working to improve economics
- > Not yet determined cost competitive with other new projects
 - > Other new LNG projects are already at tide water

Now exploring shared cost with a L48 pipeline

**Current
Estimated
Nikiski Capex
~ \$6.5 Billion**



**** Anderson Bay Capex does not include any cost for a spur line to the Anchorage Bowl (or permitting for that spur line)**

Example LNG Project Cost Comparisons

From Public Sources

Ex-Production Development Costs* and Ex-Shipping

Potential ANS LNG Projects	Estimated CAPEX (US\$Billion)	MTA	\$Million per MTA
ANS LNG Nikiski	\$4.9	8.0	\$610
Backbone (ANS)	\$7.3	9.2	\$790
Example other LNG Projects			
Qatar Ras Laffan (grass roots)	\$1.7	5.2	\$330
Trinidad (grass roots)	\$0.95	3.2	\$300
Oman (grass roots)	\$2.0	6.6	\$300
E. Timor (grass roots)	\$1.25**	4.8	\$260
Tangguh (grass roots)	\$1.5	6.0	\$250
Malaysia III (expansion)	\$1.5	7.6	\$200
Industry Convention (rule of thumb)			\$250

**ANS PROJECTS
INCLUDES A
DEDICATED - 800 MILE
PIPELINE that OTHER
PROJECTS DON'T HAVE
(\$2.4 B / 8 = \$300)**

O&GJ April 27, 1998

Energy Day, June 1999

Oman LNG Journal, January 2001

Dow Jones Newswire, March 9, 2001

FT International Gas Report, April 28, 2000

WGI, January 27, 2000

O&GJ December 13, 1999

**Public information on development costs is limited
but is more significantly related to oil production*

MTA = Million metric
tons per annum

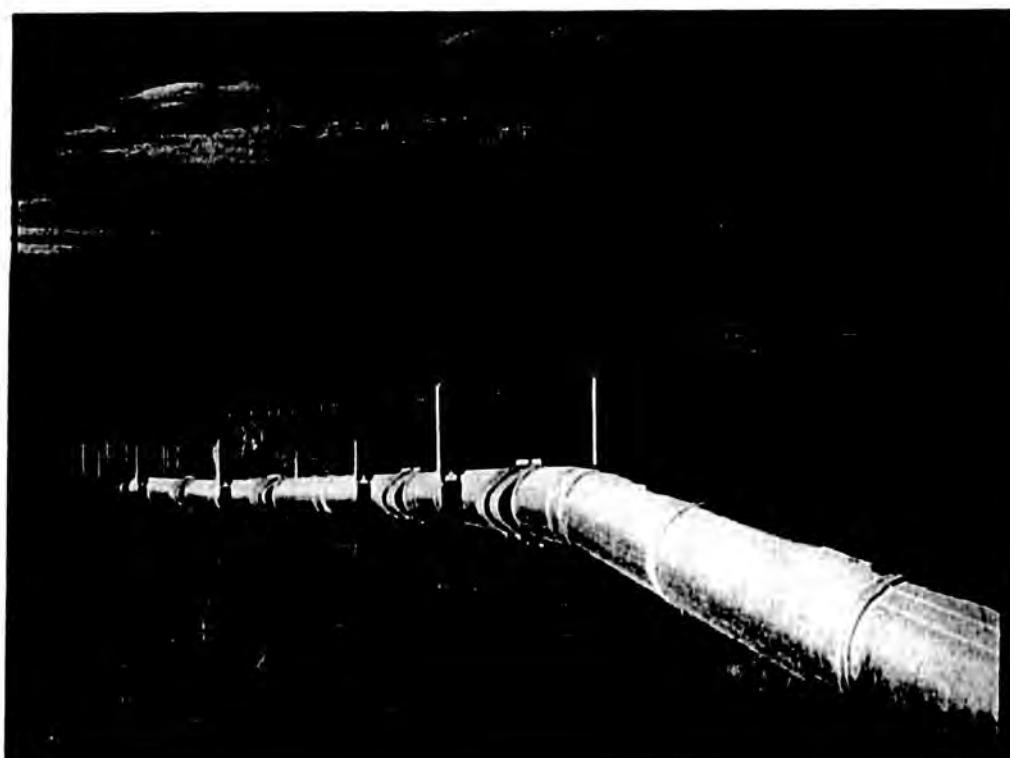
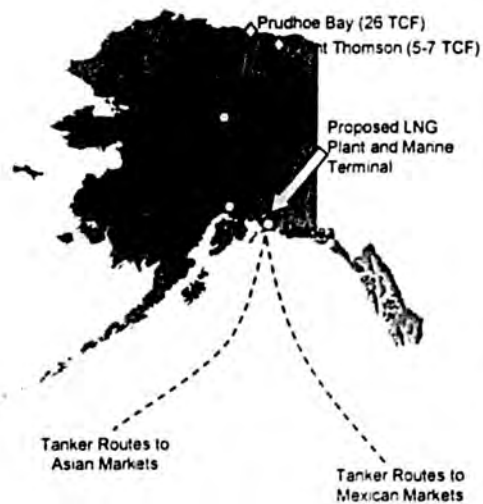
**** Article quotes LNG Plant estimate at
\$2.5 billion in Australian dollars (~US\$0.50)**



ALASKA NORTH SLOPE LNG PROJECT

■ Continuing effort

- ✦ to develop a cost competitive project
- ✦ to be prepared when the market is ready
 - but pragmatic about market timing



I Want To Cut To The Chase About Alaska Gas

- Development of Alaska gas has been and will be challenging
- The myth that there's no market for Alaska LNG
- The myth that Alaskan LNG is not an option
- The risk if we gamble that the overland route is the only option
- Your role

First:

**Developing Alaska Gas
Is A Challenge**

1970 - 2001

Arctic Gas
El Paso
Northwest/Foothills
ACETS
MACPORC
Kivalina/Wainwright
?? GTL
ARC
LNG Sponsor Group
YPC/TAGS

Key Facts Regarding Alaska Gas

- Alaskan north slope gas is located in one of the most remote areas of the world
- There is worldwide competition in both Asian and Lower 48 markets
- Any project from Alaska must be big to meet economies of scale
- Big projects require long term contracts to obtain financing

Any Alaskan project must be big in order to compete

- Economies of scale are required to compete with gas closer to market
- A gas pipeline is required that adds to cost
- In Alaska there are multiple gas producers who agree to a SINGLE project (vs projects elsewhere where they have individual)
- Investors will not invest \$billions without confidence that they receive return on their investment

**Unfortunately, the State and
Producers have not been in a position
to sell gas until June of 2000**

But luckily now they want commercialization by 2000

**Prudhoe Bay Field Working Interest Ownership Status Before
July 1, 2000
(2 separate "participating areas")**

Owner	Oil Res ^a	Gas Cap ^a	"Blended" Ownership % of all gas
<i>Solo/BP</i>	55.15%	14.82%	24%
<i>Arco</i>	20.27%	42.12%	37%
<i>Exxon</i>	20.27%	42.12%	37%
<i>Mobil</i>	2.09%	27%	2%
<i>Phillips</i>	2.05%	26%	2%
<i>Others</i>	2.16%	41%	
	100.00	100.00	100.00

**Prudhoe Bay Field Working Interest Ownership Status
After July 1, 2000 Major "Realignment"**

Owner	Combination Oil & Gas (Tentative)	Actual Net ^a Gas Volumes Owned
<i>Exxon/Mobil</i>	36.8%	8+ TCF ^b
<i>Phillips</i>	36.5%	8+ TCF
<i>BP/Amoco (Operator)</i>	26.5%	5.82 TCF
<i>Others (as to participating interest)</i>	0%	
	100.00	22 TCF

^a The Prudhoe Bay reservoir contains a net volume (after CUF removal and future in-field fuel use) of 22 trillion cubic feet (TCF) of natural gas available for sale. 30% (6.6 TCF) of the gas is dissolved in the "oil rent". 70% (15.4 TCF) is in the "gas cap". 22 TCF is the equivalent of 418 million metric tons of LNG delivered to Asia.

^b Trillion Cubic Feet

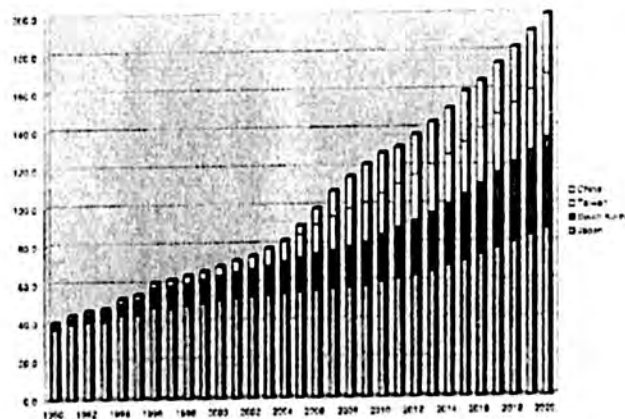
^c Note: The value of Prudhoe Bay is 22 TCF in which there is no field and gas at Prudhoe Bay.

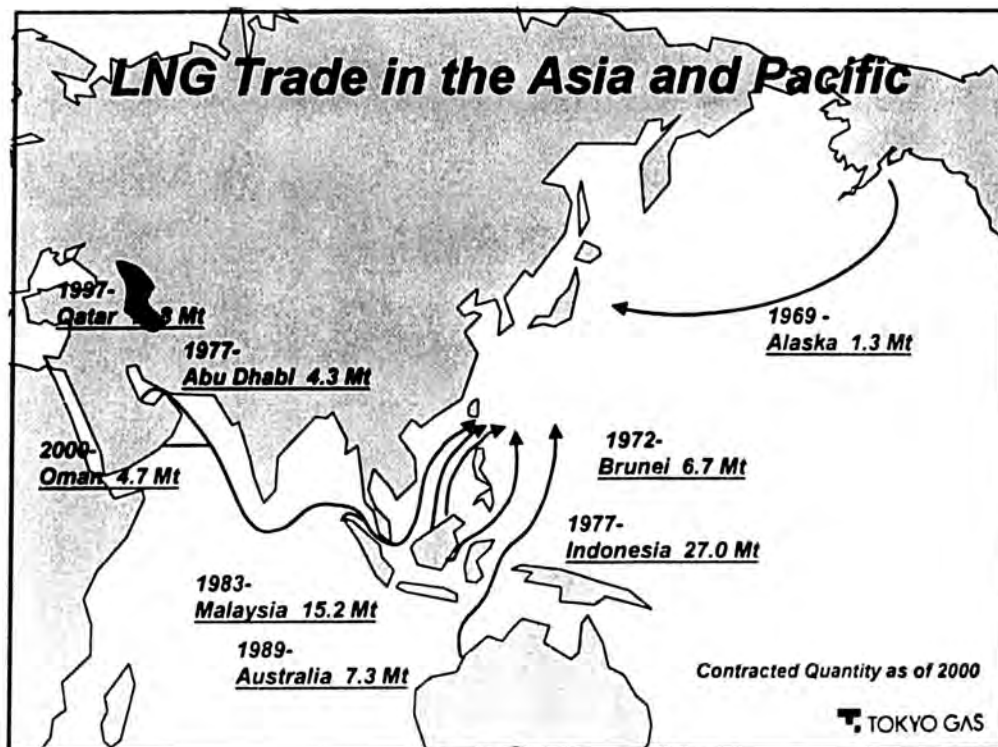
Second:

**There is No Market
For Alaska LNG?**

**Worldwide demand for gas is
increasing dramatically**

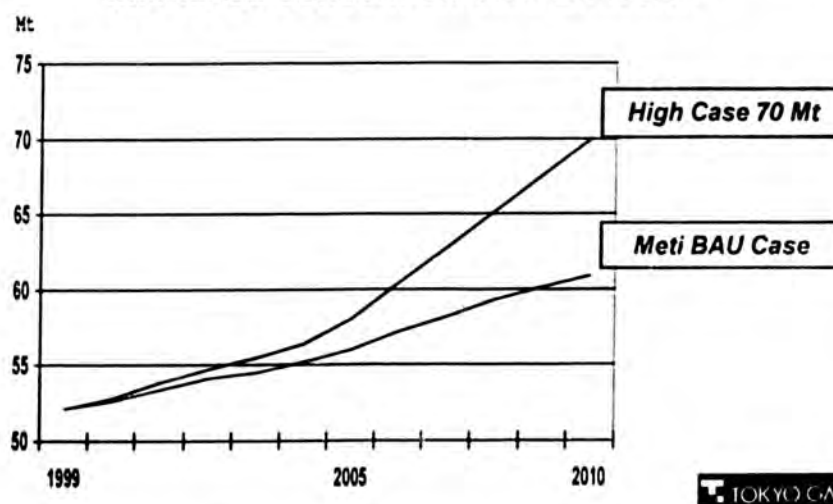
**Standard & Poors
LNG Demand Outlook (MMT)**



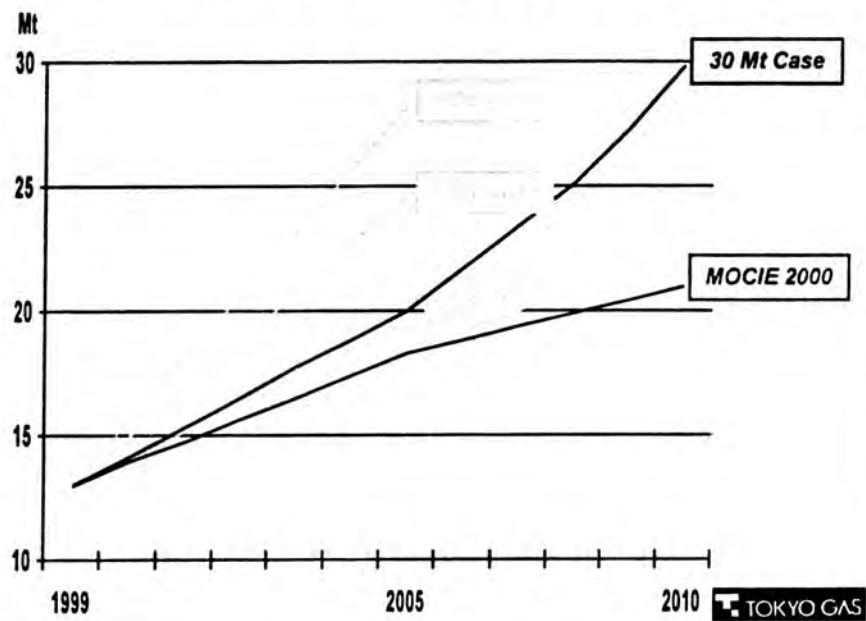


LNG Demand Outlook - JAPAN

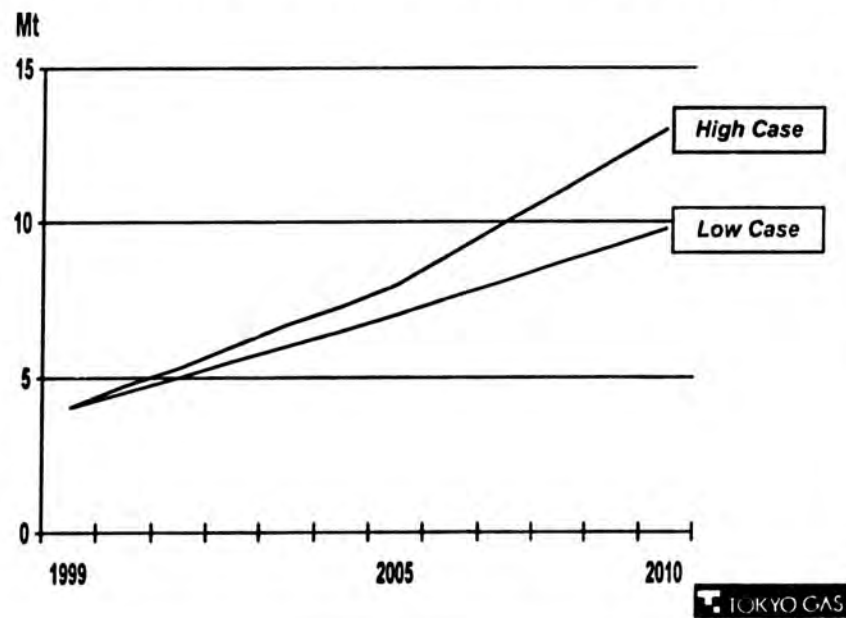
- Moderate Energy Demand Growth: 1.1%
- Slow Development of Nuclear Power
- Increased Concern on GHG Emission



LNG Demand Outlook - KOREA

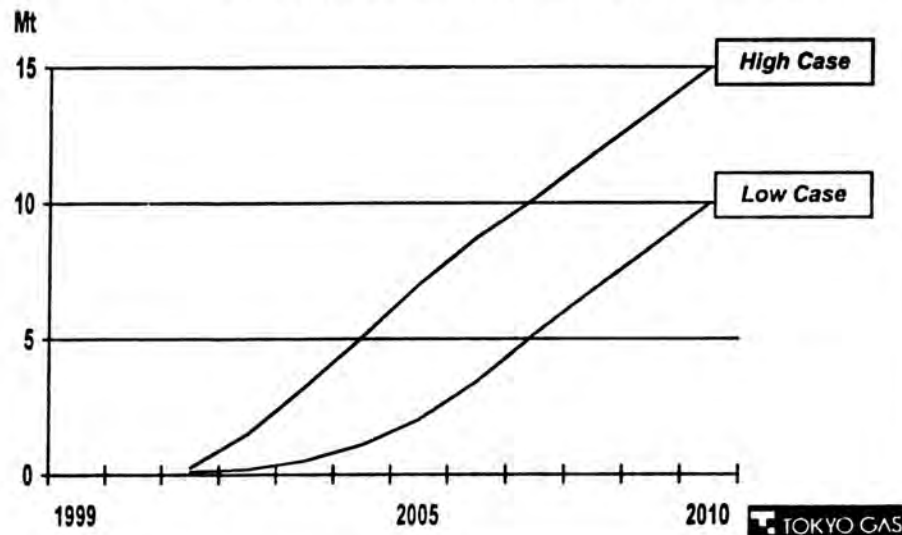


LNG Demand Outlook - TAIWAN



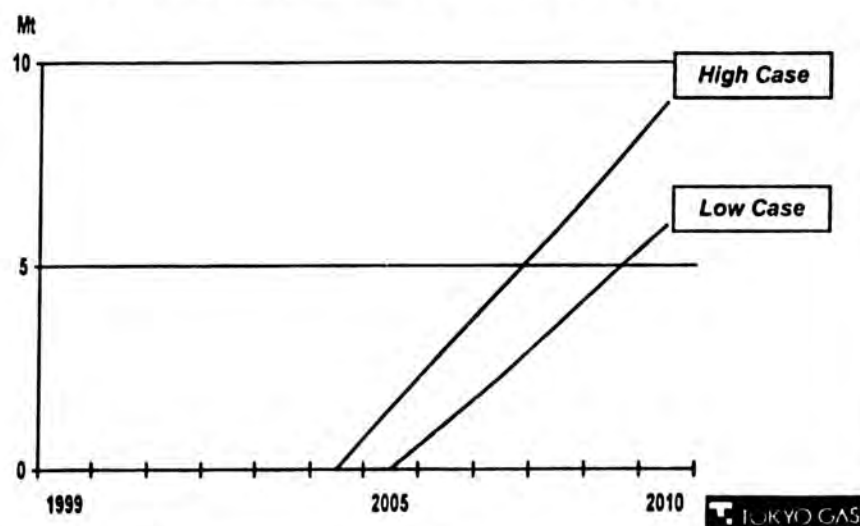
LNG Demand Outlook - INDIA

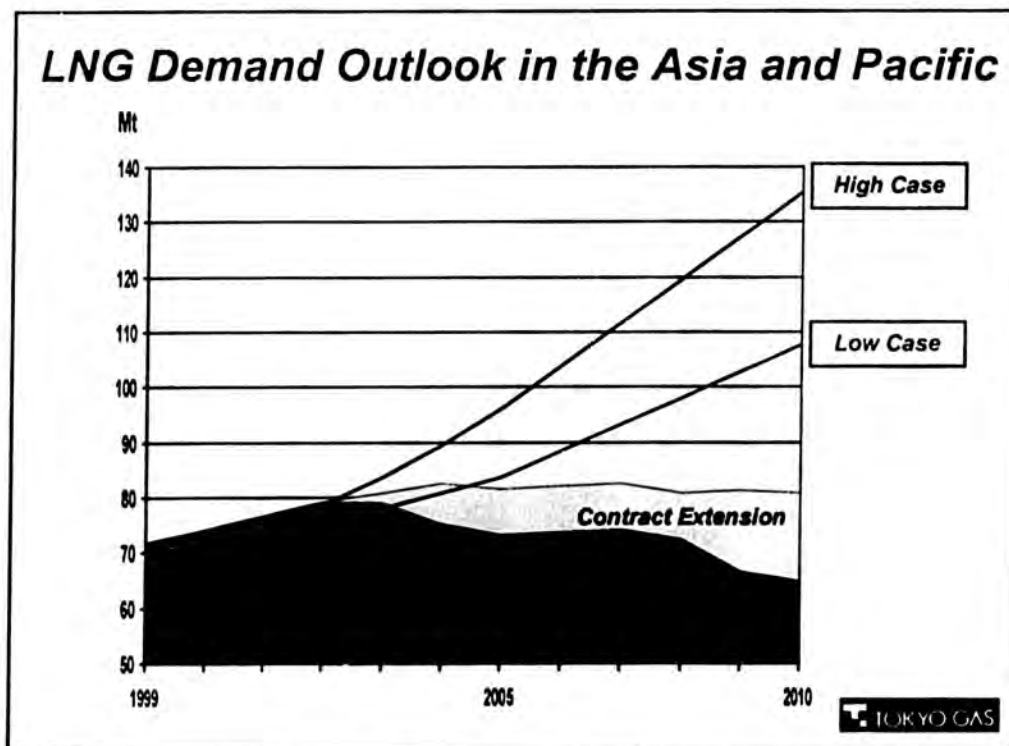
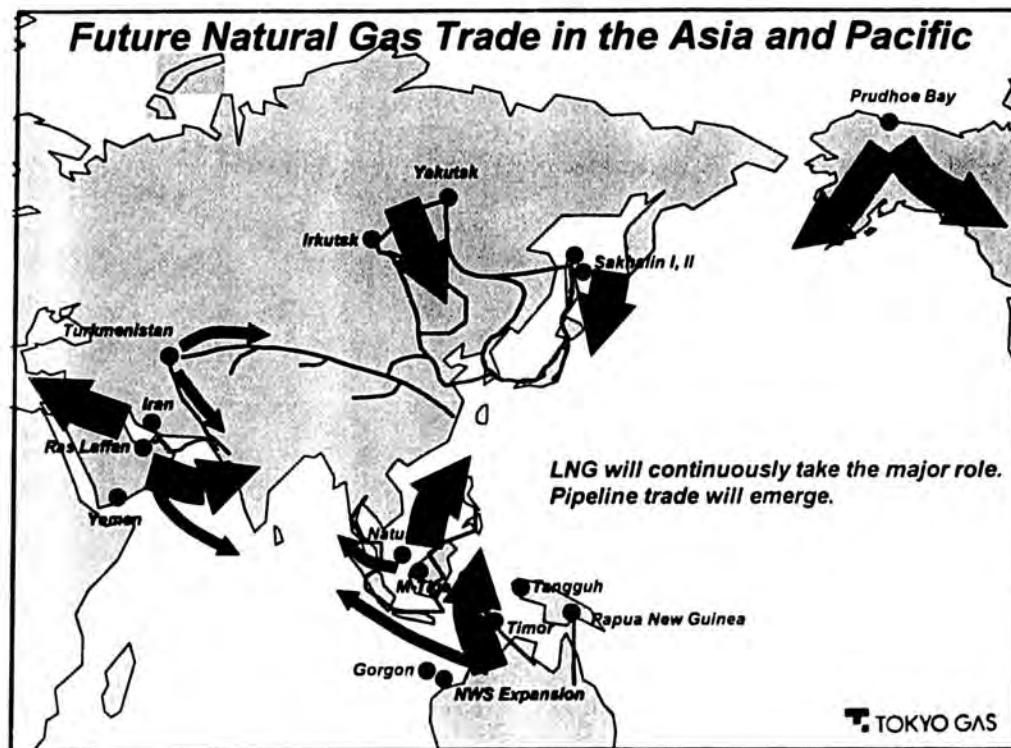
- Start of LNG Import: 2001 by Dabhol Power
- Potential Projects in Gujarat, Maharashtra, Tamil Nadu



LNG Demand Outlook - CHINA

- First LNG Import Project: Guangdong, 3 mtpa, 2005
- Potential LNG Imports in Yantsu Delta, Fujian





Asia is Alaska's largest trading partner

- Seafood
- Timber
- Coal
- LNG
- Why not more LNG?

FACT

Pedro Van Muers stated that an Alaskan LNG project may be nibbled to death by other LNG projects around the world

- | | |
|---|---|
| ▪ 1982: "only total of 7 MTPA new demand by 2000" | - New demand in 2000 was over 40 MTPA |
| ▪ "No market" in 1997 | - Qatar project 6.5 MTA |
| ▪ "No market" in 2000 | - Oman project at 5 MTPA |
| ▪ "No market" in 2007 | - 8.3 MTPA to West (Phillips, Chevron)
25 – 50 MTPA (Tokyo Gas)
50+ MTPA (Standard & Poors) |

(What if: Alaskan LNG was put first)

- Assume BP/Phillips/Foothills/Marubeni (Sponsor Group) "market viable" rate to Japan (8 MTA)
- Add Phillips' Australian project to Lower 48 (4.8 MTA)
- Add Chevron's Australian project to Lower 48 (3.5 MTA)
- Equates to a 16.3 MTA project from Alaska (TAGS at almost full out including proposed expansions)
- Economies of scale would be met and Alaska gas would be the most economic in all of Asia



Third:

LNG Is Not An Option For Alaska

LNG Positives

- It is portable and can serve multiple markets
- Offers diversity of supply from stable suppliers
- Projects are backed by a long term sale contracts
- TAGS LNG project has a smaller gas off take rate than the proposed overland project at 4 BCF so fewer gas producers must agree to dedicate gas to it

Alaska LNG is a stable supply

- Market price and proximity to market are not the only factors
- Arun plant recently shut down (10 MTA to Korea and Japan)
- Stable supplies get market preference

example

Why are two Australian LNG projects bumping Tanguh which is closer to the Lower 48 markets?

PARTIAL ANSWER: stable government

Trans-Alaska Gas System – Year 2000 Project Update Capital Costs (\$US year 2000)

		START-UP	EXPANSION	EXPANSION
			I	II
LNG Delivered	MTA	9.2	13.8	18.4
Pipeline Flow	BCFD	1.2	1.8	2.5
LNG Trains		2	3	4
Pipeline and Stations (1)	\$billion	3.7	0.2	0.4
LNG Plant & Terminal (2)	\$billion	2.3	0.9	0.8
Incremental Capital Cost	\$billion	6.0	1.1	1.2
Cumulative Capital Cost	\$billion	6.0	7.1	8.3

- Source: Willbros Engineering and Michael Baker Jr.
- Source: Kellogg Brown & Root and Air Products and Chemicals, Inc.

TAGS Cost of Service Shows Alaska Gas is Competitive

TAGS estimated cost of service to Japan, excluding fuel
- \$/mmbtu delivered, 13.8 MTA

	<u>Low</u>	<u>High</u>
Alaskan facilities	1.99	2.21
LNG tankers	0.70	0.70
Total	2.69	2.91

Fuel at 11.8%

Asian LNG Prices

Buyer	Seller	Jan. '01 \$/mmBtu
Japan	Abu Dhabi	4.81
	Alaska	4.54
	Australia	4.89
	Brunei	4.65
	Indonesia	4.98
	Malaysia	4.80
	Oman	5.17
	Qatar	5.05
	AVERAGE	4.88

WGI March 8, 2001

- Prices are high in the Lower 48 and are also high in Asia
- Let's be consistent!

FACT

**Remoteness is "taken care of" by
reaching economies of scale**

TAGS ~ 2.0 BCF

Foothills ~ 4.0 BCF

which is the great equalizer

**Cost of Service to Supply Gas to Cook
Inlet via Spur Line from TAGS at Glenallen**

Basis: TAGS 3 train case at 1.8 BSCF/day

Volume to Cook Inlet	COS (\$/mmcf)
200 mmscfd	~ 2.00
400 mmscfd	~ 1.50

The Overland Project

(Second) Honeymoon is clouding this

FACT Other gas supplies in North America
nibble at the Lower 48 demand

- McKenzie Delta
- Western Canadian Basin (BC and Alberta)
- U.S. Rocky Mountains
- U.S. Gulf Coast
- Scotian Shelf

Or is it "Gobble up the Lower 48 Demand"

FACT

Other countries' LNG projects are also nibbling away at the overland pipeline project

- LNG imports to Lower 48
 - East coast 2000 - 0.6 bscfd
 - East coast expansion capacity - 1.6 bscfd
 - Phillips to west coast - 0.7 bscfd (FA)
 - Chevron to west coast - 0.5 bscfd (FA)
- Two new west coast LNG projects plus east coast LNG expansion will consume 2.8 bscfd of Lower 48 demand
- Represents 70% of the 4 bscfd overland project

Alaskan LNG alone bears criticism for "uneconomic Alaskan gas project"

- An LNG project to Asia was originally proposed because overland pipeline project could not compete in Lower 48
- The economic viability of other gas projects from Alaska have not been demonstrated
- TAGS is a well defined project using proven technology – cannot speculate to upside potential as with other projects with less definition

When comparing projects from Alaska remember

- Worldwide LNG competes with Alaskan gas to both Asian LNG and Lower 48 markets
- Neither the LNG nor the overland pipeline project firm market commitments
- Hold conclusions until the honeymoon is over for overland project and firm costs and economics are developed

Path Forward

- Set realistic goals (e.g. State ownership, hubs)
- Do what is right for Alaska – Identify and separate corporate interests from State interests and then develop a balance
- Find out how much wellhead the producers really want and need
- Figure out PBU and PT unit requirements that control producer actions and require changes if necessary
- Compare apples to apples
- Keep ALL options open

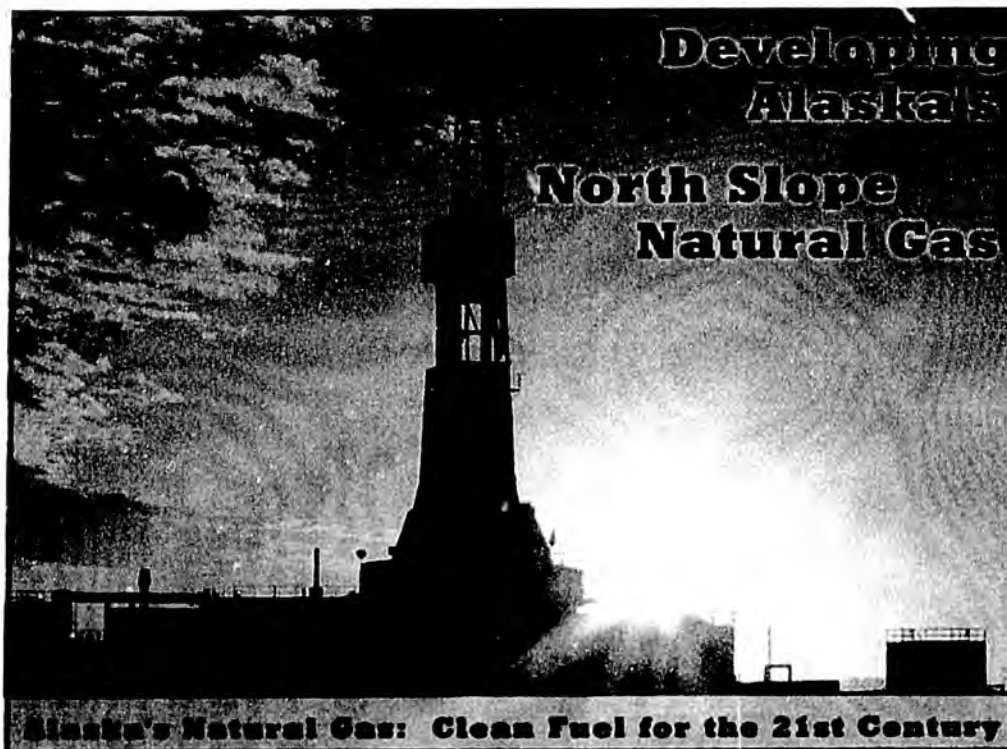


**YUKON
PACIFIC
CORPORATION**
TRANS-ALASKA GAS SYSTEM

CSX
CORPORATION

**Alaska Highway Natural Gas Policy Council
Fairbanks Public Meeting
Chena River Convention Center
April 18, 2001, 5 p.m. – 9 p.m.**

- I. Community Reception, 5:00 p.m. – 6:30 p.m.
- II. Opening remarks from Mayor Boyles, 6:30 – 6:35 p.m.
- III. Opening remarks from Governor Knowles, 6:35 – 6:45 p.m.
- IV. Presentation from Commissioner Debby Sedwick, 6:45 – 7:00 p.m.
- V. Presentation from Foothills Pipe Lines Ltd, 7:00 – 7:15 p.m. (*see April 5 presentation*)
- VI. Presentation from Ken Thompson on "The Hub" concept, 7:15 – 7:30 p.m.
- VII. Public testimony, 7:30– 9:00 p.m.



Mission

Develop and move Alaska's North Slope natural gas along the Alaska Highway route to North American markets and enable creation of gas industries in Alaska.



- Gas to North America
- Jobs and opportunities for Alaskans and Alaska businesses
- New energy sources for Alaska communities
- Future possibilities for use of North Slope gas including
 - Liquefied Natural Gas
 - In-State industrial development
 - Gas-to-Liquids
- Increased revenues to Alaska

Why Natural Gas?

It's here It's efficient It's clean



- There are known reserves of 35 trillion cubic feet of natural gas on the North Slope.
- Estimated resources are up to 100 trillion cubic feet.

Why Natural Gas?

It's here It's efficient It's clean

Natural Gas is the world's most efficient fossil fuel for generating electricity. Its other uses are for:

- residential and commercial heating and cooling
- energy to manufacturers
- feedstock for petrochemical products



Why Natural Gas?

It's here It's efficient It's clean

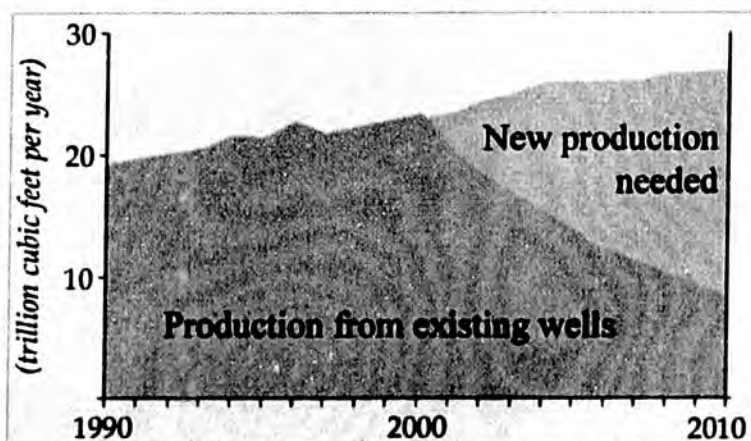


- Air emissions from Natural Gas are significantly less than those from coal or oil
- It is safer than nuclear energy
- It has less environmental impact and more year-round capacity than hydroelectric

Why Now?

Future demand Future is now

US Supply and Demand





Why Now?

Future demand Future is now



- The North American gas market is the largest in the world and demand is growing.
- The long-term outlook for higher natural gas prices makes the development of North Slope natural gas feasible for the first time.



Why the Alaska Highway Route?





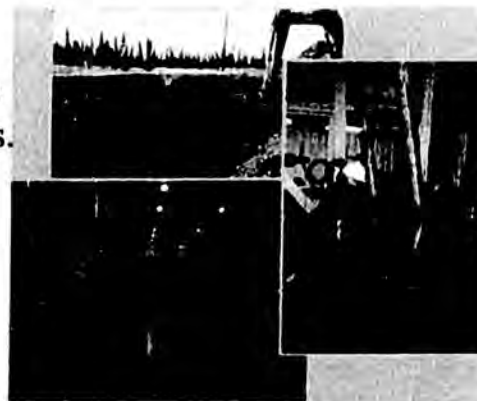
**Building a gas pipeline along the Alaska Highway
best meets the criteria of providing:**

- Gas for America
- Jobs and opportunities for Alaskans and Alaska Businesses
- Energy for Alaska communities
- Multiple opportunities for use of North Slope gas
 - Liquefied Natural Gas
 - In-State industries
 - Gas to Liquids
- Increased revenues to Alaska for our resource
- Doing it right



Jobs for Alaskans

- The pipeline will provide thousands of construction jobs and hundreds of operating jobs.
- Department of Labor and Workforce Development will ensure Alaskans have the necessary training and opportunities to build and operate the gasline.



Why the Alaska Highway Route?
Jobs Local Energy Future Opportunities Revenues Doing it Right

The Alaska Highway route will enable more Alaska communities to access a new energy source.
Possibilities include:



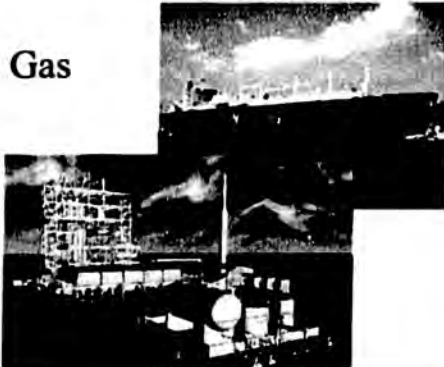

- Spur lines to communities to provide natural gas for home heating
- Gas fired power plants to generate electricity for Alaska communities

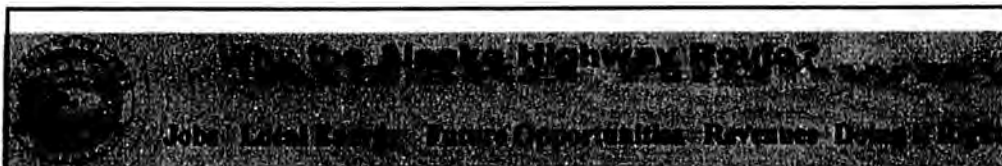
Why the Alaska Highway Route?
Jobs Local Energy Future Opportunities Revenues Doing it Right

Opportunities for North Slope Gas

The Alaska Highway route leaves open possibilities for other future in-state value added commercial uses of North Slope Gas.

- LNG – Liquefied Natural Gas
- Industrial Development
- GTL – Gas to Liquids

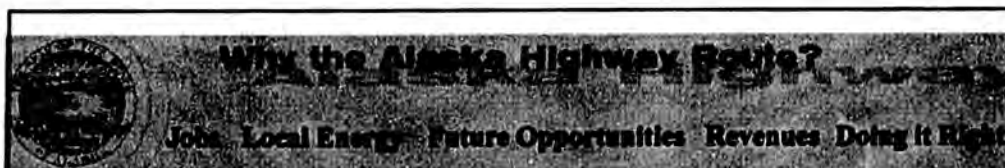




Increased Revenues for Alaska



- Total State Revenue is estimated at \$200-400 million per year from:
 - Production Tax
 - State Property Tax
 - Corporate Income Tax
 - Royalty Share of Gas
- Alaska communities would also receive economic benefit.



Doing it Right

- Sound Science
 - Onshore gasline development uses proven technology.
- Responsible Stewardship
 - Utilizing existing infrastructure of oil pipeline and road minimizes environmental impact.
- Open Public Process
 - Stakeholder concerns will be addressed in public meetings organized by the Alaska Highway Natural Gas Policy Council.



Getting the best information possible

- Expert analysis by oil and gas and economic consultants including
 - Cambridge Energy Research Associates
 - Van Meurs and Associates, Ltd.



CERA

VAN MEURS
Energy Consultants

Knowles Administrative Action

- Gas Pipeline Cabinet
- Gas Pipeline Office
- Natural Gas Policy Council



What happens now?

- **Prepare:**
 - For permit applications by project sponsors expected this year.
- **Listen:**
 - To Alaskans - the Alaska Highway Natural Gas Policy Council will help solicit the views of Alaskans.
- **Coordinate:**
 - With federal agencies, such as Department of Interior and the Federal Energy Regulatory Commission and Canadian counterparts.
- **Advance:**
 - The Alaska Highway project through outreach to producers, pipeline companies, contractors, marketers and consumers.



How can you get more information?

Where can you find out more about an Alaska Highway gasline?

- **Contact Ken Freeman:**
 - Juneau (907) 465-3500
 - Anchorage (907) 269-7450
- **Internet:** www.gov.state.ak.us/gasline/
- **Email:** gasline@gov.state.ak.us
- **Fax:** (907) 465-3532