UNITED STATES OF AMERICA

Before the

FEDERAL POWER COMMISSION

Volume I of V
Application of
El Paso Alaska Company
at Docket No. CP75-___
for a
Certificate of Public Convenience
and Necessity

Pursuant to § 7(c) of the
Natural Gas Act

Respecting the
Proposed
Trans-Alaska Gas Project

Dated: September 23, 1974 Filed: September 24, 1974

COPY NO. 0113

UNITED STATES OF AMERICA

Before the

FEDERAL POWER COMMISSION

El Paso Alaska Company) Docket No. CP75-___

Application of El Paso Alaska Company for a
Certificate of Public Convenience and Necessity

Table of Contents

UNITED STATES OF AMERICA

Before the

FEDERAL POWER COMMISSION

El Paso Alaska Company) Docket No. CP75-___

Application of El Paso Alaska Company for a
Certificate of Public Convenience and Necessity

Table of Contents
(Continued)

UNITED STATES OF AMERICA

Before the

FEDERAL POWER COMMISSION

El Paso Alaska Company) Docket No. CP75-___

Application of El Paso Alaska Company for a
Certificate of Public Convenience and Necessity

Table of Contents
(Continued)

UNITED STATES OF AMERICA

Before the

FEDERAL POWER COMMISSION

El Paso Alaska Company) Docket No. CP75-___

Application of El Paso Alaska Company
for a Certificate of Public
Convenience and Necessity

EL PASO ALASKA COMPANY, hereinafter referred to as "Applicant" or "El Paso Alaska," hereby makes application, pursuant to §7(c) of the Natural Gas Act[1] and §157.5, *et seq.*, of the Commission's Regulations Under the Natural Gas Act,[2] for a certificate of public convenience and necessity authorizing the construction and operation of certain facilities and the transportation and delivery of natural gas in interstate commerce, all as necessary to implement The Trans-Alaska Gas Project as proposed herein.

In support hereof, Applicant respectfully represents:

I.

The names, titles and mailing addresses of those persons upon whom correspondence, communications, pleadings and other documents filed in or relating to any proceedings involving the instant application are to be served are as follows:

Mr. Walter G. Henderson[3]
Assistant Vice President
El Paso Natural Gas Company
Post Office Box 1492
El Paso, Texas 79978

Paul R. Connolly, Esquire[3]
Williams, Connolly & Califano
1000 Hill Building
Washington, D. C. 20006

1/ 15 U.S.C. §717f(c) (1963).

2/ 18 C.F.R. §157.5 (1974).

3/ Persons designated for service; however, it is respectfully requested that the other persons designated receive service copies of all correspondence, communications, pleadings and other documents filed in or relating to any proceedings involving the instant application.

G. Scott Cuming, Esquire
Vice President
El Paso Alaska Company
Post Office Box 2185
2727 Allen Parkway
Houston, Texas 77001

Richard S. Morris, Esquire
Assistant General Counsel
El Paso Natural Gas Company
Post Office Box 1492
El Paso, Texas 79978

Mr. Robert N. Harbor
El Paso Natural Gas Company
310 Suffridge Building
1775 K Street, N. W.
Washington, D. C. 20006

II.

The exact legal name of Applicant is El Paso Alaska Company. It is a corporation duly organized and existing under the laws of the State of Delaware, having its principal places of business in El Paso and Houston, Texas, and having administrative offices in Anchorage, Alaska. Applicant is a wholly-owned subsidiary of El Paso Natural Gas Company ("El Paso Natural"), which is also a corporation duly organized and existing under the laws of the State of Delaware, having its principal place of business in El Paso, Texas.[4/] Applicant is currently authorized to conduct business as a foreign corporation in the States of Alaska and Texas.

Applicant's immediate corporate objective is to implement and effectuate The Trans-Alaska Gas Project.

III.

The Trans-Alaska Gas Project

The Trans-Alaska Gas Project (sometimes referred to herein as the "Project") proposed by and described in this application is designed to make the vast quantities of Alaskan gas[5/] available for use in Alaska

4/ As a result of a recent corporate reorganization, El Paso Natural has become a wholly-owned subsidiary of The El Paso Company. It is anticipated that Applicant also will become a wholly-owned subsidiary of The El Paso Company.

5/ Applicant's estimate of in-place gas reserves in the Prudhoe Bay area of Alaska's North Slope is 35 trillion cubic feet of which in excess of 27 trillion cubic feet is recoverable. This estimate may be expected to increase with additional drilling in that area. In addition, other areas of Alaska possess great potential for the discovery and development of extensive oil and gas reserves. (*See* Exhibit H appended hereto.)

and in the Lower 48 States through a transportation system which will be exclusively within the control of the United States. The Project will be completely free from foreign control; it will make a significant contribution to satisfaction of the critical energy needs of the country; and it is the very embodiment of this Nation's vital Project Independence. All factors considered--including costs, taxes, environmental impact, balance of payment impact, rapidity of completion, utilization of American materials and labor and security of supply--the Project will serve the present and future public convenience and necessity.

In essence, The Trans-Alaskan Gas Project will entail the transportation of gas by pipeline from the North Slope to the south coast of Alaska where it will be converted into liquefied natural gas ("LNG"). The resulting LNG will be transported by ocean-going LNG carriers to the coast of southern California where it will be regasified. Following regasification, the gas will be transported, directly and by displacement through idle capacity in existing natural gas transmission systems to market areas throughout the Lower 48 States.

To implement The Trans-Alaska Gas Project, El Paso Alaska, acting in conjunction with its affiliates and others, will transport, and will arrange for the transportation of, Alaskan gas to markets in Alaska as well as in the Lower 48 States. This transportation service will be rendered by El Paso Alaska for parties who may own or control Alaskan gas, including the State of Alaska, Alaskan producers and Alaskan and Lower 48 purchasers, either affiliated (such as El Paso Natural) or non-affiliated with El Paso Alaska.

The basic transportation components of The Trans-Alaska Gas Project are as follows:

(i) The Alaskan Gas Pipeline System: an 809-mile, 42" O.D. buried, chilled gas pipeline, together with twelve compressor stations, designed to receive up to 3.5 billion cubic feet of gas daily at Prudhoe Bay on the Alaskan North Slope and to deliver to Gravina Point on the Alaskan south coast up to 3.375 billion cubic feet of gas daily; El Paso Alaska proposes to construct and operate the Alaskan Gas Pipeline System;

(ii) The Alaskan LNG Plant: a liquefaction plant, with LNG storage and other facilities, near Gravina Point, with a maximum design inlet capacity of 3.375 billion cubic feet daily; El Paso Alaska proposes to construct and operate the Alaskan LNG Plant;

(iii) The Alaskan Marine Terminal: a marine terminal near Gravina Point, with facilities for the simultaneous berthing of two LNG carriers and LNG loading facilities to transfer some 58,000 gpm of LNG from storage to each of the two carriers; El Paso Alaska proposes to construct and operate the Alaskan Marine Terminal;

(iv) The LNG Carrier Fleet: eleven 165,000 cubic meter LNG carriers operating between Gravina Point and Point Conception, California; El Paso Alaska proposes to contract with an affiliate for ocean transportation of Alaskan LNG by means of the LNG Carrier Fleet;

(v) The California Facilities: terminaling, storage and regasification facilities at Point Conception, California, and existing and proposed downstream pipeline facilities situated within the State of California and extending to the boundaries of California and adjacent states; Western LNG Terminal Company proposes to construct and operate the proposed California facilities and to arrange for the use of existing California facilities; El Paso Alaska proposes to contract with Western LNG Terminal Company for services to be rendered by means of the California facilities, including deliveries of Alaskan gas to El Paso Natural's customers;

(vi) The El Paso Natural Facilities: existing transmission facilities owned and operated by El Paso Natural and extending between the Arizona-California boundary on the west and the Permian Basin of West Texas and the Anadarko Basin of the Texas-Oklahoma Panhandle on the east; El Paso Alaska proposes to contract with El Paso Natural for easterly transportation of Alaskan gas (except that to be utilized in service to El Paso Natural's customers) by means of the El Paso Natural facilities; and

(vii) Other Major Facilities: major, existing natural gas transmission systems of others, possessing idle capacity, extending from the Permian Basin area, the Anadarko Basin area and the Gulf Coast area to natural gas markets in, generally, the eastern half of the United States.

In order to secure those authorizations which are required of El Paso Alaska from this Commission, El Paso Alaska hereby seeks a certificate of public convenience and necessity under §7(c) of the Act authorizing:

(i) The construction and operation of the Alaskan Gas Pipeline System;

(ii) The construction and operation of the Alaskan LNG Plant; and

(iii) The transportation of natural gas to points of delivery in Alaska and to the outlet of the Alaskan LNG Plant.[6/]

As noted *infra*, additional authorizations necessary to implement The Trans-Alaska Gas Project will be sought through applications of others.

The Alaskan Gas Pipeline System

The proposed Alaskan Gas Pipeline System will extend southerly from Prudhoe Bay a distance of some 809 miles to a point of termination near Gravina Point on Prince William Sound, Alaska. The System will include twelve compressor stations (having an aggregate of 561,600 gas compression horsepower) and appurtenant facilities. The System is designed to receive up to 3.5 billion cubic feet of gas daily from the Prudhoe Bay area and to deliver up to 3.375 billion cubic feet of gas daily to the Alaskan LNG Plant at Gravina Point. The System is described in detail in Section 2 of Exhibit Z-1 appended hereto. As reflected in Exhibit K appended hereto, and based upon 1973 prices, capital costs associated with the System are estimated at $1.93 billion.

Significantly, the Alaskan Gas Pipeline System will lie within the Utility Corridor designated by the Secretary of the Interior,[7/] except for its southern-most forty mile segment and other minor deviations, and will generally parallel the trans-Alaska oil pipeline now under construction. The route so selected will thereby avoid proliferation of rights-of-way as required by statute[8/] and will minimize environmental impact. Moreover, El Paso Alaska expects to have access to the construction camps, service roads, warehouses, storage depots and equipment

---

6/ Specific certificate authorization for the LNG Carrier Fleet is not sought herein in view of the Commission's holding in its Order Terminating Proposed Rulemaking Proceeding issued May 4, 1973, at Docket No. R-377. Also, specific certificate authorization is not sought herein for the non-jurisdictional Alaskan terminaling facilities or for those facilities which fall within the purview of §2.55(a) of the Commission's Statements of General Policy and Interpretations.

7/ Public Land Order 5150, 36 Fed. Reg. 25410 (1971), as amended by Public Land Order 5151, 37 Fed. Reg. 142 (1972).

8/ 30 U.S.C. §185 (1973).

utilized for installation of the trans-Alaska oil pipeline thereby avoiding construction and movement of such items which otherwise would be required.

As set forth in Exhibit H appended hereto, it is presently estimated that the Prudhoe Bay area possesses a minimum of 35 trillion cubic feet of in-place gas reserves. These reserves are capable of supporting an average daily deliverability of 3.2 billion cubic feet net to the pipeline. Apart from the Prudhoe Bay area, significant potential exists in northern Alaska for development of additional gas reserves.

El Paso Alaska proposes a 42" O.D. pipeline facility with a daily receipt capability of some 3.5 billion cubic feet. Such pipeline, along with the Alaskan LNG Plant, the Alaskan Marine Terminal and LNG Carrier Fleet, has been designed so as to accommodate initial gas volumes of less than 3.5 bcf daily, with a build-up to the full design level through the addition of incremental facilities in each Project component. Further, the entire transportation system can be expanded to transport volumes above the full design level in a similar manner. The fact of this expansibility will take on importance if substantial additional Alaskan gas reserves are developed.

It is proposed that El Paso Alaska will contract with parties owning or controlling Alaskan gas supplies who are desirous of having such supplies transported to markets in Alaska or in the Lower 48 States. Such parties could include the Alaskan producers and Alaskan as well as Lower 48 purchasers, either affiliated (such as El Paso Natural) or non-affiliated with El Paso Alaska. In this connection and as to the State of Alaska, which has reserved the right to take in kind its royalty share of all gas produced from state leaseholds, El Paso Alaska has represented, and here represents, that it will undertake, directly or through affiliates, to transport such royalty share to such points of delivery along the System as the State may require and to purchase such royalty share which is surplus to the needs of the State.

The transportation service proposed by El Paso Alaska, and to be conducted by means of the Alaskan Gas Pipeline System, would be rendered on a cost of service basis.

The Alaskan LNG Plant and Alaskan Marine Terminal

The proposed Alaskan LNG Plant is to be situated at the terminus of the Alaskan Gas Pipeline System near Gravina Point. It will be comprised of eight process trains designed with an aggregate inlet capacity of up to 3.375 billion cubic feet daily which will treat, dehydrate and liquefy the natural gas. LNG storage facilities will have a capacity of 2,200,000 barrels of LNG. The facility will have a capacity to deliver to the LNG Carrier Fleet the net LNG equivalent of up to 3.03 billion cubic feet of gas daily.

The proposed Alaskan Marine Terminal will constitute the interconnection between the LNG Plant and the LNG Carrier Fleet. It will provide facilities for berthing and servicing two LNG carriers simultaneously, and for loading some 58,000 gallons of LNG per minute to each of such carriers.

The Alaskan LNG Plant and Alaskan Marine Terminal are described in detail in Sections 3 and 4, respectively, of Exhibit Z-1. As reflected in Exhibit K and based upon 1973 prices, capital costs associated with both of such facilities are estimated to aggregate $1.64 billion.

Liquefaction and terminaling service proposed by El Paso Alaska would be rendered on a cost of service basis.

The LNG Carrier Fleet

The LNG Carrier Fleet will consist of eleven LNG tankers, each having a capacity of 165,000 cubic meters. It will transport and deliver an annual average daily volume of LNG equivalent to 2.81 billion cubic feet daily from the Alaskan LNG Plant to a terminal on the coast of southern California. The fleet will make 308 round trips annually and will operate along a 1,902 nautical-mile trade route and at regular intervals between Gravina Point, Alaska, and Point Conception, California.

Each LNG carrier will be 1002 feet in overall length, 150 feet in beam and 101 feet in hull depth. Its loaded draft will be 40 feet. It will be driven by 55,000 shaft horsepower transmitted through twin propellers and fueled by LNG boil-off and Bunker C. It will have a double reinforced steel hull.

Each carrier will be provided with a bow thruster and an unusually large rudder angle to assure a high degree of maneuverability. It will be equipped with either a free-standing or integral cargo containment system. The LNG carriers will be equipped with the most advanced communications, navigation, collision avoidance, and fire detection and control systems.

The fleet, and its operation, is described in Section 5 of Exhibit Z-1. As reflected in Exhibit K and based on 1973 prices, capital costs associated with the fleet are estimated at $2 billion.

Under the transportation service arrangements proposed, El Paso Alaska will contract with an affiliate to provide ocean shipping by means of the LNG Carrier Fleet. This transportation service will be rendered at rates which are cost-based.

The California Facilities

On September 17, 1974, at Docket No. CP75-83, Western LNG Terminal Company ("Western Terminal"), a wholly-owned subsidiary of Pacific Lighting Corporation, filed an application with the Commission for authorization to construct and operate facilities in the State of California and to render terminaling, storage, regasification and downstream transportation service upon request of any party authorized to introduce LNG into the Lower 48 States at such facilities.

In implementing the California portion of The Trans-Alaska Gas Project, El Paso Alaska is desirous of utilizing such service. To this end, El Paso Alaska and Western Terminal have entered upon a Letter Agreement dated September 19, 1974, a conformed copy of which is submitted as Exhibit Z appended hereto. Thereunder, and subject to receipt of necessary authorizations and certain other conditions, Western Terminal has agreed to terminal, offload, store and regasify LNG and to deliver gas to El Paso Alaska (or for its account) at points within the State of California or at the California-Arizona boundary into the facilities of El Paso Natural.

Western Terminal's said application proposes the construction and operation of three California coast-sited terminaling and regasification facilities at, respectively, Los Angeles Harbor, Oxnard and Point Conception, with each having a potential handling and throughput capability of some 4 billion cubic feet daily. For landing of Alaskan LNG, El Paso Alaska has selected Point Conception as the preferred site for its Project. Further, Western Terminal's application proposes the construction and operation of transmission pipelines extending downstream from each of the three regasification facilities to points of connection with major, existing gas transmission facilities in the State of California. Lastly, as the application states:

> "It is contemplated that a portion of the gas [introduced as LNG into California and received and regasified by Western Terminal] may be physically transported to the boundary between California and adjacent states over existing facilities. [Western Terminal] does not presently own or operate any facilities; however, as required, [Western Terminal] intends to enter into negotiations with those companies having such facilities so that [Western Terminal] can provide such transportation. . . ."

Under the terms of the said Letter Agreement of September 19, 1974, Western Terminal will appropriately supplement its said application pending at Docket No. CP75-83 and seek final, unconditional certificate authorization necessary to construct and operate those specific

facilities and to render the specific service for El Paso Alaska in connection with The Trans-Alaska Gas Project.

Under the transportation service arrangements proposed, El Paso Alaska will contract with Western Terminal for the terminaling, offloading, storage and regasification of Alaskan LNG and the delivery of resulting natural gas to implement those transportation service arrangements which El Paso Alaska would conclude with those parties having requisite authorization to sell or utilize Alaskan gas in the Lower 48 States. For example, to the extent that El Paso Alaska shall have contracted with such parties to deliver Alaskan gas to market areas in California or in northwestern areas of the Lower 48 States, El Paso Alaska, working in conjunction with Western Terminal, would effectuate such deliveries of such Alaskan gas to desired load centers in such market areas. As to Alaskan gas which El Paso Natural may have purchased for resale to its customers, deliveries would be made by Western Terminal, as required, either in California or into El Paso Natural's existing transmission system at the Arizona-California boundary. As to Alaskan gas which El Paso Alaska shall have contracted to deliver in the Permian and Anadarko Basin areas for subsequent transportation to other market areas in the United States, Western Terminal would make deliveries into the El Paso Natural system for transportation by El Paso Natural for El Paso Alaska's account to the Permian and Anadarko Basin areas. Such transportation and delivery concepts are schematically demonstrated by the illustrative flow diagrams included in Exhibit Z-2 appended hereto.

As reflected in Western Terminal's said application and in the said Letter Agreement of September 19, 1974, the service proposed by Western Terminal will be rendered on a cost of service basis.

The El Paso Natural Facilities

This link of The Trans-Alaska Gas Project is comprised of El Paso Natural's interstate transmission system which extends from the Arizona-California boundary easterly a distance of some 765 miles to head compressor stations connecting field transmission pipelines in the Permian Basin producing area of west Texas and to a connecting pipeline facility extending into the Texas-Oklahoma Panhandle portion of the Anadarko Basin area. This system possesses a westerly throughput capability from its present producing areas of approximately 4 billion cubic feet daily.

As discussed above, El Paso Alaska will contract with El Paso Natural to make gas available to other market areas in the United States. By means of displacement, Alaskan gas brought into California will be immediately available in El Paso Natural's supply areas of west Texas and Oklahoma. In the event the gas reserves now available to El Paso

Natural in these supply areas should at some time in the future be inadequate to achieve this displacement, the El Paso Natural transmission system can be converted from a westerly to an easterly flow by means of minor station piping modifications which can be accomplished without environmental impact and with minimal cost. By these means Alaskan gas can be introduced into major, existing transmission systems, having significant idle capacity, serving market areas throughout the United States. This service would be rendered by El Paso Natural on a cost of service basis.

Permian-Anadarko-Gulf Coast to Other Lower 48 Markets

Several major existing natural gas transmission systems presently extend northeasterly from the Permian Basin area. From the Anadarko Basin, numerous major, existing natural gas transmission systems extend to the northern, midwest and eastern market areas. The Gulf Coast area provides the point of commencement for yet additional major, existing natural gas transmission systems serving the entire Lower 48 region east of the Mississippi River.

As reflected in Exhibit Z-2 hereto, present transport capacity from Permian to Anadarko aggregates 1.6 billion cubic feet daily; from Anadarko north and easterly, such present capacity aggregates 6.8 billion cubic feet daily; and from the Gulf Coast area to the midwest, southeast and east, such present capacity aggregates 16 billion cubic feet daily. Based upon review of facilities and projected supply availability estimates reflected in documents filed with the Commission by each of the pipeline companies involved,9/ it appears that, in the year 1980, and due to projected deterioration in domestic gas reserves, there will exist in major systems extending from Anadarko idle transmission capacity of some 2.9 billion cubic feet daily. Similarly, and during the same time frame and for the same reasons, the major systems extending from the Gulf Coast area to the midwest, southeast and east will possess idle transmission capacity of some 7.2 billion cubic feet daily.

Through construction of relatively minor reinforcement facilities from Permian to Anadarko, large quantities of Alaskan gas can be moved to points of introduction into the major, existing systems extending to central, midwestern, southeastern and eastern market areas. Through construction of a facility from Permian to the Gulf Coast area (such as that proposed by El Paso Natural at Docket No. CP73-260), the major, existing systems serving the entire midwestern, southeastern and eastern portions of the Nation would be given access to Alaskan gas.

El Paso Alaska represents that adequate idle capacity (with only relatively minor additional facilities) will exist to accommodate Alaskan gas throughout the Lower 48 markets. El Paso Alaska submits

---

9/ Certificate applications and Forms 15 filed by major natural gas transmission companies.

that the public interest dictates that such idle capacity be utilized in preference to the construction of thousands of miles of new pipelines which would result in a proliferation of new rights-of-way in this and foreign countries.

The Economic Impact of the Project

The total estimated capital costs for those transportation components of the Project extending between Prudhoe Bay and Point Conception, California (namely, the Alaskan Gas Pipeline System, the Alaskan LNG Plant, the Alaskan Marine Terminal and the LNG Carrier Fleet) are estimated to aggregate $5.6 billion. Such estimate is based upon 1973 prices. Based on the estimated costs set forth in the instant application and by application of traditional financing concepts, the cost of transporting Alaskan gas from Prudhoe Bay to California, after regasification, would approximate $1.15 per million Btu for the first full year of operation. On a present value tariff rate basis, as sometimes employed, this cost would approximate $1.00 per million Btu. To both would be added the cost of gas when once determined.

The Project Implementation Schedule

Given reasonably prompt certification of The Trans-Alaska Gas Project (by late 1975 or early 1976), first deliveries of Prudhoe Bay gas thereafter can be initiated in 54 months, or by mid-1980. On the basis of this schedule, in excess of 1.5 billion cubic feet of Alaskan gas daily could be moving to Alaska and Lower 48 markets by late 1980. The Trans-Alaska Gas Project could be fully implemented and fully operational by late 1981.

The Public Convenience and Necessity

El Paso Alaska respectfully submits that the present and future public convenience and necessity require approval of The Trans-Alaska Gas Project for the following reasons:

(i) An unquestioned and critical need exists for additional natural gas supplies; the Project will make Alaskan gas available to partially offset deterioration in domestic supplies.

(ii) The national policy of energy independence will be furthered by approval of the Project, which will be entirely within the control of the United States. United States control is of particular importance in view of:

(a) The recent Middle East oil embargo;

(b) The continued effort by petroleum producing foreign nations to exploit the world-wide energy shortage;

(c) Recent conduct of the Canadian government and the several Provinces of Canada in various energy related matters. The commitment of vast quantities of Alaska's North Slope gas to a pipeline subjected to and controlled by a foreign power and traversing its heartland, no matter how friendly that power may now appear, would be a repudiation of the concept of Project Independence;

(d) The fact that preemption of capacity or interruption of the flow for any reason whatsoever not only will deprive United States consumers of the gas but also the oil as well unless the gas is flared which is totally unacceptable;

(e) The impotence of the United States to assure continuity of service by insisting on the degree of security felt necessary;

(f) The inability of United States authorities to insist on maintenance and safety criteria consistent with United States standards; and

(g) The exposure of United States consumers to the taxing powers of the Canadian government and the provinces of Canada.

(iii) Failure now to apply the basic concepts of energy independence will affect far more than the presently proven quantities of gas in the Prudhoe Bay area of Alaska. Selection of an alternate Canadian route would for all practical purposes commit the future gas discoveries in the Arctic region of Alaska to dependence upon a foreign sovereign.

(iv) The Trans-Alaska Gas Project can be implemented sooner than the competing Trans-Canada proposal, thereby providing North Slope gas to markets in Alaska and the Lower 48 States at the earliest possible date, in that:

(a) El Paso Alaska plans to expedite the construction of its Alaskan Gas Pipeline System by using construction manpower and facilities available upon completion of the trans-Alaska oil pipeline;

(b) Comparatively smaller complements of steel,[10/] construction spreads and manpower are needed to build The Trans-Alaska Gas Project; and

(c) Fewer authorizations are needed for The Trans-Alaska Gas Project, since it will utilize the designated Utility Corridor, will not require approvals from foreign governments and will not require the settlement of Canadian native claims.

(v) The Trans-Alaska Gas Project will not adversely impact the Nation's balance of payments. To the extent possible, none of the materials and equipment for the Project will be purchased or fabricated in foreign nations, nor will any taxes or other payments be made to governments other than Federal, state and local entities of the United States.

(vi) The Trans-Alaska Gas Project is expected to produce tax revenues to the United States over the life of the project of approximately $8.3 billion.

(vii) The Trans-Alaska Gas Project will provide significant benefits to the State of Alaska. In addition to substantial tax revenues, estimated at $176 million per year, the proposed Alaskan Gas Pipeline System will traverse the State, providing natural gas fuel for residential and commercial users, encouraging agriculture and industrial development and providing energy for the extraction of Alaska's known rich mineral deposits. Construction and operation of the Alaskan Gas Pipeline System, the Alaskan LNG Plant and the Alaskan Marine Terminal will provide substantial, continuous employment opportunities in a state which has been experiencing an unemployment rate above the national average.

(viii) By constructing the proposed Alaskan Gas Pipeline System across Alaska within the designated Utility Corridor, and by utilizing many of the same roads, construction camps, personnel and equipment employed in the construction of the oil pipeline, the impact of the Project upon the sensitive environment of this continent's arctic lands will be minimized.

10/ The competing Trans-Canada project will use 4.7 million tons of steel, or more than two and one-half times the amount needed for all facilities, including the LNG carriers, of the Trans-Alaska Gas Project.

(ix) Within the boundaries of the Lower 48 States, The Trans-Alaska Gas Project will, for the most part, utilize major, existing facilities with idle capacity, thereby minimizing both cost and adverse environmental impact.

The public convenience and necessith urgently requires certification of the facilities and services for which application is here made and all companion facilities and services at the earliest date possible in order to permit the timely introduction of the vast Prudhoe Bay gas supplies into market areas in Alaska and the Lower 48 States. Any inordinate delays in processing such applications will impose many severe burdens upon the general public, including those in the form of increased capital costs, through the operation of inflationary factors, and those in the form of continuing erosion of gas service. Finally, delay in approval of the instant application will delay development of the significant gas reserves of Alaska, so vital to this Nation's goal of energy independence.

IV.

The facilities for which El Paso Alaska seeks a certificate of public convenience and necessity to construct and operate are specifically described as follows:11/

A. Alaskan Gas Pipeline

1. Pipeline

Approximately 809.2 miles of 42" O.D. x 0.750", 0.90" and 1.080" w.t. pipeline, with appurtenances, commencing at the outlet of a gas processing plant or plants on the North Slope in the SE/4 of Section 11, Township 11 North, Range 14 East, Umiat Principal Meridian, and terminating at the proposed LNG Plant near Gravina Point in the SE/4 of Section 17, Township 14 South, Range 5 West, Copper River Meridian, all within the State of Alaska.

2. Compressor Stations

Twelve (12) compressor stations, each having two (2) 23,400 horsepower ISO-rates gas turbine-driven centrifugal compressor units with appurteances and other necessary auxiliary facilities, and located, respectively, at approximate mileposts 58.7, 106.6, 154.2, 235.9, 294.2, 357.8, 415.4, 481.4, 539.4, 590.5, 658.2 and 721.1 on the proposed 42" O.D. pipeline.

11/ The locations of such facilities are reflected on the geographical maps attached hereto as Exhibit F.

3. Meter Stations

a. Prudhoe Bay Meter Station

A standard orifice-type meter station, having nine 20" meter runs, with appurtenances, and located at the northern extremity of the proposed 42" O.D. pipeline in the SE/4 of Section 11, Township 11 North, Range 14 East, Umiat Principal Meridan, Alaska.

b. Gravina Point Meter Station

A standard orifice-type meter station, having fifteen 20" meter runs, with appurtenances, and located within the proposed LNG Plant site at the southern terminus of the proposed 42" O.D. pipeline, in the SE/4 of Section 17, Township 14 South, Range 5 West, Copper River Meridian, Alaska.

B. LNG Plant

A gas liquefaction and LNG storage and handling complex, having eight liquefaction trains, a total annual average day liquefaction capacity of 2864 MMcf equivalent LNG loaded on board the LNG carriers, a total of 2,200,000 BBL LNG storage capacity, and other appurtenances and necessary support facilities, and located within Sections 16, 17, 20 and 21, Township 14 South, Range 5 West, Copper River Meridian, Alaska.

In addition to those facilities specifically described in paragraphs A and B above, and as a part of the instant project, El Paso Alaska proposes to construct and operate, under authority of §2.55(a) of the Commission's Statements of General Policy and Interpretations, those facilities described as facilities:

C. Maintenance Bases and Dispatching Center

Four (4) maintenance bases located, respectively, at proposed Compressor Stations 2, 5 and 8 and at the City of Valdez, Alaska, and a dispatching and control center located within the proposed LNG plant area.

D. Refrigeration Plants

Gas refrigeration plants at proposed Compressor Station Nos. 1 through 11, having 4130 refrigeration compressor ISO horsepower at Station 1 and 8260 refrigeration compressor ISO horsepower at Stations 2 through 11.

E. Communications, Telemetry and Supervisory Control Equipment

Communications, telemetry and supervisory control equipment as required for operation and maintenance of the proposed facilities.

F. Gas Processing Facilities

A diglycolamine gas treating unit and a molecular sieve gas dehydration unit for each of the eight (8) LNG plant trains, each of such gas processing units having a daily design treating capacity of 450 MMcf and 445 MMcf, respectively.

The total estimated cost of all facilities comprising The Trans-Alaska Gas Project, as presented herein, is $5.6 billion, including overhead and contingency. Of such amount, $3.3 billion is attributable to those facilities, described in paragraphs A and B above, for which specific authorization is requested herein; $200 million is attributable to those facilities, described in paragraphs C through F above, which are proposed to be constructed and operated under §2.55(a) of the Commission's Statements of General Policy and Interpretations; and the remaining amount of $2.1 billion is attributable to facilities which El Paso Alaska regards to be non-jurisdictional.

V.

El Paso Alaska submits that there are no other applications which are "interdependent" in the sense that they must be filed coincident herewith. Other applications which are supplemental or otherwise related hereto and which eventually will be filed in order to obtain authorizations and permits required in the overall implementation of the Project include the following:

(i) Producers and owners of natural gas will seek certificates pursuant to §7(c) of the Act to sell natural gas in interstate commerce for resale;

(ii) Western Terminal will seek supplemental §7(c) authorization to construct and operate additional facilities in California to implement the instant Project;

(iii) El Paso Natural will seek §7(c) authorization to transport Alaskan gas through its system, to make those minor facility modifications necessary to do so and to sell Alaskan gas purchased by it for resale;

(iv) In order to provide for the maximum eastward delivery of Alaskan gas, it is anticipated that §7(c) authorization will be sought to construct and operate any necessary interconnecting pipelines extending from El Paso Natural's system to the Anadarko Basin or to the Gulf Coast;

(v) When El Paso Alaska is certificated to construct and operate the Alaskan Gas Pipeline System pursuant to this application, it will be required to obtain from the Secretary of the Interior permits to cross, use and occupy federal lands under the provisions of the Mineral Leasing Act of 1920, as amended, 30 U.S.C. 185; likewise, permits to utilize state lands must be obtained from the appropriate official or agency of the State of Alaska; and

(vi) El Paso Alaska must also obtain such other permits from Federal, state and local authorities as are described in Section 9 of the Environmental Report submitted with this application.

VI.

Reference is respectfully directed to the Table of Contents accompanying this application for reference to all exhibits required by and applicable under §157.14 of the Commission's Regulations which are being filed herewith or omitted.

VII.

El Paso Alaska has filed herewith most exhibits required by the Commission's Regulations. El Paso Alaska is proceeding as expeditiously as possible and anticipates filing the remaining exhibits in a reasonable period of time.

Accordingly, El Paso Alaska hereby petitions the Commission, pursuant to §1.7(b) of the Rules of Practice and Procedure, to waive the filing requirements of §1.14 of the Rules of Practice and Procedure to the extent necessary to permit this application to be accepted for filing.

VIII.

Appended hereto is a statement in conformity with §2.1 of the Commission's Statements of General Policy and Interpretations, submitted in the form contemplated by §1.19(c)(3) of the Commission's Rules of Practice and Procedure, suitable for publication in the Federal Register, summarizing the instant application.

IX.

WHEREFORE, El Paso Alaska Company, the Applicant herein, respectfully prays that the Commission issue to it a certificate of public convenience and necessity under §7(c) of the Natural Gas Act authorizing:

(i) The construction and operation of the Alaskan Gas Pipeline System;

(ii) The construction and operation of the Alaskan LNG Plant; and

(iii) The transportation of natural gas to points of delivery in Alaska and to the outlet of the Alaskan LNG Plant.

Applicant is able and willing to perform the proposal set forth in this application and, for the reasons stated, believes that issuance of the requested authorizations will serve and is required by the present and future public convenience and necessity.

Respectfully submitted,

EL PASO ALASKA COMPANY

By s/ Howard Boyd
Howard Boyd
President

G. Scott Cuming, Esquire
Vice President
El Paso Alaska Company
Post Office Box 2185
2727 Allen Parkway
Houston, Texas 77001

Paul R. Connolly, Esquire
Williams, Connolly & Califano
1000 Hill Building
Washington, D. C. 20006

Counsel for EL PASO ALASKA COMPANY

Dated: September 23, 1974

STATE OF TEXAS)

COUNTY OF EL PASO)

HOWARD BOYD, being first duly sworn, on oath, says that he is President for El Paso Alaska Company; that he has read the foregoing Application of El Paso Alaska Company for a Certificate of Public Convenience and Necessity and that he is familiar with the contents thereof; that, as such Officer, he has executed the same for and on behalf of said Company with full power and authority to do so; and that the matters and facts set forth therein are true to the best of his information, knowledge and belief.

s/ Howard Boyd
Howard Boyd

SUBSCRIBED AND SWORN TO before me, the undersigned authority, as of this 23rd day of September, 1974.

s/ Sharon L. Rogers
Sharon L. Rogers
Notary Public in and for
El Paso County, Texas
My Commission Expires June 1, 1975

FEDERAL
REGISTER NOTICE

UNITED STATES OF AMERICA

Before the

FEDERAL POWER COMMISSION

El Paso Alaska Company) Docket No. CP75-__

NOTICE OF APPLICATION

(September , 1974)

Take notice that on September 24, 1974, El Paso Alaska Company ("El Paso Alaska"), a Delaware corporation, whose mailing address is Post Office Box 1492, El Paso, Texas, 79978, filed an application at Docket No. CP75-__ under Section 7(c) of the Natural Gas Act for a certificate of public convenience and necessity authorizing the construction and operation of certain natural gas pipeline and liquefaction facilities in the State of Alaska, and the transportation of natural gas, all as more fully set forth in the application on file with the Commission and open to public inspection.

The application states that El Paso Alaska proposes a project, "The Trans-Alaska Gas Project," designed to make Alaskan gas available to markets in the State of Alaska and in the Lower 48 States. El Paso Alaska's Trans-Alaska Gas Project contemplates the movement of such quantities of Alaskan gas from the Prudhoe Bay area by pipeline to Gravina Point, Alaska. At Gravina Point, the gas will be liquefied, and the resultant LNG transported by eleven LNG carriers to Point Conception, California, where it will be off-loaded, stored and regasified utilizing facilities to be constructed and operated by Western LNG Terminal Company ("Western Terminal"), a wholly-owned subsidiary of Pacific Lighting Corporation. Following regasification, the Alaskan gas will be transported and delivered, either directly or through displacement, to market areas in the Lower 48 States, primarily by utilizing existing natural gas pipeline systems.

The application further states that El Paso seeks authorization to construct and operate a 809.2 mile, 42" O.D. buried, chilled natural gas pipeline, with related compression and metering facilities, extending from gas production facilities in the Prudhoe Bay area to Gravina Point on Alaska's southern coast. El Paso Alaska also seeks authorization to construct a liquefaction plant with LNG storage and other auxiliary facilities at Gravina Point, and to transport natural gas to a point of delivery at the outlet of the LNG Plant and to other points of delivery in Alaska.

The total estimated cost of all facilities comprising the Trans-Alaska Gas Project is $5.6 billion, including overhead and contingency. Of such total, $3.3 billion is attributable to those facilities for which specific Commission authorization is requested, $200 million is attributable to those facilities which are proposed to be constructed and operated under §2.55(a) of the Commission's Statements of General Policy and

Interpretations, and the remaining $2.1 billion is attributable to facilities regarded by El Paso Alaska to be non-jurisdictional.

El Paso Alaska, acting in conjunction with corporate affiliates and others, proposes to transport and arrangement for the transportation of Alaskan gas which is owned by its corporate affiliates or others.

Any person desiring to be heard or to make any protest with reference to said application should, on or before , 1974, file with the Federal Power Commission, Washington, D. C. 20426, a petition to intervene or a protest in accordance with the requirements of the Commission's Rules of Practice and Procedure (18 CFR 1.8 or 1.10) and the Regulations Under the Natural Gas Act (18 CFR 157.10). All protests filed with the Commission will be considered by it in determining the appropriate action to be taken but will not serve to make the protestants parties to the proceeding. Any person wishing to become a party to a proceeding or to participate as a party in any hearing therein must file a petition to intervene in accordance with the Commission's Rules.

Take further notice that, pursuant to the authority contained in and subject to the jurisdiction conferred upon the Federal Power Commission by Sections 7 and 15 of the Natural Gas Act and the Commission's Rules of Practice and Procedure, a hearing will be held without further notice before the Commission on this application if no petition to intervene is filed within the time required herein, if the Commission on its own review of the matter finds that a grant of the authorization is required by the public convenience and necessity. If a petition for leave to intervene is timely filed, or if the Commission on its own motion believes that a formal hearing is required, further notice of such hearing will be duly given.

Under the procedure herein provided for, unless otherwise advised, it will be unnecessary for El Paso Alaska to appear or be represented at the hearing.

Kenneth F. Plumb,
Secretary

EXHIBITS

A

ALPHABETICAL - CERTIFICATE INDEX

Docket No. CP75-_____

EXHIBIT A

ARTICLES OF INCORPORATION AND BY-LAWS

Application of

EL PASO ALASKA COMPANY

Docket No. CP75-___
Exhibit A

EL PASO ALASKA COMPANY

Trans-Alaska Gas Project

Articles of Incorporation and By-Laws of Applicant

Table of Contents

EL PASO ALASKA COMPANY

Certificate of Incorporation
(Delaware)

CERTIFICATE OF INCORPORATION

OF

EL PASO ALASKA COMPANY

* * * * *

FIRST: The name of this corporation is

EL PASO ALASKA COMPANY

SECOND: Its registered office in the State of Delaware is to be located at 100 West Tenth Street in the City of Wilmington, County of New Castle, State of Delaware, and the name and address of its registered agent is The Corporation Trust Company, No. 100 West Tenth Street, Wilmington, Delaware.

THIRD: The nature of the business and the objects and purposes proposed to be transacted, promoted and carried on are to engage in any lawful acts or activities for which corporations may be organized under the General Corporation Law of Delaware.

FOURTH: The total number of shares of all classes of stock which this corporation shall have authority to issue is one thousand (1,000), all of which shall be shares of common stock with a par value of one dollar ($1.00) per share.

Shares of stock of this corporation whether with or without par value, of any class or classes hereby or hereafter authorized, may be issued by this corporation from time to time for such consideration permitted by law as may be fixed from time to time by the Board of Directors.

FIFTH: The name and mailing address of the incorporator is:

Wayne S. Gerber 304 Texas Avenue
El Paso, Texas 79901

SIXTH: Upon the filing of the Certificate of Incorporation, the authority of the incorporator shall terminate and the following named individuals, whose mailing addresses are set out beside their names, shall serve as directors until the first annual meeting of the stockholders or until their successors are elected and qualified.

Howard Boyd	2727 Allen Parkway Houston, Texas 79019
George D. Carameros, Jr.	2727 Allen Parkway Houston, Texas 79019
Hugh F. Steen	304 Texas Avenue El Paso, Texas 79901

SEVENTH: The following provisions are inserted for the management of the business and for the conduct of the affairs of this corporation and for defining and regulating the powers of this corporation and its directors and stockholders:

1. The private property of the stockholders of the corporation shall not be subject to the payment of corporate debts to any extent whatsoever.

2. The first meeting of the stockholders for the election of directors shall be held in El Paso, Texas, at the office of this corporation, on June 11, 1974, or at such other time and place as may be designated by the Board of Directors, and thereafter the directors shall be elected at the time and place named in the By-laws of this corporation.

3. Written ballots shall not be required for the election of directors of this corporation.

4. The Board of Directors shall have the power to make, alter or repeal By-laws of this corporation.

5. The By-laws of the corporation may fix or provide the manner for fixing and altering the number of directors constituting the Board of Directors, provided that such number shall not be less than three, and shall permit the election of members of the Board of Directors without written ballots.

IN WITNESS WHEREOF, I, the undersigned, being the incorporator of this corporation hereinbefore named, do certify that the facts herein stated are true, that the execution of this instrument is my act and deed, and that I accordingly have hereunto set my hand and seal, this 23rd day of July, A.D. 1973.

Wayne S. Gerber (L.S.)

Wayne S. Gerber

STATE OF TEXAS)
) ss.
COUNTY OF EL PASO)

Be it remembered that on this 23rd day of July, A.D. 1973, personally came before me, a Notary Public for the State of Texas, WAYNE S. GERBER, Incorporator of the foregoing Certificate of Incorporation, known to me to be such, and acknowledged the said Certificate to be his act and deed and that the facts stated therein are true.

Given under my hand and seal of office the day and year aforesaid.

Madelane W. Munas
Notary Public in and for
El Paso County, Texas
My Commission Expires June 1, 1975

State of Delaware

Office of Secretary of State

I, **Robert H. Reed,** *Secretary of State of the State of Delaware,* **do hereby certify** *that the above and foregoing is a true and correct copy of* Certificate of Incorporation of the "EL PASO ALASKA COMPANY", as received and filed in this office the twenty-sixth day of July, A.D. 1973, at 10 o'clock A.M.

In Testimony Whereof, *I have hereunto set my hand and official seal at Dover this* twenty-sixth *day of* July *in the year of our Lord one thousand nine hundred and* seventy-three.

Robert H. Reed

Secretary of State

Ass't Secretary of State

EL PASO ALASKA COMPANY
(a Delaware corporation)

BY-LAWS

EL PASO ALASKA COMPANY

BY-LAWS

ARTICLE I

OFFICES

Section 1. Registered office, agent. The registered office of the corporation shall be at 100 West Tenth Street in the City of Wilmington, County of New Castle, State of Delaware, and the name of the registered agent in charge thereof is The Corporation Trust Company, 100 West Tenth Street, Wilmington, Delaware.

Section 2. Other offices. The corporation may also have offices in such other places both within and without the State of Delaware as the board of directors may from time to time determine or the business of the corporation may require.

ARTICLE II

MEETINGS OF STOCKHOLDERS

Section 1. Meetings of Stockholders. All meetings of the stockholders of the corporation shall be held at such place, either within or without the State of Delaware, as shall be stated in the notice of the meeting or in a duly executed waiver of notice thereof. If the place for any such meeting shall not be stated in the notice thereof, then such meeting shall be at the corporation's office in El Paso, Texas.

Section 2. Annual Meeting. An annual meeting of stockholders, commencing with the year 1974, shall be held on the second Tuesday in June of each year, if not a legal holiday, and, if a legal holiday, then on the first day following which is not a legal holiday, at 9:05 o'clock A.M., at which time they shall elect by a plurality vote a board of directors and transact such other business as may properly be brought before the meeting.

Section 3. Special Meetings. At any time in the interval between annual meetings, special meetings of the stockholders may be called by the board of directors at any meeting of the board, or by the stockholders holding together at least such number of shares as shall entitle them to cast twenty-five per cent (25%) of the votes which might be cast upon any business which could legally be transacted thereat. Special meetings of the stockholders shall be held at the office of the corporation in El Paso, Texas, except in cases in which the calls therefor designate some other place.

Section 4. Notice of Meetings. Written or printed notice stating the place, day, and hour of the meeting, and in the case of a special meeting, the purpose or purposes for which the meeting is called, shall be delivered not less than ten (10) nor more than sixty (60) days before the date of any meeting of stockholders, either personally or by mail by or at the direction of the board of directors or the stockholders calling the meeting, to each stockholder of record entitled to vote at such meeting. No stockholder shall be entitled to notice of any meeting of the stockholders of the corporation unless entitled to vote thereat. If mailed, notice is given when deposited in the United States mail, postage prepaid, in a sealed envelope addressed to the stockholder at his address as it appears on the records of the corporation. At any annual or other meeting of stockholders, action may be taken upon any subject which is not by law required to be stated in the notice of the meeting and, in addition thereto, upon any special subject which may be acted upon at a special meeting called for the purpose when, in the last mentioned case, in the notice of such annual or other meeting, the purpose to consider and act upon such special subject is stated.

Whenever any notice whatever is required to be given by law or under the provisions of the Certificate of Incorporation of the corporation or these By-laws, a waiver thereof, in writing, signed by the person or persons entitled to such notice, whether before or after the time stated therein, shall be deemed equivalent to the giving of such notice; and attendance of a stockholder at any meeting shall constitute a waiver of notice of said meeting.

Whenever the vote of stockholders at a meeting thereof is required or permitted to be taken for or in connection with any corporate action, the meeting and vote of stockholders may be dispensed with if all of the stockholders who would have been entitled to vote upon the action if such meeting were held shall consent in writing to such corporate action being taken.

Section 5. Quorum. The holders of a majority of the stock issued and outstanding and entitled to vote, present in person or represented by proxy, shall be requisite and shall constitute a quorum at all meetings of the stockholders for the transaction of business except as otherwise provided by statute, by the Certificate of Incorporation of the corporation or by these By-laws. If, however, such quorum shall not be present or represented at any meeting of the stockholders, the stockholders in person or represented by proxy shall have power to adjourn the meeting from time to time, without notice other than annoucement at the meeting, until a quorum shall be present or represented, provided that if the adjournment is for more than thirty (30) days, notice shall be given to each stockholder of record entitled to vote at the meeting. At such adjourned meeting at which a quorum shall be present or represented, any business may be transacted which might have been transacted at the meeting as originally notified. When a quorum is present at any meeting, the vote of the holders of a majority of the stock having voting power, present in person or represented by proxy, shall decide any question brought before such meeting, unless the question is one upon which, by express provision of the statutes or of the Certificate of Incorporation or by these By-laws, a different vote is required, in which case such express provision shall govern and control the decision of such question.

Section 6. Voting. At any meeting of the stockholders, every stockholder having the right to vote shall be entitled to vote in person or by proxy appointed by an instrument in writing subscribed by such stockholder and bearing a date not more than three years prior to said meeting, unless said instrument provides for a longer period. Except as otherwise provided in the Certificate of Incorporation, each stockholder shall have one vote for each share of stock having voting power registered in his name on the records of the corporation.

ARTICLE III

BOARD OF DIRECTORS

Section 1. Number and Powers. The number of directors which shall constitute the whole board of directors shall be three. The board of directors shall conduct the corporation's business and manage its property and may exercise all of the powers of the corporation except such as are by statute, Certificate of Incorporation or these By-laws conferred upon or reserved to the stockholders. The board of directors shall keep full and fair accounts of its transactions.

Section 2. Term of Office. The directors shall be elected at the annual meeting of the stockholders except as provided in Section 3 of this Article III, and each director elected shall hold office until his successor shall be elected and qualified or until his earlier resignation or removal. A director may resign at any time upon written notice to the corporation. Directors need not be stockholders.

Section 3. Vacancies. If any vacancies occur in the board of directors or any new directorship is created by an increase in the authorized number of directors, a majority of the directors then in office, though less than a quorum, or a sole remaining director may choose a successor or successors or fill the newly created directorship, and the directors so chosen shall hold office until the next annual election of directors and until their successors shall be duly elected and qualified.

Section 4. Regular Meetings. Regular meetings of the board of directors may be held without notice at such time and place as shall from time to time be determined by the board of directors either within or without the State of Delaware.

Section 5. Special Meetings. Special meetings of the board of directors may be called by the president or secretary, and shall be called by the president or secretary upon the written request of one director. The notice or waiver of notice of a special meeting shall state the place, day and hour of such meeting but need not specify the business proposed to be transacted thereat.

Section 6. Quorum. At all meetings of the board of directors the presence of a majority of the whole board shall constitute a quorum for the transaction of business, and the act of a majority of the directors present at any meeting at which there is a quorum shall be the act of the board of

directors, except as may be otherwise specifically provided by statute or by the Certificate of Incorporation or by these By-laws. In the absence of a quorum, the directors present, by majority vote, may adjourn the meeting from time to time without notice other than by annoucement at the meeting until a quorum shall be present. No notice of adjourned meetings of the board of directors need be given unless the adjournment be for a period greater than ten (10) days. At any such adjourned meeting at which a quorum shall be present, any business may be transacted which might have been transacted at the meeting as originally notified.

Section 7. Notice of Meetings. Notice of the place, day and hour of every regular and special meeting shall be given to each director at least four (4) days before the meeting by delivering the same to him personally or by telephone or by sending the same to him by telegraph or by leaving the same at his residence or usual place of business or, in the alternative, upon five (5) days' notice by mailing it, postage prepaid, addressed to him at his address as it appears upon the books of the corporation. If mailed, such notice shall be deemed to have been given when mailed, and, if telegraphed, shall be deemed to have been given when delivered to the telegraph company for transmission. It shall not be requisite to the validity of any meeting of the board of directors that notice thereof shall have been given to any director who attends or to any director who, in writing executed and filed with the records of the meeting either before or after the holding thereof, waives such notice.

Unless otherwise restricted by the Certificate of Incorporation or these By-laws, any action required or permitted to be taken at any meeting of the board of directors or any committee may be taken without a meeting if all members of the board of directors or committee consent thereto in writing and the writing or writings are filed with the minutes of proceedings of the board of directors or committee.

Section 8. Compensation. Directors as such shall be entitled to receive such compensation for their services as shall be fixed by the board of directors, together with expenses of attendance. Directors shall be entitled to act as officers or to serve the corporation in any other capacity and receive compensation therefor.

ARTICLE IV

OFFICERS

Section 1. Executive Officers. The officers of the corporation shall be a president, one or more vice presidents (one or more of whom may be designated as an executive vice president), a secretary, a treasurer, and such other officers as may be appointed as provided in these By-laws. The officers shall be elected annually by the board of directors at its first meeting following the annual meeting of the stockholders, and each officer shall hold office until the corresponding meeting in the next year and until his successor shall have been duly chosen and qualified, or until he shall have resigned or shall have been removed in the manner provided in Section 9 of this Article IV. Any vacancy in any of the above offices shall be filled for the unexpired term by the board of directors at any regular or special meeting.

Section 2. President. The president shall be the chief executive officer of the corporation. He shall preside at all meetings of the stockholders and of the board of directors; he shall have general charge and supervision of the business of the corporation; he may sign, with the secretary or treasurer or assistant secretary or assistant treasurer, certificates of stock of the corporation; he may sign and execute, in the name of the corporation, all authorized deeds, mortgages, bonds, contracts, or other instruments, except in cases in which the signing and execution thereof shall have been expressly delegated to some other officer or agent of the corporation; and, in general, the president shall perform all duties incident to the office of a president of a corporation, and such other duties as, from time to time, may be assigned to him by the board of directors.

Section 3. Vice President. At the request of the president or in his absence or disability, any vice president may perform all the duties of the president, and when so acting, shall have the powers of the president; he may sign, with the secretary or treasurer, or an assistant secretary or assistant treasurer, certificates of stock of the corporation; and he shall perform such other duties as, from time to time, may be assigned to him by the board of directors.

Section 4. Secretary. The secretary shall keep the minutes of the meetings of the stockholders, of the board of directors, and of any committee appointed by the board in books provided for the purpose; he shall see that all notices are duly given in accordance with the provisions of these By-laws or as required by law; he shall be custodian of the records and of the corporate seal or seals of the corporation; he shall see that the corporate seal is affixed to all documents, the execution of which, on behalf of the corporation, under its seal, is duly authorized, and when so affixed may attest the same; he may sign, with the president or a vice president, certificates of stock of the corporation; and, in general, he shall perform all duties incident to the office of a secretary of a corporation, and such other duties as, from time to time, may be assigned to him by the board of directors.

Section 5. Treasurer. The treasurer shall have charge of and be responsible for all funds, securities, receipts and disbursements of the corporation, and shall deposit, or cause to be deposited, in the name of the corporation, all moneys or other valuable effects in such banks, trust companies or other depositories as shall, from time to time, be selected by the board of directors; he shall render to the president and to the board of directors, whenever requested, an account of the financial condition of the corporation; he may sign, with the president or a vice president, certificates of stock of the corporation; and, in general, he shall perform all the duties incident to the office of a treasurer of a corporation and such other duties as may be assigned to him by the board of directors.

Section 6. Assistant Officers. The board of directors may appoint one or more assistant officers. Each assistant officer shall, at the request of or in the absence or disability of the officer to whom he is an assistant, perform the duties of such officer and he shall have such other authority and perform such other duties as the board of directors may prescribe.

Section 7. Subordinate Officers. The board of directors may appoint such subordinate officers as it may deem desirable. Each such officer shall hold office for such period, have such authority and perform such duties as the board of directors may prescribe. The board of directors may, from time to time, authorize any officer to appoint and remove subordinate officers and prescribe the powers and duties thereof.

Section 8. Officers Holding Two or More Offices. Any number of the above offices may be held by the same person, but no officer shall execute, acknowledge or verify any instrument in more than one capacity if such instrument is required by law or by these By-laws to be executed, acknowledged or verified by two officers.

Section 9. Removal. Any officer of the corporation may be removed, with or without cause, by a vote of a majority of the entire board of directors at a meeting called for that purpose.

Section 10. Signatures. Any corporate instrument signed by an officer shall be presumed to have been so signed (a) at the request of the board of directors or the president, as the case may be, or (b) in the absence or because of the disability of the officer or officers otherwise authorized to so sign, or (c) because of expressly delegated or assigned authority to the officer so signing, and such signature may be relied upon by the person to whom the instrument is delivered without establishing the authority or power of the officer to so sign.

ARTICLE V

INDEMNIFICATION OF DIRECTORS AND OFFICERS

Any and all of the corporation's directors or officers or former directors or officers or any person who may have served at the corporation's request as a director or officer of another corporation in which the corporation owns shares of capital stock or of which the corporation is a creditor or the heirs or legal representative of any such officer, director or person shall be indemnified against and held harmless from any and all claims which may be asserted as against them or any of them based upon or arising out of acts of omission or commission on the part of such officers or directors or persons in their capacities as either officer or director of the corporation or of any such other corporation except to the extent that such liability is adjudged, by final judgment of a court of competent jurisdiction, to be based upon willful misconduct in the performance of duty. Such indemnification shall extend to proceedings settled or otherwise disposed of without a determination on the merits provided that the board of directors shall be advised by counsel for the corporation that, in the opinion of such counsel, the person seeking such indemnity was not guilty of willful misconduct in the performance of duty, and provided further that, in the opinion of the board of directors, the amount of such settlement is fair and reasonable under all the circumstances.

Without limitation of the generality of the foregoing, the indemnification herein provided for shall extend to and include reimbursement for and indemnification against all costs and expenses, including counsel fees, reasonably incurred in investigating or in connection with the preparation and/or defense of any action, suit, proceeding or claim.

ARTICLE VI

STOCK

Section 1. Certificates of Stock. The certificates of stock of the corporation shall be numbered and shall be entered in the records of the corporation as they are issued. They shall exhibit the holder's name and number of shares and shall be signed by the president or a vice president and the treasurer or an assistant treasurer or the secretary or an assistant secretary. If any stock certificate is manually signed (a) by a transfer agent other than the corporation or its employee, or (b) by a registrar other than the corporation or its employee, the signatures of the officers of the corporation may be facsimiles. In case any officer who has signed or whose facsimile signature has been placed upon a certificate shall have ceased to be such officer before such certificate is issued, it may be issued by the corporation with the same effect as if he were such officer at the date of issue.

Section 2. Transfer of Stock. Shares of stock shall be transferable only on the books of the corporation by the holder thereof, in person or by duly authorized attorney, upon the surrender of the certificate representing the shares to be transferred, properly endorsed. A person in whose name shares of stock stand on the books of the corporation shall be deemed the owner thereof as regards the corporation.

Section 3. Transfer Agents and Registrars. The corporation shall, if and whenever the board of directors shall so determine, maintain one or more transfer offices or agencies, each in charge of a transfer agent designated by the board of directors, where the shares of any of the capital stock of the corporation shall be directly transferable, and also one or more registry offices, each in charge of a registrar designated by the board of directors, where such shares of stock shall be registered, and no certificate for shares of the capital stock of the corporation in respect of which a transfer agent and registrar shall have been designated shall be valid unless countersigned by such transfer agent and registered by such registrar. The board of directors may also make such additional rules and regulations as it may deem expedient concerning the issue, transfer, registration and cancellation of certificates for shares of the capital stock of the corporation.

Section 4. Record Date. In order that the corporation may determine the stockholders entitled to notice of or to vote at any meeting of stockholders or any adjournment thereof, or to express consent to corporate action in writing without a meeting, or entitled to receive payment of any dividend or other distribution or allotment of any rights, or entitled to

exercise any rights in respect of any change, conversion or exchange of stock or for the purpose of any other lawful action, the board of directors may fix, in advance, a record date, which shall not be more than sixty (60) nor less than ten (10) days before the date of such meeting, nor more than sixty (60) days prior to any other action.

If no record date is fixed:

(a) The record date for determining stockholders entitled to notice of or to vote at a meeting of stockholders shall be at the close of business on the day next preceding the day on which notice is given, or, if notice is waived, at the close of business on the day next preceding the day on which the meeting is held.

(b) The record date for determining stockholders for any other purpose shall be at the close of business on the day on which the board of directors adopts the resolution relating thereto.

A determination of stockholders of record entitled to notice of or to vote at a meeting of stockholders shall apply to any adjournment of the meeting; provided, however, that the board of directors may fix a new record date for the adjourned meeting.

ARTICLE VII

DIVIDENDS AND FINANCE

Section 1. Dividends. Subject to any restrictions contained in the Certificate of Incorporation and in the statutes, the board of directors may, at any regular or special meeting of the board of directors, declare and pay dividends upon the shares of capital stock of the corporation. Dividends may be paid in cash, in property or in shares of the capital stock of the corporation. Before payment of any dividend, there may be set aside out of any funds of the corporation available for dividends such sum or sums as the directors from time to time, in their absolute discretion, think proper as a reserve fund to meet contingencies or for equalizing dividends or for repairing or maintaining any property of the corporation, or for such other purpose as the directors shall think conducive to the interest of the corporation, and the directors may modify or abolish any such reserve in the manner in which it was created.

Section 2. Checks, Drafts, Etc. All checks, drafts, bills of exchange or other orders for the payment of money out of the funds of this corporation, and all bonds, notes or other evidences of indebtedness of the corporation shall be signed in the name and on behalf of the corporation as shall from time to time be authorized by the board, which authorization may be general or confined to specific instances.

Section 3. Fiscal Year. The fiscal year of the corporation shall begin on the first day of January in each year and end on the last day of December in each year.

ARTICLE VIII

MISCELLANEOUS PROVISIONS

Section 1. Seal. The corporate seal of the corporation shall bear the name of the corporation and the year of incorporation and the words "CORPORATE SEAL, DELAWARE". Said seal may be used by causing it or a facsimile thereof to be impressed or affixed or reproduced. If deemed advisable by the board of directors, a duplicate seal or duplicate seals may be provided and kept for the necessary purposes of the corporation.

Section 2. Books and Records. The board of directors may determine from time to time whether, and, if allowed, when and under what conditions and regulations the books and records of the corporation, or any of them, shall be open to the inspection of stockholders, and the rights of stockholders in this respect are and shall be limited accordingly, except as otherwise provided by statute, the Certificate of Incorporation, or these By-laws. Under no circumstances shall any stockholder have the right to inspect any book or record or receive any statement for an improper or illegal purpose.

Section 3. Bonds. The board of directors may require any officer, agent or employee of the corporation to be bonded at the expense of the corporation, conditioned upon the faithful discharge of his duties, with such number of sureties and in such amount as may be satisfactory to the board of directors.

Section 4. Voting of Stock in Other Corporations. Any stock in other corporations which may from time to time be held by this corporation may be represented and voted at any meeting of stockholders of such other corporations by the president or a vice president of this corporation or by proxy executed in the name of this corporation by its president or a vice president with the corporate seal affixed and attested by the secretary or an assistant secretary.

Section 5. Powers of Attorneys. Notwithstanding anything to the contrary contained in these By-laws, the board of directors may from time to time and at any time by resolutions or by power of attorney under the seal of the corporation appoint any company, firm, person or persons, whether an officer of the corporation or not, to be the attorney or attorneys of the corporation for such purposes and with such powers, authorities and discretions and for such period and subject to such conditions as the board of directors may determine.

Section 6. Amendments. These By-laws may be altered or amended or repealed by the affirmative vote of a majority of each class of stock issued and outstanding and entitled to vote at any regular or special meeting of the stockholders, if notice of the proposed alteration or amendment or repeal be

contained in the notice of the meeting or waiver thereof, or by the affirmative vote of a majority of the board of directors at any regular or special meeting of the board, if notice of the proposed alteration or amendment be contained in the notice of the meeting or waiver thereof; provided, however, that no change of the time or place for the election of directors shall be made within sixty (60) days next before the day on which such election is to be held, and that in case of any change of such time or place, notice thereof shall be given to each stockholder in person or by letter mailed to his last known post office address at least twenty (20) days before the election is held.

B

ALPHABETICAL - CERTIFICATE INDEX

Docket No. CP75-_____

EXHIBIT B

STATE AUTHORIZATION

Application of

EL PASO ALASKA COMPANY

EL PASO ALASKA COMPANY

State Authorization

El Paso Alaska Company, a Delaware corporation, is authorized to do business as a foreign corporation in the States of Alaska and Texas.

ALASKA

1. Date of Authorization: August 6, 1973

2. Scope of Business: (a) to sell, buy, lease, deal in and with personal property, real property and services in general; and (b) to construct, operate, lease, own and manage oil and gas and mineral properties, pipelines, plants, and facilities required in connection therewith, for the production, manufacture, transmission or distribution of natural, synthetic, manufactured, liquefied, regasified or mixed gases.

3. Limitations: The Alaska statutes provide that "No foreign corporation may procure a certificate of authority to transact business in the State which a corporation organized under this chapter is not permitted to transact." Section 10.05.597, Revised Statutes of Alaska. Furthermore, certain penalties and liabilities attach upon failure to make timely payment of fees or taxes due or failure to file designated reports and for certain other acts as enumerated in the Alaska Business Corporation Act (Title 10, Article 9 of the Revised Statutes of Alaska).

4. Expiration Date: None.

5. Renewal Obligations: None, other than the filings of reports and amendments to certificate of incorporation, and payment of fees and taxes as may be required under the laws of the State.

TEXAS

1. Date of Authorization: August 3, 1973.

2. Scope of Business: (a) to sell, buy, lease, deal in and with personal property, real property and services in general; and (b) to construct, operate, lease, own and manage oil and gas and mineral properties, pipelines, plants, and facilities required in connection therewith, for the production, manufacture, transmission or distribution of natural, synthetic, manufactured, liquefied, regasified or mixed gases.

EL PASO ALASKA COMPANY

State Authorizations
(Continued)

TEXAS (Continued)

3. Limitations: The Texas statutes provide that "No foreign corporation shall be entitled to procure a certificate of authority under this Act to transact in this State any business which a corporation organized under this Act is not permitted to transact." Article 8.01(a), Texas Business Corporation Act. Furthermore, the certificate of authority of a foreign corporation to transact business in Texas may be revoked upon failure to make timely payment of fees or taxes due or failure to file designated reports and for certain other acts as enumerated. Article 8.16, Texas Business Corporation Act.

4. Expiration Date: August 3, 1983. Under present Texas laws, permits must be renewed at ten-year intervals, and the application for the renewal of a permit must be made not less than fifteen (15) days, nor more than thirty (30) days, prior to the expiration of such permit.

5. Renewal Obligations: None, other than as outlined under 4 above; and the filing of reports and amendments to the certificate of incorporation and the payment of fees and taxes as may be required under the laws of the State.

C

ALPHABETICAL - CERTIFICATE INDEX

Docket No. CP75-_____

EXHIBIT C

COMPANY OFFICIALS

Application of

EL PASO ALASKA COMPANY

EL PASO ALASKA COMPANY

Company Officials

Directors

Name	Address
Howard Boyd	Post Office Box 2185 Houston, Texas 77001
Hugh F. Steen	Post Office Box 2185 Houston, Texas 77001
George D. Carameros, Jr.	Post Office Box 2185 Houston, Texas 77001

EL PASO ALASKA COMPANY

Company Officials

Officers

Name	Title	Address
Howard Boyd	President	Post Office Box 2185 Houston, Texas 77001
Hugh F. Steen	Vice President	Post Office Box 2185 Houston, Texas 77001
John C. Bennett	Vice President	El Paso Natural Gas Company Pouch 7009 Anchorage, Alaska 99510
George D. Carameros, Jr.	Vice President	Post Office Box 2185 Houston, Texas 77001
G. Scott Cuming	Vice President	Post Office Box 2185 Houston, Texas 77001
William V. Holik, Jr.	Vice President	Post Office Box 1492 El Paso, Texas 79978
Barry Hunsaker	Vice President and Assistant Secretary	Post Office Box 2185 Houston, Texas 77001
James P. Lister	Vice President	Post Office Box 2185 Houston, Texas 77001
Travis H. Petty	Vice President	Post Office Box 2185 Houston, Texas 77001
W. Burney Warren	Vice President and Treasurer	Post Office Box 2185 Houston, Texas 77001
Richard L. McConn	Vice President and Assistant Treasurer	Post Office Box 1492 El Paso, Texas 79978
John B. Megahan	Secretary	Post Office Box 1492 El Paso, Texas 79978

EL PASO ALASKA COMPANY

Company Officials

Officers
(Continued)

Name	Title	Address
Homer A. Wilson	Controller	Post Office Box 1492 El Paso, Texas 79978
Rosalie Danielson	Assistant Secretary	El Paso Natural Gas Company Pouch 7009 Anchorage, Alaska 99510
Wayne S. Gerber	Assistant Secretary	Post Office Box 1492 El Paso, Texas 79978
Kenneth G. Johnson	Assistant Secretary	Post Office Box 2185 Houston, Texas 77001
E. G. Najaiko	Assistant Secretary	Post Office Box 2185 Houston, Texas 77001

D

Docket No. CP75-_____

EXHIBIT D

SUBSIDIARIES AND AFFILIATION

Application of

EL PASO ALASKA COMPANY

Docket No. CP75-___
Exhibit D
Sheet 1 of 1

EL PASO ALASKA COMPANY

Trans-Alaska Gas Project

Subsidiaries and Affiliation

El Paso Alaska Company is presently a wholly-owned subsidiary of El Paso Natural Gas Company, which company is a wholly-owned subsidiary of The El Paso Company. As a result of a recent corporate reorganization, it is anticipated that El Paso Alaska Company will become a wholly-owned subsidiary of The El Paso Company. El Paso Alaska Company presently has no subsidiaries or affiliates.

Docket No. CP75-_____

EXHIBIT E

OTHER PENDING APPLICATIONS AND FILINGS

Application of

EL PASO ALASKA COMPANY

Docket No. CP75-___
Exhibit E
Sheet 1 of 1

EL PASO ALASKA COMPANY

Trans-Alaska Gas Project

Other Pending Applications and Filings

There are no applications made by Applicant with and now pending before this Commission which directly and significantly affect the instant application. However, Applicant is required to file numerous documents with and obtain approvals of agencies other than the Federal Power Commission, in addition to the instant application to effectuate The Trans-Alaska Gas Project. A listing of such filings and details thereof are included as part of Section 9 of the Environmental Report submitted herewith.

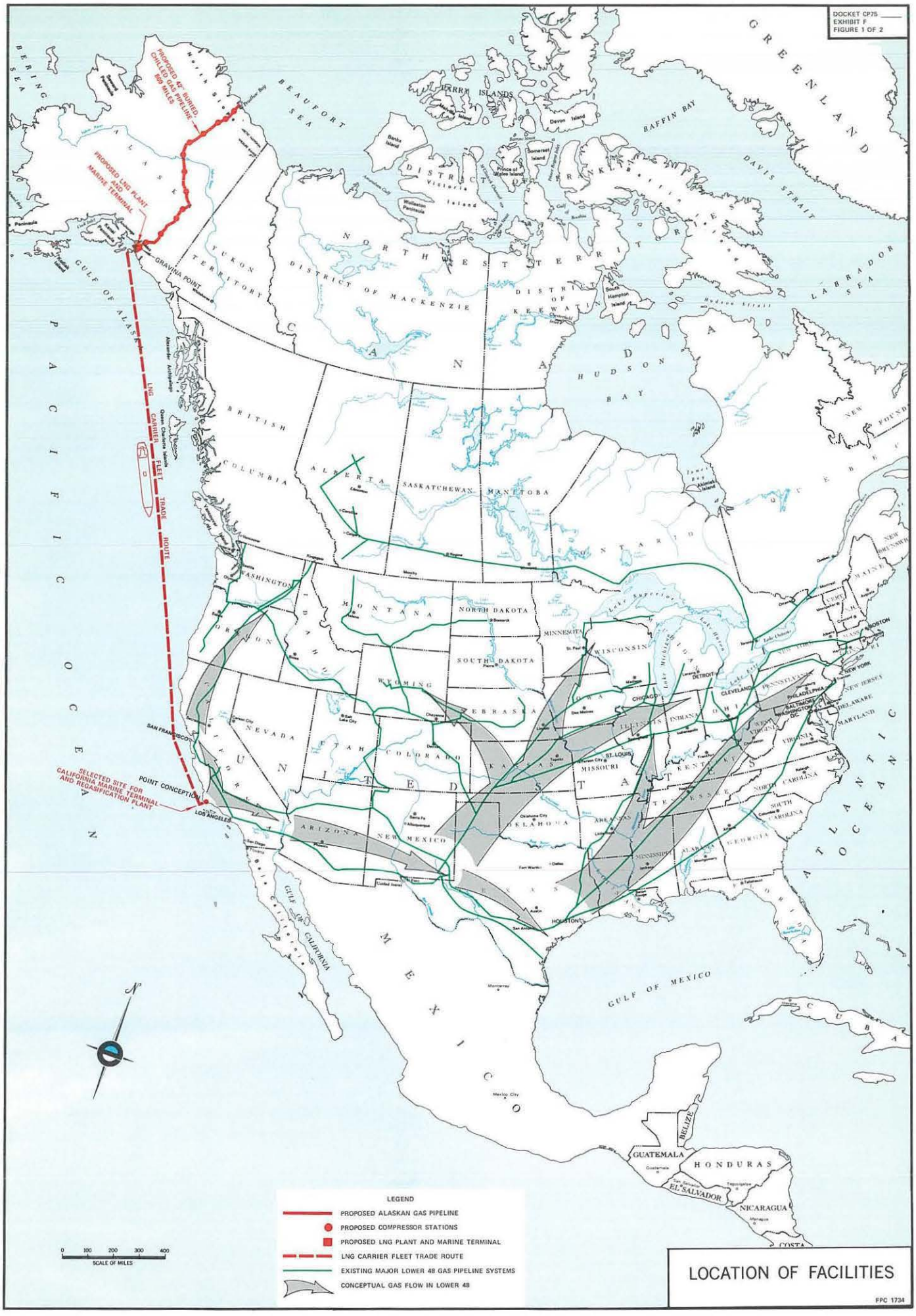
Docket No. CP75-_____

EXHIBIT F

LOCATION OF FACILITIES

Application of

EL PASO ALASKA COMPANY


DOCKET CP75 ____
EXHIBIT F
FIGURE 1 OF 2
PROPOSED 42" BURIED CHILLED GAS PIPELINE 809 MILES
PROPOSED LNG PLANT AND MARINE TERMINAL
LNG CARRIER FLEET TRADE ROUTE
SELECTED SITE FOR CALIFORNIA MARINE TERMINAL AND REGASIFICATION PLANT
POINT CONCEPTION
GRAVINA POINT
SAN FRANCISCO
LOS ANGELES
HOUSTON
BEAUFORT SEA
BERING SEA
PACIFIC OCEAN
GULF OF ALASKA
GULF OF CALIFORNIA
GULF OF MEXICO
BAFFIN BAY
DAVIS STRAIT
LABRADOR SEA
HUDSON BAY
ATLANTIC OCEAN
GREENLAND
ALASKA
YUKON TERRITORY
DISTRICT OF MACKENZIE
NORTHWEST TERRITORIES
DISTRICT OF KEEWATIN
CANADA
BRITISH COLUMBIA
ALBERTA
SASKATCHEWAN
MANITOBA
ONTARIO
QUEBEC
UNITED STATES
MEXICO
CUBA
BELIZE
GUATEMALA
HONDURAS
EL SALVADOR
NICARAGUA
COSTA
LEGEND
PROPOSED ALASKAN GAS PIPELINE
PROPOSED COMPRESSOR STATIONS
PROPOSED LNG PLANT AND MARINE TERMINAL
LNG CARRIER FLEET TRADE ROUTE
EXISTING MAJOR LOWER 48 GAS PIPELINE SYSTEMS
CONCEPTUAL GAS FLOW IN LOWER 48
0 100 200 300 400
SCALE OF MILES
LOCATION OF FACILITIES
FPC 1734

DOCKET. NO. CP75-____
EXHIBIT F
FIGURE 2 OF 2

LOCATION OF FACILITIES IN ALASKA

FPC I735

G

ALPHABETICAL - CERTIFICATE INDEX

Docket No. CP75-_____

EXHIBIT G

FLOW DIAGRAMS SHOWING DAILY DESIGN CAPACITY AND REFLECTING OPERATION WITH AND WITHOUT PROPOSED FACILITIES ADDED

Application of

EL PASO ALASKA COMPANY

Docket No. CP75-____
Exhibit G
Explanation
Sheet 1 of 1

EL PASO ALASKA COMPANY

Trans-Alaska Gas Project

Explanation of Exhibit G

Exhibit G consists of three schematic diagrams.

Figure 1 of 3 is an overall Project material balance, on an annual average day basis. Each of the four major Project components from Prudhoe Bay, Alaska, to the California coast are schematically represented and the product flow rate, composition, unit heat content and gross heat content into and out of such components are set forth.

The schematic diagram shows that 12.15% of the total energy contained in the natural gas delivered at Prudhoe Bay will be consumed in the liquefaction and transportation of such gas to the California coast.

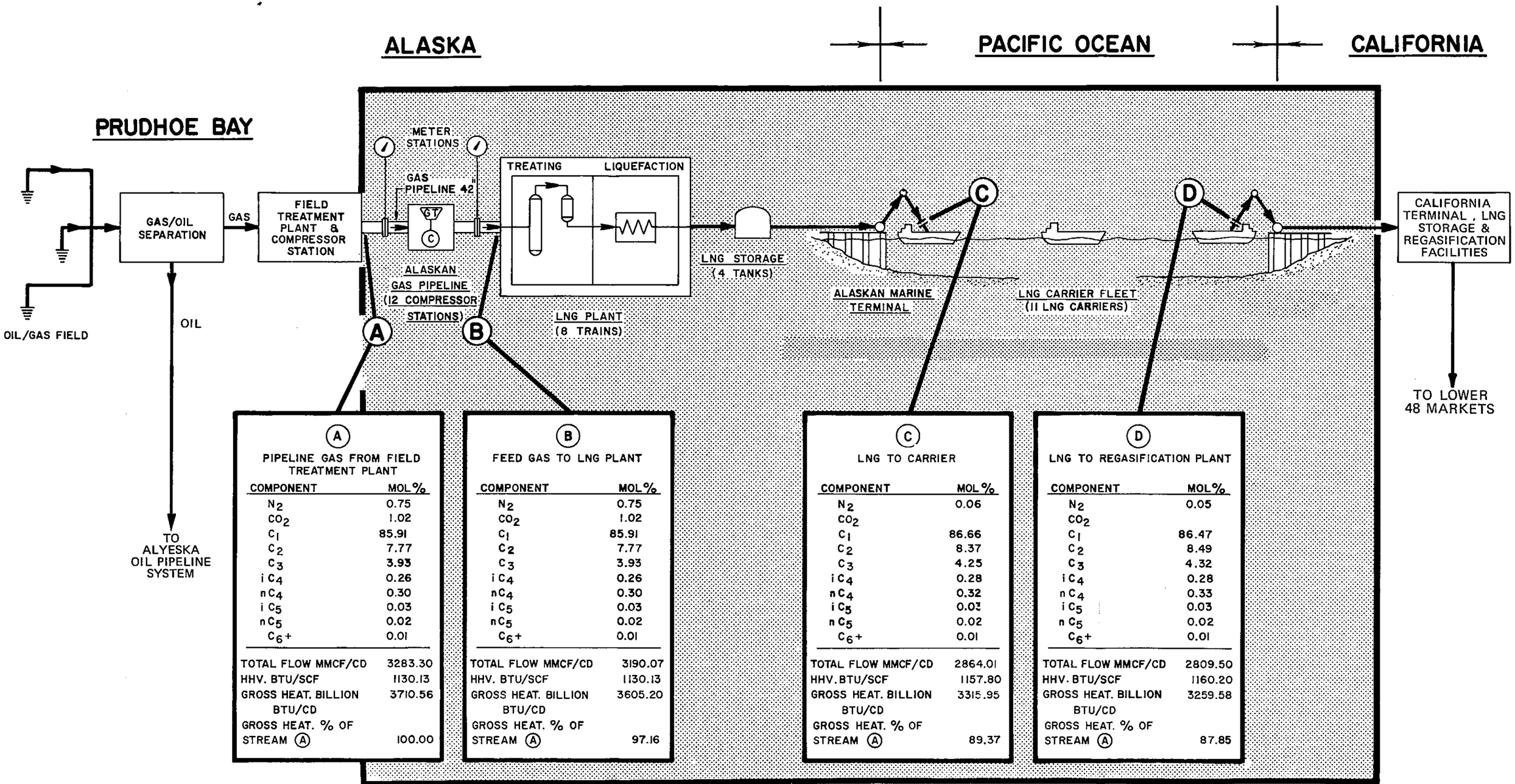
Figure 2 of 3 shows the maximum daily design capacity operation of the proposed Alaskan Gas Pipeline. It shows the length and diameter of the proposed pipeline, the volume and pressure of the gas flowing in the various sections of the pipeline, and, in tabular form, complete compressor station operating data. These data include suction and discharge pressures, compression ratio, horsepower requirements, station throughput, fuel consumption and gas flow conditions utilized in the design of the pipeline facilities. Further, inasmuch as the natural gas will be chilled to below 32°F in order to prevent permafrost degradation, design operating data for the gas refrigeration facilities at Stations 1 through 11 are also set forth.

Figure 2 of 3 shows that, with the receipt of 3489.8 MMcf/d of natural gas into the pipeline at Prudhoe Bay, a volume of 3375.0 MMcf/d will be delivered into the proposed LNG Plant, which volume difference represents total fuel consumption of 114.8 MMcf/d.

Figure 3 of 3 is an annual average day flow balance for the proposed Alaskan Gas Pipeline. It demonstrates, in tabular form, the various seasonal design flow rates considered for the pipeline and the resultant annual average day flow and fuel volumes.

Complete details concerning the design and operation of the proposed Trans-Alaska Gas Project facilities are presented in Exhibit Z-1 appended hereto.

DOCKET NO. CP75-____
EXHIBIT G
FIGURE 1 OF 3



(A) PIPELINE GAS FROM FIELD TREATMENT PLANT

COMPONENT	MOL %
N_2	0.75
CO_2	1.02
C_1	85.91
C_2	7.77
C_3	3.93
iC_4	0.26
nC_4	0.30
iC_5	0.03
nC_5	0.02
C_6+	0.01
TOTAL FLOW MMCF/CD	3283.30
HHV. BTU/SCF	1130.13
GROSS HEAT. BILLION BTU/CD	3710.56
GROSS HEAT. % OF STREAM (A)	100.00

(B) FEED GAS TO LNG PLANT

COMPONENT	MOL %
N_2	0.75
CO_2	1.02
C_1	85.91
C_2	7.77
C_3	3.93
iC_4	0.26
nC_4	0.30
iC_5	0.03
nC_5	0.02
C_6+	0.01
TOTAL FLOW MMCF/CD	3190.07
HHV. BTU/SCF	1130.13
GROSS HEAT. BILLION BTU/CD	3605.20
GROSS HEAT. % OF STREAM (A)	97.16

(C) LNG TO CARRIER

COMPONENT	MOL %
N_2	0.06
CO_2	
C_1	86.66
C_2	8.37
C_3	4.25
iC_4	0.28
nC_4	0.32
iC_5	0.03
nC_5	0.02
C_6+	0.01
TOTAL FLOW MMCF/CD	2864.01
HHV. BTU/SCF	1157.80
GROSS HEAT. BILLION BTU/CD	3315.95
GROSS HEAT. % OF STREAM (A)	89.37

(D) LNG TO REGASIFICATION PLANT

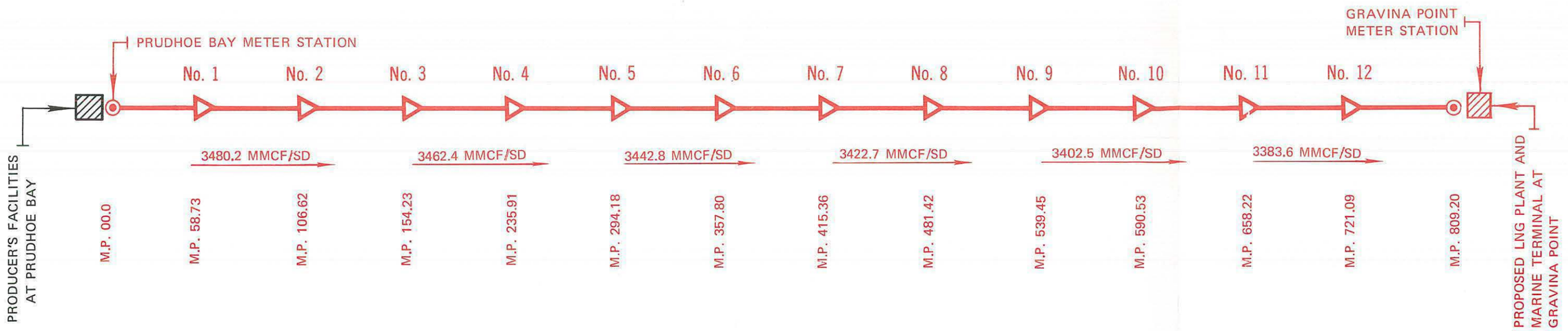
COMPONENT	MOL %
N_2	0.05
CO_2	
C_1	86.47
C_2	8.49
C_3	4.32
iC_4	0.28
nC_4	0.33
iC_5	0.03
nC_5	0.02
C_6+	0.01
TOTAL FLOW MMCF/CD	2809.50
HHV. BTU/SCF	1160.20
GROSS HEAT. BILLION BTU/CD	3259.58
GROSS HEAT. % OF STREAM (A)	87.85

NOTES:
- STANDARD CONDITIONS 14.73 PSIA AND 60° F
- VOLUMES SHOWN ARE AVERAGE DAY RATES OVER A PERIOD OF 365 DAYS

OVERALL MATERIAL BALANCE
(ANNUAL AVERAGE DAY)

FPC 1736

DOCKET NO. CP75-_____
EXHIBIT G
FIGURE 2 OF 3



LEGEND

- PROPOSED 42" O.D. PIPELINE
- PROPOSED COMPRESSOR STATION
- PROPOSED METER STATION
- PRODUCERS' FACILITIES
- PROPOSED LNG PLANT AND MARINE TERMINAL

STATION NAME	NO. 1	NO. 2	NO. 3	NO. 4	NO. 5	NO. 6	NO. 7	NO. 8	NO. 9	NO. 10	NO. 11	NO. 12
STATION INLET FLOW RATE MMCF/SD	3489.8	3480.2	3471.1	3462.4	3452.8	3442.8	3432.7	3422.7	3412.4	3402.5	3392.8	3383.6
STATION OUTLET FLOW RATE MMCF/SD	3480.2	3471.1	3462.4	3452.8	3442.8	3432.7	3422.7	3412.4	3402.5	3392.8	3383.6	3375.0
STATION FUEL MMCF/SD	9.615	9.121	8.655	9.624	9.999	10.106	9.966	10.283	9.931	9.668	9.256	8.605
STATION INLET PRESSURE PSIA	1188.7	1197.4	1220.2	1233.2	1202.1	1206.5	1207.8	1201.8	1204.7	1217.7	1229.2	1133.2
STATION INLET TEMPERATURE °F	1.3	0.4	2.3	7.0	4.4	5.4	5.0	5.5	4.4	5.7	10.0	3.3
COMPRESSOR INLET PRESSURE PSIA	1183.7	1192.4	1215.2	1208.2	1197.1	1201.5	1202.8	1196.8	1199.7	1212.7	1224.2	1128.2
COMPRESSOR OUTLET PRESSURE PSIA	1695.0	1695.0	1695.0	1695.0	1695.0	1695.0	1695.0	1695.0	1695.0	1695.0	1650.0	1657.2
COMPRESSOR OUTLET TEMPERATURE °F	45.9	43.8	43.2	48.4	47.9	48.6	47.9	49.3	47.6	47.7	48.1	52.6
STATION OUTLET PRESSURE PSIA	1685.0	1685.0	1685.0	1685.0	1685.0	1685.0	1685.0	1685.0	1685.0	1685.0	1640.0	1654.2
STATION OUTLET TEMPERATURE °F	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	52.6
AMBIENT AIR TEMPERATURE °F (MEAN AVG.)	31.3	31.6	32.0	38.2	40.2	41.8	42.8	44.0	43.9	43.6	42.9	39.7
COMPRESSOR OPERATING BHP	43,170	41,689	39,346	39,407	41,960	41,611	41,194	41,967	41,146	39,900	36,300	46,649
COMPRESSOR INSTALLED HP (ISO)	46,800	46,800	46,800	46,800	46,800	46,800	46,800	46,800	46,800	46,800	46,800	46,800
COMPRESSOR RATIO	1.4319	1.4215	1.3949	1.3800	1.4159	1.4108	1.4092	1.4163	1.4128	1.3978	1.3479	1.4689
NO. COMPRESSOR UNITS INSTALLED–BHP	2/23,400	2/23,400	2/23,400	2/23,400	2/23,400	2/23,400	2/23,400	2/23,400	2/23,400	2/23,400	2/23,400	2/23,400
REFRIGERATION LOAD (TONS)	8,796	7,639	7,302	10,124	9,817	10,163	9,761	10,449	9,528	9,532	9,645	0
REFRIGERATION H.P. REQUIRED COMPR.	4,199	3,695	3,598	6,308	6,510	7,036	6,939	7,648	6,956	6,807	6,877	0
NO. REFRIGERATION COMPR. INSTALLED	1/4,130	2/4,130	2/4,130	2/4,130	2/4,130	2/4,130	2/4,130	2/4,130	2/4,130	2/4,130	2/4,130	0
REFRIGERATION H.P. REQUIRED–COND.	1,507	1,311	1,256	1,804	1,769	1,848	1,785	1,923	1,752	1,750	1,765	0

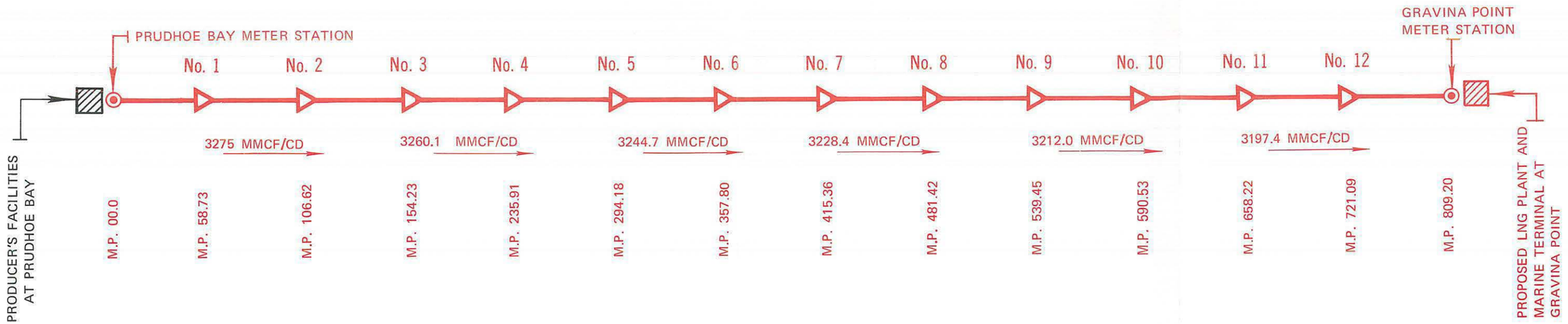
NOTES:

TEMPERATURE BASE	60°F
PRESSURE BASE	14.73 PSIA
GAS SPECIFIC GRAVITY	0.6518

FLOW DIAGRAM SHOWING
MAX. DESIGN CAPACITY OPERATION
FOR ALASKAN GAS PIPELINE
(3490 MMCF/SD FLOW–SEPTEMBER CONDITIONS)

FPC 1737

DOCKET NO. CP75-____
EXHIBIT G
FIGURE 3 OF 3



SEASONAL DESIGN FLOWS

TIME OF YEAR	FLOW MMCF/D	FUEL MMCF/D
1. WINTER	3,375.0	96.192
2. SEPTEMBER	3,375.0	114.839
/ 3. WINTER	2,953.0	65.636
4. SEPTEMBER	2,953.0	76.259
5. SUMMER	2,953.0	83.351
AVE. 1 & 2 FOR 205 DAYS	691,875.0	21,630.68
AVE. 3 & 4 FOR 40 DAYS	118,120.0	2,837.90
AVE. 4 & 5 FOR 120 DAYS	354,360.0	9,576.60
TOTAL PER YEAR MMCF	1,164,355.0	34,045.18
DAILY AVERAGE MMCF/CD	3,190.0	93.274

LEGEND

- PROPOSED 42" O.D. PIPELINE
- PROPOSED COMPRESSOR STATION
- PROPOSED METER STATION
- PRODUCERS' FACILITIES
- PROPOSED LNG PLANT AND MARINE TERMINAL

NOTES:

TEMPERATURE BASE	60°F
PRESSURE BASE	14.73 PSIA
GAS SPECIFIC GRAVITY	0.6518

STATION NAME	NO. 1	NO. 2	NO. 3	NO. 4	NO. 5	NO. 6	NO. 7	NO. 8	NO. 9	NO. 10	NO. 11	NO. 12
STATION INLET FLOW RATE MMCF/CD	3283.3	3275.3	3267.5	3260.1	3252.9	3244.7	3236.6	3228.4	3220.3	3212.0	3203.9	3197.4
STATION OUTLET FLOW RATE MMCF/CD	3275.3	3267.5	3260.1	3252.9	3244.7	3236.6	3228.4	3220.3	3212.0	3203.9	3197.4	3190.0
STATION FUEL MMCF/CD	7.976	7.792	7.408	7.184	8.178	8.155	8.180	8.137	8.223	8.109	6.577	7.355
COMPRESSOR INSTALLED HP (ISO)	46,800	46,800	46,800	46,800	46,800	46,800	46,800	46,800	46,800	46,800	46,800	46,800
NO. COMPRESSOR UNITS INSTALLED	2/23,400	2/23,400	2/23,400	2/23,400	2/23,400	2/23,400	2/23,400	2/23,400	2/23,400	2/23,400	2/23,400	2/23,400
NO. REFRIGERATION UNITS INSTALLED	1/4,130	2/4,130	2/4,130	2/4,130	2/4,130	2/4,130	2/4,130	2/4,130	2/4,130	2/4,130	2/4,130	0

FLOW DIAGRAM SHOWING
ANNUAL AVERAGE DAY FLOW BALANCE
FOR ALASKAN GAS PIPELINE OPERATION
(3283 MMCF/CD FLOW)

FPC 1738

CERTIFICATE INDEX

G-I

Docket No. CP75-_____

EXHIBIT G-I

FLOW DIAGRAMS REFLECTING MAXIMUM CAPABILITIES

Application of

EL PASO ALASKA COMPANY

Docket No. CP75-___
Exhibit G-I
Sheet 1 of 1

EL PASO ALASKA COMPANY

Trans-Alaska Gas Project

Flow Diagram Reflecting Maximum Capabilities

This exhibit is omitted since the data shown in Exhibit G reflect the maximum capabilities of Applicant's proposed facilities under the operating conditions set forth therein.

CERTIFICATE INDEX

6-II

Docket No. CP75-_____

EXHIBIT G-II

FLOW DIAGRAM DATA

Application of

EL PASO ALASKA COMPANY

Docket No. CP75-___
Exhibit G-II
Sheet 1 of 1

EL PASO ALASKA COMPANY

Trans-Alaska Gas Project

Flow Diagram Data

Pertinent engineering design data in explanation and support of the material balances and flow diagrams which are submitted herewith as Exhibit G are set forth in Exhibit Z-1 hereto.

H

CERTIFICATE INDEX

Docket No. CP75-_____

EXHIBIT H

TOTAL GAS SUPPLY DATA

Application of

EL PASO ALASKA COMPANY

Docket No. CP75-___
Exhibit H

EL PASO ALASKA COMPANY

Total Gas Supply

Table of Contents

EL PASO ALASKA COMPANY

Total Gas Supply

Discussion of the North Slope Prudhoe Bay Field
and Potential Alaska Petroleum Resources

The discovery of Prudhoe Bay Field has signaled the prospects for a new and sustained era of petroleum exploration and development in Alaska. As the giant of all American fields it has fulfilled the prophecy of vast petroleum resources in a land that encompasses an area larger than the combined areas of the four most prolific producing states in the lower 48 states.

North America's largest field, Prudhoe Bay, was discovered in 1968 above the Arctic Circle on Alaska's remote and barren North Slope. It lies approximately 200 miles east of Point Barrow and 640 miles north of Anchorage. This hydrocarbon giant, covering over 200 square miles, is estimated to contain, in-place, 13.4 trillion cubic feet of solution gas, 21.7 trillion cubic feet of associated gas and 19.4 billion barrels of oil and condensate as shown in Schedule No. 3. It has opened a vast new petroleum frontier for a nation with decreasing production and increasing requirements.

The primary reservoir in the Prudhoe Bay Field is the Sadlerochit Formation of Triassic Age. The Sadlerochit Reservoir is approximately 600 feet thick except in the east part where it thins to approximately 300 feet. Generally, the formation can lithologically be divided into three depositional zones; an upper zone of primarily fine to medium grained sandstone with occasional thin layers of shale, siltstone or conglomerate, a middle zone of primarily conglomerate and course grained sand with high concentrations of pyrite and siderite, and a lower sandstone zone that becomes increasingly silty and shaly toward its base.

Accumulation of oil and gas is controlled by a westward plunging faulted anticline truncated on the northeast flank. The limits of production are defined on the north by a major down to the north fault; on the west by an oil-water contact and probable faulting; on the south by an oil-water contact; and on the east by truncation. The gas-oil and oil-water contacts vary slightly across the field; however, they generally lie at approximately -8578 feet and -9008 feet, respectively. Minor vertical faults, with 50 feet to 200 feet of throw, occur within the field but are believed to be non-sealing. Due to complex structure and poorer reservoir quality on the west side, the field was divided into the main area and the west area. The main area comprises approximately 98 percent of the oil and gas reserves.

EL PASO ALASKA COMPANY

Total Gas Supply

Discussion of the North Slope Prudhoe Bay Field
and Potential Alaska Petroleum Resources
(Continued)

Reservoir and volumetric data, Schedule No. 2, for the Prudhoe Bay Field were obtained by analyzing and making comprehensive studies of all released data, published material and contact with industry sources. Production for the main area was scheduled utilizing a three-dimensional computer model and is shown in Schedule No. 4. The production forecast shows a relatively gradual build-up of gas production to approximately 4 billion cubic feet per day in the tenth year of operation after the start of oil production. This level of gas production is maintained for a period of 14 years with declining volumes thereafter. For the twenty-five year period shown, 29.2 trillion cubic feet of gas and 6.7 billion barrels of oil are estimated to be recovered.

The reservoir data and scheduled production contained in this application are for the Prudhoe Bay Sadlerochit Reservoir only. Hydrocarbon potential has been established in the shallower Kuparuk River and deeper Lisburne Formations; however, future development will be necessary to delineate the extent of these reservoirs and establish their producing capabilities.

Alaska has many thick sedimentary basins located throughout its boundaries. The Trans-Alaska Gas Project would bring into market's reach gas reserves expected to be associated with these highly potential sedimentary provinces. These huge and thick basinal areas are located in very favorable geologic settings and contain hundreds of thousands of cubic miles of stratigraphy representing Paleozoic to recent sediments. Surface studies and very limited drilling have found the presence of abundant organic material, surface hydrocarbon seeps, oil shales and subsurface shows. All the essentials necessary for petroliferous provinces are present except adequate drilling and testing. Indications are highly favorable that many of the potential sedimentary provinces will primarily develop as gas provinces.

Docket No. CP75-___
Exhibit H
Schedule 1
Page 1 of 1

EL PASO ALASKA COMPANY

Total Gas Supply

Statistical Data
Prudhoe Bay (Sadlerochit) Field
North Slope, Alaska

Line No.	(a)	(b)
1	Reservoir	Sadlerochit
2	Type Gas	Dissolved and Associated
3	Reserve Estimation Method	Volumetric
4	Average Depth, Feet	8500
5	Date of Discovery	1968
6	Ultimate Wells	400
7	Wells at January 1, 1974	88

EL PASO ALASKA COMPANY

Total Gas Supply

Reservoir and Volumetric Data
Prudhoe Bay (Sadlerochit) Field

Line No.	(a)	Main Area Oil Zone (b)	Main Area Gas Zone (c)	West Area Oil Zone (d)	West Area Gas Zone (e)
	RESERVOIR DATA				
1.	Average Porosity, Percent	21	23	17	20
2.	Interstitial Water Saturation, Percent	30	20	57	50
3.	Reservoir Temperature, °F.	200	192	200	199
4.	Initial Reservoir Pressure, psia	4,409	4,307	4,431	4,325
5.	Specific Gravity of Gas (Air = 1.0)		0.840		0.840
6.	Deviation Factor (Z) Initial Conditions		0.878		0.878
7.	Initial Solution GOR, Cubic Ft./Bbl.	720		650	
8.	Original Reservoir Volume Factor	1.40		1.38	
9.	Original Oil in Place, Bbls./Acre Foot	814.6		410.9	
10.	Original Gas in Place, Mcf/Acre Foot		2,128.8		1,149.5
11.	Original Condensate in Place, Bbls./MMcf		34.4		34.4
	VOLUMETRIC DATA				
12.	Acres	116,810	59,260	16,060	4,140
13.	Acre Feet	22,334,300	10,161,300	1,302,500	108,800

Docket No. CP75-___
Exhibit H
Schedule 3
Page 1 of 1

EL PASO ALASKA COMPANY

Total Gas Supply

Summary of In Place Oil, Condensate and
Gas and Recovery for 25 Year Period
Prudhoe Bay (Sadlerochit) Field

Line No.	(a)	Oil and Condensate Volumes in Billion Barrels					
		In Place			Recovery for 25 Year Period		
		Main Area (b)	West Area (c)	Total (d)	Main Area (e)	West Area (f)	Total (g)
1.	Oil	18.2	0.5	18.7	6.6	0.1	6.7
2.	Condensate	0.7	Neg.	0.7	---	---	1/
3.	Total	18.9	0.5	19.4	6.6	0.1	6.7

		Gas Volumes in Trillion Cubic Feet at 14.73 psia and 60° F.			
		In Place			Recovery for 25 Year Period
		Solution	Associated	Total	Total
4.	Main Area	13.1	21.6	34.7	29.1
5.	West Area	0.3	0.1	0.4	0.1
6.	Total	13.4	21.7	35.1	29.2

1/ Not Scheduled.

EL PASO ALASKA COMPANY

Total Gas Supply

Forecast of Oil and Gas Production
Prudhoe Bay (Sadlerochit) Field
North Slope, Alaska

Volumes at 14.73 psia and 60° F.

Year	Oil Production, MBbls/D			Wellhead Gas Production, MMcf/D			Gas Available to Pipeline, MMcf/D
	Main Area	West Area	Total	Main Area	West Area	Total	
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
1	1,191	--	1,191	828	--	828	1/
2	1,190	--	1,190	800	--	800	1/
3	1,190	--	1,190	801	--	801	1/
4	1,501	--	1,501	2,061	--	2,061	1,649
5	1,499	--	1,499	2,195	--	2,195	1,756
6	1,497	--	1,497	2,497	--	2,497	1,998
7	1,490	--	1,490	3,187	--	3,187	2,550
8	1,377	15	1,392	3,805	10	3,815	3,052
9	1,214	15	1,229	3,821	10	3,831	3,065
10	1,021	15	1,036	4,091	10	4,101	3,281
11	829	15	844	3,977	11	3,988	3,190
12	677	15	692	4,026	11	4,037	3,230
13	567	15	582	4,084	11	4,095	3,276
14	478	15	493	3,912	11	3,923	3,138
15	409	15	424	3,980	12	3,992	3,194
16	342	15	357	3,974	12	3,986	3,189
17	274	15	289	3,987	12	3,999	3,199
18	232	15	247	4,020	13	4,033	3,226
19	204	15	219	3,971	13	3,984	3,187
20	185	15	200	3,999	14	4,013	3,210
21	166	15	181	3,962	14	3,976	3,181
22	163	15	178	3,927	15	3,942	3,154
23	149	14	163	4,029	15	4,044	3,235
24	117	12	129	3,294	19	3,313	2,650
25	89	11	100	2,606	20	2,626	2,101
Production for 25 Year Period:							
Oil, Billion Bbls.	6.6	0.1	6.7				
Gas, Trillion Cu. Ft.				29.9	0.1	30.0	23.3

1/ Gas injected.

EL PASO ALASKA COMPANY

Total Gas Supply

Map Index

Docket No. CP75-
Exhibit H
Figure 1

ARCTIC OCEAN
BEAUFORT SEA
CHUKCHI SEA
BERING SEA
PACIFIC OCEAN
GULF OF ALASKA
BRISTOL BAY
NORTON SOUND
ANADYR GULF
ALEXANDER ARCHIPELAGO

SIBERIA
BARROW
POINT HOPE
NOME
PRUDHOE BAY FIELD
NAVAL PETROLEUM RESERVE NO. 4
ARCTIC NATIONAL WILDLIFE RESERVE
Mackenzie Delta Area
COLVILLE RIVER
BROOKS RANGE
KOTZEBUE SOUND
SEWARD PENINSULA
USSR
UNITED STATES
(US-RUSSIA CONVENTION OF 1867)
ARCTIC CIRCLE
UNITED STATES
CANADA
NORTHWEST TERRITORIES
YUKON
PROPOSED TRANS ALASKA GAS PIPELINE
YUKON RIVER
TANANA RIVER
FAIRBANKS
ALASKA RANGE
MTNS
KUSKOKWIM RIVER
KUSKOKWIM
KUSKOKWIM BAY
SUSITNA RIVER
COOK INLET
ANCHORAGE
VALDEZ
ROUTE
COPPER RIVER
CORDOVA
KENAI PENINSULA
ALEUTIAN RANGE
PENINSULA
ALASKA
KODIAK ISLAND
YUKON
BRITISH COLUMBIA
JUNEAU
CANADA
UNITED STATES

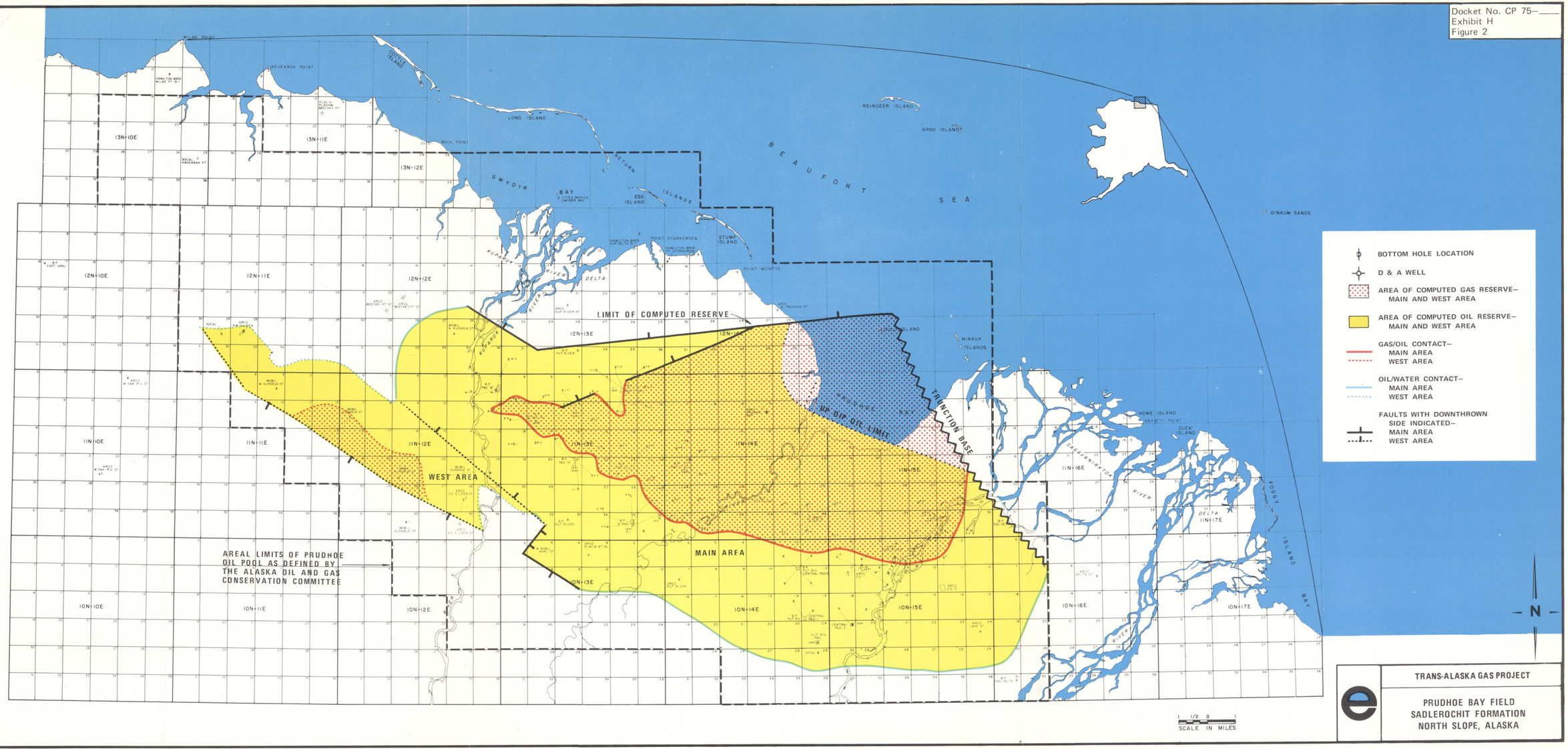
SCALE
50 0 50 100 150

N

TRANS-ALASKA GAS PROJECT

INDEX MAP
STATE OF ALASKA

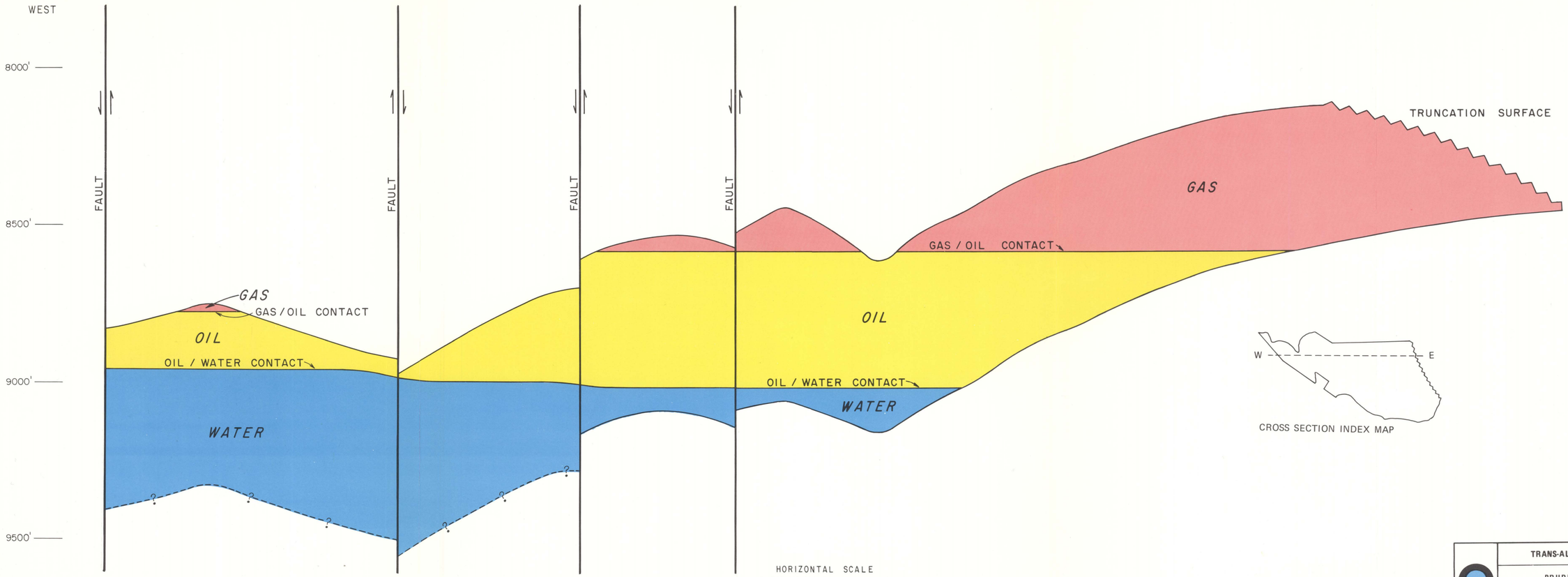
Docket No. CP 75-____
Exhibit H
Figure 2



TRANS-ALASKA GAS PROJECT

PRUDHOE BAY FIELD
SADLEROCHIT FORMATION
NORTH SLOPE, ALASKA

Docket No. CP 75–
Exhibit H
Figure 3



TRANS-ALASKA GAS PROJECT

PRUDHOE BAY FIELD
SADLEROCHIT FORMATION
GENERALIZED
EAST–WEST CROSS SECTION

Docket No. CP 75–
Exhibit H
Figure 4

SOUTH

NORTH

FAULT

FAULT

FAULT

8500'

8500'

9000'

9000'

9500'

9500'

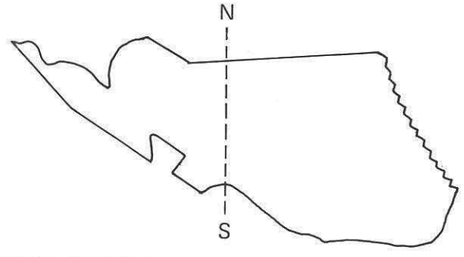
GAS

GAS / OIL CONTACT

OIL

OIL / WATER CONTACT

WATER



CROSS SECTION INDEX MAP

HORIZONTAL SCALE

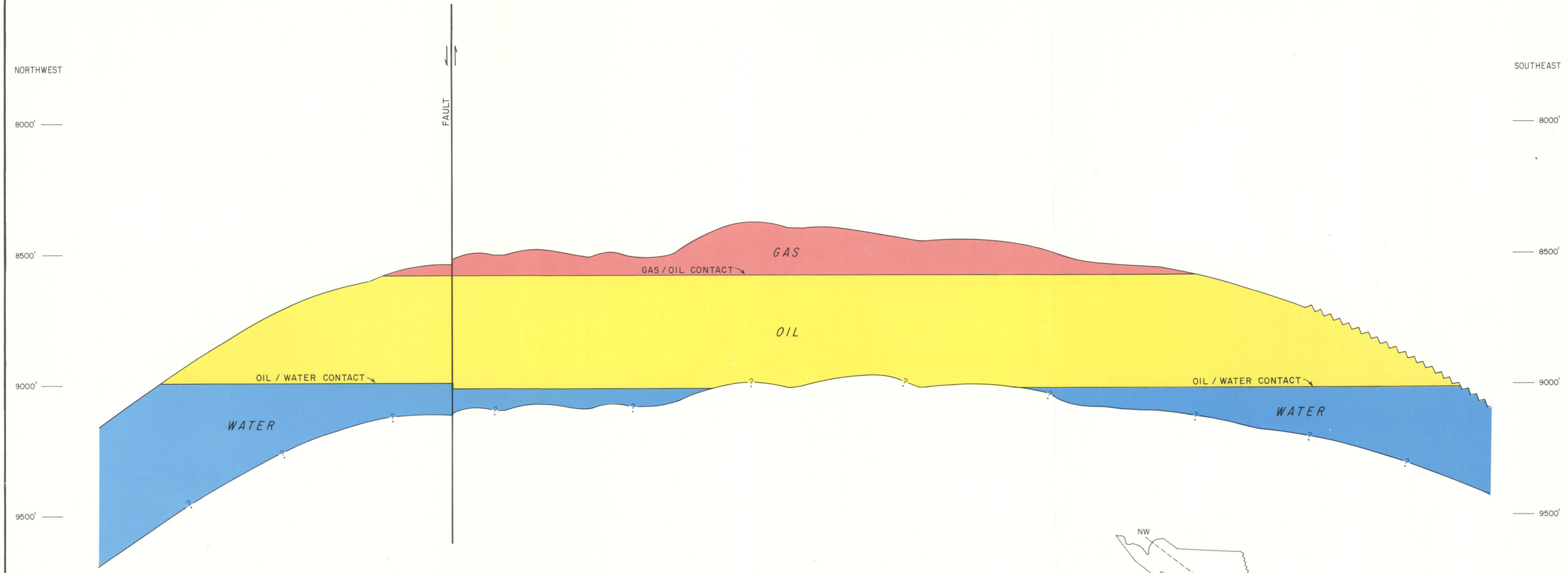
1 3/4 1/2 1/4 0 1

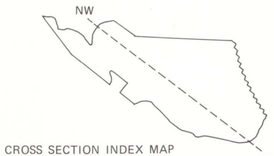
MILES

TRANS-ALASKA GAS PROJECT

PRUDHOE BAY FIELD
SADLEROCHIT FORMATION
GENERALIZED
NORTH–SOUTH CROSS SECTION

Docket No. CP 75–
Exhibit H
Figure 5





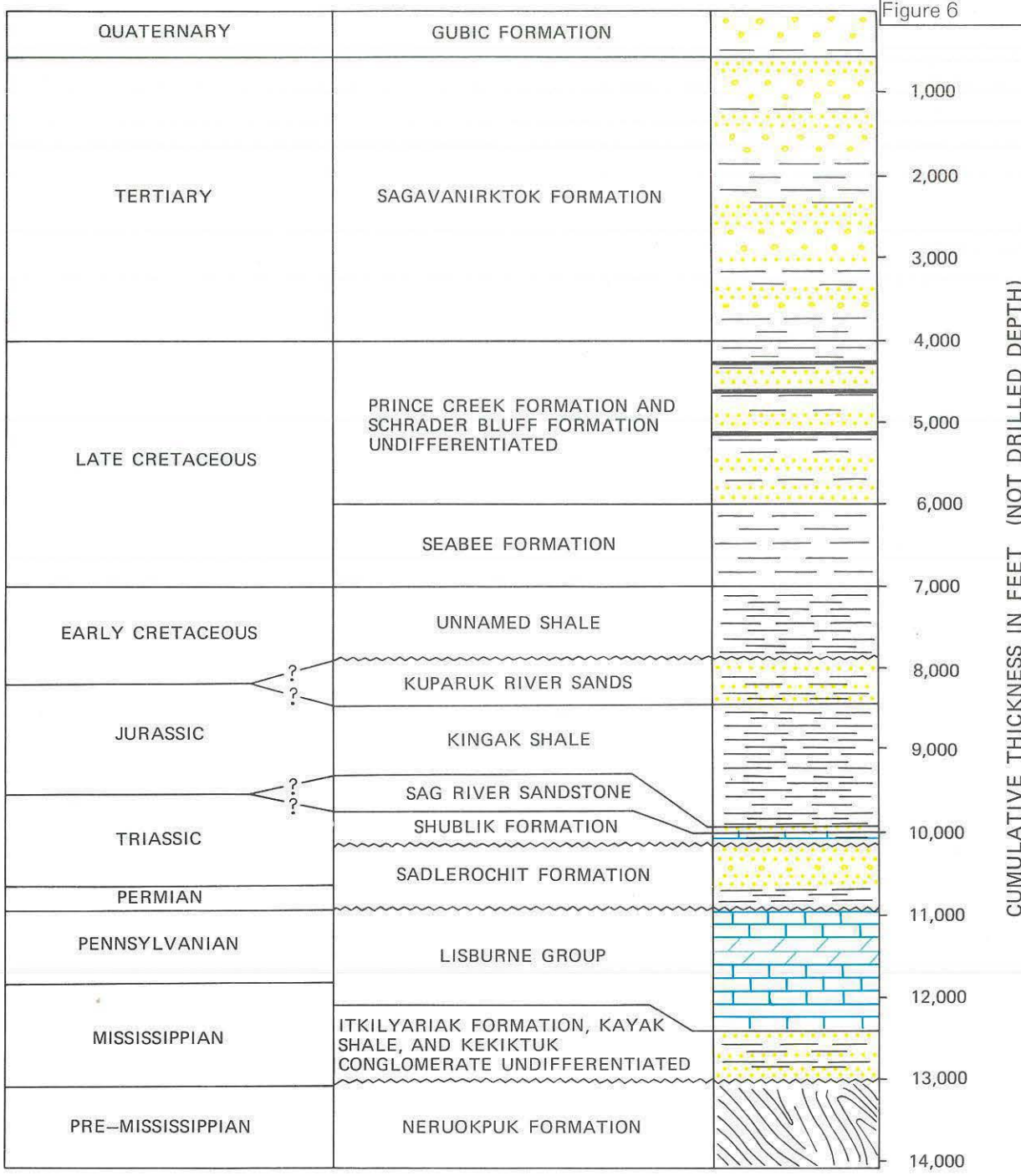
CROSS SECTION INDEX MAP

HORIZONTAL SCALE
3/4 1/2 1/4 0
MILES

TRANS-ALASKA GAS PROJECT

PRUDHOE BAY FIELD
SADLEROCHIT FORMATION
GENERALIZED
NORTHWEST–SOUTHEAST CROSS SECTION

Docket No. CP75-
Exhibit H
Figure 6



TRANS-ALASKA GAS PROJECT

GENERALIZED STRATIGRAPHIC COLUMN OF PRUDHOE BAY FIELD

Docket No. CP 75-
Exhibit H
Figure 7

ARCTIC OCEAN
BEAUFORT SEA
CHUKCHI SEA
BERING SEA
PACIFIC OCEAN
GULF OF ALASKA
BRISTOL BAY
NORTON SOUND
ANADYR GULF
KOTZEBUE SOUND
KUSKOKWIM BAY
ALEXANDER ARCHIPELAGO

SIBERIA
BARROW
POINT HOPE
NAVAL PETROLEUM RESERVE NO. 4
ARCTIC NORTH SLOPE AREA
PRUDHOE BAY FIELD
ARCTIC NATIONAL WILDLIFE RESERVE
Mackenzie Delta Area
COLVILLE RIVER
BROOKS RANGE
USSR
UNITED STATES
(US-RUSSIA CONVENTION OF 1867)
SEWARD PENINSULA
NOME
UNITED STATES
CANADA
ARCTIC CIRCLE
PROPOSED TRANS ALASKA GAS PIPELINE ROUTE
YUKON RIVER
TANANA RIVER
FAIRBANKS
NORTHWEST TERRITORIES
YUKON
MTNS
ALASKA RANGE
SUSITNA RIVER
KUSKOKWIM RIVER
KUSKOKWIM MTNS
KUSKOKWIM
ANCHORAGE
VALDEZ
COPPER RIVER
ROUTE
COOK INLET
KENAI PENINSULA
CORDOVA
COOK INLET BASIN AREA
ALEUTIAN RANGE
PENINSULA
ALASKA
KODIAK ISLAND
YUKON
BRITISH COLUMBIA
JUNEAU
UNITED STATES
CANADA
YUKON
ALASKA

SCALE
50 0 50 100 150

N

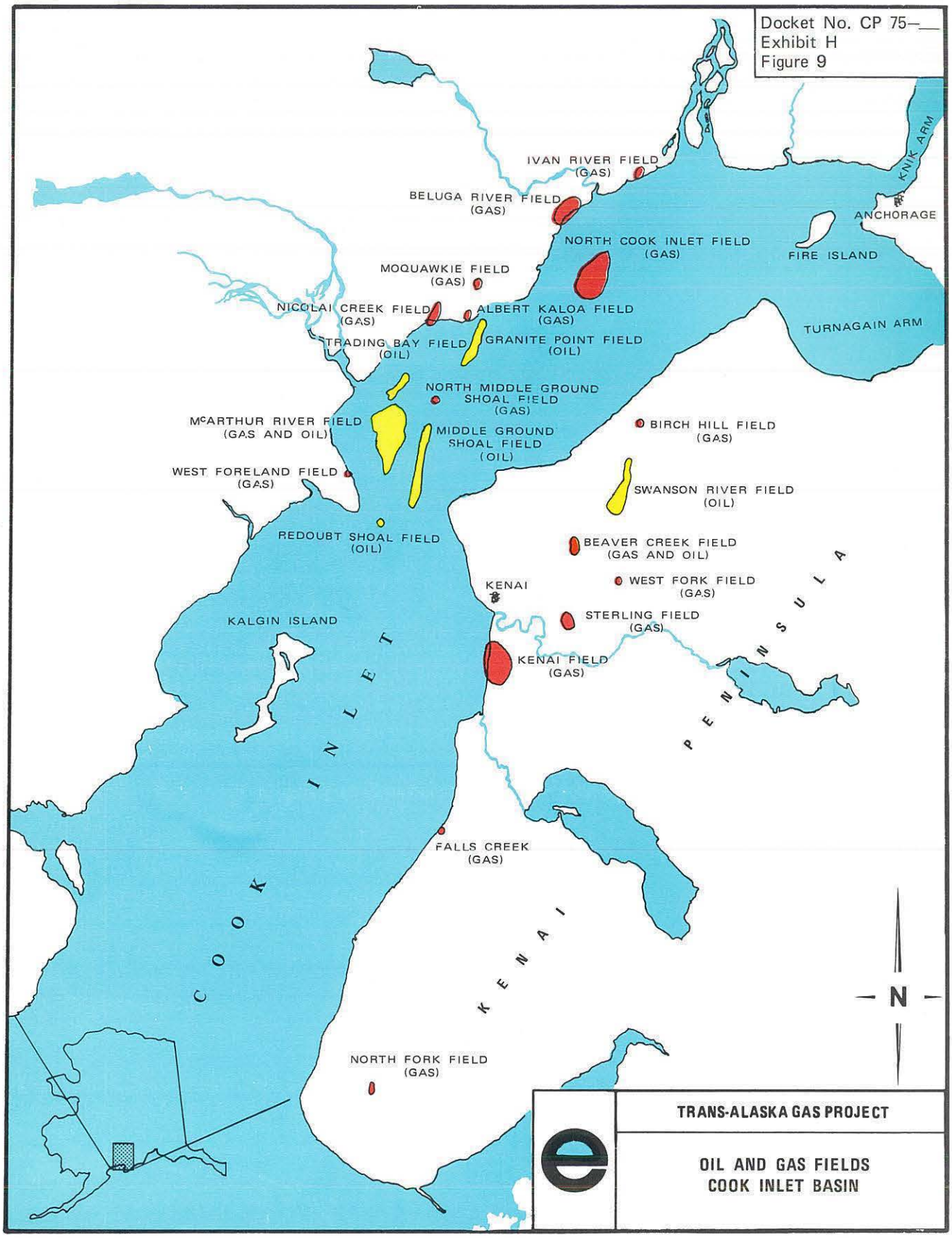
TRANS-ALASKA GAS PROJECT

OIL AND GAS PRODUCING AREAS
STATE OF ALASKA

Docket No. CP 75–
Exhibit H
Figure 8

TRANS-ALASKA GAS PROJECT

OIL AND GAS FIELDS
ARCTIC NORTH SLOPE


Docket No. CP 75-__
Exhibit H
Figure 9
IVAN RIVER FIELD (GAS)
BELUGA RIVER FIELD (GAS)
KNIK ARM
ANCHORAGE
NORTH COOK INLET FIELD (GAS)
FIRE ISLAND
MOQUAWKIE FIELD (GAS)
NICOLAI CREEK FIELD (GAS)
ALBERT KALOA FIELD (GAS)
TURNAGAIN ARM
TRADING BAY FIELD (OIL)
GRANITE POINT FIELD (OIL)
NORTH MIDDLE GROUND SHOAL FIELD (GAS)
McARTHUR RIVER FIELD (GAS AND OIL)
MIDDLE GROUND SHOAL FIELD (OIL)
BIRCH HILL FIELD (GAS)
WEST FORELAND FIELD (GAS)
SWANSON RIVER FIELD (OIL)
REDOUBT SHOAL FIELD (OIL)
BEAVER CREEK FIELD (GAS AND OIL)
KENAI
WEST FORK FIELD (GAS)
KALGIN ISLAND
STERLING FIELD (GAS)
KENAI FIELD (GAS)
COOK INLET
KENAI PENINSULA
FALLS CREEK (GAS)
N
NORTH FORK FIELD (GAS)
TRANS-ALASKA GAS PROJECT
OIL AND GAS FIELDS
COOK INLET BASIN

Docket No. CP 75–
Exhibit H
Figure No. 10

CHUKCHI PROVINCE
BARROW
BEAUFORT SEA PROVINCE
SIBERIA
CHUKCHI SEA
NORTH SLOPE BASIN
POINT HOPE
BROOKS RANGE
HOPE PROVINCE
KOTZEBUE BASIN
ANADYR GULF
SEWARD PENINSULA
NOME
USSR
UNITED STATES
(US-RUSSIA CONVENTION OF 1867)
KUSKOKWIM BAY
BERING SEA PROVINCE
YUKON – KOYUKUK GEOSYNCLINE
YUKON – KANDIK BASIN
CANADA
ARCTIC CIRCLE
PROPOSED TRANS ALASKA PIPELINE ROUTE
FAIRBANKS
MIDDLE TANANA BASIN
MTNS
KUSKOKWIM
HOLITNA BASIN
ALASKA RANGE
MINCHUMINA BASIN
COPPER RIVER BASIN
YUKON
ALASKA
BETHEL BASIN
ANCHORAGE
VALDEZ
CORDOVA
BRISTOL BAY
BRISTOL BASIN
ALEUTIAN RANGE
PENINSULA
COOK INLET BASIN
KENAI PENINSULA
GULF OF ALASKA PROVINCE
JUNEAU
GULF OF ALASKA
UNITED STATES
CANADA
YUKON
BRITISH COLUMBIA
NORTHWEST TERRITORIES
YUKON
MACKENZIE DELTA AREA
BEAUFORT SEA
OCEAN
ARCTIC
PACIFIC OCEAN
200 METER WATER DEPTH
1500 METER WATER DEPTH
KODIAK ISLAND
KODIAK ISLAND PROVINCE
ALEXANDER ARCHIPELAGO
SCALE
50 0 50 100 150
N

TRANS-ALASKA GAS PROJECT

POTENTIAL OIL AND GAS AREAS
STATE OF ALASKA

Docket No. CP75-_____

EXHIBIT I

MARKET DATA

Application of

EL PASO ALASKA COMPANY

Docket No. CP75-___
Exhibit I
Sheet 1 of 1

EL PASO ALASKA COMPANY

Trans-Alaska Gas Project

Market Data

This exhibit is omitted at this time.

CERTIFICATE INDEX

J

Docket No. CP75-_____

EXHIBIT J

CONVERSION TO NATURAL GAS

Application of

EL PASO ALASKA COMPANY

Docket No. CP75-__
Exhibit J
Sheet 1 of 1

EL PASO ALASKA COMPANY

Trans-Alaska Gas Project

Conversion to Natural Gas

This exhibit is omitted inasmuch as no conversions to natural gas associated with the service to be provided under the instant application are contemplated, except in the State of Alaska which cannot be determined at this time.

CERTIFICATE INDEX

K

Docket No. CP75-_____

EXHIBIT K

COST OF FACILITIES

Application of

EL PASO ALASKA COMPANY

EL PASO ALASKA COMPANY

Cost of Facilities

Trans-Alaska Gas Project

Cost Estimate Summary [1]

Description		Cost (In $1,000's)
Alaskan Gas Pipeline		$ 1,351,413
LNG Plant		$ 1,176,133
Marine Terminal		$ 30,273
LNG Carrier Fleet		$ 1,590,550
Total Direct Cost		$ 4,148,369
Add:	General Overhead	$ 52,468
	Contingency	129,492
	Contract Project Management Fee	61,565
	Intangible Plant	15,886
	Allowance for Funds Used During Construction	1,477,874
	Line Pack	2,909
	Start Up Costs	(303,097)
TOTAL PROJECT COST		$ 5,585,466

[1] The bases for these cost estimates are set forth under Exhibit Z-1, Sections 2 through 5.

EL PASO ALASKA COMPANY

Cost of Facilities

Alaskan Gas Pipeline
(Cost in $1,000's)

	Labor	Sub-Contracts	Materials	Total
Direct Job Cost				
Land	$ 160	$ 7	$ 963	$ 1,130
Rights-of-Way	2,278	138	5,470	7,886
Structures & Improvements	19,135	4,428	13,646	37,209
Pipeline	308,646	18,092	510,684	837,422
Compressor Stations	41,227	1,942	133,635	176,804
Measuring Stations	893	12	3,065	3,970
Communications		3,794	2,113	5,907
General Plant	1,166	1,237	8,018	10,421
Sales and Use Taxes			9,560	9,560
Total Direct Job Cost	$373,505	$29,650	$687,154	$1,090,309
Indirect Job Cost				
Engineering & Construction Fee				$ 152,504
Temporary Construction Facilities				20,352
Const. Services, Supplies & Expenses				45,504
Field Staff & Expenses				7,644
Field Overhead				10,903
Total Indirect Job Cost				$ 236,907
Office Cost				
Engineering				$ 20,952
Home Office Services				420
Purchasing and Expediting				2,825
Total Office Cost				$ 24,197
Total Direct Cost				$1,351,413
Add: General Overhead				21,806
Contingency				68,661
Contract Project Management Fee				20,244
Intangible Plant				8,279
Allowance for Funds Used During Construction				614,392
Line Pack				2,909
Start Up Costs				(154,179)
TOTAL COST - ALASKAN GAS PIPELINE				$1,933,525 1/

1/ See Section 2 of Exhibit Z-1 for additional cost detail.

EL PASO ALASKA COMPANY

Cost of Facilities

LNG Plant
(Costs in $1,000's)

Direct Job Cost	
Equipment	$ 248,539
Materials	152,642
Direct Labor	203,243
Sub-Contract Labor	32,175
Spare Parts and Maint. Equip	6,462
Sales Taxes	2,837
Freight	45,213
Consumables	1,651
Royalties	15,851
Start-Up Costs	9,100
Land	5,400
Sub-Contracts	
Site Preparation	37,162
Housing	4,714
Buildings	2,574
Total Direct Job Cost	$ 767,563
Indirect Job Cost	
Engineering & Construction Fee	$ 43,647
Temporary Construction Facilities	88,798
Const. Services, Supplies and Expenses	24,804
Field Staff and Expenses	80,014
Field Overhead	89,824
Const. Tools and Equipment	30,745
Total Indirect Job Cost	$ 357,832
Office Cost	
Engineering	$ 16,958
Purchasing and Expediting	1,772
Home Office Services	32,008
Total Office Cost	$ 50,738
Total Direct Cost	$1,176,133
Add: General Overhead	15,235
Contingency	59,298
Contract Project Management Fee	33,397
Intangible Plant	5,604
Allowance for Funds Used During Construction	442,792
Start-Up Costs	(145,092)
TOTAL COST - LNG PLANT	$1,587,367 1/

1/ See Section 3 of Exhibit Z-1 for additional cost detail.

EL PASO ALASKA COMPANY

Cost of Facilities

Marine Terminal
(Costs in $1,000's)

Direct Job Cost	
Equipment	$ 2,419
Materials	12,437
Labor	3,351
Spare Parts	60
Sales and/or Use Taxes	76
Freight	534
Start-Up Costs	25
Total Direct Job Cost	$18,902
Indirect Job Cost	
Engineering & Construction Fee	$ 1,541
Temporary Construction Facilities	131
Construction Services, Supplies & Expenses	116
Field Staff & Expenses	1,214
Field Overhead	1,055
Construction Tools & Equipment	5,111
Total Indirect Job Cost	$ 9,168
Office Cost	
Engineering	$ 1,635
Purchasing and Expediting	150
Home Office Services	418
Total Office Cost	$ 2,203
Total Direct Cost	$30,273
Add: General Overhead	378
Contingency	1,533
Contract Management Fee	7,924
Intangible Plant	503
Allowance for Funds Used During Construction	20,604
Start-Up Costs	(3,826)
TOTAL COST - MARINE TERMINAL	$57,389 1/

1/ See Section 4 of Exhibit Z-1 for additional cost detail.

EL PASO ALASKA COMPANY

Cost of Facilities

LNG Carrier Fleet
(Cost in $1,000's)

Fleet Cost	
Yard Cost - 11 LNG Tankers	$1,524,600
Construction Supervision	19,437
Owner's Miscellaneous	4,576
Replacement Cost Insurance	6,644
Gas Trials	4,180
Total Fleet Cost	$1,559,437
Shore-Based Structures & Equipment	
Buildings	$ 1,522
Service Vessels	11,900
Bunker "C", LN_2, & Diesel Facilities	4,186
Communications Equipment	30
Provisioning Containers	333
Spare Parts	4,551
Total Shore-Based Structures & Equipment	$ 22,522
Indirect Job Cost	
Crew Training & Indoctrination	$ 1,837
Initial Ship Voyage	4,928
Title XI Investigating Fee	1,826
Total Indirect Job Cost	$ 8,591
Total Direct Cost	$1,590,550
Add: General Overhead	15,049
Intangible Plant	1,500
Allowance for Funds Used During Construction	400,086
TOTAL COST - LNG CARRIER FLEET	$2,007,185[1/]

1/ See Section 5 of Exhibit Z-1 for additional cost detail.

CERTIFICATE INDEX

L

Docket No. CP75-_____

EXHIBIT L

FINANCING

Application of

EL PASO ALASKA COMPANY

Docket No. CP75-___
Exhibit L
Sheet 1 of 1

EL PASO ALASKA COMPANY

Trans-Alaska Gas Project

Financing

This exhibit is omitted at this time.

CERTIFICATE INDEX

M

Docket No. CP75-_____

EXHIBIT M

CONSTRUCTION, OPERATION AND MANAGEMENT

Application of

EL PASO ALASKA COMPANY

EL PASO ALASKA COMPANY

Trans-Alaska Gas Project

Construction, Operation and Management

Construction of the facilities for which specific authorization is requested herein will be performed by independent contractors under contracts awarded on the basis of competitive bidding, if sufficient contractors are available; otherwise, such construction of facilities will be accomplished under negotiated contracts. Applicant proposes to operate all facilities so constructed. Otherwise, it is not known at this time whether there will be any service, management or other contracts existing or contemplated in connection with the construction and operation of such facilities.

To effectuate operation of The Trans-Alaska Gas Project, Applicant proposes to contract with an affiliate company who will conduct, or arrange for the conduct of, ocean shipping of the Alaskan LNG between Gravina Point, Alaska, and Point Conception, California, by means of the LNG Carrier Fleet. In California, Applicant has contracted with Western Terminal, who proposes to construct and operate facilities in the State of California to terminal, offload, store, regasify and deliver gas for Applicant at points within the State of California and at the California-Arizona boundary. Further, Applicant proposes to contract with El Paso Natural for easterly transportation through El Paso Natural's facilities.

CERTIFICATE INDEX

N

Docket No. CP75-_____

EXHIBIT N

REVENUES – EXPENSES – INCOME

Application of

EL PASO ALASKA COMPANY

Docket No. CP75-___
Exhibit N
Sheet 1 of 1

EL PASO ALASKA COMPANY

Trans-Alaska Gas Project

Revenues-Expenses-Income

This exhibit is omitted at this time.

CERTIFICATE INDEX

Docket No. CP75-_____

EXHIBIT O

DEPRECIATION AND DEPLETION

Application of

EL PASO ALASKA COMPANY

Docket No. CP75-___
Exhibit O
Sheet 1 of 1

EL PASO ALASKA COMPANY

Trans-Alaska Gas Project

Depreciation and Depletion

This exhibit is omitted at this time.

Docket No. CP75-_____

EXHIBIT P

TARIFF

Application of

EL PASO ALASKA COMPANY

Docket No. CP75-___
Exhibit P
Sheet 1 of 1

EL PASO ALASKA COMPANY

Trans-Alaska Gas Project

Tariff

This exhibit is omitted at this time.

CERTIFICATE INDEX

Z

Docket No. CP75-_____

EXHIBIT Z

LETTER AGREEMENT BETWEEN EL PASO ALASKA COMPANY

AND WESTERN LNG TERMINAL COMPANY

Application of

EL PASO ALASKA COMPANY

El Paso Alaska Company
2727 Allen Parkway
Houston, Texas 77019

POST OFFICE BOX 2185
77001

September 19, 1974

Western LNG Terminal Company
720 West Eighth Street
Los Angeles, California 90017

Gentlemen:

This letter agreement sets forth the understanding which has been reached by and between El Paso Alaska Company ("El Paso") and Western LNG Terminal Company ("Terminal Company") regarding the design, construction, ownership, operation and utilization of facilities for the berthing and shoreside support of ships carrying liquefied natural gas ("LNG") at a site or sites on the Pacific coast of the State of California, the unloading, storage and regasification of said LNG at such site or sites and the redelivery of equivalent quantities of natural gas by Terminal Company to El Paso or parties designated by El Paso at mutually agreed upon delivery points on the existing pipeline systems of Pacific Gas and Electric Company, Pacific Lighting Service Company and/or Southern California Gas Company within the State of California and, if required, at the boundary between the State of California and the State of Arizona. (Such undertakings of Terminal Company are sometimes hereinafter collectively referred to as "Terminal Service.")

Terminal Company has filed an application with the Federal Power Commission, Docket No. CP75-83, seeking the requisite conditioned authority to construct and operate certain marine terminal, LNG storage and regasification facilities on the California coastline at or near Point Conception, Oxnard and Los Angeles Harbor, respectively, together with the authority to construct and operate such facilities as may be necessary to transport the resultant quantities of natural gas to certain points of delivery. In said Docket, Terminal Company offers to perform Terminal Service and to make such facilities available for all qualified companies having potentially viable LNG projects. Further, Terminal Company has indicated that it intends to apply for and to diligently pursue the timely receipt of all governmental authorizations, permits and approvals necessary in connection with requests by such companies that Terminal Company provide the Terminal Service contemplated in Docket No. CP75-83.

El Paso intends to file an application with the Federal Power Commission seeking the requisite authority, inter alia, to transport natural gas from the North Slope of the State of Alaska across that State

to a point on the south central coastline and to convert such natural gas to LNG. From such point LNG will be transported by ship to a point on the California coastline where such LNG will be regasified and ultimately delivered to U. S. consumers all in furtherance of the services contemplated by El Paso's Trans-Alaska Gas Project.

In this connection, El Paso desires to utilize the Terminal Service proposed to be rendered by Terminal Company in its application at Docket No. CP75-83 and, therefore, to enter into an arrangement with Terminal Company with respect to those volumes of natural gas from the North Slope which El Paso proposes to transport in the form of LNG from the south coast of Alaska to the facilities of Terminal Company and for delivery by Terminal Company of the resulting quantities of natural gas at mutually agreeable delivery points on the existing pipeline systems of Pacific Gas and Electric Company, Pacific Lighting Service Company and/or Southern California Gas Company within California and/or at the California-Arizona boundary.

Subject to the foregoing understandings, the parties hereto have agreed upon the following matters:

1. El Paso agrees to utilize the Terminal Service which Terminal Company will provide at a location on the California coastline and to utilize the related transportation services to the delivery point or points to be mutually agreed upon. El Paso prefers to utilize Terminal Company's proposed Point Conception terminal site. In the event that the necessary governmental approvals are obtained for the Point Conception site, Terminal Company agrees to make Terminal Service available at such site for the Trans-Alaska Gas Project on the terms and conditions set forth herein.

2. Terminal Company will reserve 3.3 billion cubic feet of maximum daily capacity of Terminal Service for LNG deliveries from El Paso's Trans-Alaska Gas Project at the proposed Point Conception terminal or such other terminal site of Terminal Company as El Paso may designate for which the necessary governmental approvals have been obtained.

3. At the option of the owners of the LNG, Terminal Company will cooperate with El Paso to permit extraction of any portion of the hydrocarbons contained within the LNG and the commercial utilization of the cryogenic quality of the LNG. To the extent it is not inconsistent with the construction or operation of the facilities of

Terminal Company or any reasonable expansion thereof, Terminal Company shall upon a mutually agreeable basis grant El Paso the right of access to and reasonable utilization of the terminal site to realize such recoverable value. Any obligations for redelivery of BTU's pursuant to the Definitive Agreement shall be reduced in an amount equivalent to the amount of BTU's used in such extraction and utilization and/or contained in the extracted hydrocarbons.

4. El Paso will reimburse Terminal Company for the rendition of the above-described services on a cost of service basis as reflected in the cost of service formulae contained in the Definitive Agreement to be negotiated between the parties or upon such other basis as may have been approved by the Federal Power Commission and accepted by the parties hereto.

5. Upon the execution of this letter agreement, the parties agree to immediately enter into good faith negotiations of a Definitive Agreement on the subject matter contained herein. In addition to the understandings outlined herein, it is contemplated that said Definitive Agreement will cover in detail such matters as quantities, buildup period deliveries, regular deliveries, special deliveries, scheduling, facilities, capacity, charges, quality, measurement and analysis, invoicing and payment, financing and security arrangements, warranty and indemnification, force majeure, taxes, notices, term and precedent conditions. Such precedent conditions shall include:

   (a) A requirement that all necessary governmental approvals be received on or before January 1, 1977 in a form satisfactory to both parties;

   (b) A requirement that satisfactory financing be obtained on or before July 1, 1977 in a form satisfactory to both parties. In connection with Terminal Company's financing, it is contemplated that risks of completion and ultimate credit support will fall upon credit worthy parties utilizing or benefiting from the Terminal Service.

(c) A requirement that El Paso on or before April 1, 1977 provide Terminal Company with copies of executed gas sale and/or transportation contracts sufficient in Terminal Company's opinion to justify offering Terminal Service.

6. The parties agree that said Definitive Agreement shall be incorporated in an amendatory or supplemental filing contemplated in Terminal Company's filing at Docket No. CP75-83. Terminal Company agrees that said filing shall be made one hundred twenty (120) days from the date El Paso's application referred to above shall have been filed with the Federal Power Commission, but, in no event is Terminal Company obligated to file such amendatory or supplemental filing prior to sixty (60) days after the execution of the Definitive Agreement by the parties hereto.

7. Both parties agree that the rights and obligations reflected herein or in said Definitive Agreement may in such party's sole discretion be assigned to or performed by their respective parent or any of such party's subsidiaries or affiliates.

8. Terminal Company's execution of this contract for Terminal Service shall not be deemed to be an endorsement by Terminal Company of the proposed LNG project to the exclusion of, or preference to, any competing project. In the event that one or more applicants or prospective applicants for LNG projects which are mutually exclusive request Terminal Service from Terminal Company, both parties recognize that Terminal Company may contract with each such applicant or prospective applicant for utilization of the same Terminal Service at the same location or locations, upon the understanding that such service would be provided under the contract entered upon with the applicant whose proposed project is approved by final order of the public authority having jurisdiction to issue such order.

If the foregoing correctly sets forth our mutual understandings, please signify your acceptance thereof by executing both duplicate original copies of this letter agreement and returning one copy thereof to the undersigned.

Very truly yours,

EL PASO ALASKA COMPANY

By s/Travis Petty
Vice President

ACCEPTED AND AGREED TO
as of the date hereof

WESTERN LNG TERMINAL COMPANY

By s/H. A. Proctor
President