



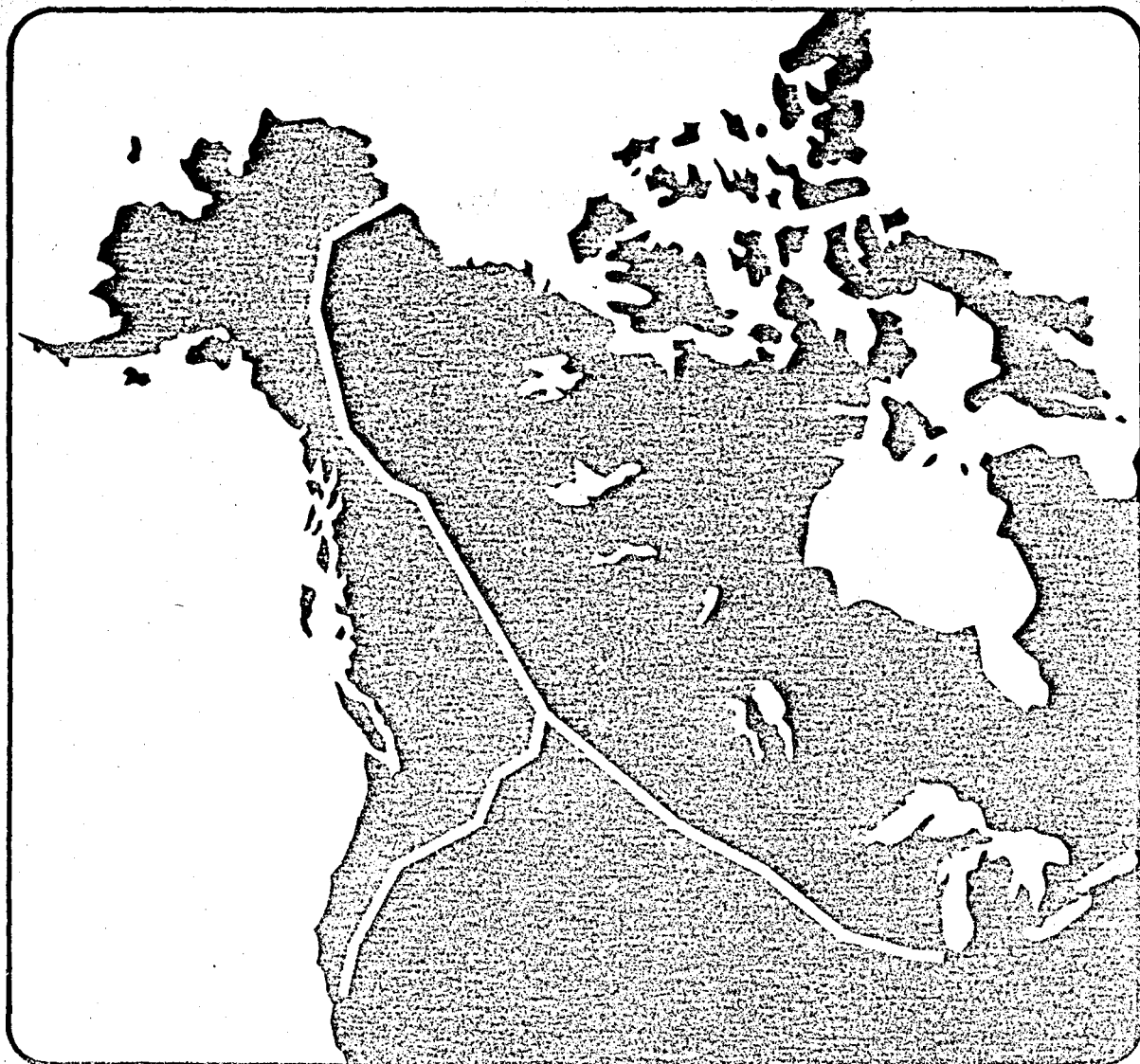
JULY 1982

QUARTERLY REPORT

No.

12

**Quarterly Report to the
President and Congress on Construction of the
Alaska Natural Gas Transportation System**



Office of the Federal Inspector, Alaska Natural Gas Transportation System

The Twelfth

QUARTERLY REPORT

to the

PRESIDENT and CONGRESS

on

Construction of the

ALASKA NATURAL GAS
TRANSPORTATION SYSTEM



THE FEDERAL INSPECTOR
ALASKA NATURAL GAS TRANSPORTATION SYSTEM
ROOM 2413, POST OFFICE BUILDING
1200 PENNSYLVANIA AVENUE
WASHINGTON, D.C. 20044

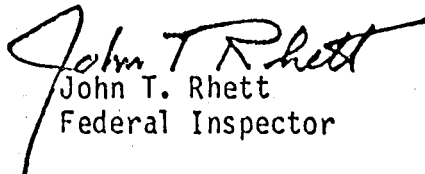
July 29, 1982

Honorable George Bush
President of the Senate
Washington, DC 20510

Dear Mr. President:

Section 7(a)(5)(E) of the Alaska Natural Gas Transportation Act of 1976 (P.L..94-586) requires that I submit quarterly reports to the President and Congress on the status of the Alaska Natural Gas Transportation System. Accordingly, I am hereby submitting my twelfth quarterly report which summarizes the significant project developments that have occurred from April through June 1982.

Sincerely yours,


John T. Rhett
Federal Inspector

Enclosure



THE FEDERAL INSPECTOR
ALASKA NATURAL GAS TRANSPORTATION SYSTEM
ROOM 2413, POST OFFICE BUILDING
1200 PENNSYLVANIA AVENUE
WASHINGTON, D.C. 20044


July 29, 1982

Honorable Thomas P. O'Neill, Jr.
Speaker of the House
of Representatives
Washington, DC 20515

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INTRODUCTION

The items discussed in this report have been selected to provide an accurate, overall picture of the recent progress on the Alaska Natural Gas Transportation System (ANGTS). To keep the report concise, only significant developments occurring during the second quarter of Calendar Year 1982 are discussed. Consequently, some of the topics covered in previous reports are not mentioned in this document. Finally, if pertinent background information on an issue was presented in an earlier report, such information is not repeated here.

SUMMARY OF KEY EVENTS

On April 30, 1982, the sponsors announced that, due to the current uncertainties in world financial markets, depressed world crude oil prices, and the current excess in world energy supplies, they had not been able to obtain financing in time to allow Phase II of the Alaska Natural Gas Transportation System (ANGTS) to be completed during the winter of 1987-1988 as planned. However, the sponsors also announced that they would continue their efforts to obtain financing and would continue preconstruction planning, design, and other activities at the pace necessary to enable Phase II of the system to be completed in 1989. Finally, the sponsors noted that a minimum of five and one-half years from financing to project completion is required and indicated that they would also be prepared to move toward an earlier completion date, if financing were obtained.

In early May, the sponsors reduced their budget, staff, and planned activities to accommodate the new schedule. During the first half of 1982, the sponsors spent about \$61 million on the Alaskan Leg and the Gas Conditioning Facility.

During the last half of 1982, the sponsors now plan to spend about \$17 million.

In establishing its new staffing levels and priorities, Northwest Alaskan Pipeline Company (NWA) decided to reduce its staff as quickly as possible. Overall, the sponsors reduced their staff by about 48%. NWA also decided to focus its efforts on completing certain steps in the Alaskan Leg and the Alaska Gas Conditioning Facility design processes to assure that the project can be quickly remobilized. The following chart shows the sponsors' staffing levels by location:

	<u>4/30/82</u>	<u>5/7/82</u>
Alaska	51	23
Irvine	74	32
Salt Lake City	63	48
Houston	7	6
Pasadena	54	19
Washington	<u>14</u>	<u>10</u>
TOTAL	263	138

Due to the budget reductions, NWA's major contractors also reduced their staffing levels substantially. Overall, contractor staff was reduced by about 90%. The following chart shows the number of contractor staff working on the Alaskan Leg and the Gas Conditioning Facility:

	<u>4/30/82</u>	<u>5/7/82</u>
Alaskan Leg	343	30
Conditioning Plant	<u>200</u>	<u>20</u>
TOTAL	543	50

The sponsors have identified a number of major activities that they plan to accomplish during the remainder of 1982. These include:

- continuing financing negotiations;



- continuing operation of the Fairbanks Frost Heave Test Site and remote frost heave and weather data collection stations along the corridor;
- obtaining permits for the temporary construction camps and airfields from the Department of the Interior (DOI);
- obtaining the Federal Energy Regulatory Commission's (FERC) and the Office of the Federal Inspector's (OFI) approval of past expenditures for eventual inclusion in the rate base;
- obtaining FERC approval of the Certification Cost Estimate; and
- obtaining FERC's "shipper tracking" rules.

The sponsors also plan to submit the following items to OFI for review during 1982:

- revised Pipeline and Compressor Station Design Criteria Manuals;
- conditioning plant design;
- frost heave design criteria and methodology;
- technical reports on pipe metallurgy, typical fault crossing design, and fracture control;
- certain environmental plans required by the DOI's Right-of-Way Grant;
- report on the archaeological surveys conducted during 1981; and
- expenditure reports for eventual rate base inclusion.

Following receipt of the sponsors' reduced staffing levels and proposed activities, the OFI carefully analyzed its functions and determined that a Reduction-In-Force would be necessary to balance staffing levels and projected workload. This is reflected in the substantial reductions proposed in both the Fiscal Year 1982 and 1983 budgets. As new information on the project becomes available, OFI will re-evaluate its resource needs to assure that it can continue to fulfill its mission. OFI's decision was based

on the need to fulfill the following basic objectives:

- OFI must be able to continue to meet the workload generated by the Alaskan Leg sponsors. Because OFI reviews designs and plans prepared by the sponsors, OFI's peak workload occurs later than the sponsors'. In addition, as indicated by the sponsors' proposed activity list, OFI will be reviewing a large number of designs, plans, and technical reports during 1982.
- OFI must retain certain key staff to assure that OFI can interface with the employees retained by NWA and that OFI can quickly remobilize. Because the sponsors announced that if financing were obtained they would be prepared to move toward project completion before 1989, OFI must be prepared for this possibility. Due to the constraints of the Federal hiring process, OFI cannot remobilize as quickly as the sponsors.
- OFI must continue to oversee the Eastern Leg construction effort and must also monitor the Remedial Weld Program which involves excavation of about 830 welds located in five states. To help meet this additional workload, a substantial portion of OFI's technical staff normally assigned to the Alaska Offices, as well as some Washington and Irvine personnel, has been reporting to OFI's Omaha Office since early May.
- OFI will reduce contractor staff more quickly and more substantially than in-house staff. For example, during this summer, OFI's principal engineering support contractor has reduced its staff working on the Alaskan Leg by about one-third. By September 30, this contractor is scheduled to reduce its staff working on the Alaskan Leg by about 90%. As a result of the delay in



the Phase II completion schedule, OFI's management information system contractor will reduce its staff by about one-third during this summer. By September 30, 1982, this contractor is scheduled to reduce its staff by about 55%.

The OFI's planned Reduction-In-Force (RIF) will be effective on September 30, 1982. Because the Eastern Leg is still under construction, OFI does not plan to reduce its staff working on this portion of the project until mid-1983 when construction is complete and smooth operation of the system is assured. When it became apparent that the Phase II completion schedule might change, OFI decided to meet the additional workload on the Eastern Leg by assigning some Alaskan, Irvine, and Washington staff to the Omaha Office. OFI's planned RIF affects only staff working on the Alaskan Leg and the Gas Conditioning Facility and reflects about a one-third reduction in permanent full-time staff assigned to those areas.

Due to voluntary, internal restrictions on its recruitment efforts, OFI's staffing level has never reached its originally approved ceiling of 190 full-time permanent positions in Fiscal Year 1982. Chart 1 shows OFI's full-time permanent staff on April 30, 1982 and the OFI's planned staffing level on September 30, 1982. At this time, OFI expects that additional information on the sponsors' planned activities will be available in late fall. When this information becomes available, OFI will re-evaluate its resource needs to assure that its staffing levels are balanced with the sponsors' programs and that OFI has the ability to remobilize quickly.

OFI's resource requirements have always been dictated by the level of activity established by the sponsors and OFI has always adjusted its budget requests to reflect schedule changes. For example,

in April 1982, as a result of a previous slip in the scheduled Phase II completion date, OFI reduced its original \$30,471,000 Fiscal Year 1983 request to \$24,270,000.

When the change in the Phase II completion schedule was announced, it became apparent that, even though less than half of the Fiscal Year remained, OFI could make substantial reductions in its Fiscal Year 1982 spending level. Thus, OFI proposed an \$8,000,000 reduction in the second half of its Fiscal Year 1982 budget. This represents about a 57% reduction in budget expenditures for the last half of the Fiscal Year. These reductions were achieved mainly by cancelling planned staffing increases, making substantial contract reductions, and eliminating certain planned activities. For Fiscal Year 1983, OFI reduced its April 1982 request by over 70%. The proposed rescission for the Fiscal Year 1982 budget and the second amendment proposed for the Fiscal Year 1983 budget were submitted to the Office of Management and Budget in early June and subsequently transmitted by the President to Congress in late June 1982. Most of the savings in Fiscal Year 1983 resulted from a substantial reduction in OFI's contractor support. Chart 2 shows OFI's proposed budget reductions for Fiscal Years 1982 and 1983.

Chart 1 - OFI Staffing

	<u>4/30/82</u>	<u>9/30/82</u>
Anchorage	19	11
Fairbanks	12	6
Irvine	28	18
Omaha	10	9
Denver	1	1
Washington	65	50
TOTAL ^{1/}	135	95

^{1/} On April 30, OFI also had 19 temporary employees. On September 30, OFI plans to have only 7 temporary employees.



Chart 2 - OFI Budget

	<u>FY 1982</u>	<u>FY 1983</u>
Request	\$27,425,000	\$24,270,000
Revised	19,425,000	7,125,000
Reduction	\$ 8,000,000	\$17,145,000

Despite the problems and delays caused by an unusually wet spring in the mid-West, construction of the U.S. portion of the Eastern Leg is basically on schedule. Mainline construction is now about 91% complete and is expected to be finished in late July. Hydrotesting is expected to be completed by mid-August. (See the "Eastern Leg" section of this report for additional details.) In Canada, although mainline pipeline construction is progressing faster than planned, work on the Compressor and Meter Stations located in Saskatchewan has been halted by a building trades union strike. As a result, all planned facilities will not be completed on September 1, 1982, as scheduled. However, Foothills Pipelines, Ltd., the sponsor of the Canadian portion, is exploring alternate arrangements which will enable the Eastern Leg to deliver the planned volumes of gas on September 1, 1982. (See the "Canadian Activities" section in this report for additional details.)

OFFICE OF THE FEDERAL INSPECTOR

Staffing Progress

Throughout Fiscal Year 1982, the Office of the Federal Inspector (OFI) has voluntarily limited its recruitment efforts. Thus, no one was hired during this quarter. In addition, as a result of the delay in the Phase II completion schedule, 10 employees left the OFI during this quarter, bringing the total full-time permanent staff at the end of the third quarter of Fiscal Year 1982 to 127 employees. Sixty-one employees are located in Washington, D.C.;

28 in Alaska; 28 in Irvine; 9 in Omaha; and 1 in Denver.

As discussed in the "Summary of Key Events" section of this report, following the project sponsors' decision to delay the scheduled completion date of Phase II of the system until 1989 and reduce their staffing levels significantly, OFI carefully examined its functions and the expected workload for Fiscal Year 1983. As a result of this study, OFI management decided that a Reduction-In-Force (RIF) would be required to balance staffing levels and anticipated workload requirements. Affected employees were officially notified on June 30, 1982, even though the RIF will not be effective until September 30, 1982. While the RIF will reduce OFI's full-time permanent staff to 95 employees, voluntary attrition is expected to reduce this number further. As new information on the sponsors' planned activities becomes available, OFI will re-evaluate its staffing requirements to assure that its staffing levels and anticipated workload are balanced and that OFI has the ability to remobilize.

During the next quarter, the OFI will continue to devote substantial effort to placing those employees who will be separated on September 30, 1982. Given the 90-day notice, OFI expects that most employees can be placed.

Internal Equal Employment Opportunity

Of the 10 employees who left OFI during this quarter, three were minorities and three were women. Although this reduced the actual number of women and minorities, the percentage of women in the total workforce increased, while the percentage of minorities slightly decreased.

The following are actual statistics for the end of the third quarter of Fiscal



Year 1982. Of our 127 employees, 57 are women (45%) and 32 are minorities (25%). Twenty-two percent of the professional staff are women, and 18% of the professional staff are minorities.

The OFI's planned Reduction-In-Force will not greatly alter the percentage of women and minorities in the workforce on October 1, 1982. Obviously, the effects of additional attrition on OFI's minority and female statistics cannot be either predicted or controlled.

Field Office Activities

Alaskan Leg

During this quarter, the OFI's Alaska Field Office concentrated on updating the field data relating to the airfield and camps permits which Northwest Alaskan Pipeline Company (NWA) has requested from the Department of the Interior (DOI) and on resolving other issues related to those permits. For example, during this quarter, OFI approved NWA's plan covering the design and operation of the construction camps and airfields required by the DOI's Right-of-Way Grant. Work on the remaining issues regarding the camps permits will continue during the next quarter. Other permitting activity is expected to remain at a very low level throughout the remainder of 1982.

Although, as a result of the project delay, NWA has reduced its Alaskan staff and planned field activities, NWA will continue to operate the Fairbanks Frost Heave Test Site and monitor the various remote frost heave and weather data collection stations along the corridor. NWA does not anticipate starting any new field data collection efforts during the remainder of 1982. However, during spring break-up, representatives of the OFI, the State, other Federal agencies, and the Trans-Alaskan Pipeline System (TAPS) conducted

some field reconnaissance activities along the corridor.

Although the State of Alaska closed its State Pipeline Coordinator's Office (SPCO) on June 30, 1982, the State will retain some former SPCO employees to act as the focal point for all ANGTS issues. These employees will be located with OFI staff in Fairbanks. Additional support will be provided by existing State agency staff.

Since early May, a substantial portion of the OFI's technical staff in the Alaska Field Office has been detailed to the Omaha Field Office to provide the additional field staff required to oversee the Eastern Leg Remedial Weld Program. OFI's Alaska Field Office will continue to provide this support until the Remedial Weld Program is completed in early August.

Eastern Leg

The 1982 construction season began in early April on the mainline in North Dakota. Although extremely wet spring weather resulted in the imposition of road restrictions and created very muddy right-of-way conditions which initially slowed progress, work on the three mainline pipeline construction spreads was progressing at a satisfactory pace by early May. The wet right-of-way conditions also caused a few landowner concerns which were resolved quickly through discussions among the sponsor's field personnel, OFI and state agency staff, and the landowners.

Of the total 823 miles of Phase I of the Eastern Leg, 635 miles were back-filled during 1981. About 544 miles were hydrotested and cleanup work on about 626 miles was completed. Welding of the remaining 188 miles is scheduled to be completed in late July. At this time, mainline pipeline construction is about 91% complete. The following



chart shows the number of miles that have been completed from the start of the 1981 construction season through June 30, 1982:

<u>Activity</u>	<u>Miles</u>
Temporary Fencing	178
Clearing/Grading	178
Stringing	163
Trenching	169
Bending	158
Welding	138
Coating/Lowering-In/ Backfill	114
Hydrotest	61
Cleanup	61

Prior to the start of the 1982 construction season, the project sponsor developed revised procedures designed to avoid a recurrence of the welding problems encountered during the 1981 season. Revised pipe handling techniques, joint preparation procedures, welding process timing controls, and x-ray interpretation procedures have been implemented in an effort to more closely control the welding process. By early May, after the welding crews and the sponsor's quality control personnel had adjusted to the new procedures, the quality of construction indicated that the problems encountered during the 1981 season are being successfully controlled.

On May 4, 1982, as clearing and grading began on the west edge of the Little Missouri River Badlands, a mass of earth slid about 15 feet. To avoid this area, the sponsor decided to re-route about one-half mile of the pipeline. Construction of the pipeline along the new route is scheduled to begin in early July.

From June 21 through 25, the OFI conducted a special observation of mainline welding and x-ray interpretation procedures to assess the sponsor's adherence

to the revised manuals and procedures. Similar special observations, designed to assist and reinforce the efforts of OFI's field inspectors, were conducted during 1981 on specific construction operations and quality control systems. The special observation indicated that, although several minor problems were noted, compliance with the specifications and procedures was generally satisfactory. OFI immediately discussed those areas needing improvement with the sponsor and appropriate corrective actions were taken.

During this quarter, the sponsor received variances to several environmental restrictions. OFI worked with the involved Federal and state agencies to develop revised restrictions which would allow construction to proceed while still retaining an acceptable level of environmental protection. The variances granted allowed blasting at the Oahe Reservoir; limited construction in a prairie falcon nesting area during May and June; and in-stream work from March 1 - June 30 at the Oahe Reservoir Crossing. The variance allowing instream work at the Oahe Crossing is similar to a variance granted during the last quarter at the Missouri River Crossing. Since the requested variances were granted, construction has progressed satisfactorily.

Work on the Missouri River crossing began in early April. On May 10, the second pipeline was placed under the river and installation of the valves and connecting lines on each bank is now underway. Welding of the first crossing of the Oahe Reservoir was completed on June 26, 1982. Excavation of the 5,000-foot trench for the second pipeline crossing has been started. Work on this crossing is expected to be completed in mid-August.

Because wet weather slowed progress on Compressor Station No. 4 during May,



the contractor increased both the work week and the workforce. Construction is now progressing satisfactorily and Compressor Station No. 4 is presently expected to be completed on schedule. Work on Compressor Station No. 8 began on May 26, approximately one month later than originally scheduled. Although rain also hampered progress at this station, civil and structural work is progressing satisfactorily at this time. Compressor Station No. 8 is still expected to be completed in November, as originally scheduled. This station is not required to transport the initial volume of gas scheduled to flow in September. Thus, this delay will not affect the scheduled initial operation date of the system. Work on the Meter Stations is progressing satisfactorily and these facilities are now expected to be completed before September 1, 1982. The following table shows the construction status and the scheduled completion date of each of the Compressor and Meter Stations:

	<u>Construction Start</u>	<u>Scheduled Completion</u>	<u>Percent Complete</u>
<u>COMPRESSOR STATIONS</u>			
No. 4	9/01/81	9/1/82	80
No. 8	5/26/82	11/1/82	10

METER STATIONS

S. Dakota	9/18/81	9/1/82	81
Minnesota	9/31/81	9/1/82	74
Iowa	9/08/81	9/1/82	66

As discussed in the OFI's eleventh quarterly report, the sponsor submitted a proposal to the Department of Transportation (DOT) and the OFI for correcting girth weld defects found during the audit of x-ray film conducted during last winter. The sponsor requested permission to repair most of these defects rather than cut out the entire weld as

otherwise required by the DOT's pipeline safety regulations. On May 5, 1982, after the sponsor provided sufficient justification for use of its repair procedures, the DOT granted the requested waiver and the sponsor immediately began to repair the defective welds. Because the mainline contractors have the necessary personnel and equipment readily available, they are conducting the repair work on the three spreads in North Dakota. In all other states, the remedial work is being performed by separate contractors. At this time, approximately 74 percent of the necessary repairs have been completed, even though progress in Iowa was slowed due to unusually heavy rains. The Remedial Weld Program is expected to be completed in early August, as scheduled.

The OFI has closely monitored the Remedial Weld Program. In mid-June, OFI conducted a special observation of the program to assess the sponsor's adherence to the conditions of the waiver and its Quality Control procedures and specifications. The observation revealed several minor problems in the sponsor's documentation system which have been successfully corrected. Overall, the sponsor has maintained a high level of quality on the Remedial Weld Program.

The following chart shows the project control estimate for the Eastern Leg, the amount that the sponsor had spent as of April 30, 1982, and the sponsor's forecasted cost at completion. All estimates exclude finance charges and are in as-spent dollars:

Project Control Estimate	\$1,237,902,000
Amount Spent (as of 4/30/82)	\$ 938,766,000
Forecasted Cost at Completion	\$1,190,921,000



These estimates indicate that the sponsor expects to complete Phase I of the Eastern Leg under budget.

Western Leg

Only minor construction activity occurred on Phase I of the Western Leg during this quarter. The repairs to the electrical systems at one compressor station mentioned in the OFI's eleventh quarterly report were completed during this quarter. Repairs to certain restoration and revegetation work were also started. Finally, the sponsor completed its survey of the various cathodic protection systems and installed some of the required equipment. The remaining cathodic protection equipment is scheduled to be installed by October 1982.

During this quarter, the OFI conducted an observation of both the Western Leg and the Western Delivery System rights-of-way to determine if any repairs to the restoration and revegetation work will be necessary. In most areas, the restoration and revegetation work is in satisfactory condition. During the next quarter, OFI will submit a report to the sponsors listing the areas that need repairs, even though the sponsors have already begun corrective actions in most of these areas.

Finally, during this quarter, OFI reviewed the Western Leg sponsor's operation, maintenance and surveillance procedures. OFI will report the findings of this review to the sponsor during the next quarter. Since Phase I Western Leg construction consisted of looping an existing system and did not require installation of any new compression equipment, no significant changes in the existing procedures were required. Thus, OFI's comments on the procedures will be minimal. A similar review of the Western Delivery System's procedures will be conducted during the next quarter.

The following chart shows the project control estimate for Phase I of the Western Leg, the amount spent as of May 30, 1982, and the sponsor's forecasted cost at completion. These estimates exclude finance charges and are in 1981 dollars:

Project Control Estimate	\$167,779,000
Amount Spent (as of 5/30/82)	\$161,298,559
Forecasted Cost at Completion	\$164,338,570

Certain contingent liabilities are excluded from the projected expenditures. However, even if these contingent costs are incurred, the sponsor expects that the final project cost would exceed the estimate by less than 1 percent.

Compliance Management Evaluation

During the last quarter, the OFI developed a set of detailed compliance assurance policies and procedures for use on the Eastern Leg. (See the OFI's eleventh quarterly report for details.) In early July, the OFI will evaluate the effectiveness of these revised procedures and the overall compliance management program on the Eastern Leg. An interdisciplinary team of representatives of the OFI and other agencies will conduct the evaluation. The study will be completed in mid-July to allow OFI to adjust its compliance management procedures during the 1982 construction season, if necessary.

EXECUTIVE POLICY BOARD

A joint briefing for the Executive Policy Board (EPB) and the Agency Authorized Officers was held on June 24. The briefing consisted of a report on the status of the Eastern Leg construc-



tion and a discussion of the impacts of the delay in the Phase II construction schedule announced by the project sponsors on April 30. In light of the delay, the EPB decided to hold meetings semi-annually rather than quarterly. This decision was based on the understanding that additional meetings could be called if necessary.

FEDERAL AGENCY PROGRESS

FERC Actions

On April 16, 1982, the presiding officers in the Federal Energy Regulatory Commission's (FERC) technical conferences issued a report on NWA's requested amendment to its Certification Cost Estimate (CCE) for the Alaskan Leg. Comments and reply comments have been received and the presiding officers are now preparing a draft order recommending a CCE and Center Point for the Alaskan Leg for consideration by the Commission. In addition, on May 19, 1982, an Administrative Law Judge held a prehearing conference to discuss the status of NWA's Certificate application. (See the section on "NWA's FERC Certificate Filing" in this report for additional details.)

On April 20 and 21, 1982, the FERC held hearings in Alaska to allow Alaskan citizens to express their views on socioeconomics and related issues. (See the section on "Socioeconomics" in this report for additional details.) The presiding officers are now preparing a report on these issues. All interested parties will have an opportunity to submit comments and reply comments on this report before the Commission acts on the recommendations in the report.

On June 1, 1982, the FERC issued an order approving approximately \$90 million of Alaskan Leg expenditures

for eventual inclusion in the rate base. The sponsors had requested approval of a total of \$130 million incurred from inception of the project through December 31, 1979. Due to a lack of supporting material, the FERC determined that none of the Canadian Arctic Gas Study Limited expenditures are qualified for inclusion in the rate base. The FERC also disallowed certain expenditures for lobbying and influencing public opinion. Although the FERC determined that public relations expenses and donations are not qualified for rate base inclusion, such expenditures are usually allowed as operating costs and thus the sponsors will be allowed to eventually recover these amounts as part of the cost-of-service.

Finally, the FERC staff is preparing a draft Notice of Proposed Rulemaking for consideration by the Commission which will establish the methods by which ANGTS shippers will be able to recover the costs of transporting Alaskan gas from their customers. Due to the impact that this process, known as "shipper tracking", will have on financing, the sponsors have requested that the FERC establish these procedures as soon as possible.

During this quarter, the OFI began coordinating with the Northern Pipeline Agency and the FERC regarding the start of operation on the Eastern Leg and the initiation of the tariff.

As discussed in the OFI's eleventh quarterly report, a group of U.S. Senators and Congressmen, State Attorneys General, and consumer and public interest groups filed a law suit (Metzenbaum v. FERC) with the U.S. Court of Appeals for the District of Columbia Circuit on January 28, 1982. The suit challenged the validity of the President's waiver of law and the implementing orders issued by the FERC in January. On



April 20, 1982, the Court ruled that the President's waiver of law was validly enacted and was not unconstitutional on its face. The Court also ruled that the FERC's orders were validly issued. Finally, the Court ruled that the challenge that the President's waiver deprived natural gas consumers of the right to just and reasonable rates could not be addressed at this time.

Interagency Memoranda of Agreement (MOAs)

During this quarter, the OFI began discussing the terms of a proposed Memorandum of Agreement (MOA) with the Department of the Interior (DOI). The proposed agreement covers procedures for the agencies' involvement in the preconstruction, construction and initial operation phases of the Alaskan Leg. Subjects covered in the draft MOA include use of the OFI's "one-window" permitting process; sharing of land use, environmental, and technical information; involvement of DOI staff in OFI's design and plan review processes; involvement of DOI in OFI's field observations, enforcement activities, special observations and internal management evaluations; OFI/DOI relations with the owners of the Trans-Alaskan Pipeline System (TAPS); and DOI reimbursement for services performed for OFI. The OFI expects that this agreement will be ready for signature during the next quarter.

CANADIAN ACTIVITIES

Although mainline pipeline construction on the Eastern Leg in Canada is proceeding ahead of schedule, work on the Compressor and Meter Stations in Saskatchewan was halted in early May by a building trades union strike. As a result, all facilities will not be completed by September 1, 1982, as

planned. A few months will be needed to complete these stations after the strike is settled. Installation of the first compressor unit at the Compressor Station in Alberta is now about 85 percent complete. This work is expected to be completed by September 1. When this unit is installed and certain other modifications are made, the Canadian portion will be able to deliver the volumes of gas planned to be transported on September 1, 1982.

Welding operations are almost complete and approximately half of the total 128 miles of pipeline scheduled to be completed during the 1982 construction season have been hydrotested. Mainline construction is expected to be completed in mid-August.

The project control estimates and forecasts for the Canadian segments given in the OFI's tenth and eleventh quarterly reports mistakenly included finance charges. The chart below shows the correct current project control estimates and the sponsor's forecasted cost at completion for Phase I of the Eastern and Western Legs in Canada. These estimates exclude finance charges and are given in as-spent dollars:

	East Leg	West Leg
	(\$000,000)	
Project Control Estimate	\$662.6	\$158.7
Forecasted Cost at Completion	\$635.7	\$147.8

These estimates indicate that the sponsor expects that both segments of Phase I construction will be completed under budget.

On June 28, 1982, the National Energy Board (NEB) began a series of hearings on a number of Phase I tariff and regulatory issues raised in Foothills'



application for amendments to its existing Certificate. Foothills requested that the NEB make certain changes in the approved Phase I final design cost estimates, the application of the Incentive Rate of Return mechanism, and the calculation of operating and maintenance expenses. Foothills also requested that the NEB consider allowing certain Phase II expenditures to be included in the rate base for Phase I construction. Because the border price of Canadian gas is fixed, the U.S. gas consumer does not directly pay for increases in Foothills' transportation costs.

On May 20, 1982, OFI and Federal Energy Regulatory Commission staff met with representatives of the National Energy Board and the Northern Pipeline Agency (NPA) in Washington, D.C. The group discussed a number of regulatory issues of mutual interest. OFI and NPA also discussed their proposed responses to the project delay and agreed upon a general approach to the agencies' future operations. OFI and NPA are tentatively planning to hold the next coordination meeting in Calgary in the fall.

On May 31, 1982, in response to the delay in Phase II of the system, Foothills reduced its staff. After thorough review of Foothills' proposed activities and reduced staffing levels, the Northern Pipeline Agency will make appropriate reductions in its staffing levels and operating plans.

NWA's FERC CERTIFICATE FILING

On April 16, 1982, the presiding officers in the FERC's technical conferences issued a report on certain aspects of NWA's amended Certification Cost Estimate (CCE). (See the OFI's tenth quarterly report for details.) The amendment to the CCE filed by NWA in November 1981 requested that the CCE

be increased by \$373 million, bringing the total requested amount to \$8.55 billion in 1980 dollars, excluding finance charges. The presiding officers recommended that the CCE be set at \$7.1 billion, an increase of about \$380 million over the CCE recommended in the August 1981 report. This increase included \$103 million for the communications system which the August 1981 report had recommended be deferred for later consideration by the Commission. (See the OFI's ninth quarterly report for details.) Comments and reply comments on the report were filed by interested parties in May. The presiding officers are now preparing a draft order recommending a CCE and Center Point for the Alaskan Leg for consideration by the Commission.

On May 19, an Administrative Law Judge convened a prehearing conference to develop procedures for addressing certain issues related to final Certification. This prehearing conference was conducted pursuant to an order issued by the FERC on April 30, 1982. At the conference, the project sponsors recommended that the Commission should not initiate any new proceedings on issues related to final Certification until the gas sales contracts are executed and the remaining Certificate filings have been submitted to the Commission. On May 27, the Administrative Law Judge advised the Commission that he would not initiate any new reviews until the sponsors have submitted the remaining documents to the Commission.

PROJECT FINANCING

On April 30, 1982, the project sponsors announced that due to the current excess in world energy supplies, depressed crude oil prices, and uncertainties in world financial markets, they had been unable to develop a financing plan in time to enable completion of Phase II



of the project during the winter of 1987-1988 as planned. The sponsors also announced that they would continue their efforts to obtain financing and that preconstruction planning and other activities would be pursued at a pace which would enable Phase II of the system to be completed in 1989, if a financing plan were developed. Finally, the sponsors noted that a minimum of five and one-half years is required from the time that financing is arranged to the completion of construction and indicated that they would be prepared to move toward an earlier completion date if financing were obtained.

As discussed in the "Summary of Key Events" section of this report, in early May, the sponsors revised their planned activities to accommodate the new schedule and reduced their budget, staff, and contractor support accordingly.

Since announcing the delay in the Phase II completion schedule, the project sponsors and the Prudhoe Bay producers have been working toward establishing a Financing Committee which will be actively pursuing financing arrangements.

FEDERAL INSPECTOR MANAGEMENT INFORMATION SYSTEM (FIMIS)

In response to the delay in the project schedule and NWA's decision to substantially reduce its system development activities, the OFI has significantly modified its program. Although OFI will maintain the systems required to support the Eastern Leg construction effort at existing levels until construction has been completed, other essential, administrative systems will be maintained at a greatly reduced level. Development of new systems has been postponed indefinitely. During

the next few months, OFI will continue to work with NWA to assure that critical systems development issues are adequately addressed.

AUDIT AND COST ANALYSIS

During this quarter, the OFI completed its audit of Alaskan Leg expenditures incurred from January 1980 through September 1981. The sponsors have requested that \$331 million be approved for eventual inclusion in the rate base. OFI will issue its tentative decision on these costs early in the next quarter.

At this time, a decision on the Eastern Leg costs incurred prior to January 1, 1980 is pending before the FERC. The OFI will complete its audit and issue its tentative decision on Eastern Leg costs incurred from January 1980 through September 1981 during the next quarter.

ALASKA GAS CONDITIONING FACILITY

As discussed in the OFI's tenth quarterly report, the OFI is now responsible for oversight of the design and construction of the Alaska Gas Conditioning Facility. OFI staff is now developing an overall statement of policy which will define the exact nature of this oversight.

During this quarter, the sponsors have continued to work on the design and engineering for the facility. NWA has developed a design review plan outlining the content of the six design packages which NWA proposes to submit to OFI for review. In late June, OFI received this plan and the first design package which discusses various carbon dioxide removal processes and outlines the reasons for selection of the proposed process. OFI will review these items during the next few months.



During the next quarter, the sponsors plan to submit the remaining five packages separately. These design packages will cover design criteria, facility design and physical layout, site development and civil construction plans, piling design, and the design of supporting facilities.

ENGINEERING ACTIVITIES

Design Review

In October 1981, OFI and the State of Alaska provided comments to NWA on its Design Criteria Manuals for the pipeline and the Compressor Stations. Based on these comments, NWA revised these Manuals and again submitted them to OFI for review on May 4, 1982. During this quarter, NWA also submitted technical reports on frost heave, fracture control and mainline pipe specifications to OFI. OFI is now reviewing these Manuals and reports.

NWA expects to submit its technical reports on typical fault crossing designs to OFI for review during the next quarter. However, due to the slip in the project schedule, NWA has delayed work on a study of faults between Prudhoe Bay and Delta Junction until 1983.

Arctic Engineering

During this quarter, NWA submitted four additional reports on frost heave design methodology and criteria to OFI for review. NWA expects to submit the remaining two reports on this issue during the next quarter. The Corps of Engineers' Cold Regions Engineering Technical Committee will assist the OFI in the review of these documents. The next full Committee meeting will be held after NWA has submitted the remaining frost heave documents and the Committee members have had an

opportunity to review them. At this time, it is expected that the next meeting will be held in late August.

In addition to continuing to collect data from other tests at the Fairbanks Frost Heave Test Site, NWA began obtaining data from the differential heave evaluation during this quarter. This evaluation was installed at the Fairbanks facility during 1981. This evaluation and an uplift test will continue to produce data into the next quarter.

ENVIRONMENTAL ACTIVITIES

Biological Programs

During this quarter, the OFI's biological program staff reviewed NWA's Design Criteria Manuals for the pipeline and the Compressor and Meter Stations. OFI staff also completed a plan for conducting a field evaluation of the success of the revegetation and restoration efforts on the Eastern Leg. This evaluation will be conducted during this summer. Finally, during this quarter, OFI staff completed a report summarizing and analyzing existing data on revegetation and restoration of surface disturbances in arctic and subarctic environments.

Physical and Civil Programs

During this quarter, the OFI's physical and civil program staff reviewed NWA's revised Design Criteria Manuals and construction camps plan. On June 16, 1982, OFI approved NWA's camps plan which is required by the Department of the Interior's Right-of-Way Grant. This plan addresses design criteria and operational procedures for temporary construction camps and airfields.

During the next quarter, OFI staff will focus upon completing any remaining



issues regarding the Design Criteria Manuals and will review any additional plans submitted by NWA.

Cultural and Archaeological Resources

NWA has almost completed its report on its 1981 archaeological field investigations. This report will be submitted to the OFI for review. The existing Memorandum of Agreement with the Advisory Council on Historic Preservation and the salvage plan for cultural resource management for the Alaskan Leg will provide guidance for the review of the survey and determine subsequent program direction.

OFI staff is preparing a report outlining the elements of the cultural resource program which should be addressed when work in this area is resumed. The report will address traditional Native American values which may be impacted by construction activities in Alaska. This program will aid OFI in assuring compliance with Federal cultural resource management laws.

Due to the slip in the project schedule, NWA has ceased its activities in this area. Although OFI will also eliminate its internal cultural resources staff dedicated to the Alaskan Leg on September 30, 1982, OFI will retain the staff working on the Eastern Leg archaeological program. This staff will be available for Alaskan Leg work and OFI will also utilize other agencies' expertise and outside services as necessary.

EQUAL EMPLOYMENT OPPORTUNITY AND MINORITY BUSINESS ENTERPRISE

After evaluating the sponsors' comments on its proposed Equal Employment Opportunity and Minority and Female Business Enterprise (EEO/MBE) reporting require-

ments, OFI finalized the requirements on April 30, 1982. However, due to the delay in the scheduled completion date and the resulting decrease in Alaskan Leg activities, the OFI decided to reduce the frequency of reports required from the Alaskan Leg sponsors. Thus, on June 30, OFI informed NWA that, until project activities intensify, these EEO/MBE reports will only be required semi-annually.

As part of the evaluation of all of OFI's compliance activities on the Eastern Leg which will be conducted during early July, OFI will also evaluate the sponsor's EEO/MBE programs. (See the section on "Compliance Management Evaluation" in this report for additional details.) During this evaluation, OFI will check the sponsor's records to verify the accuracy of the employment and contracting data that the sponsor has submitted to OFI. The on-site visits will also allow OFI to identify problems and make recommendations for improvement in the sponsor's programs. The information gained during this review will be useful during Phase II construction.

SOCIOECONOMICS

On April 20 and 21, 1982, the Federal Energy Regulatory Commission (FERC) held hearings in Anchorage and Fairbanks on socioeconomics issues related to ANGTS. Representatives from a number of State agencies testified on a variety of issues including the effects of the Trans-Alaskan Pipeline System construction on government services, current Alaskan socioeconomic conditions, and anticipated costs of ANGTS construction to State and local governments. State officials also pointed out that the basic information needed to plan mitigative efforts in areas such as subsistence and community services was lacking. Groups involved



in health services, consumer protection, family counseling services, and senior citizens, women, and minority business issues also testified. Many of those who testified emphasized the need for adequate housing, more socioeconomic information and planning, and company-sponsored employment counseling. The consensus was that existing government and charitable services are at capacity due to the increasing Alaskan population. The presiding officers are now preparing a report on these issues. Interested parties will be given an opportunity to comment on this report before the Commission acts on the recommendations in the report.

The Social Impact Assessment Symposium organized by the University of Alaska and sponsored by certain Federal and State agencies will be held in Anchorage at the Alaska Pacific University from August 25 to 27, 1982. The seminar will address methods of assessing social impacts and processes for resolution of socioeconomic problems created by resource development projects.

Due to the delay in the scheduled completion date, both NWA and the State of Alaska have eliminated their socioeconomic staffs. OFI will eliminate its internal socioeconomic staff on September 30, 1982, and will utilize other agencies' expertise and outside services as necessary.

FEDERAL/STATE RELATIONS

The OFI and the State of Alaska staff have reached agreement on most of the provisions of the Joint Federal/State Monitoring Agreement. A draft of this Agreement has been provided to the Department of the Interior and Northwest Alaskan Pipeline Company for informal comment. At this time, OFI expects that these comments will be received during the next quarter.

U.S./CANADIAN PROCUREMENT COORDINATION

During this quarter, procurement coordination activities continued to focus on the compressor unit requirements for the Alaskan and Eastern Legs of the ANGTS. Coordination of the specifications and bidding documents for 19 small (about 4,000 horsepower) refrigeration and compressor units for the Alaskan Leg was completed in mid-May.

On June 29, the Canadian Northern Pipeline Agency advised the OFI that it had no objections to the compressor unit specifications and bidding documents for two 16,000 horsepower compressor units which Northern Plains Natural Gas Company is considering installing on the U.S. portion of the Eastern Leg.