REPORT TO
THE GOVERNOR'S TASK FORCE
ON
STATE OF ALASKA PARTICIPATION
IN FINANCING THE ALASKAN SEGMENT
OF
THE ALASKA NATURAL GAS TRANSPORTATION SYSTEM

Kidder, Peabody & Co. Incorporated

10 Hanover Square

New York, New York 10005

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EXECUTIVE SUMMARY

Kidder Peabody has been retained by the Governor's Task Force on the Alaska Natural Gas Transportation System (ANGTS) to advise whether the State of Alaska should participate in financing the Alaskan Segment of ANGTS and, if so, through what means. After evaluating the Project and its financing requirements, we would recommend that the State participate but that such participation be in the form of a contingent and limited guarantee of up to $3 billion of Project debt. Such participation would be dependent upon the private Sponsors of the Project meeting certain conditions established by the State.

We attach two important reservations to our recommendation. First, we note that neither the State nor Kidder Peabody has been provided with a detailed plan for financing the Alaskan Segment. No such plan has as yet been agreed upon by both the Pipelines and the Producers. We have therefore been obliged to make our own informed judgments with regard to the probable resolution of such significant elements of the financing plan as the total projected capital cost and the dollar size and relative sharing of the funding commitments of the Pipelines and Producers. If these issues are ultimately resolved in a manner materially different from our assumptions, we would wish to re-evaluate the situation and possibly amend our recommendation.

Second, we are cognizant that the success of ANGTS is heavily dependent on the ability to market Prudhoe Bay gas in the early years of operation. Serious doubts about marketability continue to be expressed, particularly in light of the recent decline in energy prices. In view of this concern, we believe that before a decision to proceed with construction can be made, steps will have been taken to improve marketability through the adoption of risk sharing and levelization

procedures involving both transportation costs and wellhead values. Such procedures would be intended primarily to defer some of the costs of Prudhoe Bay gas in the early years to later years when such gas is expected to be more competitive. Because of the importance to the State of maximizing the wellhead value of Prudhoe Bay gas, we would urge its active participation in negotiations on this issue. Participation in financing should entitle the State to have a meaningful voice in such negotiations and should be conditioned upon a satisfactory resolution of this issue.

The basis for our recommendation is summarized in the numbered paragraphs below and is set forth at greater length in the body of this Report. In order to gain a full understanding of the reasoning underlying our conclusions, we urge the reader to review the full Report.

1. Despite our reservations, particularly as they relate to gas marketability, ANGTS does have the potential to be a successful project and is the only near term means by which Alaska can realize the value of Prudhoe Bay gas. It appears that construction of ANGTS would provide the State with substantial net benefits under the circumstances most likely to eventuate. A recent State study, although it appropriately adopted a very conservative posture, confirmed the findings of earlier national studies as to the positive value of the Project to the State.

2. The Sponsors are now proceeding diligently to resolve all open issues, and in late 1982 should be able to arrive at a final decision to commence construction. The start of operations would then be scheduled to occur in late 1987.

3. Development of a financing plan is one of the critical remaining issues. The Alaskan Segment alone is estimated to cost between $24 and $30 billion. A definitive estimate for financing plan purposes should be forthcoming from the Sponsors by the end of April, if not sooner. In order to establish a framework for consideration of Alaskan participation at this time, we have analyzed the components of total cost and its sensitivity to change and have adopted a conservative figure of $27 billion in nominal dollars as our assumption of total project cost for the Alaskan Segment.

4. The Sponsors have not publicly committed to change previously announced levels or proportions of their financial commitments, but we believe that if the Project is to become a reality they are likely to have to do so in the near future. Accordingly, we are assuming that equity commitments and completion assurances from the Sponsors totalling about $20 billion will be forthcoming, about equally divided between the Pipelines and Producers. This amount, while very large by any standards, represents only about 75% of the total estimated cost. A viable financing plan will require additional financial support for the remaining 25% or about $7 billion. The Sponsors will be seeking to fill this shortfall from suppliers and other sources other than the State, but it is not likely that they will be wholly successful. Without some participation by the State it is unlikely that the shortfall will be filled or that a viable financing plan will be developed.

5. Kidder Peabody believes that Alaska should provide financial support to meet a portion of the shortfall, in an amount equal to the lesser of $3 billion or 1/8 of project cost, if the State can be satisfied that the risk of loss is minimal and that any appropriation of funds before fiscal year 1988

will not be burdensome and provided also that the State is satisfied with arrangements to mitigate the risks of gas marketability. For its support, the State should receive fair compensation, based on the value of its support, apart from the other net benefits it will receive from ANGTS. The form of such compensation would normally be a fixed percentage of the amount guaranteed; however, should the State prefer another form of compensation it could choose an equity-type interest such as an income debenture or an option to acquire such a security.

6. Financial support by the State such as we have recommended would materially improve the probability of ANGTS being constructed and would be preferable to an equity investment by the State which would entail a disproportionately greater risk or a direct debt investment which would require substantial appropriations or issuance of general obligation debt in fiscal years 1984-7.

7. Means are available by which Alaska can accomplish this support with minimum risk and minimum early appropriation. Minimum risk can be achieved by making Alaska's obligation a contingent and limited guarantee of completion of the Alaskan Segment. We would propose that the State's obligation be (a) limited to a guarantee during the construction period only of debt representing a portion of the last $7 billion of the cost scheduled to be spent, (b) conditioned on either the first $20 billion of cost having been spent without overruns or the Sponsors having provided additional funds to complete on a junior security basis and (c) secured by a senior security interest to which debt funds supported by the Sponsors' credit would be subordinated in the event Alaska were called upon to fund its obligation. It

is expected that Alaska would suffer no material deterioration in its credit ratings from this undertaking.

8. The existing Alaska Gas Pipeline Financing Authority, with certain relatively minor amendments in its authorizing legislation, could be utilized to provide the financial support during the construction period described above by either (a) issuing its own debt or (b) undertaking obligations with respect to debt issued by the entity which owns the Alaskan Segment. The Authority's credit would be supported in turn by the State's commitment to make appropriations to replenish a reserve fund established by the Authority.

9. In order to commit the State's credit in support of the Authority in a legally binding manner, a vote of the people would be required. Since conducting such a vote may not be practical in time to allow the State to participate in the financing plan, a moral obligation, which is not legally binding on future Legislatures, may be preferable and would be sufficient for this purpose. This moral obligation could be strengthened by State appropriations to the Authority during fiscal years 1984-7 in amounts approximating $100 million per year. Funds remaining in the Authority after its obligation has been fully discharged would be returned to the State.

10. To implement these recommendations the State Legislature should act in its current session by expressing its approval of the concepts embodied in

this Report and authorizing State officials to proceed to negotiate a detailed commitment, conditioned upon:

a. Receipt of mutually satisfactory commitments from other financing plan participants.

b. Satisfactory determinations by Alaska as to its risks and compensation.

c. Acceptable arrangements being made to allocate the risks of marketability so that Alaska, through its interests in the well-head value, does not bear an inappropriate share of those risks.

d. Satisfactory resolution of any other issues which Alaska wishes to raise in relation to the financing plan.

Negotiation of details of the State's participation would proceed during 1982 with the results being acted upon at the next session of the Legislature, which could proceed to implement the State's commitment.

KIDDER PEABODY'S ASSIGNMENT

In December 1981, Governor Jay Hammond formed a Task Force headed by Natural Resources Commissioner John Katz to consider the State of Alaska's involvement in financing the Alaskan Segment of the Alaska Natural Gas Transportation System (ANGTS).* The Task Force selected Kidder Peabody as its financial advisor and, on January 8, 1982, Kidder Peabody contracted with the State to provide financial advisory services with respect to this matter and in particular to prepare a report containing its recommendations with respect to two questions:

1. Should the State of Alaska participate in financing the Alaskan Segment of ANGTS?
2. If so, how should the State participate?

This Report sets forth Kidder Peabody's conclusions and recommendations with respect to those questions.

As will appear below, progress is being made on the development of a financing plan for the Alaskan Segment by the Sponsors** and related regulatory actions are proceeding, but both are moving at a pace

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* For purposes of this Report, ANGTS will be deemed to consist of three segments: (a) the Alaskan Segment (now including both the Alaskan portion of the pipeline and the gas conditioning plant at Prudhoe Bay) which is sometimes referred to as the Project, (b) the portion of the pipeline which is yet to be constructed in Canada, which is referred to as the Canadian Segment, and (c) the segments in the United States and Canada which have been or are being constructed which are referred to as the Pre-Built Segment.

** For purposes of this Report, the nine U.S. and one Canadian gas transmission companies participating through subsidiaries as a partnership in the development of the Alaskan Segment are referred to as the Pipelines, the three major Prudhoe Bay gas owners are referred to as the Producers and the Pipelines and Producers are referred to together as the Sponsors. The managing partner of the Pipelines' partnership is referred to as Northwest.

which indicates that there will be no resolution before the end of the second quarter of 1982. The direction to Kidder Peabody was to provide a written report to the Task Force in March 1982 so that Kidder Peabody's recommendations could be considered by the current Legislature and legislative action be taken, if appropriate. Because of these timing considerations, our Report, while specific in terms of conclusions and recommendations, does not present definitive details as to the proposed involvement of Alaska in the financing. Those details can only be developed as a result of participation in negotiations which should take place during the remainder of 1982.

As a consequence, this Report and the suggested State action in response to it can only be considered as the first phase of a several phase progression, possibly leading to a definitive commitment by Alaska to participate in the Alaskan Segment financing.

This phased procedure, although somewhat tantalizingly slow -- particularly for those Alaskans who have been waiting patiently for several years for ANGTS to come to fruition -- can actually be very useful to Alaska for four reasons.

1. It is desirable for the State to first evolve a policy as to its role, if any, in financing of the Project before working out of the details.

2. While it is appropriate for Alaska to develop policy in public debate, it would undercut the State's negotiation of details if it

were to develop its negotiating strategy in public. Therefore, the negotiating phase should be conducted privately, with the results submitted to the public and the State government for approval.

3. Not enough time or information has been provided to Alaska to work out and consider all of the issues associated with its participation, given the many other issues which State officials are simultaneously considering. The phased approach provides more time within which to do all of the necessary backup work preparatory to a definitive commitment.

4. With 1982 being a State-wide election year in which a new Governor will be chosen, there will be ample opportunity to have the issues associated with financing of the Project considered by the candidates and voters, so that the new Legislature and Administration, which may be called upon in early 1983 to implement these recommendations, will have been able to assess the public attitude towards those issues.

This Report represents Kidder Peabody's professional opinion as to whether Alaska should participate in financing the Alaskan Segment and the preferred means to do so. Representatives of our firm will be available to discuss and answer questions about this Report with State officials, members of the Legislature and the public at your convenience. We are also prepared to assist the State should it be the decision of the State to carry this process on to the next stage of implementation.

KIDDER PEABODY'S ACTIVITIES

In performance of its assignment, Kidder Peabody has undertaken the following tasks:

1. Familiarization with the history and documentary background of ANGTS.

2. Numerous meetings and other communications with members of the Task Force and with other officials and consultants to the State associated with ANGTS.

3. Meetings with Northwest, its investment bankers and its advisors. This encompassed both formal and informal contacts designed to assist us in understanding the Project as it is now formulated and the prospective financing and regulatory developments which are now being planned. Needless to say, efforts have been made to verify elsewhere all information obtained from these sources. Our contacts with Northwest included:

    (a) A field trip to Irvine, California to meet with the engineering staff of Northwest and its outside engineers, Fluor for the pipeline and Parsons for the conditioning plant, to discuss construction plans and cost estimates.

    (b) A meeting in Washington, D.C. with Northwest's senior staff people involved in regulatory affairs and gas marketing to discuss those issues.

(c) A meeting in New York City with Northwest's principal quantitative analysts to discuss the computer programs developed to analyze the project and test its feasibility.

(d) Various meetings in New York and Washington, D.C. with Northwest and its financial advisors to discuss financing requirements and alternatives.

(e) Meetings and other communications with the commercial bank advisors to the Project.

4. Attendance at the Federal Energy Regulatory Commission (FERC) public conference held on March 16, 1982 in Washington, D.C. to review the status of the Project and the remaining regulatory issues and procedures.

Kidder Peabody has not been asked to conduct its own evaluation of State benefits to be derived from ANGTS or State investment alternatives; instead those subjects have been developed by State officials and we have merely reviewed their work, taken note of it and commented on it, as appropriate.

Neither was Kidder Peabody asked to research the legal and State Constitutional basis for participation in financing of the Project. Fundamental research in that respect has been developed by the State Department of Revenue. We have, however, given extensive consideration to this subject and have worked closely with the Department and the State's outside advisors in

trying to develop legally acceptable and financially feasible alternatives for State participation, should such participation be warranted.

Kidder Peabody's existing proprietary project financing computer programs have been adapted to evaluate some aspects of ANGTS, particularly the sensitivity of the capital costs of the Alaskan Segment to changes in contingency allowances, interest rates and inflation. In addition to our own computer programs, Kidder Peabody has been granted access to the output of Northwest's program and has reviewed output of the FERC computer model which can test the sensitivity of ANGTS in terms of delivered gas prices. Kidder Peabody has satisfied itself that both of those models are well designed to provide the necessary analytical output and the Kidder Peabody and FERC programs represent reasonable independent verifications of the Northwest output.

Kidder Peabody has not independently discussed possible State participation in financing with the Producers. At the direction of the Department of Natural Resources we have relied upon information as to those contacts provided by State officials and advisors who are in communication with the Producers regularly in the course of their attendance at periodic Design and Engineering Board meetings and through other means.

FEASIBILITY OF ANGTS

An important preliminary consideration for Alaska is whether ANGTS is a viable and feasible project. This consideration is meaningful to Alaska for the following reasons:

1. If ANGTS is not a realistic project it is fruitless for Alaska to waste time and resources considering financial participation.

2. If Alaska does decide to participate financially, its type and level of participation will be affected by the extent of the risks that are perceived for the Project.

As part of its assignment Kidder Peabody has reviewed all of the major elements of ANGTS with a view towards formulating a judgment as to the project's viability. We have noted above some of the inquiries and contacts we have made to assist us in this effort. Our research in this respect has been as complete as we could reasonably make it in the limited amount of time afforded to us. We did not commission independent technical experts to deal with issues such as construction costs and gas marketability. Nevertheless, we consider our review to be sufficient to enable us to express a responsible informed opinion.

Based on this research we are able to state that ANGTS does have the potential to be a successful project, but we do have significant reservations, particularly relating to gas marketability. The ultimate issue is the marketability of the gas which ANGTS will transport; that is, whether it can all be sold in competition with other fuels at the city gate or burner tip. The recent softening in prices of competitive fuels, the movement towards accelerated deregulation of natural gas and the admittedly high delivered cost of Prudhoe Bay gas lead us to share the serious concern expressed by others as to marketability, particularly if traditional cost of service regulatory methods

are applied. The adoption of risk sharing and levelizing practices, though not insuring success of the Project, would substantially enhance its feasibility.

An important factor, but by no means the only issue, in a marketability assessment is the capital cost of ANGTS. Transportation charges must be levied to service capital costs and such transportation charges, when added to the wellhead price of the gas and other costs, produce a price which will be compared with that of other fuels. Capital costs, particularly as impacted by higher than anticipated inflation and financing rates, can escalate substantially, as the experience of the last several years has shown. On the other hand, as long as capital costs increase in step with the market price of the fuel with which Alaskan gas will compete, this increase should not adversely impact the feasibility of the entire ANGTS Project.

Nevertheless, the capital cost of ANGTS will have an important impact on price and marketability. Of the anticipated capital costs of ANGTS, it would appear that the capital costs of the Alaskan Segment are the largest and most variable part. Analysis indicates that over 60% of the overall transportation cost of Prudhoe Bay gas is attributable to the Alaskan Segment and that in the initial years of operation of ANGTS, Alaskan Segment costs will represent about one-half of the delivered price of gas, before possible adjustment for levelization. The Alaskan Segment is not only the most capital intensive but the riskiest of the three segments in terms of capital costs. The Canadian Segment poses fewer risks because of a more favorable climate and terrain. The Pre-Built Segment is relatively minor in scale and is close to completion within budget, despite some additional costs which are being

incurred to correct welding deficiencies which appeared recently in the Northern Border portion.

While we have not examined closely the capital cost estimates of the Canadian Segment or the Pre-Built Segment, we have looked carefully at estimates of cost for the Alaskan Segment, both because of their impact on marketability and, as will be explained below, because (1) the financing plan of the Alaskan Segment is the major unresolved issue of the entire ANGTS project, (2) a determination of the funds needed for that segment is a vital element of that plan and (3) Alaska may have a role to play in that financing plan. Our discussion of the Capital Cost of the Alaskan Segment appears below beginning on page 25. Our conclusions, explained in that section, are that $27 billion is a reasonably conservative projection of that capital cost. We believe that the Sponsors and the banks are likely to share these conclusions and to arrive at a capital cost estimate of approximately $27 billion for the Alaskan Segment as the basis for their financing plan.

As noted above, however, the capital cost of ANGTS is but one element of the marketability of the gas. Capital cost and the resulting transportation charges do not translate directly into city gate or burner tip prices. They must first be filtered through a complex structure of regulation and economics. Not only is this process extremely complex but it involves projections of future events, many of which are inherently far more unpredictable than are those relating to construction. There are several significant relationships which must be understood before one arrives at the core question of the price at which all of the Alaskan gas will be marketable. Without fully defining these relationships, we list them as follows:

1. Traditional gas pipeline regulation which utilizes a cost of service approach predicated on historical cost. This method of rate making will result in higher charges to consumers in the early years and lower charges in the later years for the same unit of service.

2. The availability of regulated, low cost gas to shippers and distributors from other sources to be rolled-in with the cost of Alaskan gas to achieve an average price which permits competitive marketing. This availability will be impacted by the scheduled decontrol of gas prices, and even more so by any acceleration of decontrol.

3. The identification of the fuels with which rolled-in Alaskan gas will compete in the future at the burner tip. Projections of prices for these fuels is equally difficult. The price of competing fuels depends in part on world-wide petroleum prices and on such other factors as the product slate which refineries eventually produce, the resulting prices for those products and the regulation of markets for certain hydrocarbons.

4. Ability to levelize delivered gas prices through various regulatory means so as to reduce costs in the early years when Alaskan gas is least competitive with other fuels based on price and to recoup these reductions in later years when other fuels become relatively more costly.

5. The elasticity of the demand for gas by gas customers.

6. The obligations upon and the ability of shippers under contractual provisions and FERC mandated tracking of their costs to pass the cost of

Alaskan gas to distributing companies and they in turn to pass these costs to their respective classes of customers.

7. The obligations which may be imposed upon shippers by contract to (a) take and pay for all of the Alaskan gas produced from the Sadlerochit Reservoir at the maximum NGPA regulated price and (b) to pay the full FERC established cost of service tariff.

8. The Incentive Rate of Return (IROR) mechanism by which the equity owners of ANGTS will benefit or suffer from some deviations from cost estimates for some elements of the transportation system.

These issues are so complex and energy pricing and regulation are so volatile that confident prediction would be foolhardy. However, it does seem clear that the delivered price of Alaskan gas through ANGTS, assuming a capital cost of the Alaskan Segment of $27 billion, will be substantially higher than the projected price of competing natural gas from other sources or oil-based fuels in the initial years of operation of ANGTS, although over a 20 or 25 year term Alaskan gas should be fully competitive with other fuels.

There would also appear to be a reasonable prospect for significant roll-in capacity of regulated below-market natural gas with which Alaskan gas can be averaged in order to develop a clearing price at which all of the then available Prudhoe Bay gas can be disposed of in the early years. While the amount of such roll-in capacity will be affected by gas deregulation, even under an accelerated deregulation scenario a meaningful amount of roll-in capacity may well remain. However, in view of the vagaries of anticipating the extent of this cushion, it would not be appropriate to depend wholly on

roll-in to assure marketability. Fortunately, as identified below, there are a variety of means to defer a portion of the cost of Alaskan gas from the early years, when it may have difficulty competing on a price basis, to later years, when amortization of the cost of ANGTS reduces the cost of Alaskan gas relative to that of other fuels.

Northwest produced an expert evaluation from Jensen Associates dated July 1981, which projected Alaskan gas being marketable on a rolled-in basis without resort to levelization under some conditions and with levelization under other conditions including, in the latter case, projected real increases in world oil prices of 3% per annum after 1982 from a $32 per barrel base and gas deregulation. Although this study can be criticized in its weighting of various factors and other competing studies can be produced which reach differing conclusions, it was a responsible professional judgment at that time. The conclusions of the Jensen study as to marketability were supported by the testimony in the Congressional hearings on the waiver package of the U.S. gas pipeline companies participating in the Project, which together represent 40% of the domestic gas transmission industry. However, in view of declining world energy prices since mid-1981, the subject of marketability will have to be re-evaluated and we understand that this will be done in the context of the ensuing FERC proceedings.

Regardless of the comfort one may draw from prior or future studies, our view is that the marketability of Alaskan gas should be of foremost concern to all parties participating in the financing of ANGTS. In other words, we share the conclusion of the interim report on marketability prepared by the State's Division of Budget Management that "the marketability of Alaskan

Natural gas is anything but certain." Since no one is omniscient, it is imperative that steps be taken to improve the competitiveness of Alaskan gas. Simply stated, marketability is primarily a function of price and price is primarily a function of costs. The delivered cost of Alaskan gas consists of two components: the wellhead price and the transportation charges. It is our opinion that neither should bear a disproportionate share of a cost reduction in order to assure marketability. If wellhead prices are reduced and transportation charges remain unchanged, the Producers and the State bear an unreasonable share of the burden. Conversely, if wellhead prices are maintained and transportation charges lowered, the Sponsors are unfairly treated. Therefore, a sharing arrangement should be negotiated by the interested parties whereby the marketability risk is fairly distributed between the wellhead price and the transportation charge.

More importantly, however, the best insurance that the State and the Sponsors can obtain for the marketability risk is a levelized tariff for transportation. For rate making purposes, certain costs such as depreciation could be spread more equitably over the economic life of ANGTS thereby reducing the costs in the early years of operation when the marketability risk is the greatest. The logic of levelization is very compelling, particularly in an inflationary environment, but it has not surfaced as standard rate making procedure for several reasons. First, the regulatory agencies have been tradition-bound to historical cost pricing. Second, electric and gas utilities have not pushed levelization because their rate bases consisted of numerous assets, some of which were fully depreciated, so levelization was occurring internally. Naturally, this is not the case with ANGTS.

It should be noted, however, that the levelization of tariffs will have an impact on the lenders' protection as measured by debt service coverages. Therefore, the amount of levelization possible will depend on lender acquiescence. Alternatively, lenders may be persuaded to participate directly in levelization through any number of mechanisms which could be designed to either delay or spread over a longer period their debt service requirements.

While it is premature to know with any certainty what will result from the upcoming FERC deliberations on ANGTS tariffs, we are encouraged that consideration is being given to the levelization concept, by all parties and by FERC. We would strongly recommend that the State support the applicability of the levelization concept to ANGTS. From the State's point of view, levelization would not only reduce the marketability risk of Alaskan gas but also reduce the probability of wellhead price erosion as the primary means to assure marketability.

In sum, marketability is an extremely complex issue resting entirely on unpredictable future events. The State has a great stake in the outcome. We would therefore recommend that Alaska's possible participation in the financing of the Alaskan Segment be conditioned upon the State's active participation in the contractual and regulatory proceedings concerning marketability. We believe that by participating in financing the State will gain a greater voice in and influence over the results of these negotiations. With a suitable division of the marketability risk and appropriate levelization procedures, we believe that ANGTS has a satisfactory chance of success and can be considered to be viable and feasible.

NET BENEFITS TO ALASKA FROM ANGTS

It is important for Alaska to decide whether the construction of ANGTS is advantageous to it before it takes any steps to assist in its financing. Many Alaskans and most non-Alaskans have assumed that the State and its citizens would reap large benefits from the construction of the Project -- the State through the enhancement of its revenues as a 1/8 royalty owner and taxing authority and the citizens through the jobs and business opportunities created by construction. These assumptions have been supported by the conclusions to be drawn from various net national benefit studies of ANGTS developed in recent years. Those studies include an ICF Incorporated study for FERC in May 1979 and an update by two ICF employees, as published in the Energy Journal in 1981, and that published in July 1981 by Resource Planning Associates, Inc. (RPA) which was prepared for Northwest. None of these studies specifically addressed the Alaskan State benefits but in the course of addressing national benefits they each permitted identification of the portion of the national benefits accruing to Alaska. The results can be summarized as follows:

Study (date)	Unit of Benefit	National Benefit (billions of $)	State Benefit (billions of $)
ICF (1979)	mid 1979 $	14.9	4.7
ICF Employees (1981)	mid 1980 $	22.0	3.6
RPA (1981)	mid 1980 $	60.1	6.3(a)

(a) Alaskan State Benefits are not specifically identified but wellhead price is shown at a present value of $25.4 billion and we have assumed that the State would receive approximately 25% of that value through royalties and taxes.

The recent study of projected State benefits from ANGTS which has been prepared for the Task Force by the Division of Legislative Finance for use in connection with our Report generally confirms the conclusion which could be drawn from the earlier national net benefit studies that the State realizes significant net benefits from ANGTS .

The State study, particularly when contrasted with the national studies, does a thorough job of illustrating the difficulties inherent in such studies, both because of the complex analytical problems involved and the need to project uncertain future events. All of these studies, when contrasted with each other and considering the range of conclusions, demonstrate that the results are highly variable depending on the methodologies and assumptions employed. Moreover, net benefits analyses cannot always fully measure in financial terms all of the relevant costs and benefits, some of which are social, political and aesthetic and some of which -- like increasing the skills of the labor pool by work experience -- are too subtle to be quantified. We also recognize that in the area of social, political and aesthetic considerations, there are differing value judgments which a single net benefits study may not be able to accommodate.

The State study of net benefits appears to us to be the most comprehensive analysis attempted thus far in that it goes beyond a simple measurement of incremental revenues from royalty gas, severance taxes, income taxes and property taxes. The State study, unlike the national studies, also considers the consequences of higher State expenditures for public services required to support the construction of the Alaskan Segment, the cost

to the State and its various funds of higher induced inflation and the value to the private sector of construction of the Project.

However, the State study admittedly takes a very conservative approach in that it tends to understate the revenues and overstate the costs of ANGTS. In adopting this approach the State study did not aim at identifying a most likely range of values for net State benefits but rather sought to provide a "failsafe" test. The study states that "if benefits are positive, or nearly so, in the worst imaginable case, the project can be endorsed with confidence." We view this as a perfectly valid method for projecting the impact of the Project on the State provided that the reader recognizes that conclusions should be based on whether the net benefits are positive or negative and not on a specific dollar amount of such benefits.

In the State analysis, four cases were presented, varying from one another based on two critical assumptions — low and high induced inflation scenarios and low and high levels of State expenditures. In three of the four cases, there are positive net benefits to the State on a present value basis. Only in the case which assumed high inflation (considerably higher than that induced by the Trans Alaska Pipeline System (TAPS)) and low State expenditures (per capita expenditures remaining at the FY82 level of service) was there a net cost. The arithmetic average of the four cases (assigning equal probability to each case) was in excess of $2 billion in present value terms.

Underscoring the study's "failsafe" approach is its adoption of extremely conservative assumptions applicable to all four of its cases. In each case it

assumed (a) no revenue to the State from the sale of gas liquids from the Sadlerochit Reservoir, from the sale of gas from other fields or from higher bonus or royalty bids on acreage yet to be leased, (b) a zero wellhead value for Prudhoe Bay gas for the first several years of production based on net back pricing and (c) continuing high levels of inflation for eleven years after completion of ANGTS, contrary to the State's experience with TAPS. The study acknowledges the overly conservative tendency which the foregoing assumptions reflect.

Even without adjusting the quantitative conclusions of the State study to reflect less conservative assumptions, the Study as written seems to support the conclusion that the construction of ANGTS would provide substantial net benefits to the State under the circumstances most likely to eventuate and that the Project is deserving of State support if such support is judged to make a meaningful contribution to the realization of those benefits. By demonstrating the wide range of the possible value of those benefits, the study underscores the desirability of Alaska receiving compensation for participation in the financing plan based on the fair market value of its support, without regard to the magnitude of the other benefits which the State will receive through consummation of the Project.

ANGTS IS THE ONLY NEAR-TERM MEANS OF REALIZING GAS VALUE

It appears that ANGTS is the only project which is currently capable of delivering Alaskan gas to market within the remainder of this decade.

Any project to process and transport Alaskan gas is one of major magnitude which of necessity has a long planning horizon and requires substantial government involvement in approvals and authorizations. ANGTS has been developed over a five year period and enormous resources (approximately $600 million through 1981) have been devoted to its development. It currently has the attention and support of all of the major Prudhoe Bay producers, a large segment of the gas pipeline industry, the Federal government (as evidenced by the waiver package and by the expedited consideration promised by FERC) and the financial community as represented by the involvement of the nation's four largest commercial banks.

Any new project, even a smaller one, would require substantial time and similar up-front monetary resources to come as close to fruition as ANGTS or to develop the momentum which ANGTS currently has. We would estimate that any alternative project would take at least three years and probably five years to reach the same point of advanced development that ANGTS enjoys today. Should ANGTS fail at this time, it is likely that this failure will cool the ardor of proponents of alternative projects, rather than inspire them. This is because ANGTS has demonstrated the enormous front end exposure that sponsors have to incur and such failure would underscore the risks of loss associated with such exposure. In addition, the most likely (and perhaps essential) participants in any alternative program are also to be found within the Producer and Pipeline groups now associated with ANGTS and these interests have already expressed their clear preference for ANGTS over alternatives at this time. Finally, the underlying cause of such failure would undoubtedly lie in the uncertainties of (1) attracting sufficient investment capital and (2) marketing Alaskan gas given the softening world crude oil

pricing picture. These same conditions would tend to undermine and make questionable the economics of other projects as well as ANGTS. Accordingly, we believe that if ANGTS fails now, it is unlikely that an alternative means of marketing Alaskan gas will be developed which is capable of delivering meaningful quantities of gas in any form before the early 1990's.

In considering specific alternatives to ANGTS, we note that an all-Alaska project based on LNG, which was favored by many Alaskan interests in 1978, although attractive and potentially viable as an alternative then, is now highly doubtful for at least three reasons:

1. The El Paso Company, sponsor of that project, has withdrawn from the LNG business after suffering writeoffs equal to almost one-half of its corporate net worth due to a combination of defects in design or construction of LNG vessels and the withholding of gas shipments by Algeria due to pricing differences.

2. LNG terminal siting in the U.S. has become increasingly difficult. Despite efforts stretching over most of a decade, an LNG terminal site on the West Coast still has not been approved.

3. U.S. Government guarantees of debt for LNG vessels have become less likely as a result of the Reagan Administration curtailment of the Title XI guarantee program and unsatisfactory experiences which the Maritime Administration has suffered in guaranteeing other LNG shipping projects.

In view of the above, neither the El Paso project nor any other domestic LNG project should be viewed as a serious alternative to ANGTS at this time. Export of Prudhoe Bay gas continues to be restricted by Federal law.

Various proposals have been made to convert Alaskan gas to methanol, some of which propose barge-mounted or other modular methanol plant packages. These projects could have some appeal if ANGTS fails, but for two reasons they are unlikely to be as desirable as ANGTS, on a large scale basis.

First, it is recognized that reforming natural gas into methanol consumes a very large proportion of the energy content of the gas, making it less competitive with alternative fuels on a BTU basis, unless one assumes that the gas will be flared or otherwise lost and hence has no cost associated with it.

Second, the major obstacle to a methanol alternative is the marketability of the end product. Today, the U.S. market for methanol is relatively small (approximately one billion gallons in 1981) with its use being primarily restricted to the chemical feedstock market. This market is anticipated to grow at a 5% compound annual growth rate during the 1980's, and can be satisfied to a great extent by the existing methanol production facilities in the lower 48 states which were operated significantly below capacity in 1981. However, the future for methanol lies primarily in its use as a transportation fuel. Initially, methanol will be blended with gasoline to enhance octane rating and to extend the gasoline supply. Ultimately, methanol will be used in its neat form (100% methanol) as a direct substitute for gasoline. While the transportation fuels market holds great promise for methanol, it is not anticipated that this market will develop to any significant

extent prior to 1988. In addition, competition in the methanol market beyond 1988 will be reasonably intense from coal-derived methanol in the lower 48 states (and perhaps Alaska) and from natural gas-derived methanol imported from countries where natural gas is being flared because no local market exists. For example, much of the growth in the demand for methanol in the Pacific Rim market, in which Alaskan methanol is likely to compete during the next fifteen years, could be satisfied by proposed plants in Indonesia and elsewhere fed by relatively inexpensive natural gas.

Other proposals have been made to use natural gas liquids and conditioned gas as feedstocks for Alaskan-based petrochemical industries. Those plans are still under development and in most cases are dependent on the resolution of issues surrounding ANGTS. The Dow-Shell Group has announced that any petrochemical development in Alaska would not take place before the late 1980's. Accordingly, at this time it would be unrealistic to envision those plans coming to fruition in the same time frame as ANGTS and using the full available quantities of Prudhoe Bay gas. However, the State's participation in the financing plan for the Alaskan Segment could improve its position with respect to assuring access to specified quantities of Prudhoe Bay gas or gas liquids for in-state use. In fact, the State may wish to consider making access to gas liquids for in-state use a condition of its financial participation in the Project.

We have also presumed that given current uncertainty with respect to trends of world pricing of crude oil and given that NGPA limits Prudhoe Bay gas prices to a fixed amount plus escalation at the GNP deflator, there is no merit to continuing to reinject this gas for future delivery. We also

understand that a study done for Alaska by National Economic Research Associates, Inc. in 1979, based on technical analysis by Van Poolen and Associates, has demonstrated that this is an undesirable strategy for the oil companies even after taking into consideration the relationship of gas deliveries to oil field production profiles. In addition, as the Producers testified in Alaska recently, all of the studies done by the major owners of Prudhoe Bay gas indicated that the optimal operating plan for Prudhoe Bay included early gas sales and that the reservoir can be managed such that gas offtake will have little or no effect on ultimate oil recovery.

STATUS OF ANGTS

As of the date of this Report, it appears that ANGTS is close to a definitive decision to proceed with construction, subject only to the resolution of various issues, most of which are in the legal, financial and regulatory areas. Planning for construction is well underway. As soon as the outstanding non-construction issues are resolved, orders for long lead time equipment can be placed, more detailed design work can be expedited and other pre-construction work will be undertaken. The Sponsors have recently announced that resolution of these issues by the fourth quarter of 1982 would permit field construction to start by early 1984 in order to provide operational commencement by late 1987, rather than 1986 as previously scheduled. During the additional period before the start of construction, it is expected that design work will continue so that more detailed cost estimates and some design efficiencies should compensate in part for the higher escalation costs

associated with the delay which has occurred. The principal non-construction issues to be resolved are as follows:

1. Gas Sale Contracts: The Producers and the shippers must extend and revise old contracts or enter into new contracts for Prudhoe Bay gas. These contracts must be submitted to FERC for approval.

2. Financing Plan: The Sponsors must conclude a financing plan acceptable to each of them and representatives of the prospective lenders and submit it to FERC for its consideration.

3. Other FERC Issues: FERC will have to complete its Alaskan Segment certification in the course of which it must review marketability and tariff structure, including levelization plans and shipper tracking. It will have to finalize IROR costs and components and establish a billing commencement date. It will also have to resolve issues as to the allocation of costs of conditioning as between gas and liquids.

Contracts, the financing plan and other Sponsor submissions must be filed before FERC can complete its deliberations. It is generally recognized that FERC will need at least five months to resolve these issues. If the Sponsors need a decision by year-end, at the latest, to maintain even a 1987 completion schedule, they must submit by July 1 to ensure timely resolution and they have announced their intention to do so. This means that financing and related levelization issues should be sufficiently resolved by the Sponsors, the banks and the State, if it chooses to participate, during the next three

months to permit submission to FERC. Negotiations and adjudication by FERC during the remainder of the year provide latitude to modify and work out details on these arrangements.

One other significant uncertainty is the law suit filed by Senator Metzenbaum challenging the waiver procedure. Most counsel have expressed the view that this litigation is without merit, but it is unlikely that either the Sponsors or lenders will proceed to multi-billion dollar levels of commitment until this litigation is disposed of. It is expected to be resolved within the next several months, unless it is accepted for review by the Supreme Court, in which case, unless the Court were to give it an unusually expedited resolution, it could carry into 1983, thereby delaying the entire project for another year.

While many of the FERC issues are complex and potentially controversial, at this time it would appear that if the Project participants and FERC can be satisfied as to marketability, the major roadblock to consummation of the Project will be the development of a fully workable financing plan which is acceptable to all of the participants. Such financing plan must be consistent with a realistic estimate of total costs to be incurred during the construction phase.

CAPITAL COST OF THE ALASKAN SEGMENT

The capital cost estimates in "as spent" dollars for the Alaskan Segment consist of four elements:

1. Basic engineering costs in current dollars.

2. Contingency.

3. Escalation or inflation.

4. Financing costs incurred during construction.

We have reviewed the basic engineering cost estimates provided by Fluor and Parsons for the Alaskan Segment of ANGTS, consisting of the Alaskan pipeline and the conditioning plant as most recently filed with FERC. As noted, we have not commissioned an independent technical review of these costs but we have consulted with the State Pipeline Coordinator. To the extent of our competence to judge these estimates, it would appear to us that, insofar as these basic engineering cost estimates are concerned, they are reasonably reliable. We base this judgment principally on the following considerations:

1. The estimates were compiled by highly respected and competent professional organizations which have had broad experience in this type of work.

2. An extensive amount of time and money has been devoted to preparing these estimates.

3. The estimates have been based on a significant amount of design engineering, far more such advanced design information than was available at a comparable stage with respect to TAPS.

4. Much of the experience associated with the construction of TAPS was available in the design and cost estimating of ANGTS.

5. ANGTS presents a simpler engineering problem than TAPS in that it involves a chilled gas line installed underground as contrasted with TAPS which was a heated oil line installed above ground over a major part of the route. The ANGTS conditioning plant is largely to be constructed in modules off-site and assembled at Prudhoe Bay.

6. The design and estimating work is being reviewed and critiqued not only by the Pipelines but also by the Producers, each of whom has extensive experience with this type of construction, Arctic environmental conditions for construction and Alaska and Prudhoe Bay conditions in particular. Each of the Producers will have a very substantial economic stake in the accuracy of the estimate. It is our understanding that a recent independent review of the basic engineering cost estimates by the Producers has confirmed the validity of the Fluor and Parsons estimates.

7. All of the construction cost issues which we raised in the course of our due diligence had been carefully considered by Northwest's professional staff and its contractors. These include such issues as (a) the logistics of materials delivery to the North Slope, particularly as they relate to the conditioning plant modules, (b) frost heave protection, (c) the negotiation of fixed price contracts with the construction contractors, (d) labor (including in-State and minority employment and training) and (e) effective management and cost control in the field. While some doubts have properly been expresssed, particularly with regard to issues (a) and (e)

above, as to the risks of overruns or delay, we are not aware of any means of mitigating these risks which are not being explored by the Project's construction managers.

It may be noted that apart from our preliminary analysis and the ongoing review by the Sponsors, the cost estimates developed will be reviewed by and must be acceptable to the lenders to the Project, the Office of the Federal Inspector and FERC. In addition, the IROR mechanism adopted by FERC discourages the Sponsors from using anything but a high total cost estimate.

While the basic engineering cost estimates may be reliable, the three other elements which contribute to the as spent cost determination are far more questionable because these elements are projections of the future.

The first of these is the provision for contingencies. Based on the last filing with FERC of estimated cost figures on the Alaskan Segment, Northwest had provided contingency allowances aggregating 42% of the engineering cost estimates on the pipeline and 20% on the gas conditioning plant. The pipeline contingency allowance consisted of two parts. One is based on the standard engineering practice of estimating a 90% chance of no higher cost. The second is based on a complex computerized "Monte Carlo" simulation of the interconnected probabilities of a series of abnormal events occurring which result in higher costs than the base cost estimates. Both of these contingency estimating techniques are highly subjective and dependent on the experience and wisdom of those doing the estimating. The portion of the pipeline contingency representing abnormal events is particularly relevant in reaching an acceptable cost estimate for regulatory purposes (given the IROR

consideration) but, in our opinion, not as relevant in building a cost estimate for financing purposes.

The last two elements of as spent costs are escalation (inflation) and financing costs. Escalation and financing costs are, in some respects, the least predictable of the elements, particularly in light of their volatility in the last several years. Nevertheless, in order to derive a total as spent capital cost estimate for the Project, it is necessary to develop some reasonable analytical parameters. Northwest has analyzed the impact on total costs of numerous combinations of escalation and financing cost assumptions, within the following ranges:

Escalation during construction	7% - 11% per annum
Interest rate	8% - 15% per annum

At the present time, the Sponsors and Producers are re-evaluating the cost estimate for ANGTS, particularly for the Alaskan Segment for the purpose of providing a target figure for the financing plan. It is our understanding that their new estimate for the Alaskan Segment will probably be available in several weeks. Based on our discussions with Northwest, we would expect an estimate between $25 billion and $28 billion, the exact number dependent largely on the impact of the one year delay in the scheduled completion date to 1987 and their judgment as to a reasonable escalation rate in light of recent economic trends.

However, in order to provide the State with a better sense of the as spent dollar cost of the Alaskan Segment at this time, we adapted our

computer model to analyze the impact of contingencies, escalation and interest rates on the total cost estimate. Briefly, our analysis incorporated the 1980 dollar engineering cost estimate of the pipeline by Fluor and the 1981 dollar engineering cost estimate for the conditioning plant by Parsons and the anticipated expenditure level in each year through 1987, assuming a late 1987 start-up date for the Alaskan Segment in accordance with Northwest's recent announcement.

As previously stated, these engineering cost estimates are then converted to as spent dollar estimates by adding the dollar effect of contingencies, escalation and interest. We have completed numerous model runs using the following ranges for these three assumptions:

o	Contingency allowance	20% - 34% of base cost
o	Escalation or inflation	9% - 12% per annum
o	Interest rate	14% - 18% per annum

Certain of these model runs are included herein as Exhibits 3 through 5. Other assumptions were made in our analysis which should be understood in reviewing the results. Funding in every case would follow the same pattern: Sponsor equity is utilized first, then debt supported by the Sponsors, then debt supported by a guarantee of the State of Alaska of the type described in later sections of this Report and, finally, debt of a limited recourse or non-recourse nature. Also, we have assumed that all commitment, issuance and guarantee fees related to the debt are incorporated in the interest rate. For example, a 17% interest rate on the debt may include interest payable to the lenders at 16% and a 1% guarantee fee payable to the guarantor. These and other

assumptions pertinent to our analysis are reviewed in greater detail in Exhibit 1.

From the standpoint of total estimated cost of the Alaskan Segment, our analysis indicates the following:

- **Conservative Case**

- Contingency	24%	
- Escalation	11%	
- Interest rate	17%	
Total estimated cost		**$ 27.1 billion**

- **Best Case**

- Contingency	20%	
- Escalation	9%	
- Interest rate	14%	
Total estimated cost		**$ 23.8 billion**

- **Worst Case**

- Contingency	34%	
- Escalation	12%	
- Interest rate	18%	
Total estimated cost		**$ 30.5 billion**

In the course of our financial analysis, we also performed sensitivity analyses which showed that the escalation rate is the factor having the greatest impact on total estimated cost and financing requirements. For example, in the conservative case, holding the interest rate and the contingency factor constant, a one percentage point change in the escalation rate, from 11% to 12%, resulted in more than a 3% change in the total

estimated cost, from $27.1 billion to $28.0 billion. A one percentage point change in interest rates, from 17% to 18%, changed total estimated cost by approximately 1% or $270 million. Total estimated cost is least sensitive to changes in the contingency factor. Changing the contingency factor by one percentage point, from 24% to 25%, results in a 0.8% or $215 million change in total estimated cost.

In the conservative case, shown as Case A in Exhibit 3, total as spent costs consist of:

o Basic engineering cost estimate	$12.4	billion
o Escalation	$ 5.8	
o Contingency including escalation	$ 4.3	
o Financing charges	$ 4.6	
TOTAL	$27.1	billion

Based on our assumption of a late 1987 completion date, the vast majority of these funds will be expended in the 1984-1987 period as shown below:

	Annual Amount ($ millions)	Cumulative Amount
Pre 1982	$ 434	$ 434
1982	320	754
1983	1,505	2,260
1984	3,633	5,892
1985	6,814	12,707
1986	7,731	20,438
1987	6,666	27,104

In the financing plan assumed as part of this analysis, the Pipelines and Producers would fund the first $6.8 billion of expenditures with their equity contributions, which would carry the Project into the first quarter of 1985. At that time, debt funds backed by the Pipelines and Producers would be utilized. The $13.6 billion of debt funds which we would expect the Sponsors to provide directly or support with their corporate credit would permit full funding of budgeted expenditures into the fourth quarter of 1986. At that time, the Sponsors will have advanced a total of $20.4 billion, or 75% of total estimated costs, and the Project would be only $6.7 billion and one year away from the scheduled completion date of late 1987. We have assumed and recommend, as will be explained in the remaining sections of this Report, that debt funds supported by a guarantee of the State of Alaska totalling $3 billion would then be employed, provided that all conditions precedent to the State's commitment had been met. These debt funds would be applied to construction expenditures during the fourth quarter of 1986 and the first and second quarters of 1987. Thereafter, we believe that lenders would be willing, if properly compensated, to advance the remaining $3.7 billion to complete construction on a non-recourse or limited recourse basis. Several representatives of the commercial banks advising the Pipelines have indicated to us their receptivity in general to this latter concept.

Throughout the remainder of this Report, we have assumed the conservative case result of $27.1 billion (rounded to $27 billion) as a reasonable estimate of total cost at this time for the purpose of structuring a financing plan.

STATUS OF THE FINANCING PLAN

During the summer of 1981 Northwest proposed a financing plan for the Alaskan Segment which contained the following major elements:

1. A $30 billion projected as spent cost, including a $3 billion completion pool of funds and a $2.3 billion abnormal events contingency allowance for regulatory purposes over and above normal engineering contingency provisions.

2. A 25% equity contribution (aggregating $7.5 billion) shared 70% by the Pipelines and 30% by the Producers.

3. Debt financing for the remaining 75% of cost (up to $22.5 billion) on a project finance basis, that is, without guarantees or other assurances other than the tariff structure of the Project.

The major banks, acting as prospective lenders to the Project, generally expressed support for most of the terms of the plan, subject to passage of the waiver package, except that they advised that they could not proceed on a completion pool of funds concept. Accordingly, they required that during the pre-completion phase the plan include some component of "acceptable debt assumption arrangements by Sponsors, Producers and possibly other beneficiaries."

It is our expectation that the parties are now likely to conclude that a total financing package of approximately $27 billion in as spent dollars will be

needed. At the FERC public hearing on March 16, 1982 it was stated that the Pipelines were prepared to commit equity capital and a pledge of their corporate credit to assure lenders of completion totalling about $9 billion, subject to confirmation by the commercial banks as to their creditworthiness to support that figure. It was also stated that the Producers were prepared to commit a like figure. Although the equity split between the Producers and the Pipelines has been generally assumed to be 30/70, there is no legal limitation on the Producers' share so long as, in the view of the Department of Justice, they do not gain control so as to create anti-trust problems.

In view of the assumption we have made as to the total estimated cost of $27 billion, we consider it likely that the Producers and Pipelines collectively will increase their aggregate commitments to about $20 billion and/or will attract additional pipelines or supplier credit sufficient to bring the total commitment to $20 billion. Regardless of the eventual composition of this $20 billion, for purposes of our analysis we are deeming this $20 billion to be provided equally by the Pipelines and the Producers. The Producers may have the financial capacity to commit beyond the $10 billion which we have assumed but are unlikely to do so at this time without a larger equity share. It should be noted that the Producers have not publicly committed to enlarge their commitment beyond $9 billion or to increase their equity ownership beyond 30%. However, in view of the magnitude of the financing requirements, we believe that they will be obliged to make some changes if they wish the Project to proceed.

Of the aggregate of $20 billion which we have assumed to be committed by the Sponsors, an amount equal to 25% of the projected cost, presumed to be

$6.75 billion, would be invested as equity. The balance of the Sponsors' commitment, $13.25 billion, would be debt funds supplied by the Sponsors or funded by others against the assurance of repayment by the Sponsors if completion does not occur within the cost constraints of $27 billion and an agreed upon time constraint.

In order to fulfill their completion obligations to such lenders, the Sponsors would either be obliged to (a) pay off their loans, or (b) supply funds sufficient to complete on a basis which is junior to the lenders. Should the Project be completed on time within the cost constraints or with additional junior funds supplied by the Sponsors, the Sponsors would have discharged their credit obligations and the lenders would look solely to the revenues supplied by operation of the Project and its tariff structure.

The financing plan with an aggregate of $20 billion committed by the Sponsors would still fall $7 billion short of full funding. The principal need which the Sponsors now have is for some additional credit support for completion. While we would not propose that Alaska fill this entire shortfall, we have considered the desirability of Alaska covering a portion, leaving it to the Sponsors to deal with the balance by enlarging their own commitments, attracting support from other interested parties such as other pipelines and suppliers and/or inducing lenders to accept a portion of the completion risk without a backup from a creditworthy party.

ALASKAN PARTICIPATION IN THE SHORTFALL

Although Northwest has indicated that it will be seeking to fill this $7 billion shortfall from sources other than Alaska, it is not likely that it will wholly succeed in doing so. Accordingly, we believe that Alaskan participation in the financing plan by providing a portion of the shortfall of credit support for completion would be the most useful of the means available to Alaska to further the Project. By agreeing to participate in this way, Alaska would not only be displaying a positive attitude towards ANGTS, reassuring other participants as to the essentially friendly governmental climate in which the Project will operate and providing further momentum towards consummation of ANGTS, but would also have made a major contribution towards alleviating a principal problem which ANGTS has yet to solve. Indeed, without Alaskan involvement in filling the shortfall there is a distinct possibility that a viable financing plan will not come about and that ANGTS will not be built. Finally, Alaska would avoid any criticism which might be forthcoming for failure to contribute to the success of a project which is widely perceived as benefiting Alaska more proportionally than it does the balance of the nation.

Were this assistance to ANGTS to be made by Alaska at great cost or risk to itself we would not recommend this approach. However, we believe that not only can Alaska secure full and fair compensation for its sharing of the risks of the Project but that Alaska can do so in a way which significantly limits its risk and keeps to a minimum the disruption of Alaska's other contemplated capital expenditures and governmental operations.

It is important to consider a party's ability to bear risk prior to recommending its financial participation in a venture such as this. We consider it important to keep Alaska's risk exposure to a minimum because Alaska is a political entity and as such does not maintain a net worth to absorb losses. In this respect, it is unlike the corporate participants in the Project. Losses sustained by the State would eventually have to be paid for through reduced services or higher taxes.

It is also desirable to defer as much as possible any funding requirements associated with Alaska's participation in the financing plan so as to permit it to continue its programs of State expenditures and capital formation. Although the State is presently among the most fortunate of all the States in terms of high per capita State expenditures combined with low per capita tax burdens, Alaskans are painfully aware that this good fortune is attributable to the State's extraordinary petroleum based revenues which are projected to peak in 1989. Consequently, it is important to the State to continue its investment in capital programs which will serve to cushion the decline in oil revenues in the future. We understand that the State is considering other projects, such as hydroelectric development, which may prove to have large State benefits. Also, the Permanent Fund will continue to generate revenues perpetually, after oil revenues have declined. The sooner investments of this type can be funded, the more long-term oil replacement benefits they will yield for the State.

ANGTS also produces benefits of a long term duration to offset oil revenue losses. However, to the extent that ANGTS participation precludes the State from early funding of other positive benefit programs, ANGTS

participation becomes less appealing. Accordingly, we have recommended a structure for the State's participation which maximizes the deferral of funding. We propose that it be done with a minimum risk to the State and a minimum early funding obligation. We propose to achieve these dual objectives -- minimum risk and maximum funding deferral -- by limiting Alaska's commitment in several ways which would serve these purposes:

1. Alaska's obligation would be conditioned on the prior investment of $20 billion by the Sponsors or others and upon that amount having been expended without incurring cost overruns, unless they are funded on a junior basis by the Sponsors.

2. Alaska's credit support would be contingent on an event -- non-completion after expenditure of the first $20 billion -- which is very unlikely to occur.

3. Alaska's exposure would be limited in time to the construction period and in scope to cost overruns which occur during the last year of scheduled construction.

4. Alaska's position, if it were required to fund, would be secured by a senior security interest which is designed to enhance the probabilities that it will not suffer any loss.

We have considered what should be the maximum amount of the State's commitment to the financing of the Project from a number of different perspectives. On the one hand, the amount should, we believe, be substantial

enough to be deemed to constitute a significant contribution by the State to the success of the Project. In addition, the support provided should be an amount which, when added to amounts which may reasonably be provided by other interested parties, is sufficient to fill the financing shortfall of the Project in light of the projected total capital cost estimate. On the other hand, we believe that the credit support extended should be in an amount which would not unduly strain the State's credit from the point of view of rating agencies, or an amount which, in the contingency that the State's guarantee be called, would not constitute an undue burden on the State's budget and resources over the period during which such guarantee would have to be paid. While the foregoing factors are imprecise and to some extent intuitive, we believe, taking all of such factors into account, that a State contingent commitment of the nature recommended in this Report of up to $3 billion would, under existing circumstances, satisfy all of the foregoing criteria.

To the extent that the Sponsors are able to fill the shortfall without reliance on Alaskan support, the amount of Alaska's commitment could be reduced without harming the Project. In addition, to ensure that Alaska's commitment remains proportionate to its interest in the Project, we would suggest that its commitment not exceed 1/8 of the total estimated cost.

EQUITY ALTERNATIVE

In arriving at our recommendation that Alaska pursue a limited and contingent guarantee of debt during the construction period, we have also

reviewed the principal alternative means by which Alaska might participate in funding the Alaskan Segment of ANGTS.

One means which has been frequently discussed has been that Alaska provide equity funds in one or more of a variety of ways. We would consider this to be a less desirable alternative for Alaska for the reasons stated below:

1. If Alaska were to become an equity investor in the Project, it would enlarge the policy conflict between its interest as the regulator of the Project -- in its sovereign capacity -- and its already existing economic interest in the success of the Project. Non-ownership forms of investment such as debt or debt backup do not pose so direct a conflict.

2. If Alaska has direct ownership of a portion of the Alaskan Segment or acts as a partner in the format presently being employed, Alaska could not use Federal income tax benefits which the private party owners will enjoy and which serve as an important element of return to them. Alaska's ownership might also preclude the partnership from realizing investment tax credits which would otherwise accrue to a taxable owner of an asset. While mechanisms might be employed to generate tax credits and benefits from Alaska's share of the Project and transfer them to other parties with consideration flowing to Alaska in return, such mechanisms are at best exceedingly complex, create tax issues which carry some risk and are less efficient than having parties

who can use the tax benefits serve as equity owners and realize these benefits directly.

3. ANGTS is a regulated enterprise. Under the system of rate making employed by FERC for gas transmission facilities, there is virtually no upside potential for the enhancement of return in the future, as an inflation hedge or otherwise. In fact, the profile of investment is for declining income in both nominal and real terms as the investment is amortized, similar to investment in a sinking fund bond with a fixed return. Gas pipeline regulation traditionally operates on a depreciated original cost rate base method so that each year's depreciation shrinks the base on which a fixed rate of return is earned. At the end of the depreciation period, even if the asset has continuing economic value and its replacement cost has soared, it has to continue to be operated for the benefit of the consumers with no return on investment for the owners. As such, particularly as a system with limited opportunity for reinvestment, ANGTS is an unattractive investment compared to most opportunities in unregulated businesses. ANGTS will have more risk than a typical utility investment but no more upside potential. Despite the fact that their rates of return may be enhanced by income tax benefits such as investment tax credit, it is apparent that many of the Sponsors are investing in equity of ANGTS not because of the appeal of the regulated return, but for other business reasons including the Producers' need for a system to deliver Prudhoe Bay gas to market and the Pipelines' need to supplement declining deliverability from existing reserves. It

should also be noted that gas pipeline regulation is to be distinguished from that of oil pipelines, which traditionally has allowed appreciation in replacement cost to enter into calculation of the allowable return.

4. It may superficially appear that equity ownership would give the State a degree of control over management of the system, including a control over major policy decisions such as retention of gas or gas liquids for in-state use, which could not be obtained in other ways. As a partner in the Alaskan Segment, Alaska would be a minority participant whose interests are likely to differ in important respects from the Sponsors such that it will be outvoted. As the owner of a segment of the system, such as the conditioning plant, Alaska would almost certainly be prevented by contract and regulation from exercising control in a manner inconsistent with the wishes of the owners of the balance of the system. The unity of the system in this respect is underscored by the decision reflected in the waiver package to incorporate the conditioning plant in the system. One of the reasons advanced for this part of the waiver package was that investors would look with disfavor on arrangements whereby an essential portion of the system could be operated in a manner contrary to the operation of the whole so as to jeopardize the flow of tariff revenues servicing the investment in the entire Project. While equity ownership may not provide control for the foregoing reasons, Alaska is not precluded from negotiating for a share of control as a condition of other forms of financial participation.

5. The Sponsors have indicated that they are prepared to commit equity funds equal to 25% of the total cost of the Project. It is our understanding that the 25% equity level was established to minimize the transportation cost, to enhance the return to the equity contributors and to provide sufficient at-risk capital for a project of this nature. Greater amounts of equity would only serve to increase the gas transportation cost or reduce the allowed return on all equity contributed. Therefore, additional equity funds from any source, including the State, would do little to advance the chances of the Project being built.

6. Of paramount importance to Alaska in contemplating equity investment is the risk it entails. In an earlier section of this Report, we pointed out that while ANGTS appears feasible, there are no assurances currently available that future risks, such as cost overruns and marketability, would work out favorably for the Project. By assuming an equity position, Alaska would bear all of those risks and would be in the most junior position to recoup its investment if those risks materialized and losses were sustained. Unlike a major oil or gas company, Alaska has little inherent capability to monitor or control those risks and is not well positioned to absorb capital losses.

7. It is highly likely that the equity capital committed by all parties would be required to meet expenditures in the initial years of construction activities (1983-5). If Alaska were to be an equity investor it would be required to advance funds almost immediately

to gain the same rights as the other equity investors. Therefore, Alaska would have to appropriate funds for this purpose or issue debt and commit the proceeds therefrom within the next four years, thereby substantially impinging on the other expenditure plans which the State may be contemplating. Given the magnitude of the State's other plans, the policy and possible Constitutional limits on its appropriations and, in light of its current revenue shrinkage due to falling oil prices, there would appear to be little room for this kind of spending .

8. Because of the funding constraints described in the preceding paragraph, it is likely that the State would have to issue general obligation debt in the near term to provide funds for an equity investment. We believe that such action would jeopardize the State's general obligation credit ratings.

On a somewhat related subject, we have been specifically requested to comment upon the desirability of the State sharing in the costs of the ongoing design engineering in order to obtain voting membership on the Design and Engineering Board. The Board serves no long term purpose; it merely acts as a vehicle for the development of a design and of cost estimates and membership confers no economic interest in the Project. If Alaska does not contemplate an equity investment in the Project, for the reasons cited above, we see no justification for such an expenditure.

DEBT ALTERNATIVE

Debt participation by Alaska is a far more desirable alternative than is equity participation. Debt investment does not carry with it such impediments as high risk, high degree of conflict of policy interest or loss of tax benefits to the Project. Alaskan debt investment would be useful to the Project although we do not regard it as essential. The principal drawback of direct debt participation by Alaska is that it would require total funding whereas credit support need not be fully funded in advance.

As to the need for Alaskan debt investment, our discussions with the Sponsors, their investment bankers and the commercial banks, as well as our own evaluation of domestic and world credit markets, convinces us that although the Project is of an enormous magnitude there is sufficient debt capacity in world capital markets to fund its debt requirements. What is in short supply at this juncture is the credit support during the construction period for the entire 75% of expenditures to be met with debt funds. The debt capital itself seems to be available, based on our research and our discussions with the commercial banks, provided it is supported by creditworthy parties. If Alaska and other parties were to fill the shortfall in that respect, we believe that finding debt investors to fund in reliance on that credit support would be a manageable problem.

As evidence of the sufficiency of domestic capital sources alone to fund the debt portion of the Alaskan Segment we can draw upon the research of Professor Benjamin M. Friedman of Harvard University, who has researched various credit aggregates in the paper "The Relative Stability of Money and

Credit Velocities in the United States" (March 1981). The stability of the ratio of non-financial borrowing to Gross National Product (GNP) is established in this research. Over the last twenty years the ratio of non-financial indebtedness to GNP has averaged 1.412 with a standard deviation of 0.020. The constancy of this relationship makes it a valuable indicator of future non-financial indebtedness based on projections of GNP.

In order to estimate the availability of debt for the Alaskan Segment, we have projected GNP to grow in nominal terms of 9.5% per year over the 1982-8 period as shown in the table on the following page. This growth rate is consistent with projections of the Congressional Budget Office. Future levels of domestic non-financial sector indebtedness were calculated by multiplying the projected GNP figures by the constant 1.412. The change in non-financial sector indebtedness from year to year was then calculated to project the new domestic debt formation each year. The table then compares the projected borrowing for the Alaskan Segment in the years 1985-7, based on a total cost of the Alaskan Segment of $27 billion, with the new debt formation. The Alaskan Segment would require between 1.1% and 1.3% of the new domestic debt formation in those years and up to 4.8% of annual new domestic corporate debt formation.

Although representing large absolute numbers, in our judgment these are acceptably small percentages of new domestic debt. Moreover, a significant portion of the total debt for the Project may be obtained from foreign funding sources which could reduce these percentages substantially.

CAPITAL AVAILABILITY STUDY
($ billions)

New Domestic Debt Formation Projection

Year	GNP(a)	Year-end Level of Non-Financial Sector Debt	Ratio of Non-Financial Sector Debt to GNP	New Domestic Debt Created(b)	Alaskan Segment of ANGTS	Alaskan Segment as a % of New Domestic Debt
1972	$1,234	$1,722	1.396	-	-	-
1973	1,428	1,910	1.388	$188	-	-
1974	1,473	2,082	1.413	172	-	-
1975	1,622	2,275	1.403	193	-	-
1976	1,773	2,519	1.421	244	-	-
1977	1,989	2,840	1.428	321	-	-
1978	2,271	3,198	1.408	358	-	-
1979	2,497	3,573	1.431	375	-	-
1980	2,731	3,902	1.429	329	-	-
1981	2,996	4,272	1.426	370	-	-
1982e	3,280	4,631	1.412	359	-	-
1983e	3,591	5,071	1.412	440	-	-
1984e	3,932	5,552	1.412	481	-	-
1985e	4,306	6,080	1.412	527	$5.9	1.1%
1986e	4,715	6,657	1.412	578	7.7	1.3
1987e	5,163	7,290	1.412	632	6.7	1.1
1988e	5,653	7,982	1.412	693	-	-

e = Estimate.

(a) = Fourth quarter annualized.

(b) = New Domestic Debt Created includes public sector, individual and corporate borrowings. During the three year period 1979-81, corporate borrowings represented approximately 28% of New Domestic Debt Created. Applying this percentage to the projected figures, corporate borrowings in the years 1985-7 would be $147.6, $161.8 and $177.0 billion, respectively. The Alaskan Segment borrowings, derived from this sector, would reach a maximum of 4.8% in 1986.

Some concerns have been expressed as to the adequacy of the debt capital markets for the Project in view of (a) the legal lending limits imposed on U.S. banks, (b) the conclusions expressed in the August 28, 1981 funding survey conducted for Northwest by its commercial bank advisors and (c) possible competition for foreign funds from the proposed Soviet gas line. A review of that survey and discussions with some of those bank advisors indicates to us that while there is no absolute assurance as to the adequacy of the capital markets to fund all of the necessary debt for the Project, this is not likely to be a constraint on the accomplishment of the Project, provided the Project obtains satisfactory credit support for its borrowings.

The funding limits imposed by law and by market conditions as reviewed in the bank survey can be expanded in a number of ways to accommodate the Project's needs. During the construction period, the banks may regard the Project as consisting of several credits, each qualifying for its own lending limit, subject to refunding on completion. Some debt funding commitments may be deferred until late in the construction period, by which time lending limits will have expanded through growth in bank capital. It is not unreasonable to expect a 50% enlargement in lending limits from 1980, the year on which the bank survey was based, to 1987, when completion is scheduled. The bank advisors clearly do not regard capital availability as defined in their previous survey as an impediment to completion of the Project. They do expect to undertake another capital availability survey in the near future.

Neither the bank advisors nor we consider that the financing of the Soviet gas line would preclude financing of ANGTS or vice versa. The two

pipeline projects, if attempted during the same time period would compete for materials and associated supplier credit but, if each can establish its credit support and economic viability, each should be able to attract the necessary capital from world markets.

While we do not believe that it is necessary for Alaska to fund the debt itself, it is, of course, possible for it to do so either directly or through one or more of its agencies, bearing the risk of completion as part of the terms of that funding. While use of an Alaska agency as a vehicle for debt funding is a possible mechanism which will be discussed in a later section, funding of the debt by the State through appropriations from the General Fund would pose problems similar to that of the equity alternative, though not as severe, of conflict with other State spending objectives.

Debt funding would be required in full during the period from 1985 through completion in 1987, thereby leaving the State with difficult choices in terms of selection of spending purposes, some of which alternatives are programs which have already been commenced and are viewed with favor by the State government and electorate. If debt investment in the Alaskan Segment were funded by the State with proceeds of general obligation bonds, as might be necessitated by the State's current spending limit actions, this too would create a risk of downgrading the State's current credit ratings. In contrast to direct funding, debt support would permit further deferral, minimize appropriations during the period prior to completion of construction and, we believe, not adversely affect the State's credit ratings. It also facilitates a scheduled liquidation of the State's obligation should the State's guarantee actually be drawn on. Finally, it diminishes the refinancing risk on

completion, since if the State funds and is to be repaid on completion, a source of repayment will have to be found at that time, whereas if the State never funds there is no issue of refinancing.

We do not wish to preclude consideration of investment in Alaskan Segment debt which has adequate credit support from the State or any of the Sponsors as a portfolio investment by any of the State's agencies or affiliates, such as State-managed pension funds or the Permanent Fund, provided such investment meets the standards for investment normally applied by the managers of those funds.

PROPOSED CONTINGENT AND LIMITED GUARANTEE BY ALASKA

We contemplate that before major construction of ANGTS goes forward or large equipment or material orders are placed, it will be necessary for definitive financing arrangements to be made. Such financing arrangements would be documented in the form of participation agreements or other similar documents signed by all of the participating parties. Such documents would assume or be conditioned upon final FERC action acceptable to the parties on all of the significant issues referred to above and the resolution of the Metzenbaum lawsuit and other potential legal challenges to project arrangements.

As an element of those arrangements we would propose and recommend, if the foregoing and other conditions are met, that Alaska agree to provide a limited and contingent guarantee to support the issuance of debt in an amount

equal to the lesser of $3 billion or 1/8 of the projected capital budget of the Alaskan Segment. Such debt (referred to as the Guaranteed Debt) may be issued by the owner of the Alaskan Segment (referred to as the Owner) or by an agency of the State (referred to as the Authority), such as the Alaska Gas Pipeline Financing Authority. The State's commitment would assure payment when due to the holders of the Guaranteed Debt if funds are not available from other sources, but only in the event that the Alaskan Segment fails to achieve completion by an agreed upon date. For these purposes, completion means that billing of shippers has commenced, either under the pre-billing procedures authorized in the waiver package or through actual commencement of operations.

The Guaranteed Debt would be limited to debt issued to fund costs of the Alaskan Segment only after the greater of $20 billion or 75% of the projected cost of the Project had been expended. As a condition of the issuance of such Guaranteed Debt and of Alaska's limited guarantee obligations as to such debt, it would be necessary to establish that the Guaranteed Debt and other debt, together aggregating not more than the lesser of $20 billion or 75% of the projected costs, was secured pari passu by a senior security interest in the Alaskan Segment and, further, at the time that the Guaranteed Debt was issued and first expended, the Owner must have demonstrated to the reasonable satisfaction of Alaska that the remaining funds needed to complete construction of the Alaskan Segment have been firmly committed by responsible sources on an unconditional basis.

For purposes of that demonstration, certificates of the prime contractors to the Alaskan Segment, Fluor and Parsons, if verified by

nationally recognized experts of Alaska's choosing, would be conclusive as the amount of funds needed to complete. As to the commitment of funds to complete from responsible sources on an unconditional basis, such demonstration would be subject to verification by legal and financial advisors of Alaska's choosing. At a time immediately prior to the expenditure of the proceeds of the Guaranteed Debt, if Alaska and the experts and advisors it selects to assist it in making these determinations are satisfied that the foregoing conditions have been met, Alaska or its Authority will so certify that it is liable as guarantor of the Guaranteed Debt upon the occurrence of the noncompletion contingency.

In the event that Alaska is obliged to honor its commitment by reason of such noncompletion, Alaska or its Authority would acquire the Guaranteed Debt and the security interest to which such debt is entitled. Alaska would have the option to make its guarantee payment in installments over a period of years, rather than at one time, either on the repayment schedule of the underlying Guaranteed Debt or on some other schedule, but would be liable for interest on the unpaid portion. Alternatively, the Authority, with State credit support, could issue longer term debt to fund its guarantee payment. We would also propose that all debt held by or secured by guarantees or completion commitments from the Sponsors or their affiliates, representing at least $13.5 billion, be subordinated to the repayment of the Guaranteed Debt so acquired by Alaska and, in addition, that Alaska would have an option to convert its debt to common equity ownership of the Alaskan Segment on a basis to be negotiated.

MEANS OF IMPLEMENTING THE STATE'S GUARANTEE

We have considered various financing structures by which the State's limited guarantee during the construction period of the Alaskan Segment, as described above, could be implemented. The guarantee could be provided either by (a) the State directly guaranteeing debt issued by the Owner, (b) a State Authority guaranteeing debt issued by the Owner, with the State providing credit support to the Authority, or (c) the State guaranteeing debt issued by the Authority, the proceeds of which would be re-lent to the Owner. In the latter case, the debt issued by the Authority would be payable solely from and secured by repayments under the loan agreement with the Owner, except in the event of noncompletion. The State's obligation, in all cases, would be limited to and contingent on noncompletion as previously described. If and when the Project is completed, the State's obligation would expire.

The structure referred to in (c) may well be more desirable in that it is more familiar to investors generally and has precedent in connection with other Alaskan authorities such as the Alaska Housing Finance Corporation and the Alaska Industrial Development Authority. It also puts the Authority in the position of a lender to the Owner and as such facilitates negotiations by which it can obtain such terms, conditions, covenants, and events of default as it deems desirable, including a security interest in the Project. The structures referred to in (a) and (b) above do not have precedent in Alaska and have not been widely used elsewhere. In addition, both structures may require a legislative exception to current State law which prohibits the State from lending its credit for the use of a private corporation.

CREDIT SUPPORT FOR THE STATE'S COMMITMENT

Regardless of which of the three financing structures discussed above is employed, its efficacy will depend upon the confidence which the lenders who provide funds have in the State's undertaking to fund when obliged to do so. The State's credit ratings of AA from Moody's and AA minus from Standard & Poor's are more than satisfactory to lend confidence as to its ability to fund a $3 billion obligation. The extent to which the State legally binds itself to fund is a matter of greater concern. There are a variety of means by which the State can bind itself, each of which may have a different consequence for the lenders and a different authorization process for the State. We have listed below the principal available means. We will discuss these alternatives from a financial point of view but will not address their feasibility or desirability from a political or other viewpoint. We have discussed these means with the State's bond counsel and certain State officials and believe that these alternatives are legally feasible, although further confirmation and refinement might be necessary.

1. State Guarantee. A direct guarantee by the State would constitute the strongest credit support which could be made by the State. Lenders would take greatest confidence from such a direct guarantee by the State and the Sponsors would undoubtedly find such a guarantee most desirable because the debt issued would have the full benefit of the State's credit ratings, thereby minimizing the cost of such debt funds, although the State would undoubtedly wish to be compensated for having reduced the cost of funds.

The State Constitution provides that no legally binding State debt (including a guarantee) shall be contracted unless authorized by the State Legislature for "capital improvements" and ratified by a majority of voters of the State voting on the question in a general election (i.e., November of any year).

We have been advised that in order to meet the "capital improvement" requirement, (a) the project financed must constitute an asset of relatively permanent value and (b) the State must retain some legal interest in the asset. Such legal interest must have a value corresponding to the amount of the State's investment and may take the form of a mortgage, deed of trust, tenancy in common or other security interest in the asset. An equity interest in the Alaskan Segment as represented by a stock or partnership interest in an entity which owns the asset would probably not constitute a "capital improvement."

We believe that a full faith and credit guarantee of the State would provide credit ratings for the Guaranteed Debt comparable to those accorded State general obligation indebtedness, insofar as it covers the completion risk.

We have also been advised that in a general election to authorize incurrence of the State's guarantee, the issue put to the voters could be framed in terms of the maximum amount of guarantee to be issued and, in general, the type or types of "capital improvement" to be financed thereby and the interest therein to be obtained by the State in the Alaskan Segment in return for its guarantee. Accordingly, if it is deemed desirable to seek voter approval of a State guarantee this year, it would be necessary to negotiate

promptly with the Sponsors as to the general type or types of interest to be obtained by the State prior to submission of the issue to the voters in November. While the technical requirements of the State Constitution might possibly be met in time to submit this issue to the voters in November 1982, we question whether sufficient detailed information as to the progress of the financing plan or Alaska's role in it can be developed in time for a vote this November. Deferring such a vote beyond 1982 would be inconsistent with the timetable now contemplated for the resolution of the Project's financing plan.

2. Guarantee From Specific Revenues. While many states have issued substantial amounts of indebtedness payable solely from and secured by specific state revenues, Alaska has not, in part because of the State Constitutional requirement that "the proceeds of any State tax or license shall not be dedicated to any special purpose." It is our understanding, however, that the meaning and scope of what constitutes a "tax or license" of the State for this purpose is unclear from a legal viewpoint and that revenues such as, for example, oil royalties which are not expressly denominated as "tax" or "license" might very well not be subject to the Constitutional nondedication prohibition. We believe that a direct State guarantee payable solely from and secured by a stable and predictable revenue source of the State would constitute a very substantial credit support and, if adequate coverage of annual debt service were provided, might very well attain ratings for the debt so secured comparable to that of the State's general obligation debt, insofar as it covers the completion risk. At the same time, since such guarantee would not constitute a call on all of the State's revenues, it should have even less impact on the State's credit standing than a direct guarantee.

We understand, however, that it is unlikely that bond counsel would be prepared to render an approving opinion as to the legality of such a pledge in the absence of a favorable conclusion of test litigation and that such litigation might well consume as much as a year or more. We believe that the resulting delay and uncertainty as to the nature and extent of the State's commitment would be unsatisfactory to the Sponsors, who now consider it necessary to resolve the financing plan by the end of this year in order to have the Project move forward on an acceptable schedule.

Should it be deemed to be desirable and feasible to proceed with a pledge of specific revenue, one other means of obtaining early assurance as to its legality would be enactment of a specific Constitutional amendment. Such an amendment, which would require approval of two-thirds of each legislative body and a majority of voters voting in a general election, could be voted upon in the general election in November of this year but, for the reasons set forth in paragraph 1, above, such an early submission to the voters may be impractical.

3. Permanent Fund Guarantee. Due to the present and projected magnitude of its assets, the Permanent Fund is a very attractive source of credit support. Since it is comprised of a very substantial pool of assets with almost no corresponding liabilities, a guarantee by the Fund might very well carry a higher credit rating than obligations of the State itself. As previously mentioned, such a guarantee, if called, need not be payable at one time but could be paid over a longer period. In any event, such a guarantee would, we understand, require various legislative changes, approval of the Fund trustees

and, possibly, a Constitutional amendment. For these and other reasons, this alternative may also be impractical.

4. Guarantee Secured by Permanent Fund Income. The only express exception to the Constitutional prohibition against dedication of funds referred to earlier is the disposition of income from the Permanent Fund. Accordingly, although legal opinion is divided, it may be legally possible by legislative action without Constitutional amendment or action by the voters to pledge some portion of the income from the Permanent Fund to secure debt issued by an Authority or by the Owner. A portion of such income, which is estimated to be $137 million in FY 82, $205 million in FY 83 and $264 million in FY 84 and to continue to increase thereafter, would, we believe, provide substantial security for a debt guarantee. As previously discussed, if the Alaskan Segment is not completed and the guarantee were called, payments to liquidate the guarantee need not be made immediately but could be extended over a period of time.

At present, 50% of the income from the Permanent Fund is dedicated to the Dividend Fund to pay for the Permanent Fund Dividend Program. In addition, we understand that the Board of Trustees of the Permanent Fund Corporation has proposed that the remaining 50% be returned to the Permanent Fund to help protect the fund principal from erosion due to inflation. We recognize that use of this technique would raise serious policy concerns beyond the scope of this Report.

Should the State determine that income from assets already made part of the Permanent Fund should not be committed to provide credit support for

the guarantee, it may nevertheless wish to consider depositing other assets, such as a portion of State oil royalties, into the Permanent Fund. The income to the Permanent Fund from these assets could then be pledged to secure the guarantee. The authorizing legislation could expressly provide that the assets presently in the Permanent Fund and the income therefrom would in no way be affected or committed thereby. Unless and until the guarantee were called, the income from these assets would be free to be appropriated as the Legislature shall determine. Again, we observe that use of the Permanent Fund would raise broad policy considerations beyond the scope of this Report.

5. "Moral" Obligation of the State. We believe that the State could lend substantial credit support to the Project by adding its "moral" obligation to debt issued by an Authority or the Owner. Such a moral obligation of the type described below would not constitute a legal indebtedness of the State and would not, therefore, require action by the voters. Such a structure has had credibility with investors in the other contexts where it has been employed because of the perception of rating agencies and investors that the state undertaking such a moral obligation would, if necessary, honor its moral obligation by appropriating funds to meet debt service shortfalls. The failure to do so would be regarded as a derogation of the State's credit and adversely impact the ability of the State to sell its securities. The moral obligation of the State has been employed in Alaska to support debt obligations issued by the Alaska Industrial Development Authority and the Alaska Housing Finance Corporation. In addition, there is already authorization for a moral obligation structure in the legislation creating the Alaska Gas Pipeline Financing Authority, although such legislation would have to be modified in some respects to be utilized in the manner discussed in this Report.

A moral obligation structure somewhat similar to that employed for certain other State authorities and in other states would be implemented in the following manner: the Authority (which could be the Alaska Gas Pipeline Financing Authority or any other properly authorized State entity or enterprise fund governed by State officials) would issue debt securities and re-lend the proceeds thereof to the Owner. Such re-lending would be conditioned upon and secured by such terms and conditions as are deemed to be appropriate and desirable by the Authority. The payment of principal and interest on the debt issued by the Authority would be secured by, among other things, (a) the payments of the Owner under the loan agreement, (b) a pledge of the Authority's security interest in the Project and (c) a reserve fund established from debt proceeds in an amount at least equal to maximum debt service in any year. To the extent deemed desirable, if at all, to provide a further assurance to the lenders, the Legislature may appropriate additional funds to be deposited in this reserve fund in advance of the occurrence of the noncompletion condition. If at any time after the noncompletion condition has occurred there are insufficient funds from other sources to pay debt service, funds would be disbursed from the reserve fund to make such payment. The authorizing legislation would provide that if at any time monies on deposit in the reserve fund have been disbursed to pay debt service, the resulting deficiency would be certified to an appropriate State official. The State Legislature would, prior to sale of the debt securities, enact legislation appropriating future revenues sufficient to replenish the reserve fund when necessary. Such appropriation would not, however, be legally binding and could be reversed by future Legislatures. Both the legislative provision for certification and the appropriation by the Legislature would lapse upon completion of the Project. Upon such completion the reserve fund would be

liquidated with unused funds appropriated by the State (and interest earned thereon) returned to the State and the balance remitted to the Owner.

Debt service reserve funds of the foregoing type are usually funded in an amount equal to maximum debt service in any year. However, in view of the magnitude of the Project and of the State's commitment as well as the fact that the Project will not be operated by the State, prospective investors and the rating agencies may well wish to have additional amounts deposited in such fund in advance of issuance of the debt as a condition of obtaining desirable ratings or adequate commitments from investors.

The amounts, if any, which are appropriated by the State Legislature to the reserve fund prior to any call on such fund would be a function of the amount within each year's budget which the Legislature can provide given the other State needs which the Legislature perceives balanced against the credit strength and sense of commitment which such funding adds to the saleability of the debt by the Authority. In the absence of consultation with prospective lenders or the rating agencies, we would hesitate to express a definitive opinion as to whether such an appropriation would be needed or, if needed, what would be a desirable level of prefunding. If prefunding is required, however, a reasonable range of backup for a total $3 billion obligation might be between 10% ($300 million) and 25% ($750 million) of the total obligation by the date when the fund might first be called upon.

These amounts could consist of the aggregate of annual appropriations made during the four fiscal years, FY 84 through FY 87, together with any net compensation paid into the Authority for re-lending its funds, plus interest

accrued thereon. At a 12% annual interest rate, excluding any net compensation, the fund could grow to $300 million by annual appropriations of about $60 million and to $750 million by annual appropriations of about $150 million. A target figure of perhaps $100 million per year may be useful for discussion purposes. When the Authority's obligations expire or are otherwise fully discharged, funds accrued in the reserve fund attributable to the State's appropriations would be available to the State for other general purposes or could be earmarked for application to specific purposes such as deposit in the Permanent Fund.

It is not possible to predict with any assurance the credit ratings which would be accorded to debt obligations supported by the State's moral obligation of the type described above insofar as it covers the completion risk because of, among other things, (a) the relatively large magnitude of the State's commitment, (b) the absence of substantial precedent for a moral obligation undertaking by a state on behalf of a private project of this magnitude and (c) the uncertainty as to how the rating services will perceive the feasibility of the Project itself at the time the debt which the moral obligation supports is issued. One major rating agency has stated that, under appropriate conditions, it is prepared to rate bonds with a one year reserve fund and a makeup provision of the type described above, supported by a state moral obligation, at a rating one grade below the rating for the State's general obligation bonds. The other major rating agency has stated formally in the past that it gives no credit for a moral obligation of the type described above. Despite the absence of direct precedent for rating this type of obligation, we believe that Alaska's moral obligation would be of substantial assistance in securing a satisfactory rating for the debt insofar as it covers the completion

risk. We also believe that a substantial appropriation of State funds to the reserve fund (in addition to one year's maximum debt service) as described above would be of even greater significance. In view of the lack of direct precedent, we would recommend advance consultation with the rating agencies to gauge their anticipated responses.

Perhaps more importantly, we believe that the marketability of the debt would be very substantially improved and its financing cost lowered by the State's moral obligation and by the appropriation of substantial amounts into the reserve fund.

The moral obligation approach described above is one which can be adopted within the available time for resolving the financing plan and without any apparent legal or Constitutional obstacles. Because of its feasibility in these respects, we recommend that it be employed if other approaches are not deemed desirable.

6. Moral Obligation Payable from Specific Revenues. The State may also wish to consider a moral obligation structure utilized in certain other jurisdictions which would effectively earmark (in a non-binding manner) a single revenue source as security for its moral undertaking. If a stable revenue source were selected, we believe that prospective investors and rating agencies would perceive such a structure to be somewhat stronger than the general moral obligation structure described above. Such a structure would be fashioned as follows: the Legislature would appropriate in the current year an existing stream of revenues, preferably tax revenues, to an Authority and would enact legislation to appropriate such revenue stream to the Authority in

future years, subject to the right of future Legislatures to reverse such appropriation. Because the Legislature is not legally required to appropriate such revenues in any year, such action should not constitute a legal dedication of revenues in contravention of the Constitutional prohibition previously discussed. The Authority would in turn issue debt secured by a pledge by the Authority of such revenues and re-lend the debt proceeds to the Owner in the manner previously described. The revenue stream so pledged would not be utilized to pay debt service unless the Owner defaulted on its loan agreement and the noncompletion condition had occurred and, to the extent not utilized, such revenue stream would be available in any year for any other purpose designated by the Legislature. Such debt, as in the case of the moral obligation structure previously discussed, would be secured by a reserve fund, with a procedure for certification and a moral obligation legislative enactment to make up any deficiency.

Although the foregoing structure could apparently be implemented by legislation without a Constitutional amendment or voter action, it is not presently clear whether counsel would be able to render an approving opinion in the absence of test litigation. Such litigation, if required, would create a timing problem which could render this approach impractical.

IMPACT ON THE STATE'S CREDIT RATING

A factor which we believe the State should consider in determining the manner in which it lends assistance to the financing of the Alaskan Segment is the impact of its participation on its credit rating. In addition to the form of the State's participation, we believe the rating agencies will take into account,

among other things, (a) the feasibility and economic viability of ANGTS and the likelihood of its completion, (b) the estimated increases in State revenues generated by ANGTS, (c) the impact of the Project on the State's economy and (d) the timing of benefits and costs to the State by reason of the construction of the Project. We have considered these matters in greater detail elsewhere in this Report.

The State's general obligation debt is currently rated AA by Moody's and AA minus by Standard and Poor's and, other factors being equal, it is doubtful in our opinion that these ratings could be sustained if the State made a direct debt or equity investment in the Project of the magnitude contemplated. Unless very major adjustments were made in the State's operations and anticipated capital expenditures, it is likely that such an investment would have to be funded by a very substantial amount of new general obligation borrowing by the State, thereby increasing the State's indebtedness in respect to standard yardsticks such as population, resources and economic indicators. In addition, the returns of the equity and debt investments would be long term and, particularly in the near term period when construction is about to commence or has just commenced, would not be assured. These factors would, of course, be offset in part by the benefits to the State of the Project.

In contrast, we believe that a limited and contingent guarantee by the State, which involves only modest immediate cash expenditures and has the low order of risk which we believe can be provided, offers a means of participating in the financing of the Project in a very meaningful way without significantly adversely impacting the State's credit ratings.

RISKS TO ALASKA

We have structured our recommendation as to Alaska's commitment in such a way that there is a very low probability that the State will be called upon to honor its guarantee or, should it have to do so, that it will suffer any significant loss of principal.

The minimal likelihood of Alaska having to pay off the Guaranteed Debt is based upon the late stage of construction at which the proceeds of the Guaranteed Debt are employed. As shown on page 6 of each of the construction model results included in Exhibits 3 through 5, at least 75% of projected funds will have been expended before the Guaranteed Debt funds are employed. At that time, the Alaskan Segment should be within about one year of completion. During the last year of construction a large portion of the funds spent are for interest, so that almost 80% of actual construction dollars will have been expended to that point. By reason of cost escalation, the nominal value of the last elements of construction cost is higher than that of the early elements so that by that time over 80% of construction should have been completed in physical terms.

With that large a proportion of the construction completed and such a small proportion remaining at the time Alaskan guaranteed funds are committed, it should be possible to evaluate how well construction is progressing, what problems remain which have not been solved and which could lead to overruns in the cost to complete from that time on, which would then determine the extent of Alaska's guarantee exposure. By that time, as well, management procedures would have been established and the learning curve

surmounted. The Project would also have built up a reasonably large cushion in the form of retainages in the uncompleted construction contracts. While risks would no doubt exist for Alaska, principally in the form of contingencies for which adequate reserves had not been provided or increases in escalation or interest rates during that period, there would be a very low likelihood that those occurrences in the last year would be of sufficient magnitude to convert a feasible project with no unfunded cost overruns up to that point into a project which is so unsuccessful that debt investors holding a senior security position would suffer a loss of some or all of their investment. To illustrate this with a simple example, if the first 75% of projected cost is expended without any overrun, a 10% overrun on the last 25% represents only a 2.5% overall overrun.

While the possibility that Alaska may be called upon to honor its guarantee is a small one, we consider it even less likely that Alaska would actually sustain a loss by funding its guarantee. In assessing this risk, it is important to distinguish between the risk of physical noncompletion of the Project and the risk of noncompletion in financial terms, which is really the risk of cost overruns being of a magnitude which render the Project non-economic. Looking only to the Alaskan Segment to illustrate, once construction has begun and at least $20 billion dollars of capital has been definitely committed to the Project, the risk of physical noncompletion becomes quite remote, except in the context of some extraordinary uninsured event such as a major physical catastrophe like an earthquake which destroys a large amount of work in progress or precludes continuation of construction or some type of major governmental action such as war. We presume that to the extent insurance against such calamities is available at acceptable cost it will

be provided. Barring such force majeure events, from an economic point of view once a major expenditure like $20 billion has been sunk into the Project, it almost completely assures physical completion. Once those funds are spent, completion of the Project then should be analyzed in terms of whether the completed facility has a value equal to or in excess of the remaining cost to complete. Accordingly, if $20 billion had been spent and instead of an additional $7 billion to complete as originally projected, $10 billion is required to complete, it would be sensible to fund that $10 billion, including the $3 billion overrun as long as the completed Project is worth more than $10 billion. In the event of failure to fund the overrun, the full initial $20 billion will be lost (less salvage), so that each dollar of value to the completed project in excess of the cost to complete is a dollar saved which would otherwise be lost by reason of project abandonment.

If there are overruns beyond the projected cost, they do not result in losses unless those overruns render the Project less economic. Overruns which are balanced by escalation in the price of competing fuels should not result in economic losses. Thus if cost overruns result in higher gas transportation charges and a higher delivered gas price, no long run harm to the Project will be sustained if conditions have also resulted in comparable increases in prices of the competing natural gas and oil-based fuels. For example, despite TAPS' huge overruns, the economic value of the completed pipeline justified the owners' additional commitments of funds to complete because of the equally large increase in the market price of crude oil. It is only when the overruns make the Project less competitive and deprive it of real net revenue that economic losses occur.

If such economic losses occur, they are first sustained by the equity investors in the Project. When the equity is fully "underwater", the debt investors begin to bear the risk of loss -- the most junior, subordinated and unsecured creditors first and the most senior and secured creditors last.

To the extent that a project such as ANGTS suffers overruns but equity investors still retain value, they would be motivated to provide or arrange to provide additional funds to complete the project even to the extent of sharing with new investors or subordinating to new investors the interests they have earned by investing their sunk costs, up to the point that the remaining cost to complete exceeds the remaining value of their interest. When it ceases to do so, they have gone underwater and the de facto equity and motivation shifts to the next most senior interest in the project.

Thus cost overruns not compensated for by escalation in prices of competing fuels and not absorbed by wellhead gas owners, shippers, distributors and consumers under the marketing arrangements, will be immediately absorbed by the equity owners of the Alaskan Segment. They will suffer the first loss to the extent of their equity, which is 25% of the cost of the Segment. Only if the loss exceeds 25% of the value expended will the debt investors sustain a loss, proportionally as the extent of the loss increases. They in turn will have the option of providing additional funding to protect their remaining value, either by investing themselves or by arranging for such investment from third parties to whom they must surrender a portion of their interest.

We propose as a condition of Alaska's guarantee that should Alaska fund its guarantee by reason of noncompletion, then not only the equity funds invested by the Sponsors but also the debt funds procured on their credit would be subordinated to Alaska's resulting senior security position. Thus, since Alaska would be funding at most a portion of the 25% of the cost not covered by equity investment or Sponsor backed debt, Alaska would have to see the value of the funds spent on the Project diminish by almost 75% before Alaska sustained any loss and by 100% before it lost all of its investment in the Project. It should be self-evident that the chances of that occurring are quite remote.

As an additional means of Alaska protecting its interest and being rewarded if it is required to fund its guarantee, Alaska could require that it have a right to convert its debt funding into an appropriate equity share. This may not be necessary if the interests junior to Alaska have gone underwater, but it does provide a means for Alaska to exercise some measure of equity control should the need arise and to capitalize on a turnaround in the Project's fortunes.

COMPENSATION TO ALASKA: VALUE

In the event that Alaska decides to extend its limited and contingent guarantee of completion of the Alaskan Segment, the State would be entitled to compensation for its undertaking. Such compensation should be determined on an arm's length basis through negotiation. The compensation should represent a full reward and inducement to the State without regard to other benefits the State expects to receive from the completion of ANGTS. Apart

from the difficulty of assessing those other benefits, other participants in ANGTS are seeking full compensation for their financial position without regard to their ancillary benefits such as ownership and sale of Prudhoe Bay gas by the Producers and the acquisition of gas to supplement declining deliverability from lower 48 reserves and to fill existing idle pipeline capacity in the case of some of the Pipelines.

The theory of compensation provides a method of determining a floor price for the compensation due the State for the risk associated with its undertaking. This floor value can be estimated by using a probabilistic approach, a market comparability approach or a reinsurance approach. Market and other factors also suggest that a premium should be added to the floor value.

Dealing first with the probabilistic approach, in order to place a minimum value on the risk associated with the State's commitment the chance of a loss and the magnitude and the timing of that loss must be determined. The following methodology combines these factors to derive a single number representing the Expected Value of the discounted loss associated with the commitment.

A number of possible known events exist which may result in a loss to Alaska. To as complete a degree as possible, each of these events should be enumerated and the loss to Alaska if the event did occur should be calculated. Ideally, each of the events should be mutually exclusive and the list should be collectively exhaustive. The probability of the occurrence of each event should then be estimated. An appropriate discount factor, which reflects both

the State's risk free investment alternatives and the market risk associated with the Project, should then be determined.

The Expected Discounted Present Value should be calculated by summing, for each possible event of loss, the present value of that loss, calculated by using the rate determined as described above, multiplied by the probability of the event occurring. The formula for this calculation is:

$$\text{Value} = \sum_{i} \text{Pi} \times \text{NPVi}$$

Where: i represents each event;

Pi represents the probability of event i;

NPVi represents the net present value of the loss discounted at the appropriate rate.

Whereas the Expected Value gives a single value associated with the risks of the State's undertaking, a risk profile describes the probability and magnitude of each loss event, explicitly showing the distribution of possible losses. This analysis is useful in analyzing the full downside exposure inherent in the guarantee. It is particularly important that Alaska examine the downside risk in setting a level of compensation because in guaranteeing a portion of the debt, the State is engaging in a single decision in which the "Law of Averages" or "Law of Large Numbers" plays no part in diversifying the non-systematic risk associated with the Project, as would be the case in the more ordinary underwriting of risk. The Expected Value approach is useful in establishing a minimum compensation level for the State, but it can be argued that a premium should be paid to entice the State to take on the risk of a

single project rather than, as most institutional insurers do, underwrite a diverse portfolio of risks.

As a supplement to the probabilistic approach, analysis of how other loan guarantees have been priced may provide a rough estimate of a market comparison for the Alaska guarantee. For example, the United States Federal Government has guaranteed debt under the auspices of the Maritime Administration, and in programs such as the Chrysler, Lockheed and New York City Loan Guarantees. In addition, the United States Synthetic Fuels Corporation intends to issue loan guarantees of several billion dollars for major alternative energy projects sponsored by many of the same companies involved in ANGTS. Some of these guarantees will be expressly designed to cover completion risks.

A study of these various guarantee programs may be useful in establishing a floor for the pricing of Alaska's guarantee. The rates charged range from about 1/2 of 1% to 1½% per annum. As an example, the Federal Financing Bank has recently established a 7/8 of 1% annual premium on the interest rate it will charge to the Great Plains Coal Gasification Project. Because of the national security and political nature of these programs, the fee charged by the government may not fully reflect the economic value of the guarantee. Bank letters of credit to support borrowings in the private sector normally carry fees of up to 1½% per annum.

The premium that a commercial insurer would charge to assume a portion of Alaska's risk as guarantor would be another indication of the floor price for the value of the State's guarantee. The actuarial basis upon which

such an insurer would determine its premium would be similar, if not the same, as the methodology described above. The premium charged for a portion of the guarantee risk may not necessarily represent the value of the entire guarantee risk unless the total guarantee risk were underwritten. If a syndicate of insurers to underwrite the entire guarantee risk cannot be formed, however, then the State would be providing a service which the insurance market could not provide and the compensation to the State should reflect this fact.

COMPENSATION TO ALASKA: FORM

When the value of Alaska's limited and contingent guarantee has been ascertained under the principles described above, Alaska can negotiate to receive that value in a variety of forms including a lump sum payment, a fixed stream of payments or a variable stream of payments. A variable stream might fluctuate based on factors external to the Project such as inflation indices or might be geared to internal factors such as the returns to the equity investors in the Project. The latter stream might be reflected in a security like an income debenture with equity return characteristics. Each of these streams, fixed or variable, should be capable of being valued in present dollar terms, although the valuation of variable streams predicated on future events is obviously more judgmental and difficult to analyze.

It is also possible to give Alaska various options as to the type of compensation it will take. It could, for example, have an option to acquire any one or more of these streams of payments, fixed or variable. Such an option could itself have a present value over and above the present value of the

stream of income to be acquired, dependent on the terms and conditions of the option, including the option price. By taking some or all of the value of its compensation in an option of this nature, particularly an option to acquire an equity-type security, Alaska enhances the possibility of eventually securing a maximum return equal to or in excess of that anticipated by the equity investors in ANGTS. However, it achieves this possibility by substantially increasing the risk that it will not benefit from having lent its credit to support the completion risk of the Project.

We believe that the value and form of compensation that Alaska receives should be negotiated with the other financing plan participants following an initial policy decision by the State to consider this type of participation. In order to preserve the fullest flexibility for Alaska in those negotiations, we do not feel it is appropriate for us to comment publicly on the value or form of that compensation, other than to reiterate that the value should be determined on a fair market basis without regard to other benefits which the State is considered to have derived from ANGTS and that Alaska can be both flexible and innovative as to the form.

CONDITIONS OF ALASKA'S PARTICIPATION

We believe that Alaska can and should set down a set of conditions for its participation in the Alaskan Segment financing plan. We can suggest certain conditions which are appropriate. Other conditions not necessarily linked to ANGTS directly can be added by the State as it considers its involvement, both in the initial generic policy decision and in the detailed negotiating phase which may follow.

The fundamental conditions associated with the financing plan which we believe should be attached to Alaska's participation are as follows:

1. The commitment of other responsible participants in the plan on terms which all participants deem mutually satisfactory.

2. A determination having been made by Alaska as of the time that it makes a definitive commitment of its credit that (i) the risks which the State has assumed have been adequately reviewed with the assistance of expert advisors and are acceptable to it and (ii) the amount and form of compensation which the State will receive for its participation are also acceptable to it.

In addition to the foregoing financing plan conditions, we again strongly recommend that Alaska lend its support to and participate actively in negotiations concerning arrangements to share the gas marketability risks as between the Producers and the Pipelines. Because of the significance of its royalty and tax interests in the value of the gas, Alaska has an important interest in this matter. Indeed, the size of its interest relative to its overall financial position may well exceed that of any of the other participants in the Project. Alaska therefore has a strong motivation to see that it does not bear a disproportionate share of the risks of marketability, but that they are handled prudently and shared fairly by all interested parties. In the absence of suitable arrangements to accomplish this objective, Alaska's interest in having the system constructed becomes less pressing and its reason for assisting in developing a feasible financing plan diminishes. For these reasons, we would urge Alaska to make as an important condition of its financial participation

the adoption of a satisfactory levelization program which properly distributes the risks of marketability of gas among all of the parties. Indeed, it is in major part due to the importance we attach to Alaska having a front line role in the resolution of this issue that we have recommended that Alaska step forward and express its willingness to negotiate the financing position which we have proposed.

There are other issues which the State may also wish to see settled before it joins in a financing plan. It is a political question as to which issues are important and relevant enough to be made conditions of the financing plan. Some of the issues which the State may choose to consider are in-state use of gas or gas liquids, payment for socio-economic costs of the Project and the adequacy of plans for in-state and minority employment and training.

SUGGESTED ACTION

As stated in the opening section of this Report, we view the process of considering the State's possible participation in the financing plan of necessity to be a phased one. We would therefore recommend that the process be conducted in the following way:

1. Prior to the conclusion of the current legislative session, a resolution should be adopted or another appropriate form of action be taken to express that it is the policy of the State to participate in the financing plan in accordance with the general recommendations set forth in this Report, subject to the conditions discussed in the preceding section, and to authorize the appropriate

officers of and consultants to the State to conduct negotiations and submit the results of those negotiations back to the Legislature at its next session. If deemed desirable, at the same time the Alaska Gas Pipeline Financing Authority legislation could also be amended to make it a useful vehicle for the negotiation and/or implementation of the State's financing participation. Although we do not believe that the issues can be adequately framed for submission to a vote of the People in 1982, and accordingly do not recommend any course of action which is dependent on such submission, should it be determined that an advisory vote of the People or a Constitutionally required vote at the November 1982 election were necessary or desirable, legislation providing for that vote could be enacted at the same time.

2. Detailed terms and conditions of the State's participation could then be negotiated by the authorized officers and consultants. The results of those negotiations would be set forth in documentation and submitted for review by the Governor, the proper State executive departments, the Legislature at its next session and the People, if their direct approval were considered appropriate.

3. At the next legislative session, if approved by the Legislature, implementation by initial appropriation and other legislation would commence.

The initial determination in paragraph 1 above, would presumably take place before the financing plan submitted to FERC is concluded so that if first

stage authorization by the Legislature takes place there will be time to include Alaska's participation as an element in the financing plan.

The negotiations discussed in paragraph 2 above, will take place throughout most of the balance of 1982. Although we recognize that a new Governor and Legislature will be elected in November, we would hope that there would be an interim mechanism afforded to permit the State's negotiations to function responsibly and to secure meaningful interim directions and approvals.

We would hope and expect that while most other Alaskan Segment financing elements will be resolved by the end of 1982 sufficiently to permit the Project to move forward into major pre-construction activity entailing multi-billion dollar commitments, that participation by the State of Alaska will be viewed as sufficiently likely that it can remain formally contingent until the Legislature and new Governor have an opportunity in the first quarter of 1983 to firm up the commitments negotiated on behalf of the State and to take the implementing action referred to in paragraph 3 above.

THE ALASKAN SEGMENT

OF THE

ALASKA NATURAL GAS TRANSPORTATION SYSTEM

CONSTRUCTION COST AND FINANCING ANALYSIS

March 22, 1982

Kidder, Peabody & Co.
Incorporated

TABLE OF CONTENTS

INTRODUCTION

Exhibits 3 through 5 contain computer analyses of the components of the total construction cost estimate and a funding plan showing the equity and debt requirements of the various contributors to the Alaskan Segment of the Alaska Natural Gas Transportation System. We have examined the sensitivity of the financing requirements and the timing of those requirements under three scenarios representing certain assumptions about inflation rate, interest rate and contingency estimate. The three cases and a summary of the results of each case are given in Exhibit 2.

ASSUMPTIONS

Construction Cost Estimate and Contingency Estimate

A construction cost estimate, upon which the various cases are based, follows as the last page of this exhibit. 1980 dollar estimates for the pipeline and 1981 dollar estimates for the conditioning plant have been escalated to January 1982 dollar values.

The quarterly schedule is derived from annual figures by using the assumption that for years 1983 through 1987 the yearly budget is spent 26%, 30%, 27% and 17% in quarters 1 through 4 respectively. For the purposes of this analysis, start-up is assumed to occur at the end of 1987 and construction is funded up to that point.

The contingency estimate in Case A represents 25% of the base estimate for the pipeline and 20% for the conditioning plant, averaging 24% of the base estimate for the combined pipeline and conditioning plant. Sensitivity to this assumption is tested with the best case (Case B) representing 20% of the base estimate and the worst case (Case C) representing 34% of the base estimate.

Funding Sources

The construction costs, including financing charges, are funded by 25% equity and 75% debt. There are three types of debt financing described in our computer analyses. These are: (1) Sponsor guaranteed debt, (2) Debt guaranteed

by the State of Alaska and (3) Non-recourse debt. Equity funds are used first and the debt funds are employed in the order listed above.

Interest

Interest is calculated and compounded on a quarterly basis and paid in arrears. It is assumed that the funding occurs at the start of a quarter with the interest paid at the start of the next quarter.

The interest rate represents an effective interest rate and it is meant to reflect debt issuance, commitment and guarantee fees as well as the interest charged on funds used.

Inflation

The yearly inflation rate represents a rate compounded on a quarterly basis throughout the years. For example, an 11% inflation rate is a 2.643% quarterly compounded rate.

DESCRIPTION OF FINANCIAL STATEMENTS

Financial Statements

There are seven financial statements included in each of Exhibits 3 through 5 describing the construction and financing arrangements. These are:

(1) Quarterly Construction Costs Schedule -- contains the base construction estimate, the inflation effect, the contingency estimate inflated at the same factor as the base estimate and a summary of financing charges from each of the debt sources.

(2) Quarterly Funding Schedule -- contains a summary of the funds used, as described in (1), and shows amount of funding and the timing for each of the four funding sources.

(3) Cumulative Quarterly Funding Schedule -- contains the information in (2) on a cumulative basis.

(4) Equity Schedule -- describes on a quarterly basis, the equity commitment, the unused balance of the commitment and the equity funds used.

(5), (6) and (7) Schedule of Sponsor Guaranteed Debt; Schedule of Debt Guaranteed by the State of Alaska; and Schedule of Non-Recourse Debt -- describe the debt commitment, the unused balance, the funds used and the financing costs associated with each of these sources of funds.

CONSTRUCTION COST SCHEDULE ESTIMATE

($ millions, January 1982)

		Alaska Segment of the Pipeline		Gas Conditioning Facility		Total Construction Costs	
Year	Quarter	Base Costs	Contingency	Base Costs	Contingency	Base Costs	Contingency
1980	1	62	--	1	--	63	--
	2	62	--	1	--	63	--
	3	63	--	1	--	64	--
	4	63	--	1	--	64	--
1981	1	37	--	7	--	44	--
	2	37	--	7	--	44	--
	3	38	--	8	--	46	--
	4	38	--	8	--	46	--
1982	1	37	--	37	--	74	--
	2	37	--	37	--	74	--
	3	38	--	38	--	76	--
	4	38	--	38	--	76	--
1983	1	150	39	117	26	267	65
	2	172	45	135	30	307	75
	3	155	41	121	27	276	68
	4	98	25	77	17	175	42
1984	1	364	98	221	38	585	136
	2	420	113	255	43	675	156
	3	378	101	230	39	608	140
	4	238	64	145	25	383	89
1985	1	728	195	195	39	923	234
	2	840	225	225	45	1,065	270
	3	756	203	202	40	958	243
	4	476	127	128	26	604	153
1986	1	650	169	150	32	800	201
	2	750	195	172	38	922	233
	3	675	176	155	34	830	210
	4	425	110	98	21	523	131
1987	1	377	97	78	16	455	113
	2	435	112	90	18	525	130
	3	392	101	81	16	473	117
	4	246	64	51	10	297	74
		$9,275	$2,300	$3,110	$580	$12,385	$2,880

SUMMARY OF RESULTS

Three cases, representing different interest rate, inflation rate and contingency estimate assumptions were analyzed to determine the total project cost and funding requirements associated with each scenario. A summary of the assumptions and the funding requirements, for each case, is listed below.

	Assumptions			Funding Sources ($ millions)				
Case	Interest Rate	Inflation Rate	Contingency as a % of Base Costs	Equity Portion	Sponsor Guaranteed Debt	Alaska Guaranteed Debt	Non-Recourse Debt	Total Cost
A	17%	11%	24%	6,776	13,552	3,000	3,776	27,104
B	14	9	20	5,954	11,908	2,977	2,978	23,817
C	18	12	34	7,634	15,268	3,000	4,633	30,535

Case:
A = Conservative Case
B = Best Case
C = Worst Case

EXHIBIT 2

CASE A

INTEREST AT 17%

INFLATION AT 11%

CONTINGENCY AT 24% OF BASE COSTS

EXHIBIT 3

ALASKA NATURAL GAS
TRANSPORTATION SYSTEM
QUARTERLY CONSTRUCTION COST SCHEDULE
($ MILLIONS)

	TOTAL CONSTRUCTION COST				FINANCING CHARGES				TOTALS	
	CONSTRUC-TION COST	INFLATION IMPACT	CONTIN-GENCY	TOTAL CONSTRUC-TION COSTS	SPONSOR DEBT CAPITAL-IZED EXP & FEES	ALASKA DEBT CAPITAL-IZED INT & FEES	NON-REC DEBT CAPITAL-IZED INT & FEES	TOTAL FINANCING CHARGES	TOTAL CONSTRUC-TION & CHARGES	CUMULATIV CONSTRUC-TION & CHARGES
1980										
QTR 1	63	0	0	63	0	0	0	0	63	63
QTR 2	63	0	0	63	0	0	0	0	63	126
QTR 3	64	0	0	64	0	0	0	0	64	190
QTR 4	64	0	0	64	0	0	0	0	64	254
SUB-TOTAL	254	0	0	254	0	0	0	0	254	254
1981										
QTR 5	44	0	0	44	0	0	0	0	44	298
QTR 6	44	0	0	44	0	0	0	0	44	342
QTR 7	46	0	0	46	0	0	0	0	46	388
QTR 8	46	0	0	46	0	0	0	0	46	434
SUB-TOTAL	180	0	0	180	0	0	0	0	180	434
1982										
QTR 9	74	2	0	76	0	0	0	0	76	510
QTR 10	74	4	0	78	0	0	0	0	78	588
QTR 11	76	6	0	82	0	0	0	0	82	670
QTR 12	76	8	0	84	0	0	0	0	84	754
SUB-TOTAL	300	20	0	320	0	0	0	0	320	754
1983										
QTR 13	267	37	74	378	0	0	0	0	378	1,133
QTR 14	307	52	88	447	0	0	0	0	447	1,579
QTR 15	276	55	82	413	0	0	0	0	413	1,992
QTR 16	175	41	52	267	0	0	0	0	267	2,260
SUB-TOTAL	1,025	185	295	1,505	0	0	0	0	1,505	2,260
1984										
QTR 17	585	155	172	912	0	0	0	0	912	3,172
QTR 18	675	201	203	1,079	0	0	0	0	1,079	4,250
QTR 19	608	202	187	997	0	0	0	0	997	5,247
QTR 20	383	141	122	646	0	0	0	0	646	5,892
SUB-TOTAL	2,251	699	683	3,633	0	0	0	0	3,633	5,892
1985										
QTR 21	923	373	328	1,624	0	0	0	0	1,624	7,517
QTR 22	1,065	470	389	1,924	31	0	0	31	1,955	9,472
QTR 23	958	459	359	1,776	115	0	0	115	1,891	11,362
QTR 24	604	313	232	1,149	195	0	0	195	1,344	12,707
SUB-TOTAL	3,550	1,614	1,309	6,473	341	0	0	341	6,814	12,707
1986										
QTR 25	800	447	313	1,560	252	0	0	252	1,812	14,518
QTR 26	922	553	373	1,847	329	0	0	329	2,176	16,695
QTR 27	830	533	345	1,707	422	0	0	422	2,129	18,824
QTR 28	523	358	221	1,102	512	0	0	512	1,614	20,438
SUB-TOTAL	3,075	1,890	1,251	6,216	1,515	0	0	1,515	7,731	20,438
1987										
QTR 29	455	332	195	982	576	5	0	581	1,563	22,001
QTR 30	525	407	231	1,163	576	71	0	647	1,810	23,811
QTR 31	473	389	213	1,075	576	128	21	724	1,799	25,610
QTR 32	297	259	138	694	576	128	97	800	1,494	27,104
SUB-TOTAL	1,750	1,386	778	3,914	2,304	331	117	2,752	6,666	27,104
TOTAL	12,385	5,795	4,316	22,496	4,159	331	117	4,608	27,104	

ALASKA NATURAL GAS
TRANSPORTATION SYSTEM

QUARTERLY FUNDING SCHEDULE
($ MILLIONS)

	USE OF FUNDS			SOURCES OF FUNDS				
	TOTAL CONSTRUC-TION COSTS	TOTAL FINANCING CHARGES	TOTAL CONSTRUC-TION & CHARGES	EQUITY DRAWDOWN	SPONSOR DEBT DRAWDOWN	ALASKA DEBT DRAWDOWN	NON-REC DEBT DRAWDOWN	CUMULATIVE CONSTRUC-TION & CHARGES
1980								
QTR 1	63	0	63	63	0	0	0	63
QTR 2	63	0	63	63	0	0	0	126
QTR 3	64	0	64	64	0	0	0	190
QTR 4	64	0	64	64	0	0	0	254
SUB-TOTAL	254	0	254	254	0	0	0	254
1981								
QTR 5	44	0	44	44	0	0	0	298
QTR 6	44	0	44	44	0	0	0	342
QTR 7	46	0	46	46	0	0	0	388
QTR 8	46	0	46	46	0	0	0	434
SUB-TOTAL	180	0	180	180	0	0	0	434
1982								
QTR 9	76	0	76	76	0	0	0	510
QTR 10	78	0	78	78	0	0	0	588
QTR 11	82	0	82	82	0	0	0	670
QTR 12	84	0	84	84	0	0	0	754
SUB-TOTAL	320	0	320	320	0	0	0	754
1983								
QTR 13	378	0	378	378	0	0	0	1,133
QTR 14	447	0	447	447	0	0	0	1,579
QTR 15	413	0	413	413	0	0	0	1,992
QTR 16	267	0	267	267	0	0	0	2,260
SUB-TOTAL	1,505	0	1,505	1,505	0	0	0	2,260
1984								
QTR 17	912	0	912	912	0	0	0	3,172
QTR 18	1,079	0	1,079	1,079	0	0	0	4,250
QTR 19	997	0	997	997	0	0	0	5,247
QTR 20	646	0	646	646	0	0	0	5,892
SUB-TOTAL	3,633	0	3,633	3,633	0	0	0	5,892
1985								
QTR 21	1,624	0	1,624	884	741	0	0	7,517
QTR 22	1,924	31	1,955	0	1,955	0	0	9,472
QTR 23	1,776	115	1,891	0	1,891	0	0	11,362
QTR 24	1,149	195	1,344	0	1,344	0	0	12,707
SUB-TOTAL	6,473	341	6,814	884	5,931	0	0	12,707
1986								
QTR 25	1,560	252	1,812	0	1,812	0	0	14,518
QTR 26	1,847	329	2,176	0	2,176	0	0	16,695
QTR 27	1,707	422	2,129	0	2,129	0	0	18,824
QTR 28	1,102	512	1,614	0	1,504	110	0	20,438
SUB-TOTAL	6,216	1,515	7,731	0	7,621	110	0	20,438
1987								
QTR 29	982	581	1,563	0	0	1,563	0	22,001
QTR 30	1,163	647	1,810	0	0	1,327	483	23,811
QTR 31	1,075	724	1,799	0	0	0	1,799	25,610
QTR 32	694	800	1,494	0	0	0	1,494	27,104
SUB-TOTAL	3,914	2,752	6,666	0	0	2,890	3,776	27,104
TOTAL	22,496	4,608	27,104	6,776	13,552	3,000	3,776	

KIDDER, PEABODY & CO. INC.

ALASKA NATURAL GAS
TRANSPORTATION SYSTEM

CUMULATIVE QUARTERLY FUNDING SCHEDULE
($ MILLIONS)

		CUMULATIVE SOURCES OF FUNDS			
	CUMULATIV CONSTRUC-TION & CHARGES	EQUITY FUNDS USED	SPONSOR DEBT FUNDS USED	ALASKA DEBT FUNDS USED	NON-REC FUNDS USED
1980					
QTR 1	63	63	0	0	0
QTR 2	126	126	0	0	0
QTR 3	190	190	0	0	0
QTR 4	254	254	0	0	0
SUB-TOTAL	254	254	0	0	0
1981					
QTR 5	298	298	0	0	0
QTR 6	342	342	0	0	0
QTR 7	388	388	0	0	0
QTR 8	434	434	0	0	0
SUB-TOTAL	434	434	0	0	0
1982					
QTR 9	510	510	0	0	0
QTR 10	588	588	0	0	0
QTR 11	670	670	0	0	0
QTR 12	754	754	0	0	0
SUB-TOTAL	754	754	0	0	0
1983					
QTR 13	1,133	1,133	0	0	0
QTR 14	1,579	1,579	0	0	0
QTR 15	1,992	1,992	0	0	0
QTR 16	2,260	2,260	0	0	0
SUB-TOTAL	2,260	2,260	0	0	0
1984					
QTR 17	3,172	3,172	0	0	0
QTR 18	4,250	4,250	0	0	0
QTR 19	5,247	5,247	0	0	0
QTR 20	5,892	5,892	0	0	0
SUB-TOTAL	5,892	5,892	0	0	0
1985					
QTR 21	7,517	6,776	741	0	0
QTR 22	9,472	6,776	2,696	0	0
QTR 23	11,362	6,776	4,586	0	0
QTR 24	12,707	6,776	5,931	0	0
SUB-TOTAL	12,707	6,776	5,931	0	0
1986					
QTR 25	14,518	6,776	7,742	0	0
QTR 26	16,695	6,776	9,919	0	0
QTR 27	18,824	6,776	12,048	0	0
QTR 28	20,438	6,776	13,552	110	0
SUB-TOTAL	20,438	6,776	13,552	110	0
1987					
QTR 29	22,001	6,776	13,552	1,673	0
QTR 30	23,811	6,776	13,552	3,000	483
QTR 31	25,610	6,776	13,552	3,000	2,282
QTR 32	27,104	6,776	13,552	3,000	3,776
SUB-TOTAL	27,104	6,776	13,552	3,000	3,776

ALASKA NATURAL GAS
TRANSPORTATION SYSTEM
EQUITY SCHEDULE
($ MILLIONS)

	EQUITY FUNDS AVAILABLE	EQUITY FUNDS BALANCE	EQUITY FUNDS USED	EQUITY RATE	INTEREST ON EQUITY	EQUITY EXPENSES & FEES	EQUITY INTEREST EXPENSES & FEES	CUMULATIV EXPENSES & CHARGES
1980								
QTR 1	6,776	6,713	63	.0000	0	0	0	0
QTR 2	6,776	6,650	126	.0000	0	0	0	0
QTR 3	6,776	6,586	190	.0000	0	0	0	0
QTR 4	6,776	6,522	254	.0000	0	0	0	0
SUB-TOTAL	6,776	6,522	254	.0000	0	0	0	0
1981								
QTR 5	6,776	6,478	298	.0000	0	0	0	0
QTR 6	6,776	6,434	342	.0000	0	0	0	0
QTR 7	6,776	6,388	388	.0000	0	0	0	0
QTR 8	6,776	6,342	434	.0000	0	0	0	0
SUB-TOTAL	6,776	6,342	434	.0000	0	0	0	0
1982								
QTR 9	6,776	6,266	510	.0000	0	0	0	0
QTR 10	6,776	6,188	588	.0000	0	0	0	0
QTR 11	6,776	6,106	670	.0000	0	0	0	0
QTR 12	6,776	6,022	754	.0000	0	0	0	0
SUB-TOTAL	6,776	6,022	754	.0000	0	0	0	0
1983								
QTR 13	6,776	5,643	1,133	.0000	0	0	0	0
QTR 14	6,776	5,197	1,579	.0000	0	0	0	0
QTR 15	6,776	4,784	1,992	.0000	0	0	0	0
QTR 16	6,776	4,516	2,260	.0000	0	0	0	0
SUB-TOTAL	6,776	4,516	2,260	.0000	0	0	0	0
1984								
QTR 17	6,776	3,604	3,172	.0000	0	0	0	0
QTR 18	6,776	2,526	4,250	.0000	0	0	0	0
QTR 19	6,776	1,529	5,247	.0000	0	0	0	0
QTR 20	6,776	884	5,892	.0000	0	0	0	0
SUB-TOTAL	6,776	884	5,892	.0000	0	0	0	0
1985								
QTR 21	6,776	0	6,776	.0000	0	0	0	0
QTR 22	6,776	0	6,776	.0000	0	0	0	0
QTR 23	6,776	0	6,776	.0000	0	0	0	0
QTR 24	6,776	0	6,776	.0000	0	0	0	0
SUB-TOTAL	6,776	0	6,776	.0000	0	0	0	0
1986								
QTR 25	6,776	0	6,776	.0000	0	0	0	0
QTR 26	6,776	0	6,776	.0000	0	0	0	0
QTR 27	6,776	0	6,776	.0000	0	0	0	0
QTR 28	6,776	0	6,776	.0000	0	0	0	0
SUB-TOTAL	6,776	0	6,776	.0000	0	0	0	0
1987								
QTR 29	6,776	0	6,776	.0000	0	0	0	0
QTR 30	6,776	0	6,776	.0000	0	0	0	0
QTR 31	6,776	0	6,776	.0000	0	0	0	0
QTR 32	6,776	0	6,776	.0000	0	0	0	0
SUB-TOTAL	6,776	0	6,776	.0000	0	0	0	0

ALASKA NATURAL GAS
TRANSPORTATION SYSTEM

SCHEDULE OF SPONSOR GUARANTEED DEBT
($ MILLIONS)

	SPONSOR DEBT FUNDS AVAILABLE	SPONSOR DEBT BALANCE	SPONSOR DEBT FUNDS USED	SPONSOR DEBT INTEREST RATE	INTEREST ON SPONSOR DEBT	SPONSOR DEBT EXPENSES & FEES	SPONSOR DEBT EXPENSES INTEREST & FEES	CUMULATIV EXPENSES & CHARGES
1980								
QTR 1	0	0	0	.0425	0	0	0	0
QTR 2	0	0	0	.0425	0	0	0	0
QTR 3	0	0	0	.0425	0	0	0	0
QTR 4	0	0	0	.0425	0	0	0	0
SUB-TOTAL	0	0	0	.1700	0	0	0	0
1981								
QTR 5	0	0	0	.0425	0	0	0	0
QTR 6	0	0	0	.0425	0	0	0	0
QTR 7	0	0	0	.0425	0	0	0	0
QTR 8	0	0	0	.0425	0	0	0	0
SUB-TOTAL	0	0	0	.1700	0	0	0	0
1982								
QTR 9	0	0	0	.0425	0	0	0	0
QTR 10	0	0	0	.0425	0	0	0	0
QTR 11	0	0	0	.0425	0	0	0	0
QTR 12	0	0	0	.0425	0	0	0	0
SUB-TOTAL	0	0	0	.1700	0	0	0	0
1983								
QTR 13	13,552	13,552	0	.0425	0	0	0	0
QTR 14	13,552	13,552	0	.0425	0	0	0	0
QTR 15	13,552	13,552	0	.0425	0	0	0	0
QTR 16	13,552	13,552	0	.0425	0	0	0	0
SUB-TOTAL	13,552	13,552	0	.1700	0	0	0	0
1984								
QTR 17	13,552	13,552	0	.0425	0	0	0	0
QTR 18	13,552	13,552	0	.0425	0	0	0	0
QTR 19	13,552	13,552	0	.0425	0	0	0	0
QTR 20	13,552	13,552	0	.0425	0	0	0	0
SUB-TOTAL	13,552	13,552	0	.1700	0	0	0	0
1985								
QTR 21	13,552	12,811	741	.0425	0	0	0	0
QTR 22	13,552	10,856	2,696	.0425	31	0	31	31
QTR 23	13,552	8,966	4,586	.0425	115	0	115	146
QTR 24	13,552	7,621	5,931	.0425	195	0	195	341
SUB-TOTAL	13,552	7,621	5,931	.1700	341	0	341	341
1986								
QTR 25	13,552	5,810	7,742	.0425	252	0	252	593
QTR 26	13,552	3,633	9,919	.0425	329	0	329	922
QTR 27	13,552	1,504	12,048	.0425	422	0	422	1,344
QTR 28	13,552	0	13,552	.0425	512	0	512	1,856
SUB-TOTAL	13,552	0	13,552	.1700	1,515	0	1,515	1,856
1987								
QTR 29	13,552	0	13,552	.0425	576	0	576	2,432
QTR 30	13,552	0	13,552	.0425	576	0	576	3,008
QTR 31	13,552	0	13,552	.0425	576	0	576	3,584
QTR 32	13,552	0	13,552	.0425	576	0	576	4,159
SUB-TOTAL	13,552	0	13,552	.1700	2,304	0	2,304	4,159

ALASKA NATURAL GAS
TRANSPORTATION SYSTEM

SCHEDULE OF DEBT GUARANTEED BY THE STATE OF ALASKA
($ MILLIONS)

	AK DEBT FUNDS AVAILABLE	AK DEBT FUNDS BALANCE	ALASKA DEBT FUNDS USED	AK DEBT INTEREST RATE	AK DEBT INTEREST EXPENSE	AK DEBT EXPENSES & FEES	AK DEBT EXPENSES INTEREST & FEES	CUMULATIV EXPENSES & CHARGES
1980								
QTR 1	0	0	0	.0425	0	0	0	0
QTR 2	0	0	0	.0425	0	0	0	0
QTR 3	0	0	0	.0425	0	0	0	0
QTR 4	0	0	0	.0425	0	0	0	0
SUB-TOTAL	0	0	0	.1700	0	0	0	0
1981								
QTR 5	0	0	0	.0425	0	0	0	0
QTR 6	0	0	0	.0425	0	0	0	0
QTR 7	0	0	0	.0425	0	0	0	0
QTR 8	0	0	0	.0425	0	0	0	0
SUB-TOTAL	0	0	0	.1700	0	0	0	0
1982								
QTR 9	0	0	0	.0425	0	0	0	0
QTR 10	0	0	0	.0425	0	0	0	0
QTR 11	0	0	0	.0425	0	0	0	0
QTR 12	0	0	0	.0425	0	0	0	0
SUB-TOTAL	0	0	0	.1700	0	0	0	0
1983								
QTR 13	3,000	3,000	0	.0425	0	0	0	0
QTR 14	3,000	3,000	0	.0425	0	0	0	0
QTR 15	3,000	3,000	0	.0425	0	0	0	0
QTR 16	3,000	3,000	0	.0425	0	0	0	0
SUB-TOTAL	3,000	3,000	0	.1700	0	0	0	0
1984								
QTR 17	3,000	3,000	0	.0425	0	0	0	0
QTR 18	3,000	3,000	0	.0425	0	0	0	0
QTR 19	3,000	3,000	0	.0425	0	0	0	0
QTR 20	3,000	3,000	0	.0425	0	0	0	0
SUB-TOTAL	3,000	3,000	0	.1700	0	0	0	0
1985								
QTR 21	3,000	3,000	0	.0425	0	0	0	0
QTR 22	3,000	3,000	0	.0425	0	0	0	0
QTR 23	3,000	3,000	0	.0425	0	0	0	0
QTR 24	3,000	3,000	0	.0425	0	0	0	0
SUB-TOTAL	3,000	3,000	0	.1700	0	0	0	0
1986								
QTR 25	3,000	3,000	0	.0425	0	0	0	0
QTR 26	3,000	3,000	0	.0425	0	0	0	0
QTR 27	3,000	3,000	0	.0425	0	0	0	0
QTR 28	3,000	2,890	110	.0425	0	0	0	0
SUB-TOTAL	3,000	2,890	110	.1700	0	0	0	0
1987								
QTR 29	3,000	1,327	1,673	.0425	5	0	5	5
QTR 30	3,000	0	3,000	.0425	71	0	71	76
QTR 31	3,000	0	3,000	.0425	128	0	128	203
QTR 32	3,000	0	3,000	.0425	128	0	128	331
SUB-TOTAL	3,000	0	3,000	.1700	331	0	331	331

ALASKAN NATURAL GAS
TRANSPORTATION SYSTEM

SCHEDULE OF NON-RECOURSE DEBT
($ MILLIONS)

	DEBT COMMIT-MENT	UNUSED COMMIT-MENT	NON-REC FUNDS USED	INTER-EST RATE	NON-REC DEBT INTEREST EXPENSE	NON-REC DEBT EXPENSES & FEES	NON-REC DEBT EXPENSES INTEREST & FEES	CUMULATIV EXPENSES & CHARGES
1980								
QTR 1	0	0	0	.0425	0	0	0	0
QTR 2	0	0	0	.0425	0	0	0	0
QTR 3	0	0	0	.0425	0	0	0	0
QTR 4	0	0	0	.0425	0	0	0	0
SUB-TOTAL	0	0	0	.1700	0	0	0	0
1981								
QTR 5	0	0	0	.0425	0	0	0	0
QTR 6	0	0	0	.0425	0	0	0	0
QTR 7	0	0	0	.0425	0	0	0	0
QTR 8	0	0	0	.0425	0	0	0	0
SUB-TOTAL	0	0	0	.1700	0	0	0	0
1982								
QTR 9	0	0	0	.0425	0	0	0	0
QTR 10	0	0	0	.0425	0	0	0	0
QTR 11	0	0	0	.0425	0	0	0	0
QTR 12	0	0	0	.0425	0	0	0	0
SUB-TOTAL	0	0	0	.1700	0	0	0	0
1983								
QTR 13	0	0	0	.0425	0	0	0	0
QTR 14	0	0	0	.0425	0	0	0	0
QTR 15	0	0	0	.0425	0	0	0	0
QTR 16	0	0	0	.0425	0	0	0	0
SUB-TOTAL	0	0	0	.1700	0	0	0	0
1984								
QTR 17	0	0	0	.0425	0	0	0	0
QTR 18	0	0	0	.0425	0	0	0	0
QTR 19	0	0	0	.0425	0	0	0	0
QTR 20	0	0	0	.0425	0	0	0	0
SUB-TOTAL	0	0	0	.1700	0	0	0	0
1985								
QTR 21	0	0	0	.0425	0	0	0	0
QTR 22	0	0	0	.0425	0	0	0	0
QTR 23	0	0	0	.0425	0	0	0	0
QTR 24	0	0	0	.0425	0	0	0	0
SUB-TOTAL	0	0	0	.1700	0	0	0	0
1986								
QTR 25	0	0	0	.0425	0	0	0	0
QTR 26	0	0	0	.0425	0	0	0	0
QTR 27	0	0	0	.0425	0	0	0	0
QTR 28	0	0	0	.0425	0	0	0	0
SUB-TOTAL	0	0	0	.1700	0	0	0	0
1987								
QTR 29	0	0	0	.0425	0	0	0	0
QTR 30	3,776	3,293	483	.0425	0	0	0	0
QTR 31	3,776	1,494	2,282	.0425	21	0	21	21
QTR 32	3,776	0	3,776	.0425	97	0	97	117
SUB-TOTAL	3,776	0	3,776	.1700	117	0	117	117

CASE B

INTEREST AT 14%

INFLATION AT 9%

CONTINGENCY AT 20% OF BASE COSTS

EXHIBIT 4

ALASKA NATURAL GAS
TRANSPORTATION SYSTEM
QUARTERLY CONSTRUCTION COST SCHEDULE
($ MILLIONS)

	TOTAL CONSTRUCTION COST				FINANCING CHARGES				TOTALS	
	CONSTRUC-TION COST	INFLATION IMPACT	CONTIN-GENCY	TOTAL CONSTRUC-TION COSTS	SPONSOR DEBT CAPITAL-IZED EXP & FEES	ALASKA DEBT CAPITAL-IZED INT & FEES	NON-REC DEBT CAPITAL-IZED INT & FEES	TOTAL FINANCING CHARGES	TOTAL CONSTRUC-TION & CHARGES	CUMULATIV CONSTRUC-TION & CHARGES
1980										
QTR 1	63	0	0	63	0	0	0	0	63	63
QTR 2	63	0	0	63	0	0	0	0	63	126
QTR 3	64	0	0	64	0	0	0	0	64	190
QTR 4	64	0	0	64	0	0	0	0	64	254
SUB-TOTAL	254	0	0	254	0	0	0	0	254	254
1981										
QTR 5	44	0	0	44	0	0	0	0	44	298
QTR 6	44	0	0	44	0	0	0	0	44	342
QTR 7	46	0	0	46	0	0	0	0	46	388
QTR 8	46	0	0	46	0	0	0	0	46	434
SUB-TOTAL	180	0	0	180	0	0	0	0	180	434
1982										
QTR 9	74	2	0	76	0	0	0	0	76	510
QTR 10	74	3	0	77	0	0	0	0	77	587
QTR 11	76	5	0	81	0	0	0	0	81	668
QTR 12	76	7	0	83	0	0	0	0	83	751
SUB-TOTAL	300	17	0	317	0	0	0	0	317	751
1983										
QTR 13	267	30	60	358	0	0	0	0	358	1,108
QTR 14	307	42	71	420	0	0	0	0	420	1,529
QTR 15	276	45	66	387	0	0	0	0	387	1,916
QTR 16	175	33	42	250	0	0	0	0	250	2,165
SUB-TOTAL	1,025	151	239	1,414	0	0	0	0	1,414	2,165
1984										
QTR 17	585	125	138	848	0	0	0	0	848	3,013
QTR 18	675	162	161	999	0	0	0	0	999	4,012
QTR 19	608	163	148	918	0	0	0	0	918	4,930
QTR 20	383	113	96	592	0	0	0	0	592	5,522
SUB-TOTAL	2,251	563	543	3,357	0	0	0	0	3,357	5,522
1985										
QTR 21	923	298	258	1,479	0	0	0	0	1,479	7,001
QTR 22	1,065	375	304	1,744	37	0	0	37	1,781	8,782
QTR 23	958	365	280	1,603	99	0	0	99	1,702	10,484
QTR 24	604	249	180	1,033	159	0	0	159	1,191	11,676
SUB-TOTAL	3,550	1,287	1,022	5,859	294	0	0	294	6,153	11,676
1986										
QTR 25	800	354	242	1,395	200	0	0	200	1,596	13,271
QTR 26	922	437	286	1,645	256	0	0	256	1,901	15,172
QTR 27	830	420	264	1,513	323	0	0	323	1,836	17,008
QTR 28	523	282	168	973	387	0	0	387	1,360	18,368
SUB-TOTAL	3,075	1,492	959	5,526	1,166	0	0	1,166	6,692	18,368
1987										
QTR 29	455	260	148	863	417	18	0	434	1,298	19,666
QTR 30	525	318	174	1,017	417	63	0	480	1,497	21,163
QTR 31	473	303	160	936	417	104	11	532	1,469	22,632
QTR 32	297	201	103	602	417	104	63	584	1,185	23,817
SUB-TOTAL	1,750	1,083	586	3,419	1,667	289	74	2,030	5,449	23,817
TOTAL	12,385	4,593	3,348	20,326	3,127	289	74	3,490	23,817	0

ALASKA NATURAL GAS
TRANSPORTATION SYSTEM

QUARTERLY FUNDING SCHEDULE
($ MILLIONS)

	USE OF FUNDS			SOURCES OF FUNDS				
	TOTAL CONSTRUC-TION COSTS	TOTAL FINANCING CHARGES	TOTAL CONSTRUC-TION & CHARGES	EQUITY DRAWDOWN	SPONSOR DEBT DRAWDOWN	ALASKA DEBT DRAWDOWN	NON-REC DEBT DRAWDOWN	CUMULATIVE CONSTRUC-TION & CHARGES
1980								
QTR 1	63	0	63	63	0	0	0	63
QTR 2	63	0	63	63	0	0	0	126
QTR 3	64	0	64	64	0	0	0	190
QTR 4	64	0	64	64	0	0	0	254
SUB-TOTAL	254	0	254	254	0	0	0	254
1981								
QTR 5	44	0	44	44	0	0	0	298
QTR 6	44	0	44	44	0	0	0	342
QTR 7	46	0	46	46	0	0	0	388
QTR 8	46	0	46	46	0	0	0	434
SUB-TOTAL	180	0	180	180	0	0	0	434
1982								
QTR 9	76	0	76	76	0	0	0	510
QTR 10	77	0	77	77	0	0	0	587
QTR 11	81	0	81	81	0	0	0	668
QTR 12	83	0	83	83	0	0	0	751
SUB-TOTAL	317	0	317	317	0	0	0	751
1983								
QTR 13	358	0	358	358	0	0	0	1,108
QTR 14	420	0	420	420	0	0	0	1,529
QTR 15	387	0	387	387	0	0	0	1,916
QTR 16	250	0	250	250	0	0	0	2,165
SUB-TOTAL	1,414	0	1,414	1,414	0	0	0	2,165
1984								
QTR 17	848	0	848	848	0	0	0	3,013
QTR 18	999	0	999	999	0	0	0	4,012
QTR 19	918	0	918	918	0	0	0	4,930
QTR 20	592	0	592	592	0	0	0	5,522
SUB-TOTAL	3,357	0	3,357	3,357	0	0	0	5,522
1985								
QTR 21	1,479	0	1,479	432	1,047	0	0	7,001
QTR 22	1,744	37	1,781	0	1,781	0	0	8,782
QTR 23	1,603	99	1,702	0	1,702	0	0	10,484
QTR 24	1,033	159	1,191	0	1,191	0	0	11,676
SUB-TOTAL	5,859	294	6,153	432	5,721	0	0	11,676
1986								
QTR 25	1,395	200	1,596	0	1,596	0	0	13,271
QTR 26	1,645	256	1,901	0	1,901	0	0	15,172
QTR 27	1,513	323	1,836	0	1,836	0	0	17,008
QTR 28	973	387	1,360	0	854	506	0	18,368
SUB-TOTAL	5,526	1,166	6,692	0	6,187	506	0	18,368
1987								
QTR 29	863	434	1,298	0	0	1,298	0	19,666
QTR 30	1,017	480	1,497	0	0	1,174	324	21,163
QTR 31	936	532	1,469	0	0	0	1,469	22,632
QTR 32	602	584	1,185	0	0	0	1,185	23,817
SUB-TOTAL	3,419	2,030	5,449	0	0	2,471	2,978	23,817
TOTAL	20,326	3,490	23,817	5,954	11,908	2,977	2,978	

KIDDER, PEABODY & CO. INC.

ALASKA NATURAL GAS
TRANSPORTATION SYSTEM

CUMULATIVE QUARTERLY FUNDING SCHEDULE
($ MILLIONS)

		CUMULATIVE SOURCES OF FUNDS			
	CUMULATIV CONSTRUC-TION & CHARGES	EQUITY FUNDS USED	SPONSOR DEBT FUNDS USED	ALASKA DEBT FUNDS USED	NON-REC FUNDS USED
1980					
QTR 1	63	63	0	0	0
QTR 2	126	126	0	0	0
QTR 3	190	190	0	0	0
QTR 4	254	254	0	0	0
SUB-TOTAL	254	254	0	0	0
1981					
QTR 5	298	298	0	0	0
QTR 6	342	342	0	0	0
QTR 7	388	388	0	0	0
QTR 8	434	434	0	0	0
SUB-TOTAL	434	434	0	0	0
1982					
QTR 9	510	510	0	0	0
QTR 10	587	587	0	0	0
QTR 11	668	668	0	0	0
QTR 12	751	751	0	0	0
SUB-TOTAL	751	751	0	0	0
1983					
QTR 13	1,108	1,108	0	0	0
QTR 14	1,529	1,529	0	0	0
QTR 15	1,916	1,916	0	0	0
QTR 16	2,165	2,165	0	0	0
SUB-TOTAL	2,165	2,165	0	0	0
1984					
QTR 17	3,013	3,013	0	0	0
QTR 18	4,012	4,012	0	0	0
QTR 19	4,930	4,930	0	0	0
QTR 20	5,522	5,522	0	0	0
SUB-TOTAL	5,522	5,522	0	0	0
1985					
QTR 21	7,001	5,954	1,047	0	0
QTR 22	8,782	5,954	2,828	0	0
QTR 23	10,484	5,954	4,530	0	0
QTR 24	11,676	5,954	5,721	0	0
SUB-TOTAL	11,676	5,954	5,721	0	0
1986					
QTR 25	13,271	5,954	7,317	0	0
QTR 26	15,172	5,954	9,218	0	0
QTR 27	17,008	5,954	11,054	0	0
QTR 28	18,368	5,954	11,908	506	0
SUB-TOTAL	18,368	5,954	11,908	506	0
1987					
QTR 29	19,666	5,954	11,908	1,803	0
QTR 30	21,163	5,954	11,908	2,977	324
QTR 31	22,632	5,954	11,908	2,977	1,792
QTR 32	23,817	5,954	11,908	2,977	2,978
SUB-TOTAL	23,817	5,954	11,908	2,977	2,978

ALASKA NATURAL GAS
TRANSPORTATION SYSTEM
EQUITY SCHEDULE
($ MILLIONS)

	EQUITY FUNDS AVAILABLE	EQUITY FUNDS BALANCE	EQUITY FUNDS USED	EQUITY RATE	INTEREST ON EQUITY	EQUITY EXPENSES & FEES	EQUITY INTEREST EXPENSES & FEES	CUMULATIV EXPENSES & CHARGES
1980								
QTR 1	5,954	5,891	63	.0000	0	0	0	0
QTR 2	5,954	5,828	126	.0000	0	0	0	0
QTR 3	5,954	5,764	190	.0000	0	0	0	0
QTR 4	5,954	5,700	254	.0000	0	0	0	0
SUB-TOTAL	5,954	5,700	254	.0000	0	0	0	0
1981								
QTR 5	5,954	5,656	298	.0000	0	0	0	0
QTR 6	5,954	5,612	342	.0000	0	0	0	0
QTR 7	5,954	5,566	388	.0000	0	0	0	0
QTR 8	5,954	5,520	434	.0000	0	0	0	0
SUB-TOTAL	5,954	5,520	434	.0000	0	0	0	0
1982								
QTR 9	5,954	5,445	510	.0000	0	0	0	0
QTR 10	5,954	5,367	587	.0000	0	0	0	0
QTR 11	5,954	5,286	668	.0000	0	0	0	0
QTR 12	5,954	5,203	751	.0000	0	0	0	0
SUB-TOTAL	5,954	5,203	751	.0000	0	0	0	0
1983								
QTR 13	5,954	4,846	1,108	.0000	0	0	0	0
QTR 14	5,954	4,425	1,529	.0000	0	0	0	0
QTR 15	5,954	4,038	1,916	.0000	0	0	0	0
QTR 16	5,954	3,789	2,165	.0000	0	0	0	0
SUB-TOTAL	5,954	3,789	2,165	.0000	0	0	0	0
1984								
QTR 17	5,954	2,941	3,013	.0000	0	0	0	0
QTR 18	5,954	1,943	4,012	.0000	0	0	0	0
QTR 19	5,954	1,024	4,930	.0000	0	0	0	0
QTR 20	5,954	432	5,522	.0000	0	0	0	0
SUB-TOTAL	5,954	432	5,522	.0000	0	0	0	0
1985								
QTR 21	5,954	0	5,954	.0000	0	0	0	0
QTR 22	5,954	0	5,954	.0000	0	0	0	0
QTR 23	5,954	0	5,954	.0000	0	0	0	0
QTR 24	5,954	0	5,954	.0000	0	0	0	0
SUB-TOTAL	5,954	0	5,954	.0000	0	0	0	0
1986								
QTR 25	5,954	0	5,954	.0000	0	0	0	0
QTR 26	5,954	0	5,954	.0000	0	0	0	0
QTR 27	5,954	0	5,954	.0000	0	0	0	0
QTR 28	5,954	0	5,954	.0000	0	0	0	0
SUB-TOTAL	5,954	0	5,954	.0000	0	0	0	0
1987								
QTR 29	5,954	0	5,954	.0000	0	0	0	0
QTR 30	5,954	0	5,954	.0000	0	0	0	0
QTR 31	5,954	0	5,954	.0000	0	0	0	0
QTR 32	5,954	0	5,954	.0000	0	0	0	0
SUB-TOTAL	5,954	0	5,954	.0000	0	0	0	0

ALASKA NATURAL GAS
TRANSPORTATION SYSTEM

SCHEDULE OF SPONSOR GUARANTEED DEBT
($ MILLIONS)

	SPONSOR DEBT FUNDS AVAILABLE	SPONSOR DEBT BALANCE	SPONSOR DEBT FUNDS USED	SPONSOR DEBT INTEREST RATE	INTEREST ON SPONSOR DEBT	SPONSOR DEBT EXPENSES & FEES	SPONSOR DEBT EXPENSES INTEREST & FEES	CUMULATIV EXPENSES & CHARGES
1980								
QTR 1	0	0	0	.0350	0	0	0	0
QTR 2	0	0	0	.0350	0	0	0	0
QTR 3	0	0	0	.0350	0	0	0	0
QTR 4	0	0	0	.0350	0	0	0	0
SUB-TOTAL	0	0	0	.1400	0	0	0	0
1981								
QTR 5	0	0	0	.0350	0	0	0	0
QTR 6	0	0	0	.0350	0	0	0	0
QTR 7	0	0	0	.0350	0	0	0	0
QTR 8	0	0	0	.0350	0	0	0	0
SUB-TOTAL	0	0	0	.1400	0	0	0	0
1982								
QTR 9	0	0	0	.0350	0	0	0	0
QTR 10	0	0	0	.0350	0	0	0	0
QTR 11	0	0	0	.0350	0	0	0	0
QTR 12	0	0	0	.0350	0	0	0	0
SUB-TOTAL	0	0	0	.1400	0	0	0	0
1983								
QTR 13	11,908	11,908	0	.0350	0	0	0	0
QTR 14	11,908	11,908	0	.0350	0	0	0	0
QTR 15	11,908	11,908	0	.0350	0	0	0	0
QTR 16	11,908	11,908	0	.0350	0	0	0	0
SUB-TOTAL	11,908	11,908	0	.1400	0	0	0	0
1984								
QTR 17	11,908	11,908	0	.0350	0	0	0	0
QTR 18	11,908	11,908	0	.0350	0	0	0	0
QTR 19	11,908	11,908	0	.0350	0	0	0	0
QTR 20	11,908	11,908	0	.0350	0	0	0	0
SUB-TOTAL	11,908	11,908	0	.1400	0	0	0	0
1985								
QTR 21	11,908	10,861	1,047	.0350	0	0	0	0
QTR 22	11,908	9,080	2,828	.0350	37	0	37	37
QTR 23	11,908	7,378	4,530	.0350	99	0	99	136
QTR 24	11,908	6,187	5,721	.0350	159	0	159	294
SUB-TOTAL	11,908	6,187	5,721	.1400	294	0	294	294
1986								
QTR 25	11,908	4,591	7,317	.0350	200	0	200	494
QTR 26	11,908	2,690	9,218	.0350	256	0	256	751
QTR 27	11,908	854	11,054	.0350	323	0	323	1,073
QTR 28	11,908	0	11,908	.0350	387	0	387	1,460
SUB-TOTAL	11,908	0	11,908	.1400	1,166	0	1,166	1,460
1987								
QTR 29	11,908	0	11,908	.0350	417	0	417	1,877
QTR 30	11,908	0	11,908	.0350	417	0	417	2,294
QTR 31	11,908	0	11,908	.0350	417	0	417	2,710
QTR 32	11,908	0	11,908	.0350	417	0	417	3,127
SUB-TOTAL	11,908	0	11,908	.1400	1,667	0	1,667	3,127

ALASKA NATURAL GAS
TRANSPORTATION SYSTEM

SCHEDULE OF DEBT GUARANTEED BY THE STATE OF ALASKA
($ MILLIONS)

	AK DEBT FUNDS AVAILABLE	AK DEBT FUNDS BALANCE	ALASKA DEBT FUNDS USED	AK DEBT INTEREST RATE	AK DEBT INTEREST EXPENSE	AK DEBT EXPENSES & FEES	AK DEBT EXPENSES INTEREST & FEES	CUMULATIV EXPENSES & CHARGES
1980								
QTR 1	0	0	0	.0350	0	0	0	0
QTR 2	0	0	0	.0350	0	0	0	0
QTR 3	0	0	0	.0350	0	0	0	0
QTR 4	0	0	0	.0350	0	0	0	0
SUB-TOTAL	0	0	0	.1400	0	0	0	0
1981								
QTR 5	0	0	0	.0350	0	0	0	0
QTR 6	0	0	0	.0350	0	0	0	0
QTR 7	0	0	0	.0350	0	0	0	0
QTR 8	0	0	0	.0350	0	0	0	0
SUB-TOTAL	0	0	0	.1400	0	0	0	0
1982								
QTR 9	0	0	0	.0350	0	0	0	0
QTR 10	0	0	0	.0350	0	0	0	0
QTR 11	0	0	0	.0350	0	0	0	0
QTR 12	0	0	0	.0350	0	0	0	0
SUB-TOTAL	0	0	0	.1400	0	0	0	0
1983								
QTR 13	2,977	2,977	0	.0350	0	0	0	0
QTR 14	2,977	2,977	0	.0350	0	0	0	0
QTR 15	2,977	2,977	0	.0350	0	0	0	0
QTR 16	2,977	2,977	0	.0350	0	0	0	0
SUB-TOTAL	2,977	2,977	0	.1400	0	0	0	0
1984								
QTR 17	2,977	2,977	0	.0350	0	0	0	0
QTR 18	2,977	2,977	0	.0350	0	0	0	0
QTR 19	2,977	2,977	0	.0350	0	0	0	0
QTR 20	2,977	2,977	0	.0350	0	0	0	0
SUB-TOTAL	2,977	2,977	0	.1400	0	0	0	0
1985								
QTR 21	2,977	2,977	0	.0350	0	0	0	0
QTR 22	2,977	2,977	0	.0350	0	0	0	0
QTR 23	2,977	2,977	0	.0350	0	0	0	0
QTR 24	2,977	2,977	0	.0350	0	0	0	0
SUB-TOTAL	2,977	2,977	0	.1400	0	0	0	0
1986								
QTR 25	2,977	2,977	0	.0350	0	0	0	0
QTR 26	2,977	2,977	0	.0350	0	0	0	0
QTR 27	2,977	2,977	0	.0350	0	0	0	0
QTR 28	2,977	2,471	506	.0350	0	0	0	0
SUB-TOTAL	2,977	2,471	506	.1400	0	0	0	0
1987								
QTR 29	2,977	1,174	1,803	.0350	18	0	18	18
QTR 30	2,977	0	2,977	.0350	63	0	63	81
QTR 31	2,977	0	2,977	.0350	104	0	104	185
QTR 32	2,977	0	2,977	.0350	104	0	104	289
SUB-TOTAL	2,977	0	2,977	.1400	289	0	289	289

KIDDER, PEABODY & CO. INC.

ALASKAN NATURAL GAS
TRANSPORTATION SYSTEM

SCHEDULE OF NON-RECOURSE DEBT
($ MILLIONS)

	DEBT COMMIT-MENT	UNUSED COMMIT-MENT	NON-REC FUNDS USED	INTER-EST RATE	NON-REC DEBT INTEREST EXPENSE	NON-REC DEBT EXPENSES & FEES	NON-REC DEBT EXPENSES INTEREST & FEES	CUMULATIV EXPENSES & CHARGES
1980								
QTR 1	0	0	0	.0350	0	0	0	0
QTR 2	0	0	0	.0350	0	0	0	0
QTR 3	0	0	0	.0350	0	0	0	0
QTR 4	0	0	0	.0350	0	0	0	0
SUB-TOTAL	0	0	0	.1400	0	0	0	0
1981								
QTR 5	0	0	0	.0350	0	0	0	0
QTR 6	0	0	0	.0350	0	0	0	0
QTR 7	0	0	0	.0350	0	0	0	0
QTR 8	0	0	0	.0350	0	0	0	0
SUB-TOTAL	0	0	0	.1400	0	0	0	0
1982								
QTR 9	0	0	0	.0350	0	0	0	0
QTR 10	0	0	0	.0350	0	0	0	0
QTR 11	0	0	0	.0350	0	0	0	0
QTR 12	0	0	0	.0350	0	0	0	0
SUB-TOTAL	0	0	0	.1400	0	0	0	0
1983								
QTR 13	0	0	0	.0350	0	0	0	0
QTR 14	0	0	0	.0350	0	0	0	0
QTR 15	0	0	0	.0350	0	0	0	0
QTR 16	0	0	0	.0350	0	0	0	0
TAL	0	0	0	.1400	0	0	0	0
1984								
QTR 17	0	0	0	.0350	0	0	0	0
QTR 18	0	0	0	.0350	0	0	0	0
QTR 19	0	0	0	.0350	0	0	0	0
QTR 20	0	0	0	.0350	0	0	0	0
SUB-TOTAL	0	0	0	.1400	0	0	0	0
1985								
QTR 21	0	0	0	.0350	0	0	0	0
QTR 22	0	0	0	.0350	0	0	0	0
QTR 23	0	0	0	.0350	0	0	0	0
QTR 24	0	0	0	.0350	0	0	0	0
SUB-TOTAL	0	0	0	.1400	0	0	0	0
1986								
QTR 25	0	0	0	.0350	0	0	0	0
QTR 26	0	0	0	.0350	0	0	0	0
QTR 27	0	0	0	.0350	0	0	0	0
QTR 28	0	0	0	.0350	0	0	0	0
SUB-TOTAL	0	0	0	.1400	0	0	0	0
1987								
QTR 29	0	0	0	.0350	0	0	0	0
QTR 30	2,978	2,654	324	.0350	0	0	0	0
QTR 31	2,978	1,185	1,792	.0350	11	0	11	11
QTR 32	2,978	0	2,978	.0350	63	0	63	74
SUB-TOTAL	2,978	0	2,978	.1400	74	0	74	74

CASE C

INTEREST AT 18%

INFLATION AT 12%

CONTINGENCY AT 34% OF BASE COSTS

EXHIBIT 5

ALASKA NATURAL GAS
TRANSPORTATION SYSTEM
QUARTERLY CONSTRUCTION COST SCHEDULE
($ MILLIONS)

	TOTAL CONSTRUCTION COST				FINANCING CHARGES				TOTALS	
	CONSTRUC-TION COST	INFLATION IMPACT	CONTIN-GENCY	TOTAL CONSTRUC-TION COSTS	SPONSOR DEBT CAPITAL-IZED EXP & FEES	ALASKA DEBT CAPITAL-IZED INT & FEES	NON-REC DEBT CAPITAL-IZED INT & FEES	TOTAL FINANCING CHARGES	TOTAL CONSTRUC-TION & CHARGES	CUMULATIV CONSTRUC-TION & CHARGES
1980										
QTR 1	63	0	0	63	0	0	0	0	63	63
QTR 2	63	0	0	63	0	0	0	0	63	126
QTR 3	64	0	0	64	0	0	0	0	64	190
QTR 4	64	0	0	64	0	0	0	0	64	254
SUB-TOTAL	254	0	0	254	0	0	0	0	254	254
1981										
QTR 5	44	0	0	44	0	0	0	0	44	298
QTR 6	44	0	0	44	0	0	0	0	44	342
QTR 7	46	0	0	46	0	0	0	0	46	388
QTR 8	46	0	0	46	0	0	0	0	46	434
SUB-TOTAL	180	0	0	180	0	0	0	0	180	434
1982										
QTR 9	74	2	0	76	0	0	0	0	76	510
QTR 10	74	4	0	78	0	0	0	0	78	588
QTR 11	76	7	0	83	0	0	0	0	83	671
QTR 12	76	9	0	85	0	0	0	0	85	756
SUB-TOTAL	300	22	0	322	0	0	0	0	322	756
1983										
QTR 13	267	41	106	414	0	0	0	0	414	1,170
QTR 14	307	57	126	490	0	0	0	0	490	1,660
QTR 15	276	61	117	454	0	0	0	0	454	2,114
QTR 16	175	45	75	294	0	0	0	0	294	2,408
SUB-TOTAL	1,025	203	424	1,652	0	0	0	0	1,652	2,408
1984										
QTR 17	585	170	249	1,004	0	0	0	0	1,004	3,412
QTR 18	675	221	293	1,190	0	0	0	0	1,190	4,601
QTR 19	608	222	271	1,101	0	0	0	0	1,101	5,702
QTR 20	383	155	177	715	0	0	0	0	715	6,418
SUB-TOTAL	2,251	768	990	4,010	0	0	0	0	4,010	6,418
1985										
QTR 21	923	411	479	1,813	0	0	0	0	1,813	8,231
QTR 22	1,065	519	569	2,152	27	0	0	27	2,179	10,410
QTR 23	958	507	527	1,992	125	0	0	125	2,117	12,527
QTR 24	604	346	341	1,292	220	0	0	220	1,512	14,039
SUB-TOTAL	3,550	1,783	1,916	7,249	372	0	0	372	7,621	14,039
1986										
QTR 25	800	495	461	1,756	288	0	0	288	2,044	16,083
QTR 26	922	613	550	2,085	380	0	0	380	2,465	18,548
QTR 27	830	592	510	1,932	491	0	0	491	2,423	20,971
QTR 28	523	399	327	1,249	600	0	0	600	1,849	22,820
SUB-TOTAL	3,075	2,099	1,847	7,022	1,760	0	0	1,760	8,781	22,820
1987										
QTR 29	455	370	290	1,115	683	0	0	683	1,799	24,619
QTR 30	525	454	344	1,323	687	77	0	764	2,087	26,706
QTR 31	473	435	318	1,226	687	135	36	858	2,084	28,790
QTR 32	297	289	207	793	687	135	130	952	1,745	30,535
SUB-TOTAL	1,750	1,548	1,159	4,457	2,745	347	166	3,258	7,715	30,535
TOTAL	12,385	6,424	6,336	25,145	4,876	347	166	5,390	30,535	

ALASKA NATURAL GAS
TRANSPORTATION SYSTEM

QUARTERLY FUNDING SCHEDULE
($ MILLIONS)

	USE OF FUNDS			SOURCES OF FUNDS				
	TOTAL CONSTRUC-TION COSTS	TOTAL FINANCING CHARGES	TOTAL CONSTRUC-TION & CHARGES	EQUITY DRAWDOWN	SPONSOR DEBT DRAWDOWN	ALASKA DEBT DRAWDOWN	NON-REC DEBT DRAWDOWN	CUMULATIVE CONSTRUC-TION & CHARGES
1980								
QTR 1	63	0	63	63	0	0	0	63
QTR 2	63	0	63	63	0	0	0	126
QTR 3	64	0	64	64	0	0	0	190
QTR 4	64	0	64	64	0	0	0	254
SUB-TOTAL	254	0	254	254	0	0	0	254
1981								
QTR 5	44	0	44	44	0	0	0	298
QTR 6	44	0	44	44	0	0	0	342
QTR 7	46	0	46	46	0	0	0	388
QTR 8	46	0	46	46	0	0	0	434
SUB-TOTAL	180	0	180	180	0	0	0	434
1982								
QTR 9	76	0	76	76	0	0	0	510
QTR 10	78	0	78	78	0	0	0	588
QTR 11	83	0	83	83	0	0	0	671
QTR 12	85	0	85	85	0	0	0	756
SUB-TOTAL	322	0	322	322	0	0	0	756
1983								
QTR 13	414	0	414	414	0	0	0	1,170
QTR 14	490	0	490	490	0	0	0	1,660
QTR 15	454	0	454	454	0	0	0	2,114
QTR 16	294	0	294	294	0	0	0	2,408
SUB-TOTAL	1,652	0	1,652	1,652	0	0	0	2,408
1984								
QTR 17	1,004	0	1,004	1,004	0	0	0	3,412
QTR 18	1,190	0	1,190	1,190	0	0	0	4,601
QTR 19	1,101	0	1,101	1,101	0	0	0	5,702
QTR 20	715	0	715	715	0	0	0	6,418
SUB-TOTAL	4,010	0	4,010	4,010	0	0	0	6,418
1985								
QTR 21	1,813	0	1,813	1,216	597	0	0	8,231
QTR 22	2,152	27	2,179	0	2,179	0	0	10,410
QTR 23	1,992	125	2,117	0	2,117	0	0	12,527
QTR 24	1,292	220	1,512	0	1,512	0	0	14,039
SUB-TOTAL	7,249	372	7,621	1,216	6,405	0	0	14,039
1986								
QTR 25	1,756	288	2,044	0	2,044	0	0	16,083
QTR 26	2,085	380	2,465	0	2,465	0	0	18,548
QTR 27	1,932	491	2,423	0	2,423	0	0	20,971
QTR 28	1,249	600	1,849	0	1,849	0	0	22,820
SUB-TOTAL	7,022	1,760	8,781	0	8,781	0	0	22,820
1987								
QTR 29	1,115	683	1,799	0	82	1,717	0	24,619
QTR 30	1,323	764	2,087	0	0	1,283	804	26,706
QTR 31	1,226	858	2,084	0	0	0	2,084	28,790
QTR 32	793	952	1,745	0	0	0	1,745	30,535
SUB-TOTAL	4,457	3,258	7,715	0	82	3,000	4,633	30,535
TOTAL	25,145	5,390	30,535	7,634	15,268	3,000	4,633	

ALASKA NATURAL GAS
TRANSPORTATION SYSTEM

CUMULATIVE QUARTERLY FUNDING SCHEDULE
($ MILLIONS)

		CUMULATIVE SOURCES OF FUNDS			
	CUMULATIV CONSTRUC-TION & CHARGES	EQUITY FUNDS USED	SPONSOR DEBT FUNDS USED	ALASKA DEBT FUNDS USED	NON-REC FUNDS USED
1980					
QTR 1	63	63	0	0	0
QTR 2	126	126	0	0	0
QTR 3	190	190	0	0	0
QTR 4	254	254	0	0	0
SUB-TOTAL	254	254	0	0	0
1981					
QTR 5	298	298	0	0	0
QTR 6	342	342	0	0	0
QTR 7	388	388	0	0	0
QTR 8	434	434	0	0	0
SUB-TOTAL	434	434	0	0	0
1982					
QTR 9	510	510	0	0	0
QTR 10	588	588	0	0	0
QTR 11	671	671	0	0	0
QTR 12	756	756	0	0	0
SUB-TOTAL	756	756	0	0	0
1983					
QTR 13	1,170	1,170	0	0	0
QTR 14	1,660	1,660	0	0	0
QTR 15	2,114	2,114	0	0	0
QTR 16	2,408	2,408	0	0	0
SUB-TOTAL	2,408	2,408	0	0	0
1984					
QTR 17	3,412	3,412	0	0	0
QTR 18	4,601	4,601	0	0	0
QTR 19	5,702	5,702	0	0	0
QTR 20	6,418	6,418	0	0	0
SUB-TOTAL	6,418	6,418	0	0	0
1985					
QTR 21	8,231	7,634	597	0	0
QTR 22	10,410	7,634	2,776	0	0
QTR 23	12,527	7,634	4,893	0	0
QTR 24	14,039	7,634	6,405	0	0
SUB-TOTAL	14,039	7,634	6,405	0	0
1986					
QTR 25	16,083	7,634	8,449	0	0
QTR 26	18,548	7,634	10,915	0	0
QTR 27	20,971	7,634	13,337	0	0
QTR 28	22,820	7,634	15,186	0	0
SUB-TOTAL	22,820	7,634	15,186	0	0
1987					
QTR 29	24,619	7,634	15,268	1,717	0
QTR 30	26,706	7,634	15,268	3,000	804
QTR 31	28,790	7,634	15,268	3,000	2,888
QTR 32	30,535	7,634	15,268	3,000	4,633
SUB-TOTAL	30,535	7,634	15,268	3,000	4,633

ALASKA NATURAL GAS
TRANSPORTATION SYSTEM
EQUITY SCHEDULE
($ MILLIONS)

	EQUITY FUNDS AVAILABLE	EQUITY FUNDS BALANCE	EQUITY FUNDS USED	EQUITY RATE	INTEREST ON EQUITY	EQUITY EXPENSES & FEES	EQUITY INTEREST EXPENSES & FEES	CUMULATIV EXPENSES & CHARGES
1980								
QTR 1	7,634	7,571	63	.0000	0	0	0	0
QTR 2	7,634	7,508	126	.0000	0	0	0	0
QTR 3	7,634	7,444	190	.0000	0	0	0	0
QTR 4	7,634	7,380	254	.0000	0	0	0	0
SUB-TOTAL	7,634	7,380	254	.0000	0	0	0	0
1981								
QTR 5	7,634	7,336	298	.0000	0	0	0	0
QTR 6	7,634	7,292	342	.0000	0	0	0	0
QTR 7	7,634	7,246	388	.0000	0	0	0	0
QTR 8	7,634	7,200	434	.0000	0	0	0	0
SUB-TOTAL	7,634	7,200	434	.0000	0	0	0	0
1982								
QTR 9	7,634	7,124	510	.0000	0	0	0	0
QTR 10	7,634	7,045	588	.0000	0	0	0	0
QTR 11	7,634	6,963	671	.0000	0	0	0	0
QTR 12	7,634	6,877	756	.0000	0	0	0	0
SUB-TOTAL	7,634	6,877	756	.0000	0	0	0	0
1983								
QTR 13	7,634	6,464	1,170	.0000	0	0	0	0
QTR 14	7,634	5,974	1,660	.0000	0	0	0	0
QTR 15	7,634	5,520	2,114	.0000	0	0	0	0
QTR 16	7,634	5,226	2,408	.0000	0	0	0	0
SUB-TOTAL	7,634	5,226	2,408	.0000	0	0	0	0
1984								
QTR 17	7,634	4,222	3,412	.0000	0	0	0	0
QTR 18	7,634	3,033	4,601	.0000	0	0	0	0
QTR 19	7,634	1,931	5,702	.0000	0	0	0	0
QTR 20	7,634	1,216	6,418	.0000	0	0	0	0
SUB-TOTAL	7,634	1,216	6,418	.0000	0	0	0	0
1985								
QTR 21	7,634	0	7,634	.0000	0	0	0	0
QTR 22	7,634	0	7,634	.0000	0	0	0	0
QTR 23	7,634	0	7,634	.0000	0	0	0	0
QTR 24	7,634	0	7,634	.0000	0	0	0	0
SUB-TOTAL	7,634	0	7,634	.0000	0	0	0	0
1986								
QTR 25	7,634	0	7,634	.0000	0	0	0	0
QTR 26	7,634	0	7,634	.0000	0	0	0	0
QTR 27	7,634	0	7,634	.0000	0	0	0	0
QTR 28	7,634	0	7,634	.0000	0	0	0	0
SUB-TOTAL	7,634	0	7,634	.0000	0	0	0	0
1987								
QTR 29	7,634	0	7,634	.0000	0	0	0	0
QTR 30	7,634	0	7,634	.0000	0	0	0	0
QTR 31	7,634	0	7,634	.0000	0	0	0	0
QTR 32	7,634	0	7,634	.0000	0	0	0	0
SUB-TOTAL	7,634	0	7,634	.0000	0	0	0	0

ALASKA NATURAL GAS
TRANSPORTATION SYSTEM

SCHEDULE OF SPONSOR GUARANTEED DEBT
($ MILLIONS)

	SPONSOR DEBT FUNDS AVAILABLE	SPONSOR DEBT BALANCE	SPONSOR DEBT FUNDS USED	SPONSOR DEBT INTEREST RATE	INTEREST ON SPONSOR DEBT	SPONSOR DEBT EXPENSES & FEES	SPONSOR DEBT EXPENSES INTEREST & FEES	CUMULATIV EXPENSES & CHARGES
1980								
QTR 1	0	0	0	.0450	0	0	0	0
QTR 2	0	0	0	.0450	0	0	0	0
QTR 3	0	0	0	.0450	0	0	0	0
QTR 4	0	0	0	.0450	0	0	0	0
SUB-TOTAL	0	0	0	.1800	0	0	0	0
1981								
QTR 5	0	0	0	.0450	0	0	0	0
QTR 6	0	0	0	.0450	0	0	0	0
QTR 7	0	0	0	.0450	0	0	0	0
QTR 8	0	0	0	.0450	0	0	0	0
SUB-TOTAL	0	0	0	.1800	0	0	0	0
1982								
QTR 9	0	0	0	.0450	0	0	0	0
QTR 10	0	0	0	.0450	0	0	0	0
QTR 11	0	0	0	.0450	0	0	0	0
QTR 12	0	0	0	.0450	0	0	0	0
SUB-TOTAL	0	0	0	.1800	0	0	0	0
1983								
QTR 13	15,268	15,268	0	.0450	0	0	0	0
QTR 14	15,268	15,268	0	.0450	0	0	0	0
QTR 15	15,268	15,268	0	.0450	0	0	0	0
QTR 16	15,268	15,268	0	.0450	0	0	0	0
SUB-TOTAL	15,268	15,268	0	.1800	0	0	0	0
1984								
QTR 17	15,268	15,268	0	.0450	0	0	0	0
QTR 18	15,268	15,268	0	.0450	0	0	0	0
QTR 19	15,268	15,268	0	.0450	0	0	0	0
QTR 20	15,268	15,268	0	.0450	0	0	0	0
SUB-TOTAL	15,268	15,268	0	.1800	0	0	0	0
1985								
QTR 21	15,268	14,671	597	.0450	0	0	0	0
QTR 22	15,268	12,492	2,776	.0450	27	0	27	27
QTR 23	15,268	10,375	4,893	.0450	125	0	125	152
QTR 24	15,268	8,863	6,405	.0450	220	0	220	372
SUB-TOTAL	15,268	8,863	6,405	.1800	372	0	372	372
1986								
QTR 25	15,268	6,819	8,449	.0450	288	0	288	660
QTR 26	15,268	4,353	10,915	.0450	380	0	380	1,040
QTR 27	15,268	1,931	13,337	.0450	491	0	491	1,532
QTR 28	15,268	82	15,186	.0450	600	0	600	2,132
SUB-TOTAL	15,268	82	15,186	.1800	1,760	0	1,760	2,132
1987								
QTR 29	15,268	0	15,268	.0450	683	0	683	2,815
QTR 30	15,268	0	15,268	.0450	687	0	687	3,502
QTR 31	15,268	0	15,268	.0450	687	0	687	4,189
QTR 32	15,268	0	15,268	.0450	687	0	687	4,876
SUB-TOTAL	15,268	0	15,268	.1800	2,745	0	2,745	4,876

ALASKA NATURAL GAS
TRANSPORTATION SYSTEM

SCHEDULE OF DEBT GUARANTEED BY THE STATE OF ALASKA
($ MILLIONS)

	AK DEBT FUNDS AVAILABLE	AK DEBT FUNDS BALANCE	ALASKA DEBT FUNDS USED	AK DEBT INTEREST RATE	AK DEBT INTEREST EXPENSE	AK DEBT EXPENSES & FEES	AK DEBT EXPENSES INTEREST & FEES	CUMULATIV EXPENSES & CHARGES
1980								
QTR 1	0	0	0	.0450	0	0	0	0
QTR 2	0	0	0	.0450	0	0	0	0
QTR 3	0	0	0	.0450	0	0	0	0
QTR 4	0	0	0	.0450	0	0	0	0
SUB-TOTAL	0	0	0	.1800	0	0	0	0
1981								
QTR 5	0	0	0	.0450	0	0	0	0
QTR 6	0	0	0	.0450	0	0	0	0
QTR 7	0	0	0	.0450	0	0	0	0
QTR 8	0	0	0	.0450	0	0	0	0
SUB-TOTAL	0	0	0	.1800	0	0	0	0
1982								
QTR 9	0	0	0	.0450	0	0	0	0
QTR 10	0	0	0	.0450	0	0	0	0
QTR 11	0	0	0	.0450	0	0	0	0
QTR 12	0	0	0	.0450	0	0	0	0
SUB-TOTAL	0	0	0	.1800	0	0	0	0
1983								
QTR 13	3,000	3,000	0	.0450	0	0	0	0
QTR 14	3,000	3,000	0	.0450	0	0	0	0
QTR 15	3,000	3,000	0	.0450	0	0	0	0
QTR 16	3,000	3,000	0	.0450	0	0	0	0
SUB-TOTAL	3,000	3,000	0	.1800	0	0	0	0
1984								
QTR 17	3,000	3,000	0	.0450	0	0	0	0
QTR 18	3,000	3,000	0	.0450	0	0	0	0
QTR 19	3,000	3,000	0	.0450	0	0	0	0
QTR 20	3,000	3,000	0	.0450	0	0	0	0
SUB-TOTAL	3,000	3,000	0	.1800	0	0	0	0
1985								
QTR 21	3,000	3,000	0	.0450	0	0	0	0
QTR 22	3,000	3,000	0	.0450	0	0	0	0
QTR 23	3,000	3,000	0	.0450	0	0	0	0
QTR 24	3,000	3,000	0	.0450	0	0	0	0
SUB-TOTAL	3,000	3,000	0	.1800	0	0	0	0
1986								
QTR 25	3,000	3,000	0	.0450	0	0	0	0
QTR 26	3,000	3,000	0	.0450	0	0	0	0
QTR 27	3,000	3,000	0	.0450	0	0	0	0
QTR 28	3,000	3,000	0	.0450	0	0	0	0
SUB-TOTAL	3,000	3,000	0	.1800	0	0	0	0
1987								
QTR 29	3,000	1,283	1,717	.0450	0	0	0	0
QTR 30	3,000	0	3,000	.0450	77	0	77	77
QTR 31	3,000	0	3,000	.0450	135	0	135	212
QTR 32	3,000	0	3,000	.0450	135	0	135	347
SUB-TOTAL	3,000	0	3,000	.1800	347	0	347	347

ALASKAN NATURAL GAS
TRANSPORTATION SYSTEM

SCHEDULE OF NON-RECOURSE DEBT
($ MILLIONS)

	DEBT COMMIT-MENT	UNUSED COMMIT-MENT	NON-REC FUNDS USED	INTER-EST RATE	NON-REC DEBT INTEREST EXPENSE	NON-REC DEBT EXPENSES & FEES	NON-REC DEBT EXPENSES INTEREST & FEES	CUMULATIV EXPENSES & CHARGES
1980								
QTR 1	0	0	0	.0450	0	0	0	0
QTR 2	0	0	0	.0450	0	0	0	0
QTR 3	0	0	0	.0450	0	0	0	0
QTR 4	0	0	0	.0450	0	0	0	0
SUB-TOTAL	0	0	0	.1800	0	0	0	0
1981								
QTR 5	0	0	0	.0450	0	0	0	0
QTR 6	0	0	0	.0450	0	0	0	0
QTR 7	0	0	0	.0450	0	0	0	0
QTR 8	0	0	0	.0450	0	0	0	0
SUB-TOTAL	0	0	0	.1800	0	0	0	0
1982								
QTR 9	0	0	0	.0450	0	0	0	0
QTR 10	0	0	0	.0450	0	0	0	0
QTR 11	0	0	0	.0450	0	0	0	0
QTR 12	0	0	0	.0450	0	0	0	0
SUB-TOTAL	0	0	0	.1800	0	0	0	0
1983								
QTR 13	0	0	0	.0450	0	0	0	0
QTR 14	0	0	0	.0450	0	0	0	0
QTR 15	0	0	0	.0450	0	0	0	0
QTR 16	0	0	0	.0450	0	0	0	0
SUB-TOTAL	0	0	0	.1800	0	0	0	0
1984								
QTR 17	0	0	0	.0450	0	0	0	0
QTR 18	0	0	0	.0450	0	0	0	0
QTR 19	0	0	0	.0450	0	0	0	0
QTR 20	0	0	0	.0450	0	0	0	0
SUB-TOTAL	0	0	0	.1800	0	0	0	0
1985								
QTR 21	0	0	0	.0450	0	0	0	0
QTR 22	0	0	0	.0450	0	0	0	0
QTR 23	0	0	0	.0450	0	0	0	0
QTR 24	0	0	0	.0450	0	0	0	0
SUB-TOTAL	0	0	0	.1800	0	0	0	0
1986								
QTR 25	0	0	0	.0450	0	0	0	0
QTR 26	0	0	0	.0450	0	0	0	0
QTR 27	0	0	0	.0450	0	0	0	0
QTR 28	0	0	0	.0450	0	0	0	0
SUB-TOTAL	0	0	0	.1800	0	0	0	0
1987								
QTR 29	0	0	0	.0450	0	0	0	0
QTR 30	4,633	3,829	804	.0450	0	0	0	0
QTR 31	4,633	1,745	2,888	.0450	36	0	36	36
QTR 32	4,633	0	4,633	.0450	130	0	130	166
SUB-TOTAL	4,633	0	4,633	.1800	166	0	166	166