ALASKA LEGISLATURE COMMITTEE FILES 1987-1988 8672
4982 HRES HB 471

534

I want to assure you that this is not a matter that is within our company's discretion. The development of the Northstar/Seal Island Project is an enormous financial undertaking. Preliminary design estimates over a year ago indicated a total cost of approximately $1.5 billion. A project of this magnitude cannot be financed from internal cash flow and will require substantial borrowing from outside sources on a project finance basis. Project financing will not be obtainable unless it can be demonstrated to the lenders that the project will pay out within a reasonable period of time and that cash flows from the project will be sufficient to service principal and interest payments on the debt.

I know you are aware of the substantial benefits to the State of Alaska if this project proceeds. Many jobs will be provided by development work, the construction of production facilities and ongoing field operations during production. Additional jobs will be created by the construction of the subsea pipeline, as well as by ongoing pipeline operations once production commences at the Northstar/Seal Island field, and future fields served by the pipeline. The Alaska State leases involved are substantial net profit leases, ranging from 91% to 95%, and, even with royalty and severance tax relief, production after payout will generate significant royalty and severance tax revenues. Over the life of the Northstar/Seal Island field these leases will be a source of substantial revenue to the State of Alaska.

All this will obviously be lost if development never proceeds.

During our meeting, you requested an outline of our proposals. I emphasize that what is set out below represents only our preliminary thinking, our suggestions as to a possible approach. It is a basis for discussion, and you and your staff will undoubtedly have your own thoughts and ideas, which we welcome. Moreover, none of us will want to go forward to initiate these legislative proposals until our delineation drilling program of this coming winter season is completed and our company has a better feel for the developable reserves in the Northstar/Seal Island Project. In addition, the Northstar/Seal Island Project will ultimately be unitized and the participation of our partners, holding both Federal and Alaska State Leases, is necessary for any final position.

Our proposal is this:

1. The Alaska State Legislature must adopt legislation providing the Northstar/Seal Island Project relief from royalty and severance tax obligations for a period of time until full

development costs including interest are paid back. This legislation should provide:

°Waiver of the 20% royalty accruing to the State of Alaska on all production in the period prior to payout of project development costs. Payout would be defined as full recovery of total capital investment in the project, which would include principal and actual interest paid on project financing. Royalties on production should commence at the time payout is achieved, and all production thereafter should bear royalty at the full 20% rate.

°Waiver of the 15% state severance tax on all production in the period prior to payout, as above. As with the royalty obligation, severance taxes should become payable at the full 15% rate with respect to all production after payout.

2. The legislation we suggest should condition waiver of the royalty and severance tax on an agreement to contribute the subsea pipeline serving the Northstar/Seal Island Project to the State of Alaska, or to an appropriate Alaska State authority, upon payout of the Northstar/Seal Island Project. The proposed route of the subsea pipeline is shown on the map we left with you during our visit.

To facilitate the pipeline contribution:

°The pipeline would be constructed with sufficient capacity so that it could operate as a common carrier providing transportation for future production from neighboring prospective oil fields to Pump Station No. 1.

°The pipeline would be established as a separate entity. Financing of pipeline construction, estimated at approximately $300 million, would be undertaken at the same time as the financing for the Northstar/Seal Island Project production facilities, but would be treated as an entirely separate, independently based financing package. The State of Alaska would bear no credit risk or take on any obligation with respect to this financing.

°Amerada Hess would be the owner of the pipeline prior to payout of development costs for the Northstar/Seal Island Project. Amerada Hess would agree to contribute the pipeline to the State of Alaska at the time payout was achieved, and would enter into an agreement to operate the pipeline after its contribution to the State of Alaska.

°Tariffs would be established, applicable to all users including the Northstar/Seal Island Project and future field developments. These tariffs would provide a reasonable profit to the State after providing for the costs of pipeline operation and maintenance.

Our proposal to contribute the Northstar subsea pipeline to the State of Alaska is intended to provide a bonus to the State once payout of the Northstar/Seal Island Project is accomplished. The direct and immediate benefit would be through the tariffs received by the State. Long term, the existence of the pipeline would offer and be available as an economic incentive for the development of other nearby blocks, both Federal and State, whose development might otherwise be uneconomic without the benefit of existing, nearby Alaska State pipeline transportation to Pump Station No. 1.

This part of our legislative proposal obviously requires a good deal of further definition, but whatever its final form our sole aim and objective would be to provide an ongoing economic benefit to Alaska though the permanent contribution of the pipeline and its revenues to the State. I want to stress to you that we are not looking to involve in any way the credit of the State in the financing of the Northstar/Seal Island Project or the subsea pipeline. Contribution of the pipeline to the State would occur only after all Northstar/Seal Island Project debt and subsea pipeline debt was fully repaid.

Our Northstar leases have 1990 expiration dates. Amerada Hess has already expended over $80 million on exploration at Northstar. Amerada Hess must act now in the 1987-88 winter season to do the additional drilling required to delineate the Northstar Prospect's crude oil reserves. Amerada Hess will spend $40 to $50 million on this delineation drilling program.

We need your Administration's cooperation in expediting the permitting process for this drilling activity. However, if after completion of our company's delineation drilling program, legislative relief along the lines proposed is not initiated and successfully implemented, our company would be much better off if the permits were never issued.

Amerada Hess believes that the crude oil reserves at Northstar are a substantial asset of the State of Alaska that should be developed. The long term benefits of bringing the field into production should not be lost by a failure of the State of Alaska to provide the short term relief from royalty and severance taxes required for the project to proceed.

Unless you are convinced a world crude oil price of $35 a barrel is around the corner, a legislative initiative along the lines we have proposed is essential, the crucial ingredient being a sufficient economic incentive to permit the Northstar/Seal Island Project to pay out. Without payout at a reasonable date the project cannot be financed and will not be undertaken. The State of Alaska will not have the benefit of the jobs and future revenues from royalties, severance taxes and net profits accruing to it after payout of a successful oil field.

We hope, after completion of our delineation wells, the results will be encouraging, and that you will then agree to sponsor the initiatives required to bring this important project to production. We stand ready to work with your Administration in formulating a plan which you can endorse.

Sincerely,

Leon Hess

jE

HESS

AMERADA HESS CORPORATION

NORTHSTAR PROSPECT

PRESENTATION FOR GOVERNOR COWPER

AUGUST 1987

CONFIDENTIAL

AGO 1340167

AMERADA HESS CORPORATION

NORTHSTAR PROSPECT

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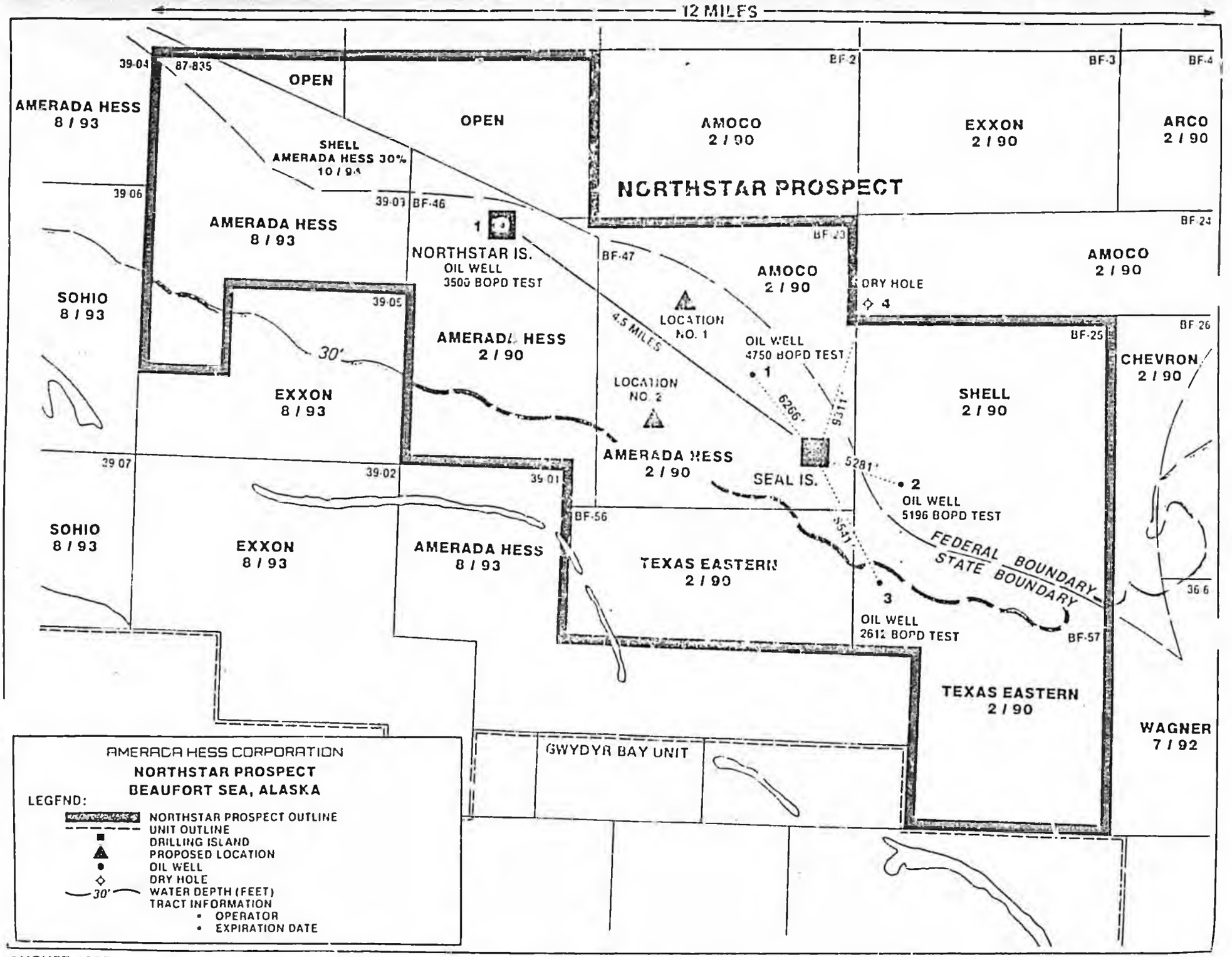
SUPPLEMENTAL ITEMS


12 MILES
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39-04
87-835
OPEN
AMERADA HESS
8 / 93
OPEN
AMOCO
2 / 90
EXXON
2 / 90
ARCO
2 / 90
BF-2
BF-3
BF-4
SHELL
AMERADA HESS 30%
10 / 94
NORTHSTAR PROSPECT
39-06
39-03
BF-46
AMERADA HESS
8 / 93
1
NORTHSTAR IS.
OIL WELL
3500 BOPD TEST
BF-23
BF-24
BF-47
AMOCO
2 / 90
AMOCO
2 / 90
DRY HOLE
4
SOHIO
8 / 93
39-05
LOCATION
NO. 1
4.5 MILES
OIL WELL
4750 BOPD TEST
BF-25
BF 26
CHEVRON
2 / 90
AMERADA HESS
2 / 90
30'
EXXON
8 / 93
LOCATION
NO. 2
1
6266'
9311'
SHELL
2 / 90
AMERADA HESS
2 / 90
39-07
39-02
39-01
SEAL IS.
5281'
2
OIL WELL
5196 BOPD TEST
SOHIO
8 / 93
EXXON
8 / 93
AMERADA HESS
8 / 93
BF-56
TEXAS EASTERN
2 / 90
5541'
FEDERAL BOUNDARY
STATE BOUNDARY
3
OIL WELL
2612 BOPD TEST
BF-57
36 6
TEXAS EASTERN
2 / 90
WAGNER
7 / 92
GWYDYR BAY UNIT
AMERADA HESS CORPORATION
NORTHSTAR PROSPECT
BEAUFORT SEA, ALASKA
LEGEND:
NORTHSTAR PROSPECT OUTLINE
UNIT OUTLINE
DRILLING ISLAND
PROPOSED LOCATION
OIL WELL
DRY HOLE
30' WATER DEPTH (FEET)
TRACT INFORMATION
• OPERATOR
• EXPIRATION DATE
AUGUST 1987
PAGE 1
AGO 134069

AMERADA HESS CORPORATION

NORTHSTAR PROSPECT

BACKGROUND

- LOCATED 20 MILES NORTHWEST OF PUMP STATION NO. 1 IN 40 - 45' OF WATER.
- SITUATED ON STATE LEASES OWNED BY AMERADA HESS CORPORATION AND TEXAS EASTERN AND ON FEDERAL LEASES OWNED BY SHELL, MURPHY OIL AND AMOCO.
- SEAL ISLAND CONSTRUCTED IN 1982 ON AMERADA HESS STATE LEASE BF-47.
- SEAL NO. 1 DRILLED ON AMERADA HESS STATE LEASE BF-47 IN 1983 TESTED 4,750 BOPD FROM 11,000 ± FEET.
- CONFIRMATION WELLS COMPLETED ON SHELL / MURPHY FEDERAL TRACT BF-25 IN 1984 AND TEXAS EASTERN STATE LEASE BF-57 IN 1985.
- NORTHSTAR ISLAND WAS BUILT IN 1985 ON AMERADA HESS STATE LEASE BF-46 AND A CONFIRMATION WELL WAS COMPLETED ON THIS BLOCK IN 1986.
- OPERATIONS WERE SUSPENDED IN EARLY 1986 WHEN WORLD OIL PRICES DECLINED AND AT THAT TIME AMERADA HESS HAD INVESTED $83,000,000.

- TWO ADDITIONAL WELLS ARE REQUIRED AT A COST OF APPROXIMATELY $40,000,000 TO DELINEATE THE RESERVES.

A&O 134017.0

AGO 1340171

AMERADA HESS CORPORATION

NORTHSTAR PROSPECT

DRILLING

- AMERADA HESS HAS CONTRACTED TO EMPLOY A CONCRETE ISLAND DRILLING SYSTEM, THE GLOMAR BEAUFORT SEA I, DURING THE 1987 - 1988 WINTER DRILLING SEASON.

- THE GLOMAR BEAUFORT SEA I MUST BE MOVED ON LOCATION TO DRILL THE FIRST WELL BY OCEAN GOING TUGS PRIOR TO ICE IN.

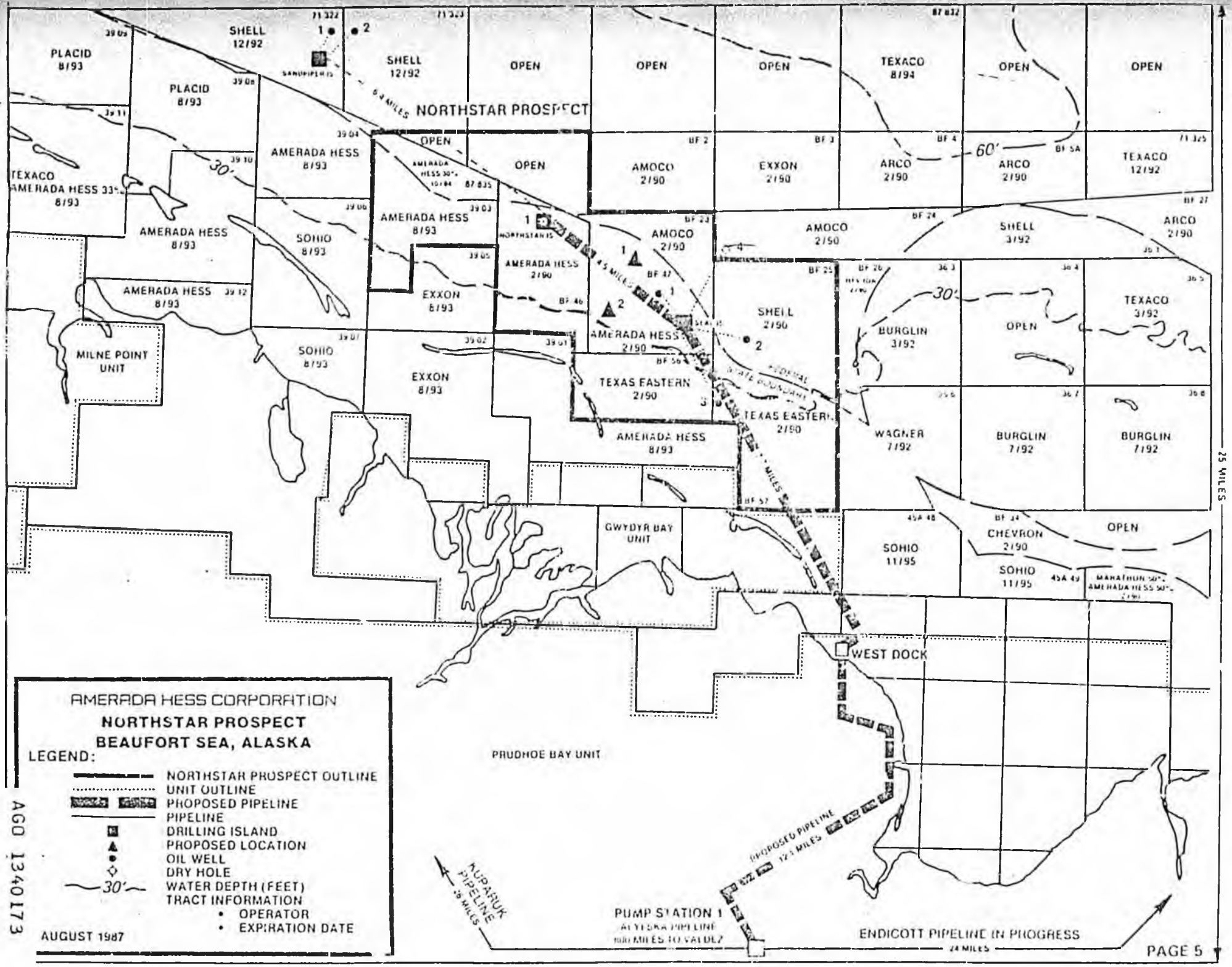
- THE DRILLING COMPANY HAS NOTIFIED AMERADA HESS THAT THE LAST PRACTICABLE DATE TO COMMENCE THE MOVE IS AUGUST 30, 1987. LETTER ATTACHED.

- DEADLINE FOR AMERADA HESS TO AUTHORIZE DRILLING COMPANY TO PROCEED IS MONDAY, AUGUST 24, 1987.

- AMERADA HESS CANNOT PROCEED WITHOUT ASSURANCE OF INITIATION AND SUPPORT OF LEGISLATIVE RELIEF FROM ROYALTY AND SEVERANCE TAX.

- DRILLING COMPANY MAY TERMINATE CONTRACT IF AMERADA HESS DOES NOT MEET MONDAY DEADLINE, AND REQUIRE AMERADA HESS TO PAY $1,000,000 IN DAMAGES.

AGO 1340172


SHELL 12/92
PLACID 8/93
PLACID 8/93
SHELL 12/92
OPEN
OPEN
OPEN
TEXACO 8/94
OPEN
OPEN
NORTHSTAR PROSPECT
6.4 MILES
AMERADA HESS 8/93
OPEN
OPEN
AMOCO 2/90
EXXON 2/90
ARCO 2/90
ARCO 2/90
TEXACO 12/92
60'
30'
TEXACO AMERADA HESS 33⅓ 8/93
AMERADA HESS 8/93
AMERADA HESS 8/93
SOHIO 8/93
AMOCO 2/90
AMOCO 2/90
SHELL 3/92
ARCO 2/90
AMERADA HESS 2/90
4.5 MILES
EXXON 8/93
AMERADA HESS 8/93
SHELL 2/90
BURGLIN 3/92
OPEN
TEXACO 3/92
30'
MILNE POINT UNIT
SOHIO 8/93
EXXON 8/93
AMERADA HESS 2/90
TEXAS EASTERN 2/90
TEXAS EASTERN 2/90
AMERADA HESS 8/93
WAGNER 7/92
BURGLIN 7/92
BURGLIN 7/92
GWYDYR BAY UNIT
SOHIO 11/95
CHEVRON 2/90
OPEN
SOHIO 11/95
WEST DOCK
PRUDHOE BAY UNIT
PROPOSED PIPELINE
12.1 MILES
KUPARUK PIPELINE 26 MILES
PUMP STATION 1
ALYESKA PIPELINE
800 MILES TO VALDEZ
ENDICOTT PIPELINE IN PROGRESS
24 MILES
25 MILES
AMERADA HESS CORPORATION
NORTHSTAR PROSPECT
BEAUFORT SEA, ALASKA
LEGEND:
NORTHSTAR PROSPECT OUTLINE
UNIT OUTLINE
PROPOSED PIPELINE
PIPELINE
DRILLING ISLAND
PROPOSED LOCATION
OIL WELL
DRY HOLE
30'
WATER DEPTH (FEET)
TRACT INFORMATION
• OPERATOR
• EXPIRATION DATE
AUGUST 1987

AGO 1340173

AMERADA HESS CORPORATION

NORTHSTAR PROSPECT

ECONOMICS

- DEVELOPMENT COSTS CURRENTLY ESTIMATED TO BE $1,200,000,000.
- PIPELINE CONSTRUCTION COSTS CURRENTLY ESTIMATED TO BE $300,000,000.
- DEVELOPMENT WILL REQUIRE PROJECT FINANCING FROM OUTSIDE SOURCES.
- LENDERS WILL REQUIRE PROJECT CASH FLOWS SUFFICIENT TO SERVICE DEBT AND INTEREST AND TO PAY OUT CAPITAL INVESTMENT WITHIN A REASONABLE PERIOD OF TIME.
- WHEN OIL WAS $35.00 PER BARREL, STATE LEASES CALLED FOR 20% ROYALTY BURDEN AND 15% SEVERANCE TAX, PLUS NET PROFIT SHARE TO THE STATE. AMERADA HESS STATE LEASES PROVIDE NET PROFIT SHARE RANGING FROM 91% TO 93%.
- UNDER CURRENT RESERVE ASSUMPTIONS, PROJECT WILL NEVER PAY OUT, WITHOUT ROYALTY AND SEVERANCE TAX RELIEF.

AMERADA HESS CORPORATION

NORTH STAR PROSPECT

PROPOSAL

- STATE RELIEF FROM ROYALTY AND SEVERANCE TAX BURDENS UNTIL RECOVERY OF TOTAL CAPITAL INVESTMENT, INCLUDING PRINCIPAL AND INTEREST PAID ON PROJECT FINANCING.

- AMERADA HESS WILL CONTRIBUTE SUBSEA PIPELINE SERVING THE PROJECT TO THE STATE AT PROJECT PAY OUT.

- PAST EXPERIENCE HAS PROVEN THAT CONTIGUOUS ACREAGE WILL BE OIL PRODUCTIVE.

- PIPELINE WILL HAVE SUFFICIENT CAPACITY TO SERVE AS A COMMON CARRIER FOR FUTURE PRODUCTION FROM THESE OIL FIELDS.

- TARIFFS WILL BE PAID BY ALL USERS, INCLUDING NORTHSTAR PROJECT, PROVIDING NET PROFIT TO THE STATE AFTER COSTS OF PIPELINE OPERATION.

AGO 1340175

AMERADA HESS CORPORATION

LEON HESS
Chairman of the Board

1185 AVENUE OF THE AMERICAS
NEW YORK, NEW YORK 10036
(212) 997-8400

July 10, 1987

Personal and Confidential

Honorable Steve Cowper
Governor
State of Alaska
P.O. Box A
Juneau, AK 99811-0101

Dear Governor Cowper:

I appreciate your taking time from your busy schedule to meet with us to hear an update on Amerada Hess' Northstar Prospect in the Beaufort Sea. We believe the Northstar Prospect has significant potential for economic benefit both to our company and to the people of the State of Alaska.

Sadly, this project can never be brought to development, given the collapse in world crude oil prices that occurred in 1986 and the changed economic realities of the oil business, unless the legislature of the State of Alaska recognizes the need for and implements realistic development incentives. As you know, other oil producing states have recently undertaken actions to revitalize exploration and production programs within their borders.

In 1979, when bids were submitted for the Federal/State Beaufort Sea Oil and Gas Lease Sale in which the Northstar Prospect leases were awarded, the world price of crude oil was $35.00 per barrel. Projections were or steadily increasing prices over the years ahead. Today, although some stability has returned to world oil markets, the economics of the market are completely different. In the aftermath of the OPEC-inspired price war, world oil prices stand in the $20.00 per barrel range. No one reasonably anticipates a return to world crude oil prices of $35.00 per barrel until at least after 1995.

That is why under current reserve assumptions development of the Northstar Prospect is not economic and will not occur. Simply put, with a 20% royalty burden and a 15% severance tax, the project will never pay out.

To make development even marginally viable, we need your support of legislative initiatives to relieve the project of Alaska State royalty and severance tax burdens. Without such relief, no company can proceed.

I want to assure you that this is not a matter that is within our company's discretion. The development of the Northstar/Seal Island Project is an enormous financial undertaking. Preliminary design estimates over a year ago indicated a total cost of approximately $1.5 billion. A project of this magnitude cannot be financed from internal cash flow and will require substantial borrowing from outside sources on a project finance basis. Project financing will not be obtainable unless it can be demonstrated to the lenders that the project will pay out within a reasonable period of time and that cash flows from the project will be sufficient to service principal and interest payments on the debt.

I know you are aware of the substantial benefits to the State of Alaska if this project proceeds. Many jobs will be provided by development work, the construction of production facilities and ongoing field operations during production. Additional jobs will be created by the construction of the subsea pipeline, as well as by ongoing pipeline operations once production commences at the Northstar/Seal Island field, and future fields served by the pipeline. The Alaska State leases involved are substantial net profit leases, ranging from 91% to 93%, and, even with royalty and severance tax relief, production after payout will generate significant royalty and severance tax revenues. Over the life of the Northstar/Seal Island field these leases will be a source of substantial revenue to the State of Alaska.

All this will obviously be lost if development never proceeds.

During our meeting, you requested an outline of our proposals. I emphasize that what is set out below represents only our preliminary thinking, our suggestions as to a possible approach. It is a basis for discussion, and you and your staff will undoubtedly have your own thoughts and ideas, which we welcome. Moreover, none of us will want to go forward to initiate these legislative proposals until our delineation drilling program of this coming winter season is completed and our company has a better feel for the developable reserves in the Northstar/Seal Island Project. In addition, the Northstar/Seal Island Project will ultimately be unitized and the participation of our partners, holding both Federal and Alaska State Leases, is necessary for any final position.

Our proposal is this:

1. The Alaska State Legislature must adopt legislation providing the Northstar/Seal Island Project relief from royalty and severance tax obligations for a period of time until full

development costs including interest are paid back. This legislation should provide:

°Waiver of the 20% royalty accruing to the State of Alaska on all production in the period prior to payout of project development costs. Payout would be defined as full recovery of total capital investment in the project, which would include principal and actual interest paid on project financing. Royalties on production should commence at the time payout is achieved, and all production thereafter should bear royalty at the full 20% rate.

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2. The legislation we suggest should condition waiver of the royalty and severance tax on an agreement to contribute the subsea pipeline serving the Northstar/Seal Island Project to the State of Alaska, or to an appropriate Alaska State authority, upon payout of the Northstar/Seal Island Project. The proposed route of the subsea pipeline is shown on the map we left with you during our visit.

To facilitate the pipeline contribution:

°The pipeline would be constructed with sufficient capacity so that it could operate as a common carrier providing transportation for future production from neighboring prospective oil fields to Pump Station No. 1.

°The pipeline would be established as a separate entity. Financing of pipeline construction, estimated at approximately $300 million, would be undertaken at the same time as the financing for the Northstar/Seal Island Project production facilities, but would be treated as an entirely separate, independently based financing package. The State of Alaska would bear no credit risk or take on any obligation with respect to this financing.

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We hope, after completion of our delineation wells, the results will be encouraging, and that you will then agree to sponsor the initiatives required to bring this important project to production. We stand ready to work with your Administration in formulating a plan which you can endorse.

Sincerely,

Leon Hess

jf

VE COWPER
OVERNOR

STATE OF ALASKA
OFFICE OF THE GOVERNOR
JUNEAU

August 11, 1987

Mr. Leon Hess
Chairman of the Board
Amerada Hess Corporation
1185 Avenue of the Americas
New York, NY 10036

Dear Leon,

My staff is in the process of evaluating the proposal which you sent to me recently. I expect to get back to you as soon as we've discussed the matter in depth. Except for a few selected Commissioners and staffers, this proposal is confidential.

I hope you're having a good summer, and that the Jets are getting into shape.

Sincerely,

Steve Cowper
Governor

cc: Ron Birch, Washington, DC

NOTICE

AGO 1340181

Applied Drilling Technology Inc.

10777 Westheimer, Suite 700 • P.O. Box 4509

Houston, Texas 77210 • (713) 266-4001

August 19, 1987

Thomas E. Short
President

Mr. P. A. Dysert
Amerada Hess Corporation
1185 Avenue of the Americas
New York, New York 10036

Re: Glomar Beaufort Sea I
Turnkey Drilling Contract
Dated 10 July 1987

Gentlemen:

Since we have been unable to reach agreement as to the date by which Applied Drilling Technology Inc. ("ADTI") shall commence deballasting operations of the Glomar Beaufort Sea I for purposes of mobilizing the drilling unit to your drilling location, we hereby respectfully give notice pursuant to Section 4.9 of the above subject Contract that the last practical date for commencement of such deballasting operations, taking into consideration weather conditions and availability of suitable tugs, is 30 August 1987. May we please have your concurrence to proceed with such mobilization.

Your cooperation in this regard is greatly appreciated.

Respectfully,

T. E. Short
President

TES/RNP/kec

c: Mr. C. R. Richard
Amerada Hess Corporation
P. O. Box 2040
Tulsa, Oklahoma 74102

We Concur:

Amerada Hess Corporation

By:_____

AGO 1340182

MEMORANDUM
DEPARTMENT OF NATURAL RESOURCES

State of Alaska
DIVISION OF OIL AND GAS

TO: James E. Eason
Director

DATE: January 8, 1988

FILE NO:

TELEPHONE NO: 762-2589

SUBJECT:

FROM: Edward L. Phillips
Petroleum Economist

One point overlooked in the Amerada Hess discussion is the "savings" already transferred to Amerada Hess by the state as a result of the net profit bidding system employed in Sale 30. At the date of the sale (12/12/79), price expectations were extremely bullish. The Iraq/Iran war had been underway for a few weeks and spot oil prices, reflecting the uncertain outlook of the war, were in the $35.00 to $40.00 a barrel range. Market contract prices were moving up, and many price forecasters saw no end in sight. For example, the March 1980 Department of Revenue forecast projected the price of Saudi Marker Crude at $46.43 in 1985, $57.91 in 1990, and $143.17 in 1996 (a perfect example of the power of compounding). Parenthetically, yesterday's (7 January 88) Saudi spot price was $16.40. Markets have little tolerance for the compounding process. This forecast was not, by any means, off the wall--but represented a "middle of the pack" estimate.

The petroleum potential of the Beaufort Sea looked extremely attractive (profitable) with the price expectations of the period. Against this background, the winning bidders at Seal Island paid a total of $19.2 million in bonus payments for the state tracts overlying the prospects. Amerada Hess paid $6.9 million for its two tracts. In addition, the net profit share (NPS) bids ranged from 85.26% to 93.2%.

At that time, our analysis indicated that the same tracts, if sold on a bonus bid basis with a 20% royalty, were worth an estimted $333 million, and possibly much more. The state/federal price assumptions used for the presale analysis were relatively conservative.

One could argue that the NPS bidding system permitted "savings" to the winning bidders of approximately $314 million. Specifically, Amerada Hess paid $6.9 million for tracts the state estimated to be worth about $120 million. Thus, NPS bidding saved Amerada Hess over $113 million, and possibly much more. In fact, it is not clear that Amerada Hess possessed the financial resources to win the tracts under a conventional leasing system. The major North Slope operators (ARCO, Sohio, Exxon) had deeper pockets, and were clearly better positioned to bid higher cash bonuses had the cash bonus been the bidding variable for the state tracts, as it was for the adjacent federal tracts overlying the Seal Island structures.

As a conceptual exercise, one can compute the true savings to Amerada Hess by looking at what the $113 million could have earned them over the eight year time period since the sale. At a 10% rate of return (ROR), Amerada Hess would have earned almost $129 milion since the sale. If their ROR was 15%, their earnings would approach $233 million.

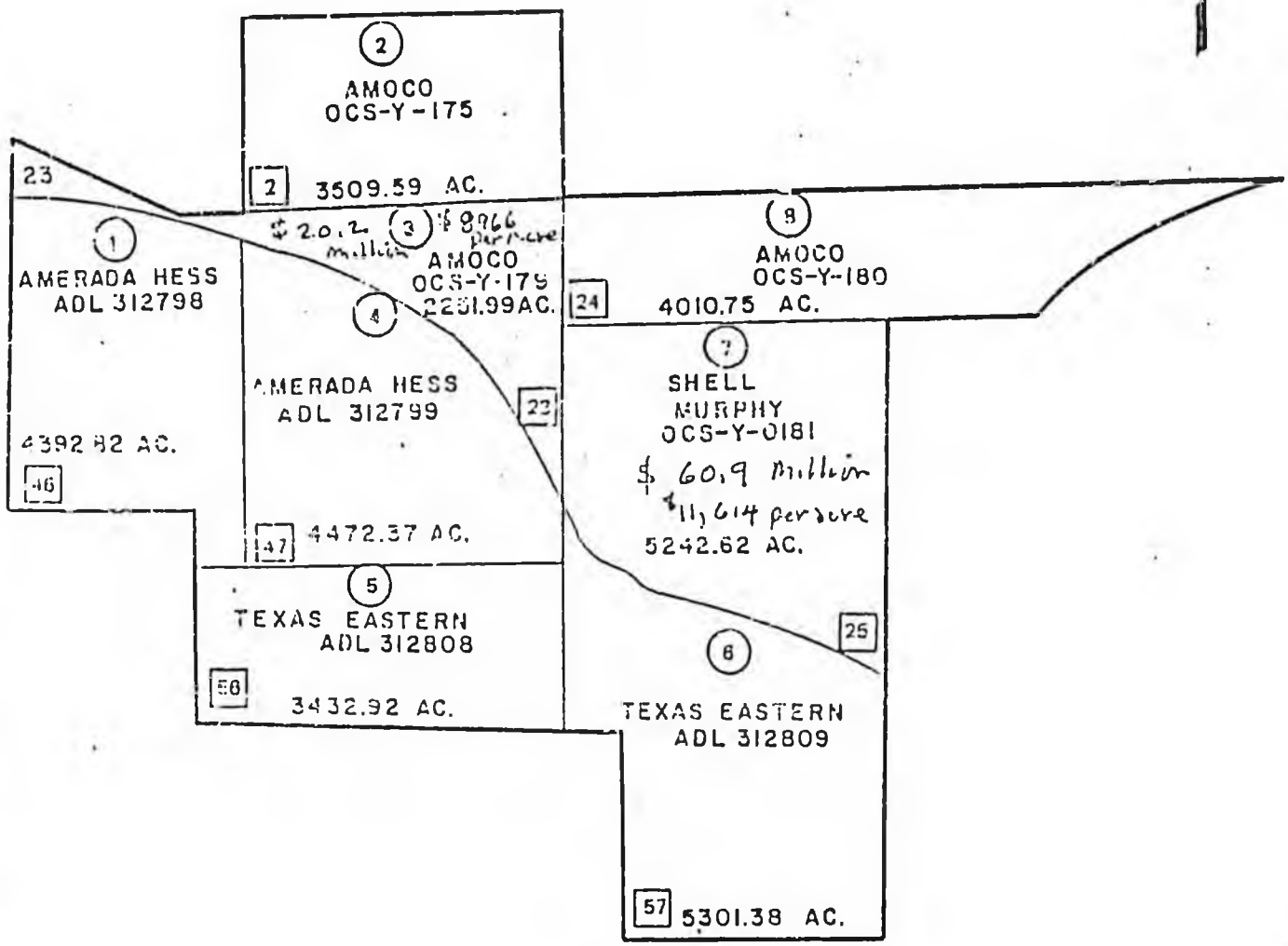
Thus, to this point in time the major sacrifice has been by the state in foregone bonuses and Permanent Fund contributions, including potential interest earnings. The Permanent Fund share of the estimated foregone bonuses would be $78.5 million. This amount would have accrued to $219.53 million by January of this year.

The current proposal appears to extend the state's sacrifice to a "foregone" conclusion.

Attachment

1269E

State Leases Bonus Bid ≈ $875.00 per acre
Federal Leases Bonus Bid ≈ $10,808 per Acre
Fed Royalty 16⅔% + Sliding Scale Royalty to Max of 65%



LEGEND

UNIT OUTLINE ———

LEASE BOUNDARY ———

UNIT TRACT NO. (1)

LEASE SALE BF TRACT NO. [2]

NO SCALE

EXHIBIT B
SEAL UNIT
BEAUFORT SEA, ALASKA

MEMORANDUM

State of Alaska

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL AND GAS

TO: James E. Eason
Director

DATE: February 19, 1988

FILE NO:

TELEPHONE NO: 762-2589

SUBJECT:

FROM: Ed Phillips
Petroleum Economist

HB 471 introduced by Representative Gruenberg appears to be a clone of an earlier proposal offered to the state by Leon Hess for royalty and tax relief at Seal Island. HB 471 would generalize the applicability of royalty and tax relief to other North Slope "reserves" particularly Pt. Thomson and West Sak. In an earlier memo the Hess Proposal and its cost in barrels of oil for the Seal Island prospect only was specifically analyzed. With minor changes that analysis is produced below. The issues raised in the analysis are still valid. The fiscal cost of applying the proposed statute could be substantial and the gains possibly chimerical.

As is often the case, the potential "costs" of the proposal are more easily discernible than the potential benefits. The potential "costs" of the proposal are the foregone royalties and taxes. These would amount to about 25 to 30% of the gross production for the period before capital recovery or December 31, 1999, whichever is less. These revenues would be forgiven during the peak production phase of the typical field. The potential benefits result from transforming fields from submarginal status to profitable. This transformation in itself does not assure that benefits equal or exceed costs. In some cases, the forgiveness may only shift forward by a year or two a particular field's development. In this case it's hard to argue the wisdom of the forgiveness. In other cases the forward shifting of development and production may be much more dramatic. Until we have more evidence of which phenomenon is more likely it will be exceedingly difficult to assess the potential benefits of this proposed legislation.

Assumptions

1. Recoverable reserves at North Star/Seal Island are estimated to be 350 million barrels. State leases have an estimated 80% of recoverable reserves. The remaining reserves are on federal leases.

2. Project must earn after tax 10% real rate of return to be feasible.

3. All state leases have 20% royalty rate.

4. Peak production at 100,000 barrels a day through first four years, then production declines at 15% per year. Total field life is 16 years.

5. Time value of production is evaluated at three interest rates, 5%, 10% and 15%.

6. Price assumed to be constant so that analysis is done in terms of barrels of oil. This is the index number for measuring costs.

Methodology

1. Compute the present value of production as of time zero. Then lag time zero for various delays that apply discount factors to the delays. The present value is stated in terms of "discounted" barrels. For example, the present value of 350 million barrels of oil produced over a sixteen year period at 5% discount equals approximately 217 million barrels of oil as a present value equivalent. At 10% this value drops to 192 million barrels, and at 15% 171 million barrels. (The method used for these calculations is readily found in Newendorp, Paul D. "Decision Analysis for Petroleum Exploration," Petroleum Publishing Company, Tulsa, Oklahoma, 1974, Appendix I, pp: 651-659.)

2. Payback (recovery of invested capital) was estimated by two methods. First, the "Rule of 72" was used. This "rule" allows one to estimate payback by dividing the rate of return into the number 72. For example, if a particular investment earns 10% per year, it will payback in approximately 7.2 years. The "Rule of 72" is a quick and dirty way to compute doubling times for compound interest rates. The other method used was to divide the rate of return into 100. This works reasonably well for uniform cash flows. (This method is illustrated in Megill, Robert E., "Exploration Economics," Petroleum Publishing Co., Tulsa, Oklahoma, 2nd Ed., 1979, pp. 83-84.) Finally, doubling times for compound interest were computed directly. These techniques will yield estimates of undiscounted payback on original investment, thus they represent minimal estimates of payback periods. Capital recovery calculations permit payback with imputed interest and represent a maximum estimate of payback.

   This analysis does not forecast a rate of return for Seal Island. It only examines the conditional statement that if Seal Island earns X rate of return, then payback will take approximately Y years. This proposition is evaluated for 10 and 15 percent rates of return (ROR). This methodology can be used for any ROR.

3. "Cost" to the state is measured in terms of undiscounted oil as well as the present value of royalty barrels foregone during payback period under the North Star (Seal Island) proposal. This simple methodology can easily be extended to include severance taxes. The inclusion of these taxes adds about 50% to the annual cost estimates, but shortens the payback period. Another potential "cost" to the state is from the delay in development and production at Seal Island due to submarginal economics attributable to state's royalty and severance taxes. This delay cost is measured for 5, 10, 15 and 20 year delays, at 0, 5, 10 and 15% discount rates.

4. Caveat: This methodology is admittedly crude, but very little data are available to justify a more sophisticated, yet questionably more accurate approach. This approach will, at least, frame the discussion in more analytical terms.

Results

1. Given an assumed 350 million barrels of recoverable reserves, the state's 20% royalty share would be 56 million barrels of undiscounted oil. (This total could be as high as 84 million barrels with the inclusion of the severance tax.) In discounted barrels this claim drops to 34.6 million barrels at 5%, 30.7 million at 10% and 27.4 million at 15% if the field could start producing as of today.

Table I

Present Value Barrels
Royalty Share

Discount Rates	Delay Times 0 Years (millions of BBls)	5 Years (millions of BBls)	10 Years (millions of BBls)	15 Years (millions of BBls)	20 Years (millions of BBls)
0	56	56	56	56	56
5	34.6	27.1	21.2	16.7	13.1
10	30.7	19.1	11.8	7.4	4.6
15	27.4	13.6	6.8	3.4	1.7

2. The reality of Seal Island economics and construction schedules vitiate columns one and two as possibilities. The maximum gain to the state if the delay is reduced by 10 years, is equivalent to 8.1 million royalty barrels of oil (Column 3 minus Column 5 at a 5% discount rate). At discount rates of 10 and 15 percent the gain associated with expedited development is less.

3. What is the royalty "cost" to the state of waiting until payback in order to capture this "gain"? The cost depends upon the rate of return on investment. If the rate of return is 10%, simple payback can take from 7.2 years by the "Rule of 72" or 11.5 years if operators are allowed a 10% rate of return on their investment before payback is complete. This would imply a minimum of 76% of recoverable reserves or about 16.1 million present value royalty barrels (42 million actual barrels) would be produced at no royalty value to the state. The maximum estimate would be about 17.4 million royalty barrels (46 million actual barrels). This means that about 82% of the field's recoverable reserves would be produced before the state would begin to receive its royalty share. The "actual" barrel estimates were derived from the field's estimated production profile as stated in Assumption 4.

At higher rates of return, simple (interest free) payback is less onerous. Payback can be achieved in five years if the project earns 15%. With this ROR payback even with imputed interest of 10% is achieved in about eight years. The cost is between 12.5 to 15.6 million present value royalty barrels (28.6 million to 41 million actual barrels).

Including a severance tax forgiveness does not change the actual barrel sacrifice by the state, but it does increase the present value barrel cost. This result follows directly from the greater "upfront" sacrifice by the state at peak production rates. The implied gain is faster payback, hence earlier reimposition of the royalty and severance tax.

Thus, for the present value equivalent of approximately 16 to 17 million barrels, (42 to 46 million actual barrels) one could argue that production would be hastened by 10 years. But that would be giving the operator benefit of all of the best assumptions. What if, in reality, the state was only purchasing a year or two in expedited development? The cost is still the same, but the benefits decline considerably. Whereas costs were only double the benefits where production was hastened by 10 years (16 million cost, 8 million benefits), the benefits approach zero as the delay difference declines. Suppose allowing payback only reduced delay by 5 years from 15 to 10 years, then the gain is only 4.5 million present value bbls at most. (Column 3 minus Column 4.) If production was only affected by one year, the benefit is reduced to 1 million barrels. The cost is still 16 million barrels.

Some caveats are important. The preliminary results outlined here may be sensitive to assumptions about field size and decline rates. Given economics of scale and concomitant longer, peak production periods, it is likely that payback would occur earlier for a significantly larger field. (This effect would follow from a higher ROR associated with the larger field.) A rapid real increase in oil prices would also change this result by increasing the ROR. The relationship between the ROR and payback would not change.

Conclusion

1. For a <u>minimum</u> royalty oil cost of 28.6 to 46 million barrels the state <u>may</u> get <u>something</u>.

2. Unless real oil prices substantially increase, the state will receive no royalty payments from the proposed development in this century.

0307P

MEMORANDUM State of Alaska

TO: Jim Eason
Director

DATE: February 26, 1988

FILE NO:

TELEPHONE NO: (907) 762-2546

FROM: Mike Kotowski MDK
Petroleum Engineer

SUBJECT: Potential Hydrocarbon Areas Subject to HB 471

The following are areas of the state where hydrocarbon discoveries have been made, but have not produced in commercial quantities to date. These are known areas that have the potential of being subject to the criteria set forth in HB 471, Fifteenth Legislature - Second Session.

Area	Estimated Recoverable Hydrocarbons (Millions of Barrels)	Royalty Interest
Seal Island/North Star	300	20% with Net Profit Share
Cwydyr Bay	10	12.5%
Niakuk	57	12.5%
Point Thomson	350 (oil and gas condensate)	12.5%
West Sak Sands	3000	12.5%
Colville Delta	Unknown	12.5%

It should be noted that under a strict interpretation of parts of HB 471 Sec. 3., two areas, the West Sak Sands and Point Thomson, may not qualify for the proposed royalty and severance tax relief. HB 471 Sec. 3. states in part

" (cc) Upon application by a lessee of a lease covered by this section, the commissioner shall temporarily waive the royalty requirement of a lease, if the lessee demonstrates that

(2) commercial production from the lease has not yet begun;

(4) exploration of the lease has delineated oil reserves."

Some of the Kuparuk River Unit leases are producing commercially from the Kuparuk formation. As these leases are also underlain by the West Sak Sands and the West Sak is not presently in commercial production, would the future royalty production from the West Sak on these leases be waived by this bill?

Also, item (4) specifically addresses delineated oil reserves. The present central area development plans for the Point Thomson Unit call for possible gas cycling that permits gas liquid production prior to major gas sales. Does the specific reference to delineated oil reserves in this section of the bill preclude the gas cycling with gas liquid production development option? In other words, would leases with gas and gas liquid production qualify for HB 471 relief?

Finally, under the most liberal interpretation of the criteria in Sec. 3., up to 487 million barrels of royalty hydrocarbons would be waived by HB 471.

3511A

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December 10, 1987

The Honorable Steve Cowper
Governor of the State of Alaska
P.O. Box A
Juneau, Alaska 99811-0101

VIA FEDERAL EXPRESS

Dear Governor Cowper:

At your request, and on behalf of Amerada Hess, I am pleased to forward draft legislation that would give your administration the power to encourage development of Alaska's smaller, offshore oil fields. Without that relief, development of these fields will be uneconomic, and will not occur.

It is conservative legislation. Many other oil producing jurisdictions have encouraged new oil development by forgiving royalties and severance taxes without regard to project economics and for the life of the field. The enclosed bill takes a more cautious approach, designed to foster development where it would not otherwise occur. Under the bill, if a company purchased its leases prior to January 1, 1986 -- in other words, at a time of radically different oil price expectations -- and the company can demonstrate that it cannot develop its field under current economic conditions, it can receive royalty and production tax relief, but only until recovery of initial development costs. Once those costs are recovered, the relief automatically ends, and the state will have in return: (1) a revenue-producing field that would not otherwise have been developed; (2) a net profit share of production, if the lease is not already a net profit share lease; (3) particularized local hire requirements developed on a constitutionally-defensible case-by-case basis by the Commissioner of Labor; and (4) if it desires, ownership of any affiliated common carrier pipeline.

Relief is available only to those oil fields where the costs of development are so high in relation to foreseeable production revenues as to make development uneconomic. As you have recognized, these are Alaska's smaller offshore fields that face

particular hurdles such as distance from existing pipeline transportation, relatively deep water, sea ice, seasonal drilling restrictions, and high construction and operating costs. However, those constraints make a field uneconomic only if their associated costs exceed likely field production revenues. There is no fixed formula to determine what level of reserves will overcome any particular mix of cost impediments. By defining "uneconomic" fields as ones where development costs exceed production revenues, the bill necessarily takes account of all the engineering and operational difficulties that make development of small offshore fields so uniquely difficult.

The bill has been carefully tailored to limit relief to those instances where it is necessary and appropriate. Three particular aspects of the bill guarantee its limited scope:

(1) After relief is granted, your commissioners of Revenue and Natural Resources will keep a close watch on field revenues. Once the company has realized revenue sufficient to pay for development costs, they will terminate the relief. In this way, the state is assured that the moment a company begins to realize any profit from its investment, the company will have to pay royalty and production tax at the normal rate;

(2) The company must meet four distinct requirements to obtain any relief: One, relief is available only to those who bought their leases before the unanticipated collapse of oil prices in 1986; Two, the company must have explored its properties and delineated reserves; Three, relief is available only for fields that have never had commercial production; and Four, most fundamentally, the company must meet its burden of showing that unless relief is granted, it cannot recover its development costs in a commercially reasonable time; and

(3) Companies can apply for relief only during the next six years. The bill is thus an emergency measure, intended only to provide an immediate, short-term stimulus to Alaska's moribund economy and not to signal a permanent shift in Alaska's leasing policy. For this reason, the immediate economic benefit of this legislation to the State of Alaska will be substantial. Under the bill, a company must delineate its reserves before application is made. Lessees will thus have a strong incentive to accelerate their exploration plans in order to meet the application deadline.

As you and your staff know, other states, and oil producing countries, have recognized the need to adjust royalties and severance taxes in order to stimulate new investment and employment. In 1983, for example, the United Kingdom acted swiftly in response to a downturn in new oil development. That year, Parliament provided that:

(1) Any new field north of the Southern Gas Basin approved for development after April 1, 1982 would be excused from the government's 12½ percent royalty over the life of the field; and

(2) To encourage small field development, 20,000 barrels per day of production from all fields would be exempt from the petroleum revenue tax, up to a 75 million barrel field limit.

In the same vein, the province of Alberta has provided that any exploratory well drilled between November, 1986 and October, 1987 will be free of royalties for a period of five years, while wells drilled in the subsequent two years will enjoy three and one year royalty holidays, respectively. Alberta has also cut royalty rates across the board for existing production by 2-3 percent in order to improve companies' cash flow. At the same time, the federal government has instituted the Canadian Exploration and Development Incentive Program, which provides cash grants of up to $2.5 million (U.S.) for new exploration and development.

Finally, a number of producing states have provided for severance tax exemptions of varying duration for new wells. In Louisiana, for example, new wildcat wells are exempt from the severance tax until 1990, while all new oil production in Montana is exempt for two years. Other exemption "windows" to encourage new or enhanced production have been enacted by Mississippi, North Dakota, Oklahoma and Wyoming.

I would like to touch on one other component of the legislation. The bill allows the state to acquire the lessee's related pipeline interest as a condition of granting relief. We previously offered this option believing that it would substantially increase our proposal's benefits to the state. Since then, members of your administration have voiced particular concern over this aspect. We continue to believe it would be of substantial benefit to the state to own this pipeline, not only in terms of tariff revenues, but also to encourage development of nearby, prospective fields. However, we do not want this

particular provision to in any way complicate the bill's progress or jeopardize your ability to support it. If you feel the provision would do either, we would concur that it be deleted.

I am confident that Amerada Hess can meet the strict standards of this legislation for the Northstar/Seal Island project. I also believe that your sponsorship and active support of this legislation will signal strong and positive commitment to Alaska's economic future and will receive overwhelming public support. It will help break the current economic logjam in Alaska oil development. It will clearly demonstrate that your administration is committed to taking the forceful steps necessary to turn Alaska's economy around.

Legislation of this kind serves Alaska and the nation, and there should not be any opposition to it. It will advance development by at least a decade at the very time Alaska most needs that development.

Thank you for the interest you have shown on this issue. From this point, as we all have recognized, time is of the essence. Legislation removing the current barriers to Northstar/Seal Island development is critically important this session, and with one month remaining before the session convenes, we must find a sponsor who is anxious to make this bill a legislative priority. Your personal leadership in setting the agenda before Alaska's legislators return to Juneau would set this matter on the proper course.

With your permission, I will call next week, and I will be anxious to hear your reaction to our proposal.

Sincerely,

BIRCH, HORTON, BITTNER
PESTINGER & ANDERSON

Ronald G. Birch

Ronald G. Birch

RGB/kf
09RGB2
Enclosure

bcc copies:
John Tillinghast
Barclay Collins
John Katz

IN THE _____ By: _____

_____ BILL NO. _____

IN THE LEGISLATURE OF THE STATE OF ALASKA
FIFTEENTH LEGISLATURE -- SECOND SESSION
A BILL

For an Act entitled: "An Act allowing the development of otherwise uneconomic state oil and gas leases not in commercial production by authorizing temporary changes in royalty and production tax rates prior to recovery of development costs, and providing for an effective date."

Sec. 1. The legislature finds and declares that:

(1) Since 1985, world oil prices have dropped precipitously;

(2) The sharp decline in world oil prices has had a dramatic effect on new oil and gas exploration and development in Alaska. In 1987, three exploratory wells were drilled in the state, compared to 22 in 1985;

(3) Future oil and gas development in Alaska is dependent upon the productivity of smaller fields in the state. Many smaller fields lie in remote offshore areas of the state, and face severe and unique constraints including distance from pipelines and supply systems, sea ice, seasonal drilling restrictions and high construction and operation costs. Under current economic conditions, these fields will not recoup the costs of development, and therefore will not be developed absent encouragement from the state; and

(4) Because of the long lead time necessary to bring remote fields into commercial production, and because of the severity of Alaska's current economic difficulties, it is in the public interest to encourage the immediate development of these fields.

Sec. 2. AS 38.05.180 is amended by adding new subsections to read:

(cc) Upon application of a lessee, the commissioner shall temporarily waive the royalty requirement of the lease, if the lessee demonstrates that:

(1) the lease was issued prior to January 1, 1986;

(2) commercial production from the lease has not yet commenced;

(3) projected production revenues from the lease would be insufficient to permit recovery of projected initial development costs within 10 years of commencement of commercial production, or any lesser period that may be commercially reasonable under the circumstances; and

(4) exploration of the lease has delineated oil reserves

(dd) An application under (cc) at this section must be filed with the commissioner by July 1, 1994. The lessee must pay the cost of processing the application.

(ee) A royalty change granted under (cc) of this section expires when the commissioner certifies that production revenues have been received sufficient to recover initial development costs. If the lease is a net profit share lease, certification under this subsection may not precede the first credit balance in the lessee's development account.

(ff) The commissioner may attach the following conditions to any royalty change granted under (cc) of this section:

(1) If the lease is not a net profit share lease, the commissioner may require a net profit share to the state upon recovery of initial development costs;

(2) The commissioner may require that the lessee employ qualified and available Alaskans on activities on or directly supporting development of and production from the lease. A condition imposed under this paragraph shall be developed by the commissioner on a case-by-case basis, in consultation with the commissioner of the Department of Labor, after considering the economy and employment patterns of the affected area, and the degree to which non-residents may cause unemployment or underemployment among qualified and available Alaska residents in the absence of the condition;

(3) If the lessee, or an affiliate of the lessee, intends to construct a pipeline to transport oil or gas from the point of production, the commissioner may require conveyance to the state of the lessee's or affiliate's interest in the pipeline upon recovery of initial development costs from the lease. The commissioner may further require that the lessee or affiliate:

(A) operate the pipeline as a common carrier; and

(B) finance construction of the pipeline in a manner that will allow subsequent conveyance to the state free of any debt obligation to the state.

(4) The commissioner may impose reasonable reporting requirements for the purpose of certifying recovery of initial development costs under (ee) of this section.

(gg) The commissioner may not attach any condition under (ff) of this section that would deny the lessee a commercially reasonable rate of return from the lease after recovery of initial development costs.

(hh) If a lessee files an application under AS 43.55.018 within 60 days before or after filing an application under (cc) of this section, the commissioner and the commissioner of the Department of Revenue shall hear and decide the applications jointly.

(ii) Any person aggrieved by a decision of the commissioner under (cc) of this section may appeal that decision only by filing a notice of appeal with the Superior Court under AS 44.62.560 within 30 days of the decision, and this requirement is jurisdictional. Any appeal under this subsection shall be heard as an appeal based upon the record compiled by the department and, to the extent consistent with the rules of the Alaska Supreme Court, the appeal shall be expedited.

(jj) As used in subsections (cc)-(ii) of this section:

(1) "projected initial development costs" include all expenses projected to accrue from issuance of the lease to the commencement of commercial production in support or as a result of lease development, together with interest on those costs from the date of accrual equal to: (A) the rate of interest allowed on the company's development account in the case of net profit share leases; and (B) for all other leases, the then-prevailing commercial rate for projects of like risk and magnitude, but in either case not less than the then-prevailing prime rate plus two percent. If the lease is a net profit share lease, the term includes any expenditure includable as a debit in the lessee's development account;

(2) "projected production revenues" must be determined based upon the Department of Revenue's then-current 30 percent case price projections at the point of production, less:

(A) projected direct operating costs;

(B) the projected federal windfall profits tax;

(C) projected subsequent development costs on an accrual basis; and

(D) the projected royalty that would be due on the lease, and the projected production tax that would be due under AS 43.55, absent a change in either obligation under subsection (cc) of this section or AS 43.55.018; and

(3) "projected subsequent development costs" means all development costs that are accrued after commencement of commercial production.

Sec. 3. AS 43.55 is amended by adding a new section to read:

Sec. 43.55.018. TEMPORARY PRODUCTION TAX CHANGE. (a) Upon application of an owner of a lease or property, the commissioner shall temporarily waive the production tax for the lease or property if the applicant demonstrates that:

(1) the lease or property was conveyed by, or derived in chain of title from, a lease issued by the Commissioner of the Department of Natural Resources under AS 38.05.180 prior to January 1, 1986;

(2) commercial production from the lease or property has not yet commenced;

(3) projected production revenues from the lease or property would be insufficient to permit recovery of projected initial development costs within 10 years of commencement of commercial production, or any lesser period that may be commercially reasonable under the circumstances; and

(4) the commissioner of the Department of Natural Resources has certified that exploration of the lease has delineated oil reserves.

(b) An application under (a) of this section must be filed with the commissioner by July 1, 1994. The taxpayer must pay the cost of processing the application.

(c) A rate change granted under (a) of this section expires when the commissioner certifies that production revenues have been received sufficient to recover initial development costs. If the lease is a net profit share lease, certification under this subsection may not precede the first credit balance in the lessee's development account.

(d) The commissioner may attach the following conditions to any rate change granted under (a) of this section:

(1) If the lease or property is not a net profit share lease, the commissioner may require conveyance to the commissioner of the Department of Natural Resources of a net profit share to the state upon recovery of initial development costs;

(2) The commissioner may require that the applicant employ qualified and available Alaskans on activities on or directly supporting development of and production from the lease or property. A condition imposed under this paragraph shall be developed by the commissioner on a case-by-case basis, in consultation with the commissioner of the Department of Labor, after considering the economy and employment patterns of the affected area, and the degree to which non-residents may cause unemployment or underemployment among qualified and available Alaska residents in the absence of the condition;

(3) If the applicant, or an affiliate of the applicant, intends to construct a pipeline to transport oil or

gas from the point of production, the commissioner may require conveyance to the commissioner of the Department of Natural Resources of the applicant's or affiliate's interest in the pipeline upon recovery of initial development costs from the lease or property. The commissioner may further require that the applicant or affiliate:

(A) operate the pipeline as a common carrier; and

(B) finance construction of the pipeline in a manner that will allow subsequent conveyance to the state free of any debt obligation to the state; and

(4) The commissioner may impose reasonable reporting requirements for the purpose of certifying recovery of initial development costs under (b) of this section.

(e) The commissioner may not attach any condition under (d) of this section that would deny the applicant a commercially reasonable rate of return from the lease or property after recovery of initial development costs.

(f) If an applicant files an application under AS 38.05.180(cc) within 60 days before or after filing an application under (a) of this section, the commissioner and the commissioner of the Department of Natural Resources shall hear and decide the applications jointly.

(g) Any person aggrieved by a decision of the commissioner under (a) of this section may appeal that decision only by filing a notice of appeal with the Superior Court under AS 44.62.560 within 30 days of the decision, and this requirement is jurisdictional. Any appeal under this subsection shall be heard as an appeal based upon the record compiled by the department and, to the extent consistent with the rules of the Alaska Supreme Court, the appeal shall be expedited.

(h) As used in subsections (a)-(g) of this section:

(1) "projected initial development costs" includes all expenses projected to accrue from issuance of the lease to commencement of commercial production in support or as a result of lease development, together with interest on those costs from the date of accrual equal to: (A) the rate of interest allowed on the company's development account in the case of net profit share leases; and (B) for all other leases, the then-prevailing commercial rate for projects of like risk and magnitude, but in either case not less than the then-prevailing prime rate plus two percent. If the lease or property is a net profit share lease, the term includes any expenditure includable as a debit in the lessee's development account;

(2) "projected production revenues" must be determined based upon the department's then-current 30 percent case price projections at the point of production, less:

(A) projected direct operating costs;

(B) the projected federal windfall profits tax;

(C) projected subsequent development costs on an accrual basis; and

(D) the projected royalty that would be due on the lease or property, and the projected production tax that would be due under AS 43.55, absent a change in either obligation under subsection (a) of this section or AS 38.05.180 (cc); and

(3) "projected subsequent development costs" eans all development costs that are accrued after commencement of commercial production.

Sec. 4. AS 38.05.180(j) is amended to read:

(j) To prolong the economic life of an oil and gas field, the commissioner shall adopt regulations for all bidding methods to allow reduction of royalty on leases within the field to compensate for increasing costs in the later stages of production decline. Except as provided in subsection (cc) of this section, [T]the commissioner may not grant a reduction of royalty until two years' initial production from the field has occurred and each lessee requesting the reduction has made a clear showing that the revenue from all hydrocarbons produced from the field is insufficient to produce a reasonable rate of return with respect to that lessee's total investment in the field.

Sec. 5. AS 43.55.011(a) is amended to read:

Sec. 43.55.011. OIL PRODUCTION TAX. (a) There is levied upon the producer of oil a tax for all oil produced from each lease or property in the state, less any oil the ownership or right to which is exempt from taxation. Except as provided in AS 43.55.018, [T]the tax is equal to either the percentage-of-the value amount calculated under (b) of this section or the cents-per-barrel amount calculated under (c) of this section, whichever is greater, multiplied by the economic limit factor determined for the oil production of the lease or property under AS 43.55.013. If the amounts calculated under (b) of (c) of this section are equal, the amount calculated under (b) of this section shall be treated as if it were the greater for purposes of this section.

Sec. 6. AS 43.55.015(a) is amended to read:

Sec. 43.55.016. GAS PRODUCTION TAX. (a) There is levied upon the producer of gas a tax for all gas produced from each lease or property in the state, less any gas the ownership or right to which is exempt from taxation. Except as provided in AS 43.55.018, [T]the tax is equal to either the percentage-of-value amount calculated under (b) of this section or the cents-per-Mcf amount calculated under (c) of this section, whichever is greater, multiplied by the economic limit factor determined for gas production of the lease or property under AS 43.55.013. If the amounts calculated under (b) and (c) of this section are equal, the amount calculated under (b) of this section shall be treated as if it were the greater for purposes of this section.

Sec. 7. This Act takes effect immediately in accordance with AS 01.10.070(c).

TELECOPY

TO: Ned Farquhar (Rep. Sam Cotten's Office)

FR: Cindy Bailey

If you have any problems receiving, call 564-5537.

Over the 2 and 1/2 year construction phase of Endicott, beginning in Spring of 1985, approximately 1020 men and women worked directly on the project here in Alaska mostly in construction. Using a conservative Department of Labor multiplier of 1.5, Endicott created about 2,250 jobs in Alaska.

Northern Region Oil & Gas Employment 1980-1987
SIC 13 Oil & Gas Extraction

	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Annual Average
1980	2,609	2,593	2,665	2,697	2,707	2,686	2,397	2,348	2,406	3,353	3,361	3,520	2,779
1981	3,922	4,080	4,079	3,785	3,819	3,605	3,751	3,904	3,867	3,994	4,127	3,985	3,910
1982	3,993	3,869	3,760	3,778	3,663	3,523	3,727	3,578	3,454	3,186	3,166	3,185	3,574
1983	3,604	3,614	3,543	3,347	3,111	3,199	3,378	3,302	3,206	3,139	3,253	3,258	3,330
1984	3,541	3,564	3,713	3,704	3,662	3,523	3,806	3,660	3,731	3,504	3,416	3,440	3,605
1985	3,719	3,895	3,947	3,894	3,834	3,758	4,151	4,291	4,150	3,883	3,801	3,798	3,927
1986	4,307	4,413	4,297	3,623	3,527	3,585	4,048	4,253	4,236	4,328	4,181	3,840	4,053
1987	3,792	3,765	3,702	3,819	3,825	4,193	4,062	4,102	4,138	4,068	3,964	3,950	3,948

	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr
1980	2,622	2,697	2,384	3,411
1981	4,027	3,736	3,841	4,035
1982	3,874	3,655	3,586	3,179
1983	3,587	3,219	3,295	3,217
1984	3,606	3,630	3,732	3,453
1985	3,854	3,829	4,197	3,827
1986	4,339	3,578	4,179	4,116
1987	3,753	3,946	4,101	3,994

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State loss from ELF may double

By PATTI EPLER
Daily News reporter

A controversial oil tax program will cost the state about $100 million more than first estimated, according to state petroleum economist Chuck Logsdon.

The Economic Limit Factor (ELF), designed as an incentive to encourage oil production as fields begin to decline, will cost the state about $305 million in reduced severance taxes in fiscal years 1988 and 1989, about $108 million more than state officials had figured on when they were factoring the tax reduction into the state revenue picture.

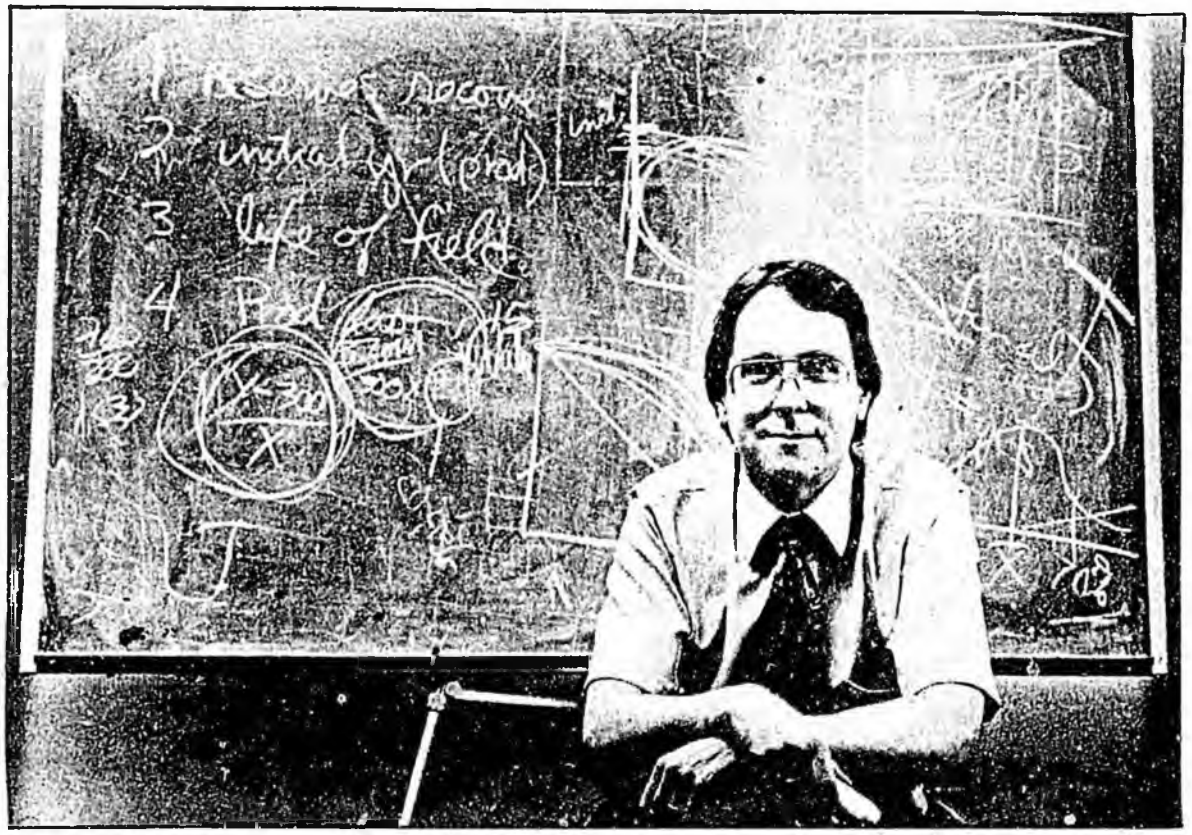
Logsdon said officials had underestimated the number of wells that North Slope producers planned to drill in those years.

Also, oil prices are higher than projected and production rates will be higher than expected, he said in a Feb. 19 memo to state Revenue Commissioner Hugh Malone.

However, state officials also have said that increased royalties to the state because of greater production in large part will offset bigger losses in severance tax revenue from a reduced ELF.

Since July, the ELF has been factored into tax computations on production from Prudhoe Bay, the largest oil field in North America and the source of most of the state's income.

The ELF is based on how much oil is produced from each well. Taxes drop as the number of barrels per well drop, which usually happens when a field declines.



Daily News file photo/Michael Penn

State oil price expert Chuch Logsdon

Logsdon said in the memo that "an aggressive drilling program such as that announced by the Prudhoe producers will keep production at the 1.54 million-barrel-per-day level but will do it with more wells than are currently required. For this reason, the severance tax rate will fall even though Prudhoe production will not."

Based on current assumptions about oil prices, production rates and number of wells for Prudhoe Bay, Logsdon said, his office now is projecting that the cost to the state of the ELF will be $147 million in FY 1988 and $158 million in 1989.

"These estimates are considerably higher than those made last spring when the legislature was considering ELF legislation," he wrote. "The reason is a combination of higher assumed prices, production in FY 1989, and a greater number of wells."

In June, petroleum economists had estimated the cost to the state to be $101 million in FY 1988 and $96 million in FY 1989.

Logsdon said in an interview his staff had underestimated the number of wells to be drilled by about 100. They also used lower oil

See Page B-5, ELF

ELF: State losses from tax program double

Continued from Page B-4

prices in their calculations, he said.

The memo to Malone updates the revenue projections, he said.

It was written partly because of recent announcements by North Slope producers of increased spending and drilling plans and partly because there has been renewed interest by legislators in a House bill that would change the ELF tax program, he said.

"It became apparent we were going to have to explain to somebody a drop in our severance tax estimates for reasons other than our usual price drop," Logsdon said.

AHFC director to speak

Dr. Ron Lehr, executive director of the Alaska Housing Finance Corp., will be the guest speaker at a Thursday meeting

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Senate Special Committee

Senator Rick U

Senator Mitch Abood

Senator Fre

Presentations Schedule

9:00 - 11:30 AM

Bob Coe, President,
Duty Free Shoppers, Alaska Division

Bob Poe, Deputy Commissioner,
Department of Transportation, State of Alaska

Hugh Gellert, Director,
Division of Tourism, State of Alaska

Keith Fernandez, Marketing Director,
Anchorage Convention and Visitors Bureau

2/9/88

Sam -

RDC wonders if you want to get into any of this.

I don't like any of it, myself. Let me know if you want more thorough analysis.

Ned

Resource Development Council
for Alaska, Inc.

807 "G" Street, Suite 200, Anchorage, Alaska 99501-3440
Box 100516, Anchorage, Alaska 99510-0516 – 907/276-0700

January 18, 1988

To: RDC's Oil and Gas Division
From: Becky L. Gay
Executive Director

Re: Oil and gas incentives

The Resource Development Council's Executive Committee endorsed the following position on December 30, 1987. On behalf of RDC, I want to thank all of you that participated in the Division's activities that led to our support for this policy.

Incentives to be added:

* **Discovery royalty incentives:** Draft legislation was prepared by RDC last year, but has not been introduced legislatively.

* **Exploration incentive credits:** Exploration incentives should be added to all future state lease sales, especially to encourage drilling.

* **Non-competitive leasing:** Certain tracts should be allowed to be filed for and awarded through this over-the-counter or lottery process as was done until 1978. This measure would encourage "grass-roots" interest in oil and gas issues, give opportunities to risk-takers and potentially create a positive, pervasive attitude change in the public favorable to development.

* **Increase DNR's flexibility to add acreage to scheduled lease sales:** Contiguous or adjacent acreage, for which there has been a best interest finding made within the last three years, should be available for addition to programmed lease sales.

Disincentives to be removed:

* **Abolish DGC coordination of permitting:** Instead, institute lead agency permitting as introduced as SB280 and HB212 last year.

* **Change the SEEA process:** Develop a legislative resolution and/or gain administrative consent to support lead resource agency supervision of the Social, Economic and Environmental Analysis (SEEA).

* **Worker Compensation insurance premiums:** Support reform which can demonstrably reduce premiums in order to make Alaskans more competitive in labor markets.

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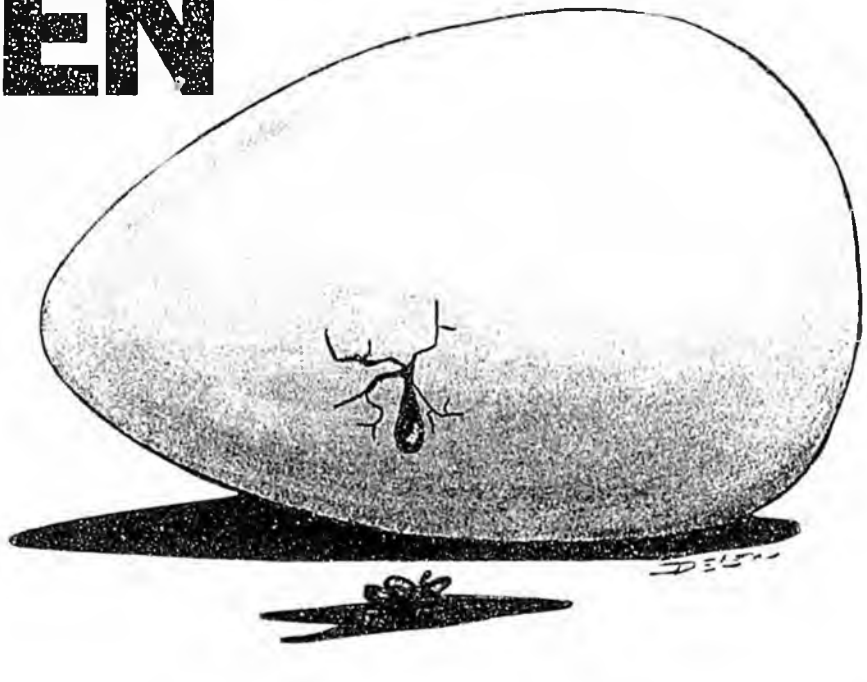

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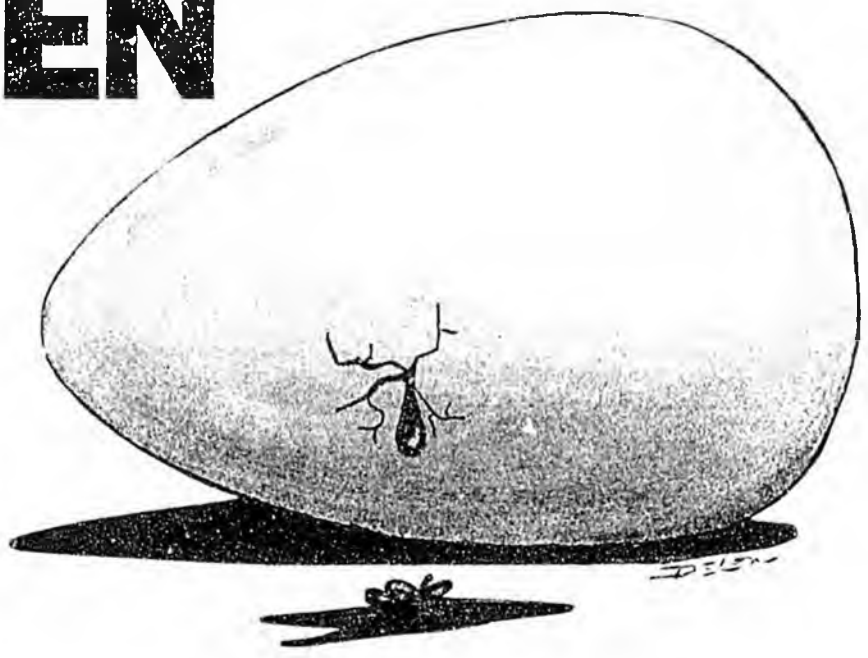

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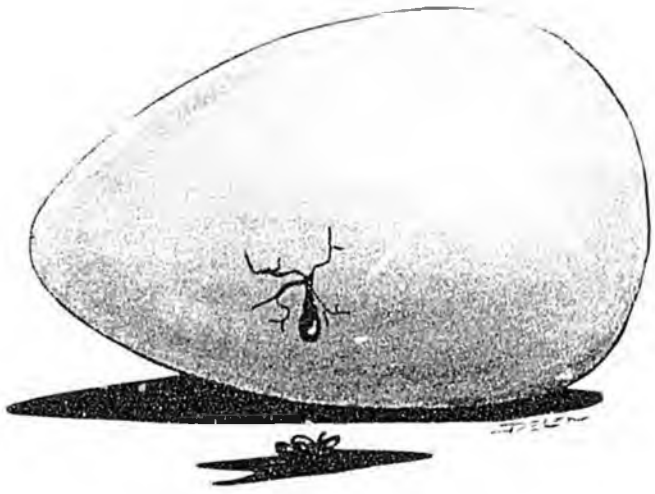

'You Have To Feed The Goose That Lays The *Golden Egg*'

10 IDEAS FOR REJUVENATING ALASKA'S OIL INDUSTRY REGARDLESS OF PRICES AND MAXIMIZING ALASKA'S RETURN ON THE INVESTMENT

By Paul Laird

1 Continue and strengthen the state's oil and gas leasing program.

Most industry executives are satisfied with the current pace of oil and gas lease sales by the state, even though the number reportedly has slipped from the target of three sales a year to two because of manpower shortages in the leasing section of Alaska Department of Natural Resources' Division of Oil & Gas.

Once is not enough for parcels that don't receive bids the first time around. Add them to future lease sales or try noncompetitive ("over-the-counter") leasing by making them available to anyone for a nominal, set fee.

Says Becky Gay, executive director of Resource Development Council for Alaska, "(Over-the-counter leasing) would give more Alaskans a stake in the process and generate additional interest in the program. At very least, it would promote more of a development attitude in the state."

2 Reinstate the discovery royalty bonus on state leases.

Designed to encourage exploratory drilling in frontier areas, the bonus reduced royalties on production from a discovery well in a new geologic structure. It was repealed in 1969 after the discovery of Prudhoe Bay.

The program reduced the normal 12½ percent royalty to 5 percent for 10 years, and it spawned additional development in areas around discovery wells.

A total of 10 discovery wells had been approved for reduced royalties by late 1987, and Standard Alaska Production Co. has applied for the reduction on discovery wells at Endicott and Niakuk.

Says O.K. "Easy" Gilbreth, assistant executive director and manager of exploration and production affairs for the Alaska Oil & Gas Association, "I remember one time when 14 exploratory wells were being drilled at once in Cook Inlet; the different companies were in a race to make a discovery and be eligible for the bonus. Some companies said the royalty bonus was the final incentive to drill."

3 Expand use of exploration incentive credits.

The commissioner of Natural Resources can credit a percentage of exploratory and geophysical expenditures toward companies' royalties, rents and taxes.

Companies can accelerate recovery of their investments and improve cash flow. Through October, more than $36 million in credits had been granted on nine wells.

In the past, use of exploration incentive credits was limited to "net profit share leases" in which companies bid a percentage of their profits from the tracts. Higher royalty rates (20 percent) were involved as well.

Kuparuk Uplands Sale 54 scheduled for January was the first time exploration incentive credits were offered on non-net profit share leases.

At a time when cash flow has slowed to a trickle for many oil companies, anything Alaska can do to improve it should enhance the state's competitive position for oil investments.

4 Develop a comprehensive state policy toward development incentives and offer additional exploration incentives.

Early last year, Amerada Hess Corp. Chairman Leon Hess flew into Juneau and proposed this to Gov. Steve Cowper:

Amerada would develop its Northstar/Seal Island prospect in the Beaufort Sea and turn the pipeline linking it with existing North Slope pipeline infrastructure over to the state after project payback so the state could collect tariffs. In return, the state would have to suspend royalties and severance taxes on the project during the payoff period.

With state guidelines on development incentives, the plan may or may not have gone further. Without such a policy, it would have set its own precedent and didn't have a chance. An opportunity lost?

A number of states and provinces – and the Canadian government as well – have adopted incentive packages that include severance tax and royalty holidays and other inducements to speedy exploration and development.

Common features: time limits on eligibility for the benefits, greater benefits for earlier drilling and production, restrictions limiting benefits to activity in new fields, a trigger price for oil at which benefits are suspended (as low as $19 per barrel, as high as $33). Another strategy for quicker payback: accelerated depreciation.

"Peers in the (Canadian oil) industry say the incentives have had a big impact," says Tom Reinhart, vice president of finance and administration for Conoco Canada Limited. "There are definitely projects we've gone forward with that we wouldn't have without incentives."

But there's a catch. Cautions Hans Maciej, vice president of the Canadian Petroleum Association, "We're not in love with incentives; we'd prefer lower royalties on a permanent basis. (Royalties in Canada range from 25½ to 34 percent.) The incentives are temporary, and they distort normal business planning. Before the deadline for five-year holidays, there was a rush to drill. After that, activity dropped off dramatically.

"Who knows what would happen if we had 12½ percent royalties all the time? That's not an unreasonable rate over the life of a project, but it may be a good idea to look at a lower rate during payout and a higher rate after that so it averages out at 12½ percent."

Louisiana adopted a severance and royalty holiday program in 1986, and it's considering dropping lease bonus payments on state leases in exchange for development commitments. A preliminary analysis indicated no appreciable impact on drilling activity in the state, but neighboring states have adopted similar programs to keep up with the Cajuns.

"It's not just a matter of the state giving away revenues," says Jim Porter, secretary of the Louisiana Department of Natural Resources. "Our goal has been to keep the industry alive and to keep people working."

There's no consensus – in the industry or out of it – what impact such incentives would have in Alaska. There's even disagreement between Prudhoe Bay's "haves" and "have nots" whether to seek tax breaks.

Says a spokesman for one of the majors, "We certainly aren't going to be at the forefront asking for incentives that may be interpreted as us asking for special treatment."

Some, like Natural Resources Commissioner Judith Brady, contend that because oil fields in Alaska are so large and lead times are so long, incentives won't sway companies' development decisions. Adds William Wade, president of ARCO Alaska, "You don't want to create an industry that relies on subsidy for survival."

Biggest challenge in tailoring an incentive program is identifying measures that will encourage new activity that wouldn't occur without incentives while minimizing the impact on state revenues. Let's not forget, however, that today's "giveaways" could be the fodder for tomorrow's investments.

"Incentives wouldn't be necessary if every field were a Prudhoe Bay," says economist Scott Hawkins, president and CEO of the Anchorage Economic Development Corp. "But when you start talking about the smaller marginal fields, those credits matter. The only time the state loses is if an oil company was ready to proceed with a project without incentives, and even then, incentives induce other private activity."

Alaska's willingness to renegotiate the 20 percent royalty forced on Conoco at Milne Point will be pivotal in determining when production resumes.

Oil & Gas's Michael Kotowski, who participated in a state study of oil industry incentives last year, note: Milne could have applied for a reduced tax burden under terms of the Economic Limit Factor (ELF) after two years of production (late 1987). The two-year provision discourages companies from winning leases with unrealistic bids then applying for immediate relief.

The oil price collapse of 1986 has posed extraordinary circumstances for the industry and the state alike. The industry has adjusted, other states and provinces have adjusted, and now it's Alaska's turn. Since Milne Point production was suspended early in 1986, the state has reaped 20 percent of nothing from the lease.

A program to lower taxes and royalties on wells drilled within a specified time will push up the timetable for work already planned and provide a quicker infusion of new

jobs for Alaska – fueling "work flow" in the private sector instead of cash flow for state government.

Deadlines for any program designed to speed up activity in Alaska still would have to reflect the long lead times for planning and development in the state.

Says Wade, "Alaska could count on that kind of acceleration of work. Projects are evaluated on the basis of economics, and it just makes sense that anything like that would improve the economics. And remember, Alaska is competing for oil company funds with other areas throughout the country and the world."

"When you ask if the tax and royalty breaks are too small to make a difference, you also have to ask if they're just enough to get things done," says Conoco Canada's Reinhart. That question is particularly compelling for the smaller North Slope oil prospects likely to chart the region's oil future.

5 Offer enhanced oil recovery incentives.

Enhanced recovery projects are more capital- and labor-intensive than primary development work, and they yield greater benefits to the Alaskan economy as a result. Strategies for encouraging them: broader use of investment tax credits and severance tax exemptions for a specified period.

Enhanced recovery tax breaks and research credits could be the key to unlocking some of the billions of barrels of Alaska's proven yet unrecoverable reserves: West Sak Sands, half of Prudhoe Bay, Ugnu and the list goes on.

"When we talk about incentives, we need to consider the three 'R's.' " State Sen. Jan Faiks told an Alaska State Chamber of Commerce gathering in early December. "You start with a resource in the ground. It doesn't become a reserve until someone drills and discovers it. The state gets the royalty after production begins."

6 Reinvest a portion of the state's oil wealth in an institute for petroleum research.

"Alaska hasn't acted like the owner of its oil," says G.D. Sharma, director of the Petroleum Development Lab at the University of Alaska in Fairbanks. "It's acted like an administrator for collecting and disbursing taxes and royalties."

Investing a small percentage of the state's oil-related revenues in a research agency would enable Alaska to maximize recovery of known reserves, assist the industry *and* the state in evaluating prospects and provide an independent center for petroleum research.

Funds would be used to inventory oil and gas resources, to determine and address technological needs and to provide an independent clearinghouse for Alaskan petroleum data and other information.

Says Sharma, whose lab's activities within UAF's School of Minerals and Engineering have been restricted by limited (and dwindling) budgets since it was established in 1984, "There would be an immediate return for Alaska in additional industry and federal interest if we had such a database."

Such an institute also could develop equipment and technology to overcome barriers to oil activity or make it more efficient . . . and spawn their own global markets. Look at what's happened with offshore equipment and technology developed by England and Norway for North Sea drilling and production.

Cowper's proposed Alaska Science & Technology Foundation may be one avenue toward taking an oil and gas research initiative.

"Compared to other states and Alberta, state government in Alaska reaps a lot more revenues from petroleum and is a lot more dependent on oil activity," Sharma says. "Yet they assist the industry and we don't plow anything back in. You have to feed the goose that lays the golden egg."

7 Designate the Department of Natural Resources as the lead agency for resource development proposals and give it ultimate authority in setting stipulations.

Industry figures this is one of the keys to improving operating efficiency in Alaska, and it's not hard to see why. One company estimates stipulations and environmental requirements add 20-25 percent to the overhead cost of drilling a well; another says permitting adds 50 percent to the time required to bring a new field into production.

"These days it doesn't take much to kill a project," says Thomas Cook, Alaska exploration representative for Chevron USA. "We face a lot of redundant reviews whenever we want to do anything."

Do your dentist, your minister and your babysitter have equal say with your mechanic when you want a tuneup for your car . . . only to have your marriage counselor draw up the final terms? Of course not.

So why do the Departments of Fish & Game, Environmental Conservation and occasionally Commerce & Economic Development have the same input on resource development issues as the Department of Natural Resources . . . so the final decision can be made by the governor's Office of Governmental Coordination?

Says Resource Development Council's Gay, "It just makes sense that the agency that knows the most about the resource should lead the show. Other agencies should comment and make suggestions, but Natural Resources should have the power to overrule inconsistencies and unreasonable stipulations from the others."

Designating Natural Resources lead agency would minimize duplication and unnecessary delays. Quicker, more reasonable reviews would result in faster returns to both the industry and the state. Stipulations shouldn't become "wish lists" for various agencies.

Maybe Alaska's state bureaucracy needs a bit of attitude adjustment, too. A lot of bureaucrats figure antagonism between regulators and the industry is natural. Oddly, other states have found it possible to work *with* the industry.

How about approaching the industry with: "What can the state do to help make the project work?" instead of: "Here's what you'll have to do to satisfy us before you start work . . . "

8 Adopt incentives to encourage local hire and to improve Alaska's competitive position for oilfield fabrication work.

Tax credits and state investments in infrastructure could be used to help offset higher labor, freight and cost-of-living expenses in Alaska.

Punitive local hire legislation might be politically expedient, but it's failed miserably. The stick hasn't worked· time to try the carrot. By subsidizing infrastructure development and labor in the early stages, the state can lower costs and make Alaskan workers and companies more competitive.

Says Pete Leathar· ·esident of Veco Inc., "Costs will go dow· structure develops. But in the early st.. ·need incentives for things to be built h·· The state needs to be willing to give on the front end to get it back later."

Veco's contract with ARCO Alaska to fabricate a pair of North Slope production modules in Wasilla will generate 50 jobs. It will be the first time production modules have been fabricated in Alaska.

"The oil industry is a place for Alaska to create jobs," says ARCO's Wade. "For a number of reasons, we prefer doing the work in Alaska to doing it in the Lower 48. But the work has to be done competitively if it's going to be done here."

One reason the modules will be fabricated in Wasilla instead of Anchorage: a low overpass on the Glenn Highway between the two cities that would have forced trucks transporting the units to the North Slope to use a detour. Says Veco V.P. Bert Hartley, "In a lot of cases, Alaska has failed to take commercial uses into consideration when it's designed things."

9 Get tough with the federal government on oil and gas development issues.

Admittedly, developments where the feds are involved are out of the state's control. But it would have to count for something if the state were to take an aggressive pro-development stance and protest unreasonable delays and requirements heaped on by federal agencies. (Do the fish really need lighted tunnels to swim under the Endicott causeway?)

Who'd like to explain why several other states went on record last year supporting oil exploration on the Coastal Plain of the Arctic National Wildlife Refuge while the Alaska House was playing political games and failed to pass its own resolution supporting exploration during the '87 session?

If Alaska's policy makers can't speak with a united voice on oil and gas development, how can the state expect anyone else to listen?

10 Do nothing.

It's not paranoia if people are really out to get you. With all the times Alaska lawmakers have changed the tax rules on Prudhoe Bay and all the other times they've tried, it's little wonder Prudhoe operators in particular suffer heart palpitations whenever anyone so much as whispers the words "oil taxes" in Juneau.

Companies with big stakes in Prudhoe Bay and Kuparuk have too much to lose if "quid pro quo" becomes the rule of the day for new exploration and development incentives.

"Three of the companies have told us they want to stay completely away from the issue of taxes and tax incentives," says Natural Resources' Brady. "They're afraid it would be like opening Pandora's Box."

Alaska's historically unstable oil tax climate forces corporate decision makers to include "fudge factors" in project cost estimates. Allowances for the possibility of higher taxes in the future damage the economics of every project and could result in low-margin project not being built.

"Our No. 1 priority is a stable tax policy," says ARCO's Wade. "We've only drilled about half of the development wells we're going to need on the North Slope, and there's still a lot of exploration and enhanced recovery potential, too.

ARCO sees billions of dollars it would like to invest in Alaska over the next 10 years, but we have to know what the rules are and be able to count on them."

Adds Veco's Leathard, "You can't recreate the traffic laws while someone is driving down the highway."

If lawmakers do adopt new incentives to encourage additional petroleum exploration and development in Alaska, they should aspire to disprove the maxim that for every action (new incentives for smaller fields) there's an equal and opposite reaction (new tax burdens for the giants). □

Four Small Steps Toward One Giant Economic Leap

Juneau entrepreneurs are carving business niches with fish incubator boxes, bottled spring water, beer and salmon skin accessories.

By Chuck Kleeschulte

WHEN GOV. STEVE Cowper spoke last year about the need for individual Alaskans to be inventive and open small businesses to lead Alaska out of its economic slump, some Alaskan entrepreneurs were listening. This is a look at several Juneau businessmen and women who took the plunge during the height of the downturn, survived and even have thrived.

HAROLD ZENGER
North Pacific Aquaculture Development Co. (NOPAD)

It's been said that if you build a better mousetrap, the world will beat a path to your door. For Zenger, the saying's been true. Literally (almost).

The retired Alaska Department of Fish & Game technician who used to build salmon hatcheries for the state's Fisheries Rehabilitation Enhancement & Development Division was frustrated a decade ago by the design of the old boxes used to incubate fish eggs. Says he, "The old boxes were round. They used a lot of water and wasted a lot of space. I knew there had to be a better design. I woke up all of a sudden at 2 o'clock one morning, and by 5 I had a new incubator box all sketched out. The problems were solved."

Zenger, who's 65, promptly patented his 4-foot-square, 14-inch-high box, which holds between 175,000 and 375,000 eggs. Its beauty: Incubator trays stack on top of each other, with water dripping from one box to another. In the process, the water reabsorbs oxygen and cuts the amount of water needed to raise fish. Now being used for steelhead as well as salmon, the boxes are non-toxic and easier to clean than the wooden boxes used previously.

Since launching the venture in his house, Zenger has expanded his aluminum fabricating business and patented his design in Canada and Japan. In October he became the first Alaskan to ink a contract inside the state's sister province in China, Heilongjaing. The Chinese will use 50 of the boxes in two new mainland salmon hatcheries. That contract could open the door to significant new business for Zenger's NOPAD.

"I could probably have a couple thousand boxes in use in the U.S. and a few other foreign countries," he says. "But if aquaculture in China grows like it looks like it will, my business could really take off."

Zenger will travel to China in July to install the boxes in the 4- and 6-million-egg facilities. The hatcheries, which will raise pink and chum salmon, are several days' drive from Harbin, the provincial capital.

JIM SATTERFIELD, JIM STEVENS & BILL SUMMER
Alaska Pure Spring Water

When most people think about selling natural resources from Southeast, they think of peddling fish and trees. But the region's most plentiful resource by far is water. That's exactly what Satterfield's selling, and with considerable success.

For the past four years, 35-year-old Satterfield has been making his living selling bottled water to Juneau customers – water from a Mendenhall Valley well. But last fall he sold Alaska

Zenger's incubator boxes are headed for China.

1988 Mark Kelley, Juneau Empire

State of Alaska

House Majority Leader

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HOUSE JUDICIARY
HOUSE RULES

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February 18,1988

To: Rep. Adelheid Herrmann
Rep. Sam Cotton
Co Chairs
House Resources Committee

From: Max F. Gruenberg, Jr. Max

I would very much appreciate it if you would schedule a hearing on HB 471, relating to state royalty waivers,as soon as possible.

Thank you very much.

March 8??
Thanks

WSJ 1/26/88 p4

Profit of Most Major Oil Firms Surged On Refining Upturn in Fourth Quarter

By James Tanner
Staff Reporter of The Wall Street Journal

Fourth-quarter profit of major oil companies generally surged on a year-end turnaround in the long-depressed refining business. Higher crude oil prices and strong chemical operations contributed to the gains.

Among the biggest oil companies reporting results, only Los Angeles-based Unocal Corp. showed a decline, mainly because of huge gains on asset sales a year earlier. Unocal's profit dropped 39%.

But Exxon Corp., Amoco Corp. and Atlantic Richfield Co. posted higher profit.

FOURTH-QUARTER NET INCOME

	1987 In millions	1987 per share	1986 In millions	1986 per share	% chg.
Exxon	1556.0	1.12	1480.0	1.03	+ 5
Arco	340.0	1.86	64.0	0.35	+ 431
Amoco	377.0	1.47	165.0	0.65	+ 129
Unocal	29.8	0.26	49.2	0.42	– 39
YEAR NET INCOME					
Exxon	4841.0	3.43	5360.0	3.71	– 10
Arco	1224.0	6.68	615.0	3.38	+ 99
Amoco	1360.0	5.31	747.0	2.91	+ 82
Unocal	181.4	1.56	175.8	1.51	+ 3

New York-based Exxon, the nation's biggest oil company, had the smallest percentage increase. Its net income climbed 5.1%, even though gains from asset sales contributed 34 cents a share to year-earlier profit.

Chicago-based Amoco's net more than doubled, while Arco's quintupled. For Los Angeles-based Arco, net included a gain of $186 million from a public offering in October of Arco Chemical Co. shares, although that gain was offset by several charges.

The increase in refining margins was an important factor in each company's results—and was particularly evident at Ashland Oil Inc. of Ashland, Ky., which is chiefly a petroleum refiner. In its first quarter ended Dec. 31, net nearly tripled to $71.1 million, or $2.50 a share, after a $31.1 million gain from an accounting change.

Stocks Surge

Analysts had generally expected refining profits to swell in the fourth quarter—and in some cases the results exceeded Wall Street expectations. In New York Stock Exchange composite trading yesterday, Arco surged $2.75 to $75.375, Amoco jumped $2.625 to $73.50, Exxon climbed $1.125 to $40.75, Unocal rose 50 cents to $31.25 and Ashland fell $1 to $54.25.

For the first nine months of 1987, petroleum-refining margins were severely depressed because of the increasing costs of crude oil. But in late 1987 crude oil prices softened somewhat, thus firming refining margins. The decline in the value of the dollar also helped the foreign refining operations of international companies such as Exxon, whose fourth-quarter results reached their strongest level since the brisk 1986 first quarter.

"The combination of lower crude supply costs and relatively firm product prices led to an improvement in refining and marketing margins—in contrast to the situation earlier in the year when higher supply costs depressed margins," said Lawrence G. Rawl, chairman of Exxon.

For 1987, however, Exxon's earnings fell despite higher revenue. Exxon's revenue rose 18% to $22.59 billion in the quarter and 10% to $84.12 billion for the year.

But for the quarter, Exxon's earnings from refining and marketing operations rose to $376 million—their highest level of 1987. Earnings from worldwide exploration and production totaled $993 million, or $185 million higher than a year earlier.

Exxon sharply boosted capital and exploration expenditures in the quarter to $2.98 billion from $1.59 billion a year earlier. For all 1987, however, spending was flat at $7.18 billion.

Petrochemical Demand

Although crude prices began tumbling in late 1987, average prices for the year climbed sharply from the severely depressed levels of 1986. Exxon, like several other oil companies, also cut operating expenses throughout 1987. Exxon's chemical profits reached a record level, reflecting stronger demand industrywide for certain petrochemicals and a sharp rise in petrochemical exports as the dollar tumbled.

At Amoco, Richard M. Morrow, chairman, cited a rise of $3 to $4 a barrel in the average price of crude, as well as improved refining margins and continued strong demand for chemical products. Revenue for the quarter rose 22% to $5.92 billion.

For the year, Amoco's earnings jumped on a revenue increase of 11% to $22.39 billion, reflecting, among other factors, the higher crude oil prices and lower exploration expenses. Capital and exploration expenditures for 1987 fell slightly to $3.1 billion from $3.2 billion in 1986, although Amoco previously has announced a spending budget of $3.8 billion for this year.

At Arco, fourth-quarter earnings included gains totaling $205 million. These were largely offset by $193 million of charges, including a $95 million charge for future environmental cleanup costs. Revenue increased 26% to $4.59 billion. In 1987, revenue increased 12% to $16.83 billion.

At Unocal, fourth-quarter earnings included a gain from asset sales of $2 million, compared with a $79 million gain in the 1986 quarter. Revenue for the quarter increased 13% to $2.33 billion. For 1987, revenue increased 12% to $9.39 billion.

Unocal continued its debt-reduction program in 1987, lowering debt by $452 million to a total of just under $5 billion. "We expect to continue to make significant debt reduction in 1988 and beyond," said Fred L. Hartley, chairman.

Microcom Acquires Meridian

NORWOOD, Mass.—Microcom Inc. said it acquired Meridian Technology Inc., an Irvine, Calif., marketer of communications software for personal computers.

Terms weren't disclosed.

Microcom makes computer communications equipment. Meridian markets the Carbon Copy line of software.

100k bbls/d LPG -
↳ gas

Wolpe contact -

EIS issue -

Std / Exxon / ARCO -

[illegible] / ANGIS ? impact ?

netback value study Korea / Japan / Gulf vs. Gulf Coast
producers - this summer -

Alaska Construction & Oil

FEBRUARY 1988

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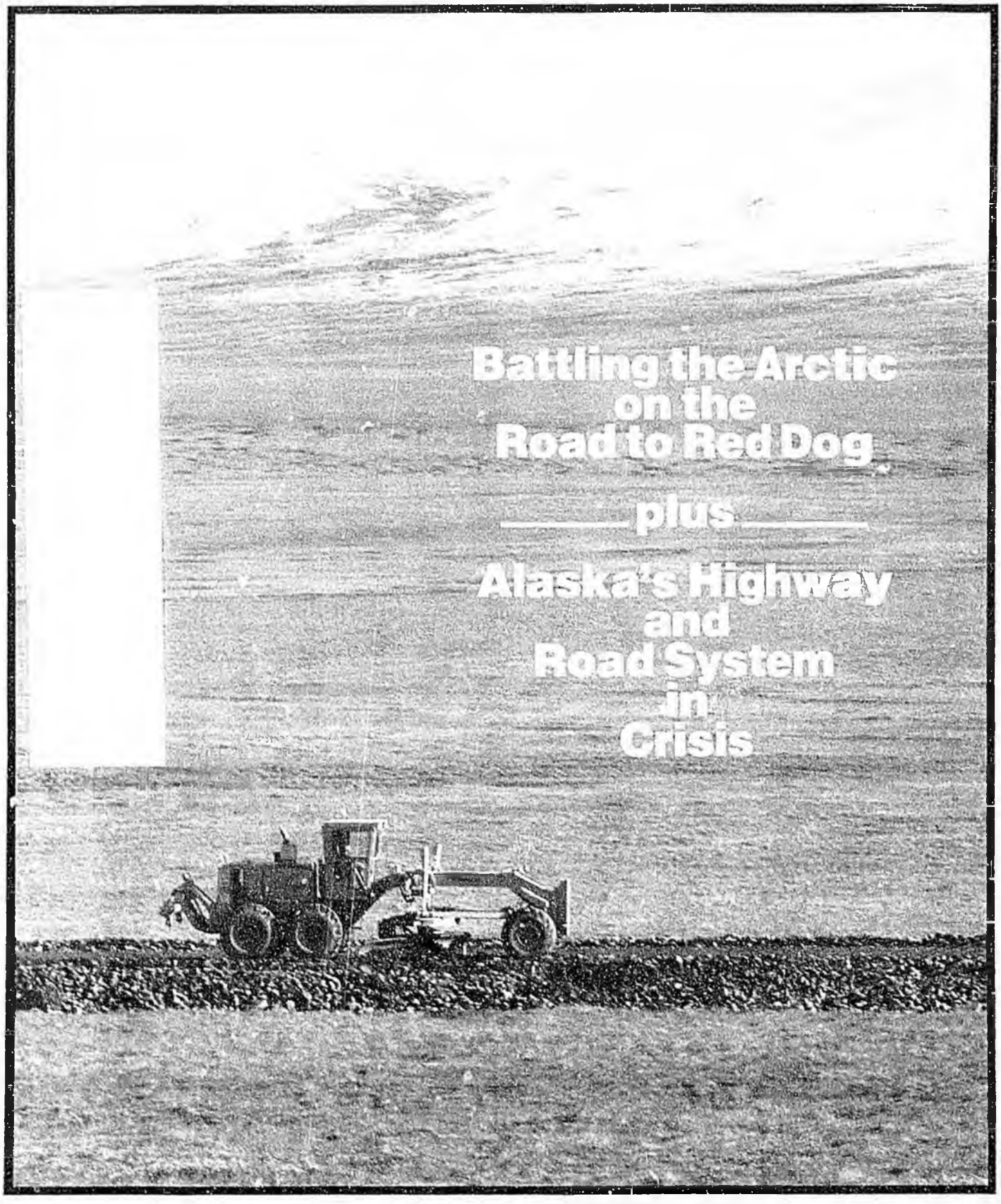

Pacific Coast Coal's John Henry Mine in Black Diamond, Washington is a year-round open pit coal mining operation supplying coal to federal, state and private customers throughout western Washington.

Mark Abernathy, Pacific Coast Coal's manager of operations.

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Mark Abernathy, Pacific Coast Coal

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AT PRESS TIME

Valdez Refinery Planning Continues

Alaska Pacific Refining Inc. is moving ahead with permitting and construction plans for a 120,000-bpd refinery at Valdez despite pending legislation that could limit product export overseas to 33 percent of the plant's output.

An amendment to the Omnibus Trade Bill which would constrict product marketing in Pacific Rim nations is causing foreign investors to drag their feet on project financing. J. Timothy Campbell, APRI chairman, said the refinery is economically viable even if two-thirds of its potential exports are bottled up. He is counting on capturing West Coast and U.S. military markets in the Pacific Rim from foreign suppliers through efficient refinery operation and certain transportation concessions. Campbell reportedly has told the Seafarers Union that half of exported product would be shipped on U.S. flagged Jones Act vessels.

As of late December, project management firm Bechtel Inc. of California was some 70 percent finished with a technical bid package to include project scope, site layout and project execution plan. Engineering firms working on permits include Dames & Moore, Santa Barbara, Calif.; North American Weather Consultants, Salt Lake City, Utah; Valdez Engineering, Valdez; and Environmental Services Ltd., Anchorage. UOP Inc. of Des Plaines, Ill., was reportedly 75 percent finished with its refinery facilities design at year-end.

OCS Lease Sale Update

The Minerals Management Service has rescheduled federal offshore oil and gas Lease Sale Number 97-Beaufort Sea for mid-March to give the state of Alaska time to review and respond to a study on drilling activity and bowhead whale movement.

On Dec. 24, the state commissioners of Natural Resources, and the Fish and Game and Environmental Conservation departments sent Secretary of Interior Donald Hodel a response outlining three main points.

First, the state agencies supported a lease sale alternative that would delete 201 blocks (412,354 hectares) around Point Barrow and west toward Point Franklin. Second, the state did not favor deleting 161 blocks (327,000 hectares) between Kaktovik and the Canadian Border but wants a whale feeding study done in the area. Third, the state wants seasonal drilling restrictions on exploratory activity during spring and fall whale migration periods.

The sale, originally consisting of 3,930 blocks in 21.2 million acres, has been set back from December 1986, July 1987 and January 1988.

Adjoining the sale 97 area to the southwest is Lease Sale Number 109-Chukchi Sea. The MMS reports the final environmental impact statement is available and this sale is on schedule for this May. The sale 109 area offers 5,450 blocks within about 29 million acres between 3 mi. and 239 mi. offshore extending from Point Franklin to Point Lay. No sales have been held in the Chukchi Sea planning area. Sale 85, scheduled for February 1985, was deleted from the leasing schedule. Sale 109 was postponed from May 1987.

Copies of the final sale 109 EIS are available from the Minerals Management Service, 949 E. 36th Ave., Rm. 110, Anchorage, AK 99508-4302.

Denali Facilities To Expand

A new hotel and visitor access center are scheduled for construction at Denali National Park beginning this year.

The hotel will replace an existing facility, built as temporary lodging after a fire in 1972. It will feature 140 rooms, restaurant, snack bar, lounge, gift shop, post office, general store, laundry, showers and a rental outlet for camping and other recreational equipment.

It will be built on and adjacent to the existing hotel site. An auditorium and some other existing facilities will be incorporated into the new structure.

ARA Outdoor World, the current concessionnaire managing the hotel, has first right to contract for the construction and management of the new hotel. The Park Service would solicit other bids if Outdoor World declines the contract.

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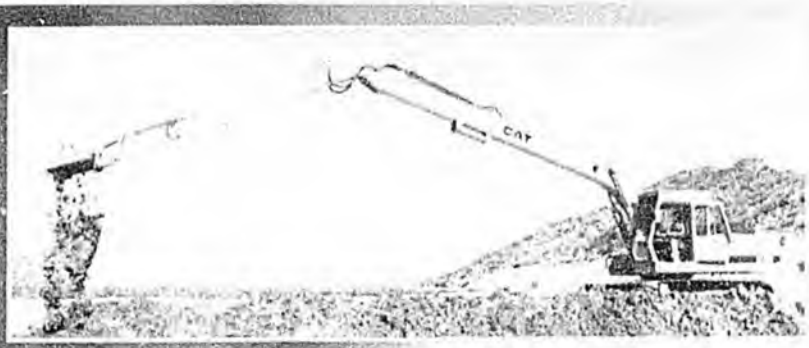
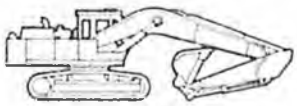



E300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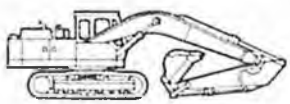
EL240

E180

EL180

	E300	EL300	E240	EL240	E180	EL180
Power	187 FWHP	187 FWHP	148 FWHP	148 FWHP	118 FWHP	118 FWHP
Operating Weight	67,240 lb	69,665 lb	50,705 lb	52,030 lb	42,110 lb	43,650 lb
Maximum Ground Level Reach	38' 10"	38' 10"	34' 9"	34' 9"	31' 9"	31' 9"
Maximum Digging Depth	27' 4"	27' 4"	24' 4"	24' 4"	21' 6"	21' 6"
Lift Capacity @ Ground Level, Over Front, 20' Reach	18,000 lb	22,600 lb	13,200 lb	16,000 lb	10,000 lb	12,050 lb

Materials and specifications subject to change without notice.

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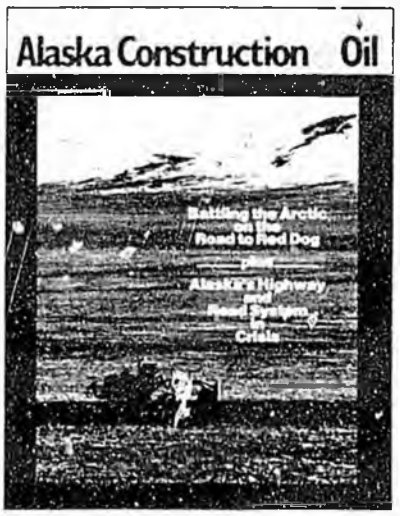


FEBRUARY 1988 VOL. 29, NO. 2

At work on the road to the Red Dog Mine, a motor grader makes its way through the tundra. Photo by Judy Patrick.

The Road to Red Dog

Doing Battle with the Arctic

By MARK HARRIS

Building a road to what will become the world's largest zinc-lead mine located 100 mi. above the Arctic Circle can be compared to some of the amazing military construction projects accomplished during wartime.

Imagine a general addressing his construction battalion: "Your mission is to establish a beachhead and punch through 52 mi. of gravel road capable of withstanding 2,000-ton loads. You must rip, drill and blast every cubic yard of embankment material, erect nine major bridges and place 6.6 mi. of culvert at 450 more stream crossings.

"By the way, you cannot tear up one tussock of tundra outside of the road right-of-way in the process. You will work in summer, fighting hordes of mosquitoes and muck up to your knees. Then you will work in winter, fighting 30-degree-below-zero temperatures and winds of 25 knots. Good luck, gentlemen."

Such was the task facing Enserch Alaska Construction Inc. The Anchorage-based company was the low bidder last spring on the road to Red Dog mine at $47.8 million. Other associated contracts brought the project's total cost to about $52 million — or $1 million per mile for a dirt road with no intersections or stop lights.

The project is administered by the Alaska Industrial Development Export Authority and the Department of Transportation and Public Facilities. It is the key component of the DeLong Mountain Regional Transportation System. AIDA invested $150 million in the road, ore conveyor system, fuel tank farm port and related facilities for development of a world class zinc-lead mine on land owned by the NANA Regional Corp. in 1982. NANA has signed an agreement with Cominco Alaska Inc., a subsidiary of Cominco Ltd. of Vancouver, B.C., to develop and operate the mine.

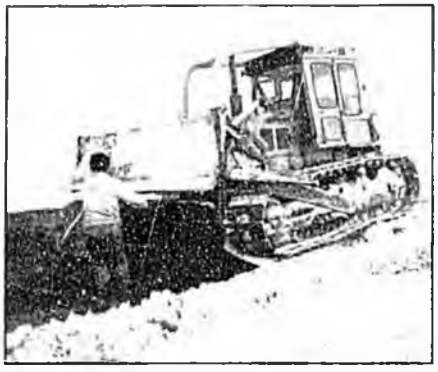
Wilson Hughes, president of Enserch Alaska Construction, said as road building began last summer, "We've talked about the project, examined the people, equipment, logistics and the schedule. The only thing that needs examining is the president of a company who would take on such a project and still sleep at night, and be able to spend some of his waking hours with a smile on his face."

As it turned out, everyone involved has a lot to smile about. The contractor pushed through the pioneer road to the mine site 69 days ahead of the Feb. 1 deadline.

Much of the credit goes to a cadre of experienced construction professionals. Among them are Enserch's project manager Roger Blankenship, project engineer Dick Reed, spread foreman Harvey Powell and head mechanic Elmer Winquist. Winquist, credited with keeping all equipment operational, died in early December.

A team effort on the part of all of Enserch's management made for smooth going in the early stages of the project. Blankenship commented, "Harvey Powell always said he would have a road to the mine site by Dec. 1." All the skeptics were quieted when a drivable road extended from the port to the mine site by Nov. 24. Road building progressed at an amazing 100-ft.-per-hour average or about 2,000 ft. per day. They hauled an average 25,000 cu. yd. of material per day, Blankenship said, beginning about July 28. The quick work earned Enserch a $2,500-per-day bonus for a total of $172,500.

Between July and October, Foss Maritime Co. brought in 11 bargeloads



More than 1.1 million cu. yd. of geotextile was placed under the mine road, material site access roads and at bridge abutments. It was rolled out directly onto the tundra by ATVs in summer and fall and with dozers after freeze-up. PN&D photo.

> ". . . The only thing that needs examining is the president of a company who would take on such a project and still sleep at night, and be able to spend some of his waking hours with a smile on his face."
> — Wilson Hughes

Crews quickly assembled 40-ft. by 30-ft. bridge sections in a large metal rib and fabric building at the project site. Eight prestressed concrete panels were grouted onto four I-beams for each 40-ft. section. Cutouts in the panels fit over Nelson studs welded to the girders. PN&D photo.

of equipment, supplies and fuel. The 269 pieces of equipment on site have a replacement value of $30 million. The spare parts inventory is valued at $4 million. That doesn't include the value of some 800 spare tires.

Four barges carried in 3.1 million gal. of arctic-grade diesel. Of this, 750,000 gal. will be used by Green Construction Co. of Anchorage, which has a $20-million contract for mine site preparation work.

The contractor brought 280 major pieces of equipment on site. Some came from its Prudhoe Bay operations, from the Bradley Lake hydro project near Homer and some from Arizona. Equipment included 17 dozers, four graders, 12 loaders, three compactors, five cranes, 10 scrapers, 14 welders, 12 generator sets for 3,000 kW of power generation, 44 pit lights, 35 pickups and Suburbans and 53 hauling trucks, buses, service trucks, fuel trucks, mixer trucks and other vehicles.

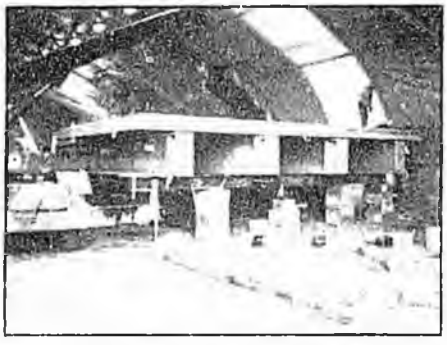
Shop buildings transported from Prudhoe Bay included a 100x300-ft. building and two 80x100-ft. buildings, all beluga-type structures with fabric stretched over metal ribs.

Getting to Work

The 2.64 million cu. yd. of embankment fill and 17,690 tons of riprap needed for the road and bridge abutments were to come from 17 material sites spaced along the project length. The challenge was getting to the pits. No construction equipment was allowed on the tundra until it was well frozen to prevent environmental scarring.

However, the contractor could begin road building under "summer conditions." That meant keeping equipment on existing fill and building road in tunnel-head fashion.

Enserch chose this option for reasons of worker efficiency, reduced equipment downtime and early jump-out for the project as a buffer against unforeseen delays later. This proved to be a wise decision.



The contractor will shop fabricate 22 40-ft. sections for nine bridges spanning a total of 898 ft. PN&D photo.

"When we hit the beach in July, we just kept going," Blankenship said. Others may have chosen to get equipment on site, open a couple of beach material sites, set up camp, then leave the project until freeze-up when they could drive on the tundra.

"We kept going, kept our valuable people working and kept the project momentum high. Our schedule required building road at 100 ft. per hour, 20 hours a day for 132 days. This resulted in moving the road completion date up a year, enabling Cominco to push up its mine development schedule if desired."

Cominco plans to move heavy modules of milling and processing equipment on site in 1989 based on Enserch's road completion estimate.

Mile by Mile

Work progressed from the beach onward under "summer conditions" through an unseasonably mild October. The method involved dumping material onto existing fill. Then dozers spread the gravel onto geotextile laid on the tundra. This prevented fabric damage.

More than 2.1 million sq. yd. of woven geotextile was used on the main road, material site access roads and at bridge abutments. Crews on four-wheel, all-terrain vehicles unrolled 400-ft.-long rolls of fabric weighing 900 lb. Two 24-ft. widths overlaid with a 12-ft. width of Nicolon fabric were used under the roadbed the length of the project.

Not until early November was the tundra frozen enough for advance crews to race ahead and open up forward material sites. The contractor built some 23 mi. of road using the summer method. "This allowed us to lay off the project during January to March when the weather is miserable and productivity is very low," said Wilson Hughes.

Once equipment reached a material site, it took about two days to scrape the overburden, drill and shoot the first material, Blankenship said. "We tried to open up about a 150-ft. face of rock to work from. Meanwhile, we were building pit access roads with the Terex TS24 scrapers and Terex 40-ton offroad trucks.

"We would excavate enough material to lay down a 3-ft. road base at first. Scrapers were used to extend the base road 2 to 4 mi. on either side of a pit. Then the advance group would move on

to the next material site and repeat the process.

"The Terex 40-ton haulers would extend the base road several more miles until the sections between pits were linked. Then the Kenworth tractors pulling 30-ton Maxhaul trailers would come in and build the roadbed up to subgrade levels. Subgrade depth averaged 6 ft., but some stream crossings with culverts required up to 50 ft. of fill."

In the typical pit situation, explosives crews would drill, fill and blast a section then ready another section for blasting. At some sites, the ripping power of Enserch's Caterpillar D11 dozer precluded the need for immediate blasting at material sites where it was used. "I think the D11 gave us about 3 ft. of material we couldn't have ripped otherwise off every material site," Blankenship said. "We ripped down about 20 ft. at MS 2 with the D11. A D9 may have gotten us down to 15 ft. there."

Enserch spent $24,000 to bring its D11 dozer from a job site near Tucson, Ariz. It was disassembled into three main pieces, trucked to Seattle and barged to the Red Dog port site for reassembly.

For blasting, Enserch used $1 million worth of ammonium nitrate, mixed with fuel oil at the site. The explosives shipment was so large, Enserch had to get permission from the Department of Defense to use a military munitions transfer facility in Puget Sound to load its barges.

The shipment of 3.2 million lb. of material was the largest commercial quantity ever to go across the Indian Island dock at Hadlock, Wash. The supplier was Alaska Explosives Co.

Load 'Em Up, Head 'Em Out

The load-haul-dump process for embankment material quickly became well-orchestrated under Blankenship's guidance. He would time the loadouts to keep a handle on time-cost factors.

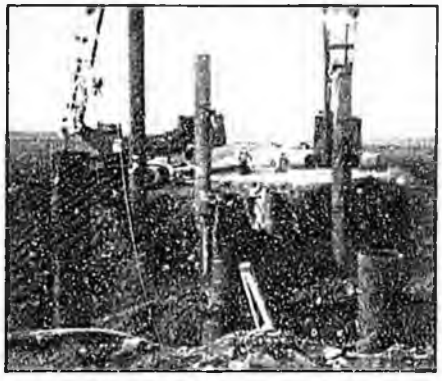
"Dozers would continually push material to the loading area," Blankenship said. "Two Cat 988 loaders would be positioned so a truck would pass one and receive a load then loop back between loaders and get bucketfuls from both sides to make a full load. The process generally took under 30 seconds per truck for the 30-ton units and 45 to 60 seconds for the 40-ton haulers.

"We tried to keep gravel hauls down to 30 minutes for a complete load-dump-load cycle. Most cycles took 20 minutes or under, depending on the distance between the pit and dump point," Blankenship said.

Material sites ranged from at roadside to 1.6 mi. away via access road. There could be up to 15 trucks between pit and dump site on the longest hauls.

Meanwhile, scrapers were making passes up and down the material site, getting dozer assists when needed. The loaders also kept clearing the traveling surface of sharp, angular rock, which proved hard on tires.

Prior to construction of the nine major bridges, the contractor kept road building on schedule by using detours.



Nine major bridges on the project will require the placement of 156 pipe pile supports and cell anchors, or up to 10,500 lin. ft. of pile. The contractor is using the drive-and-drill method at most locations. PN&D photo.

Crews had made several temporary bridges with 48-in. I-beams and 12-in. decking that could be moved and used where needed.

Complex Bridge Work

Peratrovich Nottingham & Drage Engineers of Anchorage designed the road and stream crossings. All design criteria revolved around the 1,500- to 2,000-ton modules Cominco must transport overland to the mine site.

A minimum 4-ft. depth of embankment fill was required to prevent permafrost thaw. Hills could be no more than 6-percent grade and curve radius could be no more than 600 ft. due to the module carriers' limitations on climbing and turning.

The one-lane road with 30-ft.-wide traffic surface features 300-ft.-long passing turnouts about every two miles. This design feature saved millions of tons of fill that would be specified for a two-lane road.

There are 646 drainage crossings including 13 major stream crossings. Nine bridges, 40 ft. to 200 ft. in length are needed. There are four major culvert crossings requiring 4-ft.- to 12-ft.-diameter pipe.

Four bridges feature sheet pile cells,

or bulbs, extending 60 ft. back from the abutment backwalls. This PN&D design was used only on single-span bridges of 40 ft. where streambed shifts could threaten bridge integrity.

Also, it proved a sensible way to keep riprap from choking a stream on short crossings, a concern of the Alaska Department of Fish & Game. Twelve streams contain various anadromous species.

Alan Christopherson, PN&D project engineer, said these bulbs extend 270 degrees in an arc from the abutment wall. "This creates a diaphragm with shape retention provided by fill pressure. We didn't make this a closed 360-degree cell because it is easier to place fill and do compaction with an open-end cell than to lift fill into a closed cell."

Sheet pile flank walls were placed on the upstream and downstream sides of cells as needed for scour protection and as deflectors should the stream channel shift. One single-span bridge and the four multi-span bridges are natural spill-through types with benched riprap slope protection.

Some 44,000 sq. ft of sheet pile is to be driven 12 to 20 ft. depending on site characteristics. Six-in.-diameter pilot holes were drilled every 18 in. to facilitate driving with a vibratory hammer.

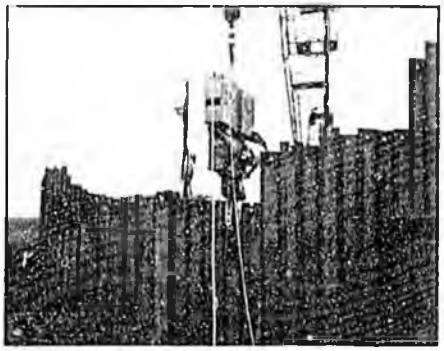
The project will use 10,500 lin. ft. of 24-in.-diameter pipe pile for bridge supports and sheet pile cell anchors. Pier piles were required to bear 240 tons each. Abutment piles must bear 120 tons.

Bridge design plans showed two alternative pipe pile placement methods. One involved drilling a 12-in. pilot hole before pile driving. The other called for grouting the pile into a larger auger hole. Both methods showed the use of a sleeve or casing if practical. Site conditions made both methods largely ineffective, so Christopherson recommended a drive-and-drill method used successfully elsewhere. The casing was eliminated and the 24-in. pile driven to resistance with a diesel impact hammer. Where driving alone ended up short of desired embedment, the pile was cut off and drilled out with a 16-in. auger. A pilot hole was drilled to desired depth, a new section welded to the pile as needed and the pile was driven to refusal.

The contractor established a smooth work flow of driving, drilling, cutting, welding and final driving that kept all equipment working efficiently.

A crane accident during pile driving slowed things temporarily but Blankenship refused to let it interfere with construction goals. As a Manitowoc 4100 crane was being moved on a lowboy, a temporary bridge settled on one side and the crane pitched off the lowboy onto its boom. The crane was not damaged but the boom and impact driving guide structure were destroyed.

Christopherson, who was on site at the time, said, "Enserch had some very fine welders on the project and they went to work to rebuild the structure that holds the drive hammer and guides the pile. Spare drive leads, as they are called, were not available."



Up to 44,000 sq. ft. of sheet pile will be driven to form open-ended cells and flank walls at the abutments of four bridges. The design provides high load-bearing qualities while preventing fill encroachment into streams. PN&D photo.

Welders used air arc welding to disassemble all the steel frame members. Using heat and force, they realigned all the pieces and rewelded them. It took about four weeks to rebuild the leads and hydraulic spotter unit that keeps the leads plumb.

Meanwhile, Blankenship scoured the country for a new boom. Enserch flew in two mid-boom sections from its Prudhoe base but the butt and tip sections were not available. Enserch ended up having the Manitowoc factory deliver them. Promised in 10 days, the sections took three and a half weeks to arrive on site. This mishap did not stop the pile driving. A second 4100 was fitted with the pile driving hydraulics and repaired leads and work continued as before.

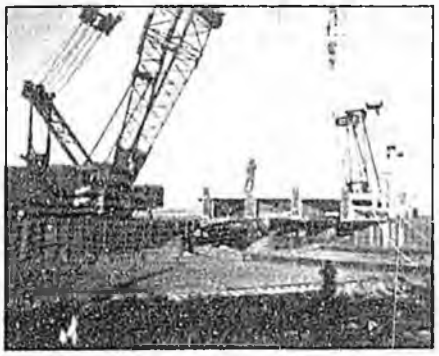
Bridge Building Factory

The contractor elected to assemble 40-ft. bridge sections on site in a heated shop building due to the amount of grouting involved that required cure time. Bridge crews soon got the process down to a science. They were able to assemble, form grout and move out a 40-ft.-long by 30-ft.-wide section in five days, including three days' cure time for the grout.

The process began with four I-beam girders placed at 8-ft. centers on blocking high enough for a lowboy to be driven under.

Eight 4-ft., 11-in.-wide by 30-ft.-long prestressed concrete panels were placed across the girders. Preformed cutouts in the 1-ft.-deep panels matched up with patterns of Nelson studs welded in groups of three onto the girders.

Grout from 8-yd. mix trucks was pumped into the gaps between panels and into these "pockets" around the Nelson studs. Shims placed between the girders and deck panels left a void for grout to spread, creating a tight seal while adjusting for fabrication differences in the girders and panels. The grout, once vibrated into the pockets and into the void underneath, assures a strong, even bearing surface for the heavy loads these bridges must bear.



Forty-ft. bridge sections, weighing 120 tons, are fabricated under cover at the Red Dog construction camp, trucked to bridge sites and lowered onto pipe pile supports with Manitowoc 4100 and P&H 5100 cranes. Twenty-two such sections are needed for nine bridges of one to five spans each. PN&D photo.

The grout was premixed and shipped to the site in 2-ton bags. The mix consists of type III cement, fine-aggregate sand and aluminum flake additive. This flake creates some expansion to offset shrinkage during grout drying.

Bridge sections are trucked to crossings and lifted onto pipe pile supports with two cranes. As of mid-December, one bridge was completed, piles were ready for bridge placement at two more and pile driving was under way at a fourth crossing. Detours and temporary bridges provided access at other stream crossings.

Calling a Halt

Altogether some 42 mi. of subgrade road has been completed from the port. Another 10 mi. of pioneer road is drivable to the mine site. Work halted on Dec. 17 due to mechanical considerations and impending storms. "We had been achieving about 80-percent equipment availability," Blankenship said. "That compares to about 90 percent on a Lower 48 job of comparable scope, but the conditions are radically different at Red Dog.

"It was determined that productivity would slip below acceptable levels during the depths of winter." Some December days registered 30 degrees below zero with 25-knot winds. So, work was suspended for nearly three months.

Beginning in mid-March, Enserch crews will be back at it, drilling and shooting new roadbed material. They will bring the pioneer road up to subgrade level beginning in April, fabricate and install more bridges and place remaining culverts.

A major aspect will be the crushing and placement of some 770,000 tons of surface course for the top 12 in. of roadway. At press time, the state had yet to identify a source of rock to meet specifications. Rock tested in most material sites has not passed both hardness and composition specs. Failing to find an acceptable top-grade source, the state may have to revise the specifications, according to some sources.

But Blankenship and his crew aren't thinking about that now. They are off the front line and enjoying some R & R. The time to rejoin the battle will come soon enough. □

FOR ALASKA HIGHWAYS

By JOHN MARTIN

The national Highway Users Federation and the Highway Users Federation of Alaska have prepared a report for the Alaska Legislature which brings to light some disturbing information about the state's highway and road system and the agency that oversees it.

Major findings and concerns in the report, entitled "Alaska Highway Program Review," can be summarized in six points:

1. Roadway maintenance and repair have been cut to the point where Alaska may not now be gaining the maximum service life from highway-improvement dollars.

2. The Alaska Department of Transportation & Public Facilities has cut manpower to the point where reduced snow and ice removal work sometimes creates hazardous conditions and inconvenience for motorists.

3. Alaska's State Highway Program lacks a dedicated fund source, making it difficult to set a long-range plan for system modernization, pavement upgrading and system expansion. (Editor's note: The Legislature is expected to take up a bill that would double the motor fuels tax to 16 cents. However, state law prohibits dedication of new tax revenue to specific highway or other uses.)

4. Boroughs and communities look to the state for road project financing. Meeting local road needs dilutes the effectiveness of the state's highway program in meeting maintenance and modernization needs of major urban and rural routes.

5. Alaska's transportation program is decentralized into three regions. This makes it more difficult than in other states for DOT/PF officials to develop and apply uniform policies. A relatively small headquarters technical staff further retards policy development and implementation monitoring.

6. A need exists to develop better information on the condition and performance of Alaska's transportation systems and the adequacy of funds to meet the needs.

Traditionally, Alaska has received a large portion of its transportation infrastructure funding from federal sources. Of $525.4 million in DOT/PF expenditures in 1986, $197.2 million was funded by federal sources.

Alaska is miles ahead of the other states in benefits from the Federal Highway Trust Fund. At $150 million per year, this funding resource pays for most highway improvements in urban and rural Alaska.

Federal support remains vital to Alaska's highway development. Historically, Alaska has received up to eight times what Alaskans contribute in federal highway taxes on motor fuel and truck purchases. No other state comes close to this return. In spite of this relatively generous revenue, Alaska's highway needs continue to outstrip its financial resources.

Alaska's spending plan for these funds falls into four major categories. First, as pavements and the other highway elements wear out, they need to be replaced. Pavements are designed to last about 10 years, meaning that each year roughly one-tenth of Alaska's highway miles needs to be resurfaced. As new miles of pavement are added to the highway system, the need for rehabilitation increases.

Second, Alaska has a program to bring the highway network up to modern and safe standards. That means wide shoulders and gentle curves, such as on the Parks Highway between Anchorage and Fairbanks. At current funding levels, however, correcting these geometric, structural and safety problems on major highways, such as the Tok Cut-off, extend beyond the year 2000.

Third, there are major capacity problems in urban areas. Because of right-of-way costs and sophisticated urban design, these projects are extremely expensive and have to be staged over many years. Although traffic growth has stagnated across the state, traffic volumes remain at or near record levels, requiring continued investment in new urban facilities. Existing funding programs fall short of meeting the above three needs by some $25 million annually.

Finally, demand continues for new rural roads: some for resource development and some for connecting existing communities to the state's contiguous highway system, such as the proposed Copper River Highway to Cordova.

Future Funds Not Assured

The current federal support for Alaska's programs expires in 1991. Reauthorization will be debated in Congress over the next three years.

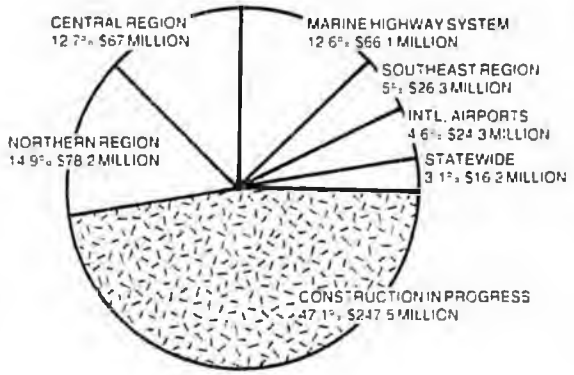
An in-state revenue stream to replace this cash flow would be equivalent to a new state gas tax of 40 to 80 cents per gallon. The alternative is a deteriorating transportation infrastructure which translates into direct economic cost for users, due to five factors: increased fuel consumption; increased wear and tear on vehicles and premature depreciation; increased labor costs, for commercial vehicles in congested traffic; increased accidents; and increased highway construction and repair costs. When the current highway bill was pending in Congress a year ago, the U.S. House of Representatives drafted legislation to make major cuts in federal aid to Alaska's highways. States contributing more to the highway trust fund feel that it is unfair to heavily subsidize Alaska's program. We have few, if any, strong allies in this battle.

The American Association of State Highway and Transportation Officials (AASHTO), in conjunction with many other organizations including the Highway Users Federation, is spearheading a national effort to prepare a policy framework for enhancing America's surface transportation system in the 21st century. This framework is expected to form the backbone of a new national surface transportation act for the 1990s. Across the nation, state and local officials, private industry and public interest groups are working together to

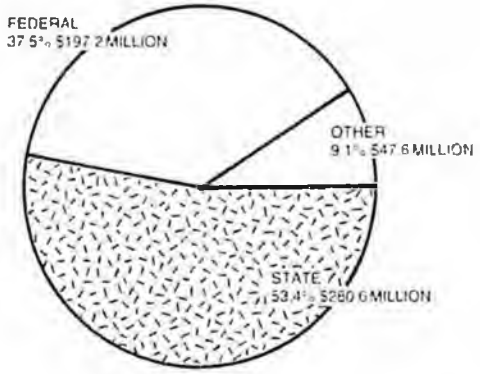
- Assess the nation's surface transportation requirements through the year 2020.

1986 ADOT&PF EXPENDITURES

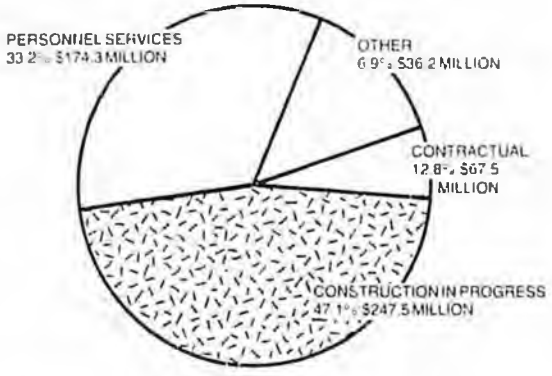
FUND SOURCE



AREA



EXPENDITURE OBJECT



TOTAL: $525.4 MILLION

Source: 1987 Alaska Highway Program Review

- Develop alternative proposals for meeting those requirements at the federal, state and local levels.
- Achieve a consensus on the best means of doing the job.

The upcoming Alaska Transportation Forum is part of the information-gathering phase of this effort aimed at assessing the nation's surface transportation requirements through the year 2020. The Highway Users Federation, in conjunction with AASHTO, has asked each state to hold a public forum on the future needs of surface transportation in America.

This is a key step in forming a new national surface transportation policy. The focus for U.S. highway policy for the last three decades has been completion of the interstate system. It will be completely funded as the current legislation expires in 1991. With major national and state policy changes looming, now is the time to make Alaska's concerns known.

This fifth annual Alaska Transportation Forum in March not only will incorporate Alaska's input into the "Transportation 2020" process, but will also address Alaska's airport, rail, port and highway systems issues, as well as transportation research in Alaska. Because of the 2020 theme, this year's Transportation Forum is expected to tackle issues with long-term implications.

A Gathering of Support

At the Transportation Forum, we expect to hear from groups supportive of transportation programs. One such group is the Alaska Department of Transportation and Public Facilities, itself heavily dependent on federal programs for primary funding. Another group is the Associated General Contractors, some of whose Alaska chapter members depend primarily on construction work funded by DOT/PF.

A third group is the Fairbanks Chamber of Commerce. Through its transportation committee and the annual publication of "Interior Transportation Needs Report," the chamber works to understand and influence improvement plans for the state transportation system.

Others with interests in transportation improvement programs are the trucking industry, local governments, the Alaska Municipal League and community chambers of commerce.

The Alaska Transportation Forum can help strengthen transportation constituencies and develop a better understanding of how current programs function and what they accomplish in Alaska. Further, this forum will look at prospects for change from an Alaskan perspective and discuss the uniqueness of transportation needs in Alaska and the relationship of those needs to national transportation policy.

We need to recognize that Alaska's aging roads, bridges, airports and other facilities need increasing rehabilitation and repair. We also know the strong correlation between a healthy transportation system and economic vitality. Greater competition for revenue is inevitable as financial needs in all areas increase.

Alaskans have a lot at stake and need to send a strong, clear message to Washington.

The University of Alaska Transportation Center's fifth annual Transportation Forum will be held at the University of Alaska, Fairbanks, March 4-5. For information, contact John Martin at (907) 451-5150. □

John D. Martin is the chief of planning and research for the Alaska Department of Transportation and Public Facilities. He is a registered engineer and is the DOT/PF representative to the Advisory Board for the University of Alaska Transportation Center.

DRILL REPORT

A dozen land-based rigs were on the active list as of early January and drillers were preparing others for work as oil companies mobilized for increased North Slope development and exploratory drilling.

Arco Alaska Inc., Standard Alaska Production Co. and Texaco were all looking to tap additional reserves within or near the Prudhoe and Kuparuk River units.

Arco was building a 4-mi. ice road off the haul road and ice pad from which to drill its Prudhoe Pipeline State No. 1 well on one of 30 state tracts gained in the 1985 Kuparuk Uplands No. 47 sale. Doyon Drilling Co.'s No. 9 rig is drilling this test, targeted for below 12,000 ft.

Texaco was to begin drilling this year the first of up to three wells on three of 51 tracts gained in the 1986 state Kuparuk Uplands No. 48 sale. Texaco has proceeded with the permitting process while awaiting a financial commitment from 50-percent partner BP America, parent company of Standard Alaska Production Co. Should BP decline to participate this season, drilling would be bumped back to winter 1989.

Plans call for spudding the first well from an ice pad on ADL 368033, a tract about 26 mi. south of the Kuparuk field 2G pad. Access is via an ice road from the 2G pad.

The first well, designated Wolfbutton No. 1, has a target depth of 9,500 ft. Successive wells would be drilled from ADL 386044, 5 mi. to the northwest, and on ADL 368036, 3.3 mi. south of the first well site. A drilling contractor has yet to be announced.

Standard will use two Alaska United Drilling Co. rigs and one Nabors Alaska Drilling Inc. rig for developing the Eileen region at the western edge of the Prudhoe Bay unit. Nabors is modifying its No. 22-E rig for work to begin in April.

An undisclosed number of wells will tap an isolated section of the Sadlerochit formation. Standard estimates this development program could recover about 110 million bbl. of oil. Drill pads are in place. Plans to develop the Eileen area in early 1987 were postponed until oil prices recovered and showed some signs of stability.

Standard also is launching a $120-million project to bring the Niakuk field into production by 1990. The company estimates that 12 production wells on a gravel island a mile offshore of the Sagavanirktok River could produce 19,000 bpd. Recovery of 58 million bbl. is expected from the reservoir, estimated to contain 150 million bbl.

Like Standard's Endicott field to the east, Niakuk development hinges on construction of a gravel causeway linking the production island to the mainland. Should the Army Corps of Engineers require a full environmental impact study, project costs would jump and production would be pushed back to 1991.

In December, Amoco Corp. announced plans for a $3.8-billion exploration budget. Alaska could see up to $25 million in capital and exploration spending, said company officials in Denver.

Marathon Oil Co. is assessing the damage to the Steelhead platform in the Trader Bay Unit. (See *AC&O*, Nov. 1987, p. 22.) A Dec. 20 gas well blowout and eight days of fire caused destruction of the Parker Drilling Co. rig and damage to the helideck and crew quarters.

The rig had drilled the M-26 well to 2,265 ft. through the northwest platform leg and crews were cementing casing at 2,255 ft. when a gas leak developed. A diverter system failed to channel the gas to burnoff towers and crew members evacuated the platform in emergency pods. The pressurized gas plume ignited at the wellhead a few hours after the blowout. No serious injuries were reported. On Dec. 28, the well bridged over with debris and the fire went out. □

Drill Report Continued

Area
Location
Driller, Rig, Status, Well Site, Operator

North Slope

Prudhoe Bay
Alaska United, #2, (d), PBU DS E-25, SAPC
Alaska United, WSR #1, (w), PBU DS 5, Arco
Nabors, 1-ES, (w), PBU-GC-1D, SAPC
Nabors, 18-E, (d), PBU DS C-30, SAPC
Pool Arctic Alaska, #102, (w), PBU DS 17, Arco

Kuparuk
Doyon Drilling, #14, (d), KRU DS 3H-12, Arco
Roll 'n Well Servicing, Nordic #1, (w), KRU 3M -, Arco

Lisburne
Nabors, #28E, (d), PBU L2-32, Arco

Endicott
Doyon Drilling, #15, (d), DIU 2-24 R12, SAPC
Pool Arctic Alaska, #7, (d), DIU 3-39 J39, SAPC

Barrow Gas Field
Grace Drilling Co., #211, (i), NSB #7, NSB

Offshore

Beaufort Sea
Canmar, SSDC Mat (d), *OCS Y-0943 Aurora #1, Tenneco

Cook Inlet (Offshore)

Granite Point Shoals
Amoco, Platform Anna, (c), GPS-36, Amoco

Middle Ground Shoals
Amoco, Platform Baker (i), MGS 17-1, Amoco
Amoco, Platform Dillon, (i), MGS 8-RD, Amoco
Amoco, Platform Anna, (c), GP-1, Amoco
Shell, Platform A, (i), MGS G-16, Shell
Shell, Platform C, (d), MGS - -, Shell

McArthur River Unit
Union, Greyling Platform, (w), MRU G-30, Union

Trader Bay Unit
Marathon, Dolly Varden Platform, (w), TBU D-6, Union Marathon
Marathon, Steelhead, (i), *TBU M-25, Union Marathon
Union, Monopod, (i), TBU-, Union

Cook Inlet (Onshore)

Cannery Loop
Grace Drilling Co., #154, (d), *Cannery Loop 3, Union

Kenai
Great Northern Drilling, #1, (s), *Mike Pelch #1, Far North

Swanson River
Roll 'n Well Servicing, #5, (i), -, Arco

Other

Katalla
NKG Drilling, NKG #1, (s), *Katalla KS-2, Alaskan Crude

KEY

(c) — completing
(d) — drilling
(i) — idle
(l) — logging
(r) — rigging up
(s) — standby
(t) — testing
(w) — workover
*exploratory well

DOG Studies Incentive and Procedure Changes

By MARK HARRIS

The Alaska Division of Oil and Gas within the Department of Natural Resources has been reviewing possible drilling and production incentive legislation and leasing permit-procedure changes that could save the oil industry money and boost state royalty revenue.

Incentives under consideration are modeled on programs now in effect in several states and Canadian provinces. They include the following:

Severance Tax Exemptions and Royalty Holidays. This would encourage bringing new reserves on stream by offering limited time tax exemptions and royalty-free periods for new wells drilled in a specific period. Alberta collects no royalty for a year up to $1 million on eligible wells and Saskatchewan has a three-year royalty or tax holiday on wells drilled through June 30, 1988, and a two-year holiday on wells drilled between July 1, 1988, and June 30, 1989. Louisiana exempts severence tax on certain wells through 1990 and levies no tax on development through 1989 for discoveries made after mid-1986. No production or monetary limits apply. Mississippi has enacted similar legislation.

Discovery Royalty. This would allow a royalty rate cut for a specified time for a producer who discovers and produces oil and gas on state leases in a specified period. The Alaska Legislature repealed such a law in 1969.

Exploration Incentive Credits. Alaska statutes allow use of such credits. The program could be expanded under existing law to include more leases. Alberta allows credits on 50 percent of well costs, applicable to royalty reduction or transferable to other operators.

Enhanced Oil Recovery. These capital and labor-intensive operations could be exempted from severance taxes for specified periods. Also, the current gas plant investment tax credit program could be expanded to increase feasibility of large projects under current oil prices. New EOR incentives could spur development of known reserves such as the West Sak and Ugnu Sands reservoirs on the North Slope, or help the economics of secondary and tertiary recovery programs for existing production.

New Tax Court. Legislation has been drafted to establish a new division within the superior court system. Appeals of disputed oil and gas tax assessments could go directly to that court, bypassing the current Department of Revenue appeals process. About $1.5 billion in disputed tax assessments is now pending in Alaska.

In addition, proposed lease-operations permitting changes include the following:

Three-year Lease-Operations Permit Terms. This would replace the one-year-commence, two years-complete terms with a standard three-year construction-phase term with annual status reports required.

Six-year Lease-Operations Permit Terms. To be granted for projects expected to exceed the three-year term. Annual status reports required.

Ten-year Lease-Operations Permit Terms. This would fix the normally long-term use of abandoned or unused pads for storage purposes. Status reports to be required every other year.

Other possible operation-procedure changes would create a single status reports filing date for many operations and two dates for filing completion reports for summer and winter work, instead of 15 days after finishing the construction phase, as is currently required. Further changes would deal with past-due reports, as-built submissions, gravel accountings and unit representative requirements.

All contemplated changes would need approval from DNR, the governor's office and passage into law by the Legislature. □

BRIEFS

• R. Craig Taylor, former Alaska businessman and bank director, died of heart failure Nov. 18 in San Diego, Calif., at the age of 69. Taylor founded and served as president of Craig Taylor Equipment Co. He started the company in Anchorage in May 1954. The company later opened Alaska branches in Fairbanks, Soldotna, Delta Junction and Wasilla and another office in Seattle. The firm was appointed John Deere dealer for the state of Alaska in May 1959.

Born Aug. 5, 1918, in Boise, Idaho, Taylor came to Anchorage in 1953. In July 1967 he was elected to the 11-member board of directors of the Matanuska Valley Bank. Taylor was a lifetime member of the Anchorage Elks Lodge No. 1351 and a 35-year member of the Associated Equipment Distributors. He was a past member of the Anchorage Petroleum Club and an associate member of the Associated General Contractors.

Following a heart attack in 1967 Taylor semi-retired to his ranch in Dulzura, Calif., where he resided at the time of his death. He leaves his wife, Thelma, and a son, Michael, both of Dulzura.

The family suggests that memorial contributions be directed to the Anchorage Salvation Army, 742 Barrow St., Anchorage, 99501, or the charity of the donor's choice.

• Arthur J. "Jack" Sahlberg Sr., founder of the Jack Sahlberg Equipment Co., 300 Aurora Ave. N., Seattle, died Dec. 9 in Kirkland, Wash., at the age of 91.

Sahlberg, who was born to Swedish parents in Osage City, Kan., on Oct. 10, 1896, first learned to speak English in primary school. He served in the U.S. Navy during World War I, attending the University of Washington as part of his naval training, and joining the Sigma Nu fraternity. He received his commission as a naval officer in 1925 and later became commander of the destroyer USS McKenzie.

Sahlberg married Helen E. Morris in 1923 at Kettle Falls, Wash. He joined the staff of the Howard Cooper Co. in 1936 and in 1945 became the branch office manager of the company's Portland office. He and his son A.J. "Jack" Sahlberg Jr. founded the Jack Sahlberg Equipment Co. in 1950.

He is survived by his wife, Helen "Nellie" Sahlberg of Bellevue, Wash.; Jack Sahlberg Jr. and his wife Dulcie, who live in Seattle; his daughter and son-in-law, Judith and Richard L. Evans of Bellevue; 10 grandchildren and nine great-grandchildren.

The family requests remembrances in his name be sent to Bellevue Medic One, Northwest Harvest or favorite charities.

• Brent T. Drage, a partner in the Anchorage consulting engineering firm of Peratrovich, Nottingham & Drage, died Jan. 2 at the family cabin in Rainbow Valley, south of Anchorage.

Drage was born Sept. 26, 1944, in Salt Lake City, Utah. He had lived the past 20 years in Anchorage, Rainbow Valley and Fairbanks, where he received a master's degree in civil engineering from the University of Alaska in 1977.

His Alaska work experience dates back to 1967, when he was a surveyor for the Department of Highways, working summers while attending school. After receiving his bachelor's degree in civil engineering from Utah State University in 1969, he worked as a professional engineer during the exploratory stages of the Prudhoe Bay oil field.

In 1981, he joined Peratrovich & Nottingham Inc., which the following year became Peratrovich, Nottingham & Drage Inc.

He was a member of the American Society of Civil Engineers, the Project Management Institute and Sigma Chi fraternity.

He leaves his wife of 20 years, Kathleen, and his sons, Jeremiah and Joshua, all of Anchorage, his parents, Don and Dixie of Logan, Utah; and his brothers, Gary, of San Diego, and Jeffrey, of Monument, Colo.

Memorials may be sent to the Brent Drage Memorial Fund in care of Peratrovich, Nottingham & Drage Inc., 1506 W. 36th Ave., Anchorage, AK 99503.

• Shareholders elected six directors to the Sealaska Corp. Board of Directors at the 14th annual meeting in Sitka on Sept. 19. Elected to the board of directors for three-year terms ending in 1990 were **Charles Carlson,** a commercial fisherman from Sitka; **Niles Cesar,** executive vice president of the Southeast Alaska Regional Health Corp., from Juneau; **Raymond Demmert,** retired construction manager from Ketchikan; **Jim Edenso,** financial management consultant, from Bellingham, Wash.; **Alan Williams,** vice president/loans for the Community Enterprise Development Corp., from Anchorage; and **Rosita Worl,** special assistant to Alaska Governor Cowper, from Anchorage.

Immediately following the meeting, the board of directors met and re-elected all officers of the corporation. The officers re-elected are **Marlene A. Johnson,** chairman of the board; **Raymond Demmert,** vice chairman of the board; **Byron I. Mallott,** chief executive officer; **William M. Howe,** president and chief operating officer; **William F. Strafford,** vice president finance and treasurer; **Robert W. Loescher,** senior vice president resource management; **Chris E. McNeil Jr.,** senior vice president and general counsel; **Robert Martin Jr.,** vice president administration; **Richard P. Harris,** vice president resource planning and administration; **Maxine H. Richert,** corporate secretary; **Edith E. McHenry,** assistant corporate secretary/shareholder services; and **Doris Stevens,** assistant corporate secretary/office manager.

• **Rod Garriott,** Anchorage operations manager for McDonald Industries Inc., recently announced three personnel changes. **Bill Bovee** has joined the service department and will concentrate on component rebuild. Bovee has worked on products by Komatsu, Terex, Detroit Diesel, Allison, Caterpillar and Cummins. Early this year **Darren Folkers** joined McDonald as shop foreman. He will continue those duties, but with more emphasis on general repair projects. **John Gallipeo** has moved to parts supervisor with responsibility for day-to-day parts sales activities. Gallipeo's experience covers 20 years of automotive and construction equipment parts in Alaska.

ENGLAND

NIDOWICZ

• Harding Lawson Associates recently implemented a management staff change in its Anchorage branch office. **Jay England,** vice president-in-charge of the Anchorage office since 1969, has been named to the new position of regional manager of HLA's corporate headquarters in Novato, Calif. England's regional duties will include operations and marketing responsibility for HLA branch offices in Northern California, Nevada, Alaska and Hawaii. **Bernard Nidowicz,** P.E., has been promoted to managing principal of the Anchorage office. Nidowicz is a registered professional engineer in Alaska and has been with HLA's Anchorage office since 1980. He has a master of science degree in civil engineering from the University of Alaska and specializes in geotechnical and arctic engineering.

• **George Woodbury** and **Jess Cline** have been appointed as corporate officers to Alaska Pulp Corp. The appointments were announced by Frank Roppel, executive vice president for the Sitka-based mill. The two new officers were appointed after the January retirement of vice president Ray Rynearson, who had 15 years of service with Alaska Pulp. Woodbury, now vice president, timber operations, came to Alaska Pulp in October 1986 from Ketchikan Pulp Co., where he served as logging manager and in other capacities for nearly 20 years. His new responsibilities include ensuring that the Sitka mill has raw materials (chips and logs), administering long-term sales and contracts of logging sites, and finding markets for sawmill logs. Cline becomes vice president, industrial relations. Prior to coming to Alaska Pulp eight years ago, he worked in labor relations positions for companies in Nebraska, Missouri, Kansas and Oregon. Presently, he oversees all personnel matters, including employment, wages, benefits, motivation and safety, as well as handling labor relations issues for the company.

• **Paul Ramert,** a senior in the civil engineering department at the University of Alaska, Anchorage, has received a $1,000 scholarship from Construction Machinery Inc. and Ingersoll-Rand Inc. Money to fund the scholarship was made available through a cooperative effort made by Construction Machinery, an Anchorage heavy equipment firm, and Ingersoll-Rand, a manufacturer of heavy power tools. Ramert was born and raised in Anchorage and plans to use the scholarship to pursue a master's degree.

Dr. Robert Miller, UAA, observes as Paul Ramert, engineering student, receives a $1,000 scholarship award from Ken Gerondale, president of Construction Machinery Inc.

CALENDAR

ANNUAL MAPPING AND SURVEYING CONFERENCE — At the Captain Cook Hotel, Anchorage; (907) 563-1867. **Feb. 8-12.**

WINTER CITIES SHOWCASE '88 — Theme is "The Business of Winter." Edmonton, Alta.; (403) 428-1988. **Feb. 13-19.**

SOIL COMPACTION SEMINARS — One-day seminars for contractors, engineers, architects and others involved in the design, construction and testing of compacted fills. In Phoenix, AZ, **Feb. 25**; Los Angeles, CA, **March 3**; Denver, CO, **April 7**; Anchorage, **April 27.**

SOCIETY OF PETROLEUM ENGINEERS SPE/IADC DRILLING CONFERENCE — Dallas, TX; (214) 669-3377. **Feb. 28-March 2.**

ASME OPEN FORUM ON CERTIFICATION — The American Society of Mechanical Engineers presents an open forum to assess need for and scope of certification of gas and hazardous liquids pipeline operators and/or inspectors. At the Marriott Hotel, Dallas Fort Worth Airport, Dallas, TX. **March 4.**

ANNUAL TRANSPORTATION FORUM — "Future of Transportation into the 21st Century." Contact: Department of Conferences and Continuing Education, University of Alaska, Fairbanks; (907) 474-7800. **March 4-5.**

SOCIETY OF AMERICAN MILITARY ENGINEERS NORTHWEST REGIONAL CONFERENCE — At the Four Seasons Olympic Hotel, Seattle, WA. **March 6-8.**

Erratum

An article in the September 1987 issue entitled "Nome Mining Operations Ripe for a New Bonanza" incorrectly identified Inspiration Gold Inc. as based in Vancouver, B.C. The company is headquartered in Scottsdale, Ariz., and is a wholly owned subsidiary of New York-based Inspiration Resources Corp.

Inspiration Gold operates the Bima offshore dredge on private and state seafloor lease holdings a mile seaward and about 3 mi. west of Nome. This, the world's largest dredge, began test operations during open-water season in 1986 and overwintered in Seattle where modifications were made and worn buckets replaced. The dredge worked a full test production season in 1987 and is wintering at the Port of Nome in anticipation of further underwater gold mining this summer.

The Bima is kept in place with one 20-ton head anchor and two 20-ton storm anchors. Its giant bucket line dredges the ocean floor in an arc along a cable line attached to four 14-ton swing anchors.

Inspiration bought the Bima in Indonesia from Billiton B.V. for considerably less than the $33 million quoted in the article, according to company officials.

ALASKA CONTRACTING SUMMARY

More than twice the dollar volume in awards was reported in December than in November — $34 million in December as opposed to $14 million in November.

Twenty and a half million dollars in highway awards was the major factor in this recovery and most of the $20 million was contributed by two awards, one for $12 million and another for $6 million.

At the end of 1987, the category of highway construction was $65 million ahead of 1986. It is the only category to show significant improvement from the previous year.

The category of industrial/commercial buildings was up $4 million over 1986 and the miscellaneous category was up $10 million. All other categories were down significantly from the previous year.

We finished 1987 off $291 million from 1986.

CATEGORIES	DECEMBER	1987 TO DATE	1986 TO DATE
Airports	—	$13,763,322	$46,613,136
Electric Power	—	1,091,343	46,776,318
Highways	20,554,572	170,862,879	105,050,829
Industrial/Commercial Buildings	2,906,591	29,098,777	25,003,272
Marine	1,079,596	19,274,664	28,864,369
Military	30,952	105,379,881	165,619,782
Petroleum	—	—	20,250,000
Public Buildings	6,684,168	86,577,484	229,576,287
Sewer and Water	715,337	22,307,535	82,197,137
Miscellaneous	1,756,265	30,354,113	20,206,269
TOTAL	**$33,915,316**	**$478,798,842**	**$770,177,399**