SB
60

SENATE COMMITTEE REPORT

FIRST COMMITTEE OF REFERRAL

Date of 5-DAY NOTICE ____________
IN ACCORDANCE WITH UNIFORM RULE 23

FURTHER FINANCE

**FISCAL NOTE(S) MUST BE ATTACHED
IN ACCORDANCE WITH AS 24.08.035

DATE TURNED INTO OFFICE 4/3/89

1/9/89

Mr. President:

RESOURCES Committee considered SB 60

making a special appropriation to the Office of the Governor for activities to encourage the federal government to permit export of oil from the state; efd.

and recommended:

[ ] replace with CS SB 60 (Resources) [X] same title [ ] new title

[ ] attached amendment(s) and

[ ] ____________ letter of intent adopted

[ ] do pass

[ ] do not pass

[ ] no recommendation

[ ] individual recommendations

[ ] further referral to ____________

FISCAL NOTE(S) attached [ ] zero [ ] fiscal impact
[ ] appropriation no FN attached [ ] Gov. FN introduced w/ bill

MEMBERS SIGNING DO PASS

Rick Halford

[signature]

[signature]

OTHER RECOMMENDATIONS

[signature] No Rec.

[signature] No Rec

[signature] Do Pass

Chairman signature and recommendation

[ ] Committee backup attached

6-0378E
Cramer
3/15/89

Original sponsors: Fahrenkamp, Kelly,
and Kerttula

Funding Information
General Fund $150,000
Other Funds -0-
$150,000

Sen. Fahrenkamp

1 IN THE SENATE BY THE RESOURCES COMMITTEE

2 CS FOR SENATE BILL NO. 60 (Resources)

3 IN THE LEGISLATURE OF THE STATE OF ALASKA

4 SIXTEENTH LEGISLATURE - FIRST SESSION

5 A BILL

6 For an Act entitled: "An Act making a special appropriation to the Office
7 of the Governor for activities to encourage the
8 federal government to permit export of oil from the
9 state; and providing for an effective date."

10 BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

11 * Section 1. The sum of $150,000 is appropriated from the general fund
12 to the Office of the Governor for activities to encourage the federal
13 government to enact legislation to permit the export of oil from the state
14 to foreign countries.

15 * Sec. 2. The unexpended and unobligated portion of the appropriation
16 made by this Act lapses into the general fund June 30, 1990.

17 * Sec. 3. This Act takes effect immediately under AS 01.10.070(c).

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Cramer
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f. O+G - export of AK oil

DRAFT REPORT ON ALASKA BENEFITS AND COSTS OF EXPORTING ALASKA NORTH SLOPE CRUDE OIL

Institute of Social and Economic Research
University of Alaska - Anchorage

For the Alaska State Senate
Finance Committee

FINDINGS AND CONCLUSIONS

Appendix A: background information and analysis

Appendix B: assumptions, methodology, and calculations

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Matthew Berman
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Samuel A. Van Vactor

May 1987

DRAFT REPORT ON ALASKA BENEFITS AND COSTS OF EXPORTING ALASKA NORTH SLOPE CRUDE OIL

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Past Revenue Impact of the Export Ban

Future Effect of the Export Ban on Alaska and California Production

Future Revenue Impact of the Export Ban

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Wellhead-Price Impact of the Export Ban

The ban on exports of Alaska North Slope ("ANS") crude oil reduces the average price producers receive at the wellhead for ANS crude oil by $2 to $3 per barrel, and the marginal price (the price they would receive on additional production) of ANS crude by about $4 per barrel. (The foregoing figures are 1987 constant dollars.)

Because Alaska crude oil competes directly with crude oil produced in California for sales to West Coast refiners, the ban on exporting ANS crude oil also reduces both the average and marginal prices of California crude oil by about $4 per barrel. (1987 constant dollars)

See Appendix A: 3.2 & 3.3

These relationships result from the fact that Alaska and California between them produce more crude oil than U.S. West Coast refineries demand, and will continue to exist for as long as a "West Coast oil surplus" exists.

See Appendix A: 3.2

Past Revenue Impact of the Export Ban

Since federal crude-oil price controls were terminated at the beginning of 1981, through the end of 1986, the crude-oil export ban has therefore reduced sales revenues on the 3.8 billion barrels produced in Alaska by about $11.9 billion, and sales revenues on the 2.4 billion barrels of crude oil produced in California by about $9.7 billion. Total revenue losses in the two states during the five-year period were therefore about $21.6 billion. (The foregoing figures are in nominal dollars.)

See Appendix B: B.2 and E.1.

Because of the complicated structure and impact of the crude-oil price-control and entitlements system that prevailed from before ANS production began in mid-1977 through January 1981, we have not attempted to estimate losses in wellhead values or government revenues during that period, but they were surely substantial.

The largest shares of these revenue losses were absorbed (a) by State and local government in Alaska and California though loss of royalty and tax revenues, (b) the federal government through loss of Windfall Profits Tax revenues, (c) the oil producers through reduced profits, and private landowners in California through reduced royalties.

From 1981 through 1986 the export ban directly cost the State of Alaska alone approximately $3.7 billion in royalties, production taxes, and corporate income taxes; the federal government lost about $4.4 billion in net windfall profits tax ("WPT") revenues on production from just the Prudhoe Bay field. (nominal dollars)

See Appendix A: 1.2;
See Appendix B: E.2 through E.6.

We have not calculated state and local government revenue losses in California, lower federal or state oil-and-gas lease-bonus receipts, reductions in federal corporate profits tax receipts, or the secondary and multiplier impacts of lower government revenues --- but all of these were also surely substantial.

During the period of exceptionally high world crude-oil prices (1979 through 1985), the reductions in ANS and California wellhead values undoubtedly had some depressing effect on exploration and development incentives in those regions, but the effect on production through 1986 may not

have been profound, and is at any rate impossible to calculate with any confidence.

Future Effect of the Export Ban On Alaska and California Production

Beginning with the collapse of world oil prices in early 1986, the roughly $4-per-barrel reduction in the marginal price of Alaska and California crude oil will have a substantial impact on the economics of production in those states.

This price penalty will determine the feasibility of projects to maintain or enhance output from producing fields in Alaska and California through infill drilling, waterflood, and through "miscible-gas" and thermally-enhanced recovery ("TEOR") techniques on several of the biggest oil-producing properties in the United States. The price penalty will also govern the feasibility or timing of development in a number giant oilfields in Alaska and California, which have already been found, but which are not yet in production.

See Appendix A: 2.1 and 2.2.

Under the world-market price assumptions adopted for this report, removal of the export ban would likely increase West Coast crude-oil production by about 500 thousand barrels per day (mb/d) by 1989-1990, of which 300 mb/d would be in Alaska and 200 mb/d in California.

See Appendix B: 2.2.

This additional production would postpone from 1991 until 1994 the date at which the West Coast would have to import foreign crude oil (other than low-sulfur supplies being imported even now because of refinery-design and air-quality bottlenecks). If exports were permitted, however, perpetuation of the "West Coast surplus" would no longer have a depressing effect on West Coast oil production.

About 460 million barrels of additional Alaska production and 280 million barrels of additional California production can be expected over the whole period 1987-2000, if exports are permitted. Most of the increase would occur in the years 1988-1991; some of the additional oil that would be produced during this period is oil that would otherwise be produced later, after the West Coast surplus ended. By the year 2000, annual production levels would about the same, regardless of whether or not exports were permitted in the late 1980s and early 1990s.

Authorizing exports of ANS crude oil is likely to attract Japanese and other foreign capital to Alaska oil exploration and development even after the West Coast oil surplus disappears, and thus result in a sustained increase in Alaska crude-oil production. The present report does not attempt to quantify this impact.

Future Revenue Impact of the Export Ban

So long as the West Coast oil surplus exists and the export ban continues in place, the average price of Alaska crude oil will continue to be depressed by at least $2 per barrel, and the return to new production in either California or Alaska will continue to be depressed by about $4 per barrel. (1987 constant dollars)

The export ban will therefore affect the future value of Alaska and California crude-oil production in two ways: (a) It will increase the value of that crude-oil that would be produced, even under the lower prices caused by the West Coast oil surplus, and (b) it will depress the amount of oil produced.

Given the world-oil price trend assumed for the present report and perpetuation of the export ban, the surplus will end (i.e., the U.S. West Coast will shift from being an exporter to being an importer of crude oil) by 1992. In the years 1987 through 1991, however, we estimate that the direct cost of the export ban in the form of reduced wellhead prices, disregarding the greater volumes that would be produced, will total about $6.9 billion in Alaska and $7.4 billion in California.

See Appendix B: C.3 to C.5.

Taking into account the expected impact on production in Alaska and California, the export ban will reduce the value of crude oil produced in the two states by about $6 billion per year in the years 1988-1990; the cumulative loss will be about $27 billion for the whole 1987-91 period, and $50 billion for the period 1987 through 2000. (1987 constant dollars)

See Appendix A:4.2 (Alaska)
See Appendix B: D.

The cost to the State of Alaska of reduced wellhead prices and lower volumes attributable to the export ban, in the form of lower royalties tax revenues attributable to crude-oil production, is projected be in the range of $500 to $600 million through year 1990. Revenue losses will likely total about $2 billion over the five-year period 1987-1991, and more than $3 billion over the period 1987 through 2000. (1987 constant dollars)

See Appendix A:4.3.2.
See Appendix B: E.

We have not estimated federal corporate tax losses, or the State and local revenue impact in California. Under present law and the world-market price assumptions of this

report, there would be no federal Windfall Profits Tax receipts regardless of import policy.

Other Alaska Economic Impacts

Elimination of the export ban would have several corrolary effects on the Alaska economy. The direct effects would include:

* Additional petroleum-development investments that would create (or presever) several hundred high-paying jobs in petroleum-extraction, construction, and related industries.
* Higher petroleum revenues would prevent the State government from having to reduce expenditures and local-government aid by as great a margin as now contemplated.
* Higher petroleum revenues would postpone the date at which the State would terminate the Permanent Fund dividend program or reintroduce the personal income tax.

Disposable personal income would thus be substantially higher without the export ban.

These direct effects, plus the multiplier effects linked to them are likely to have the following implications:

* Total petroleum employment, including exploration and headquarters employment, would be about 1,000 higher.
* Total State appropriations and expenditures would increase by the amount roughley equivalent to the increase in revenues, with 85 percent of the increase going to operating expenditures and 15 percent to capital appropriations.

* Higher revenues allow the Permanent Fund dividend to be retained for one additional year (1989), and reimposition of a State personal income tax deferred for one additional year (until 1990).
* Total employment in Alaska would be higher than in the no-export case by about 12 thousand in 1990 and 1991.
* Real per-capita disposable income would be about $400 million per year higher through 1991, owing to higher wage and salary receipts and lower personal tax rates. After 1991 these stimulating effects will diminish slowly.

See Appendix A:4.4.

U.S. Balance-of-Payments Impacts

Exports per se are not likely to have a systematic impact one way or another on the overall U.S. balance of payments. The volumes of ANS crude oil exported to the Far East would be offset almost exactly by imports of comparable crude oils to U.S. refineries. It is also reasonable to expect the average shipboard price (FOB Valdez) of U.S. crude oil exported to Japan, Korea, or Taiwan to be just about the same as the average landed price (CIF LOOP or Marcus Hook, for example) of the added Mexican, North Sea, or other crude oils imported in its place. Increased U.S. oil production and/or reduced U.S. oil consumption attendant on higher wellhead prices for Alaska and California crude oil will, however, affect the U.S. balance of payments by reducing net U.S. dependence on imported oil.

See Appendix B: A.4.

The export ban can be expected to increase the net U.S. requirement for imported oil by a peak value of about 500 thousand barrels per day in 1990 and 1991. This will be about 3 percent of total U.S. oil demand. Total import

requirements for the period 1987-2000 would be about 2.7 billion barrels less, if exports were authorized.

Under the world-market price assumptions of this report, permitting exports of ANS crude oil would reduce the U.S. overall payments deficit by about $3 billion per year in 1990 and 1991. The total deficit reduction over the period 1987-2000 would be on the order of $15.6 billion. (1987 constant dollars)

See Appendix B: C.7.

Authorization of exports would affect the bilateral balance of trade between the United States and Japan even more substantially. If Japan were the destination of all ANS exports, the U.S. bilateral trade deficit with Japan would be reduced by a peak value of $3.4 billion in 1988 and $14.8 billion over the period 1987-1994. (1987 constant dollars) (The authors do not believe that bilateral trade balances with individual countries have any economic significance, but are reporting this projection only because it is a politically sensitive question.)

Other Considerations

The utilization of domestic tankers for shipment of ANS crude oil is doomed to fall steeply, beginning in 1988 or 1989, regardless of U.S. policy toward export of ANS crude oil. Even without exports, the need to ship ANS crude oil further than California is likely to end by 1992. Accordingly, there will be no need to construct new "Jones Act" tankers to carry Alaska crude oil beyond the West Coast in any event.

Higher wellhead prices for crude oil produced in Alaska and California are not likely to result in substantially higher petroleum-product prices in the West Coast states.

The reason is that petroleum products may be, and are, both imported to and exported from the United States under present law. As a result, West Coast product prices already reflect world-market price levels. Much, if not all, of the increase in prices for crude-oil refined on the West Coast that would result from authorizing exports of ANS crude oil, would therefore take the form of lower refining margins and lower profits for companies that produce less crude oil in Alaska and California than they refine in the region.

A "compromise" that limited licenses to export ANS crude oil to some volume less than the whole "West Coast surplus" would not enhance incentives to develop new production in Alaska or California. The reason is that, if any ANS crude oil were still required to be shipped by tanker via Panama, the discounted price received for that supply would continue to dominate the West Coast crude-oil price structure. Even though the wellhead returns on the oil actually exported, and the royalties and severance taxes attributable to that oil, might increase, the marginal price of Alaska and California crude oil would still remain about $4 per barrel below world-market levels.

A compromise that would guarantee the same level of utilization for domestic tankers in shipment of Alaska crude oil beyond the West Coast as is now provided by the export ban, would be to require all exports to be carried out in U.S.-built, operated, and manned tankers through the year 1991.

Support in Congress and the national administration for permitting exports of ANS crude oil would be enhanced by some formula that guaranteed the federal government a substantial share of the potential increase in sales revenues. In order to preserve the favorable impact of exports on

production incentives, any new tax installed for this purpose should not diminish marginal prices at the wellhead.

An export tax of $2 per barrel, applicable only to crude oil from the Prudhoe Bay or Kuparuk units, would probably generate federal revenues of about $600 million per year in 1987 and 1988, and a total of about $2.4 billion over the period 1987-1991. (1987 constant dollars)

The foregoing projection assumes that the North Slope operators would carry out such exchanges as minimized the total export-tax liability associated with any given volume of exports. Such arrangements would assure marginal production, including incremental production at Prudhoe Bay or Kuparuk, of world-market prices.

DRAFT REPORT ON ALASKA BENEFITS AND COSTS OF EXPORTING ALASKA NORTH SLOPE CRUDE OIL

Institute of Social and Economic Research
University of Alaska - Anchorage

For the Alaska State Senate
Finance Committee

APPENDIX A:
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5.2.2 THERMALLY ENHANCED OIL RECOVERY ("TEOR").
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1. OVERVIEW AND SUMMARY

Paradoxically, ending bars to export of U.S. oil could help U.S. energy security.

--- United States Department of Energy
March 1987.

1.1 OVERVIEW.

1.1.1 INTRODUCTION. The world's three largest known accumulations of petroleum occur under and in the lands surrounding ---

* The Persian Gulf,
* The Eastern Carribbean, in an arc stretching from Louisiana through Texas and Eastern Mexico into the heavy-oil belt of Venezuela, and
* The Arctic Ocean, including highly prospective provinces in and offshore of the U.S.S.R. and Canada, as well as Alaska.

The United States has a strong territorial position in both the second and third regions. The Southwestern oil-and-gas-producing States constitute the most intensively explored territory on earth, and although large volumes of hydrocarbons remain to be found and produced in the region, its biggest and most prolific oilfields have been discovered and are already largely depleted.

The U.S. Arctic, which includes State, Federal and Native lands in Alaska, and the adjacent outer continental shelf ("OCS"), is the least-known and developed of the great petroleum-bearing regions. Virtually all of the "giant" and "supergiant" oil and gas finds in North America over the last generation have nevertheless been in the Arctic. Northern Alaska has been producing oil in commercial quantities for only a decade, but it already contains the number-one and number-two oil-producing fields on the continent --- Prudhoe Bay and Kuparuk River. Several more huge deposits have been identified: Some of them are in the early stages of evaluation or development; others, such as the Lisburne and Endicott fields, are currently being developed for production and will almost certainly come on stream.

Arctic petroleum exploration and development face exceptional natural handicaps, in remoteness, extreme climate, and a host of unusual environmental features. They are also suffer from an unnatural economic handicap in the form of statutory prohibitions on the export of crude oil produced in the United States and transported through pipelines crossing federal lands. This restriction, which appears in slightly different forms in both the Mineral Leasing Act and the Export Administration Act, reduces the wellhead value of existing Alaska crude-oil production by about $2 per barrel.

More importantly, any additional crude oil produced in Alaska or California must now bear the cost of transportation to other U.S. regions, either through the Panama Canal in small tankers or loaded from and reloaded to tankers in order to cross the Isthmus by pipeline. This cumbersome requirement reduces the prices of newly developed crude oil in the West Coast states by about $4 per barrel below the values that would prevail if surplus Alaska crude oil could be shipped directly to its next-nearest and most lucrative markets, which would be in the Far East.

The result is a significant reduction in the known resources of crude oil in Alaska and California that are now economically feasible to develop. **The present report projects the reduction in crude-oil output resulting from the export ban to reach about half a million barrels per day in the early 1990s.**

Since the proceeds from exporting any Alaska North Slope ("ANS") crude oil to Far Eastern refineries at world-market prices would finance the import of an offsetting amount of Caribbean or North Sea oil to U.S. Gulf or East Coast ports, the outcome of the ban on exporting ANS crude oil turns out to be an increase in the net import dependency of the United States, and in the U.S. international payments deficit. The present report describes the additional domestic resources whose development may be sensitive to U.S. export policy, and provides preliminary estimates of the economic values that are at stake.

1.1.2 THE ENERGY DEPARTMENT'S VIEW. This analysis has the endorsement of U.S. Secretary of Energy John S. Herrington. In his March 1987 report to the President on energy security, the Secretary summarizes the issues as follows:

> **At present there is effectively a ban on exporting crude oil from North Alaska. Because of this, about half of the 1.8 million barrels per day of North Alaskan crude oil is shipped to California, while roughly the other half goes all the way down and across Panama to refiners along the Caribbean and Gulf Coasts. Removal of the export restrictions would permit some Alaskan oil to be shipped a shorter sea distance to markets in the Pacific Rim, especially to Japan. With lower transportation costs, the "netback" to Alaskan producers would be higher. They would be encouraged to produce more oil and to look for more.**
>
> **Section 27 of the Merchant Marine Act of 1920 (Jones Act) requires carriage of Alaskan crude by U.S. flag tankers between U.S. ports. Approximately 40 percent of the U.S. domestic tanker fleet is currently employed in the Alaskan crude trade.**
>
> **Restrictions on the export of Alaskan crude distort the market and interfere with efficient allocation of domestic resources. The inflow of Alaskan oil to California has created a crude oil excess there that has depressed wellhead prices and will reduce long-term California production over what might otherwise occur. Thus, lifting the restrictions would increase the wellhead value of both Alaskan and Californian crude oil. Increased cash flow and profitability would stimulate additional exploration and production in both States. Dropping the effective ban would also head off a possible misallocation of resources in the future, such as construction of additional pipelines to transport crude oil from California.**

Producing more crude in Alaska and California would enhance U.S. energy security, because it would reduce net U.S. oil imports --- and thus reduce world dependence on insecure oil supplies. Greater security and diversification of oil supplies for U.S. trade partners in the Pacific would also reduce the likelihood of their bidding up world oil prices in a supply disruption. And Federal and State tax revenues would both be increased --- because the value of this U.S. crude oil at the wellhead had risen.

There are several reasons why the ban on exporting Alaska crude oil remains in place. Some believe that exporting any American crude to foreign countries would make this country less secure. In fact, however --- given the integrated nature of the world oil market --- it is net U.S. oil imports, not the amount of crude oil exports, that are important to our energy security. If net oil imports actually decline somewhat by allowing crude oil exports (through higher production in Alaska and California), then U.S. energy security has been improved.

A more contentious argument against allowing exports from northern Alaska is that it would likely result in the idling of a large number of U.S. tankers and a loss of jobs in the U.S. maritime industry. The loss of tankers would reduce the availability of militarily useful tankers for defense purposes in case of an emergency that required them.

California consumers of petroleum products (both industrial and residential) are concerned about removal of the export ban for another reason. They fear a potential price increase in petroleum products that might occur in California as the excess crude in that region was shipped elsewhere. Also, large investments in pipelines to move excess California crude to other U.S. markets would be jeopardized if the export restrictions vanished. (pp 89-90)

We have little quarrel with the Secretary's statement of the issues. Exports of Alaska crude oil would undoubtedly raise "netback" prices at the wellhead in Alaska and California, and thus encourage greater production from developed fields and new fields in both states. Federal and State tax revenues would indeed be enhanced.

The Secretary fairly summarizes the case against exports as well, but some if not all of the objections he recites (without endorsing or criticizing them, it should be noted) are superficial or of doubtful merit. Exports would indeed reduce the utilization of domestic tankers, and would likely cause layoffs among maritime workers. The argument from a security standpoint is questionable, however: What difference would it make in a military emergency whether or not the tankers that supplied U.S. forces were U.S.-built or otherwise? The abandonment of California oil-pipeline construction projects, which the Secretary first offers as an efficiency gain from exports, curiously appears again as a contra argument. Finally, for reasons set out in the body of the report, we do not believe that California consumers need to be concerned that exports will cause a rise in the local price of petroleum products.

The present report is an attempt to give approximate numbers to the probable effect of exports on wellhead prices in Alaska and California, the likely impact on production from established and new

oilfields in the two states, and the State and Federal revenue effects, and other significant consequences. It is not the result of any new research on production costs, or any new engineering or econometric models, but has been built up from data in publicly availab.e materials, interviews in March 1987 with knowledgeable oil-industry personnel, and other qualitiative information available to the investigators.

1.2 IMMEDIATE IMPACTS OF REMOVING THE EXPORT BAN.

If East Asia were a permitted destination for the crude-oil volumes that are surplus to the needs of refineries on the U.S. West Coast, there **would be an increase of about $4 per barrel ---**

* in the market value of that ANS crude which is now shipped to Gulf and East Coast ports;
* in the prices of most California crude oil refined in California;

and most importantly from a national-interest standpoint,

* **in the market value of all <u>new</u> Alaska and California production.**

There would also be a smaller, but still substantial increase --- on the order of $2 per barrel ---

* in the average wellhead price of the ANS crude oil now refined on the West Coast.

These price increases would be based on the fact that

* World-market prices for grades of crude oil similar to ANS are just about as high (if not a little higher) at refineries in Japan, Korea, and Taiwan, as at refineries on the U.S. Gulf and East Coasts; while
* Transportation of "surplus" West Coast crude oil to the Orient would sharply reduce those tanker-transport costs which have to be subtracted from "refinery-gate" prices (either in the eastern U.S. or in the Far East), in order to arrive at the wellhead value of the "marginal" barrel produced in California or Alaska.

Figures 1.2.1 and 1.2.2 contain our projections of wellhead prices in Alaska and California for the period 1985-2000, both under the <u>status quo</u>, in which exports are prohibited, and assuming that unlimited exports were authorized beginning in 1987.

1.2.1 PAST COSTS. Between the beginning of 1981, when federal crude-oil price controls ended, through 1986, the export ban reduced the wellhead value of the crude oil that was produced in Alaska by about $11.9 billion, and the wellhead value of California crude oil by about $9.7 billion. The cost to the State of Alaska alone in royalties, production taxes, and corporate income taxes was about $3.7 billion; the federal government lost about $4.4 billion in net windfall profits tax ("WPT") revenues from the Prudhoe Bay field alone.

Table 1.1

WELLHEAD PRICES IN ALASKA AND CALIFORNIA WITH AND WITHOUT THE EXPORT BAN

PRICE CATEGORY	CASE	PROJECTED 1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	[illegible]
WTI-AVG REFINER COST	MPC lower				14.74					17.93					[illegible]
1985 1986															
actual 28.02 15.28															
REPRES. GULF-COAST CRUDE	all cases	$15.00	$15.00	$15.00	$15.00	$15.00	$15.00	$15.00	$15.00	$15.00	$20.00	$20.00	$20.00	$20.00	[illegible]
ANS VALDEZ NETBACKS															
Netback from Far East	all cases	$14.00	$14.00	$14.00	$14.00	$14.00	$14.00	$14.00	$14.00	$14.00	$19.00	$19.00	$19.00	$19.00	[illegible]
Netback from U.S. Gulf	export	$10.00	$10.00	$10.00	$10.00	$10.00	$10.00	$10.00	$12.00	$12.00	$17.00	$17.00	$19.00	$19.00	[illegible]
	no-export	$10.00	$10.00	$10.00	$10.00	$12.00	$12.00	$12.00	$12.00	$12.00	$19.00	$19.00	$19.00	$19.00	[illegible]
	difference	$.00	$.00	$.00	$.00	$-2.00	$-2.00	$-2.00	$.00	$.00	$-2.00	$-2.00	$.00	$.00	[illegible]
Volume refined on West Co	export	1087	1083	1054	988	994	999	1004	1009	1013	1014	1015	1007	928	[illegible]
	no-export	1122	1158	1177	1172	1156	1128	1079	1042	1038	1016	992	990	935	[illegible]
	difference	-35	-75	-123	-184	-162	-129	-75	-34	-26	-1	24	17	-8	[illegible]
average "discount"	export	$.00	$.00	$.00	$.00	$.00	$.00	$.00	$.00	$.00	$.00	$.00	$.00	$.00	[illegible]
1985 1986	no-export	$2.08	$2.11	$2.11	$2.08	$2.03	$1.94	$1.84	$.87	$.85	$.00	$.00	$.00	$.00	[illegible]
actual $2.63 $1.06	difference	$-2.08	$-2.11	$-2.11	$-2.08	$-2.03	$-1.94	$-1.84	$-.87	$-.85	$.00	$.00	$.00	$.00	[illegible]
Average netback from West Co	export	$14.00	$14.00	$14.00	$14.00	$14.00	$14.00	$14.00	$14.00	$14.00	$19.00	$19.00	$19.00	$19.00	[illegible]
	no-export	$11.92	$11.89	$11.89	$11.92	$12.98	$13.03	$13.08	$13.12	$13.15	$19.00	$19.00	$19.00	$19.00	[illegible]
	difference	$2.08	$2.11	$2.11	$2.08	$1.02	$.97	$.92	$.87	$.85	$.00	$.00	$.00	$.00	[illegible]
AVERAGE ANS VALDEZ NETBACK	export	$14.00	$14.00	$14.00	$14.00	$14.00	$14.00	$14.00	$14.00	$14.00	$19.00	$19.00	$19.00	$19.00	[illegible]
	no-export	$11.18	$11.28	$11.40	$11.56	$12.82	$12.86	$12.89	$13.07	$13.13	$19.00	$19.00	$19.00	$19.00	[illegible]
	difference	$2.82	$2.72	$2.60	$2.44	$1.18	$1.14	$1.11	$.93	$.87	$.00	$.00	$.00	$.00	[illegible]
TAPS tariff	export	$5.33	$4.74	$4.21	$3.74	$3.84	$3.95	$4.06	$4.17	$4.29	$4.26	$4.23	$4.19	$4.19	[illegible]
	no-export	$5.38	$4.79	$4.27	$3.80	$3.91	$4.02	$4.14	$4.26	$4.38	$4.36	$4.33	$4.31	$4.32	[illegible]
	difference	$-.05	$-.05	$-.06	$-.06	$-.07	$-.07	$-.08	$-.09	$-.09	$-.10	$-.11	$-.12	$-.13	[illegible]
AVERAGE ANS PUMP-STATION #1 N		$8.67	$9.26	$9.79	$10.26	$10.16	$10.05	$9.94	$9.83	$9.71	$14.74	$14.77	$14.81	$14.81	[illegible]
		$5.80	$6.49	$7.13	$7.75	$8.91	$8.83	$8.75	$8.81	$8.75	$14.64	$14.67	$14.69	$14.68	[illegible]
		$2.87	$2.77	$2.66	$2.51	$1.24	$1.22	$1.19	$1.02	$.96	$.10	$.11	$.12	$.13	[illegible]
AVERAGE CALIFORNIA WELLHEAD P		$14.00	$14.00	$14.00	$14.00	$14.00	$14.00	$14.00	$14.00	$14.00	$19.00	$19.00	$19.00	$19.00	[illegible]
		$10.00	$10.00	$10.00	$10.00	$12.00	$12.00	$12.00	$12.00	$12.00	$19.00	$19.00	$19.00	$19.00	[illegible]
		$4.00	$4.00	$4.00	$4.00	$2.00	$2.00	$2.00	$2.00	$2.00	$.00	$.00	$.00	$.00	[illegible]

Figure 1.2.1

COMPARISON OF PROJECTED ALASKA CRUDE-OIL PRODUCTION WITH AND WITHOUT EXPORTS

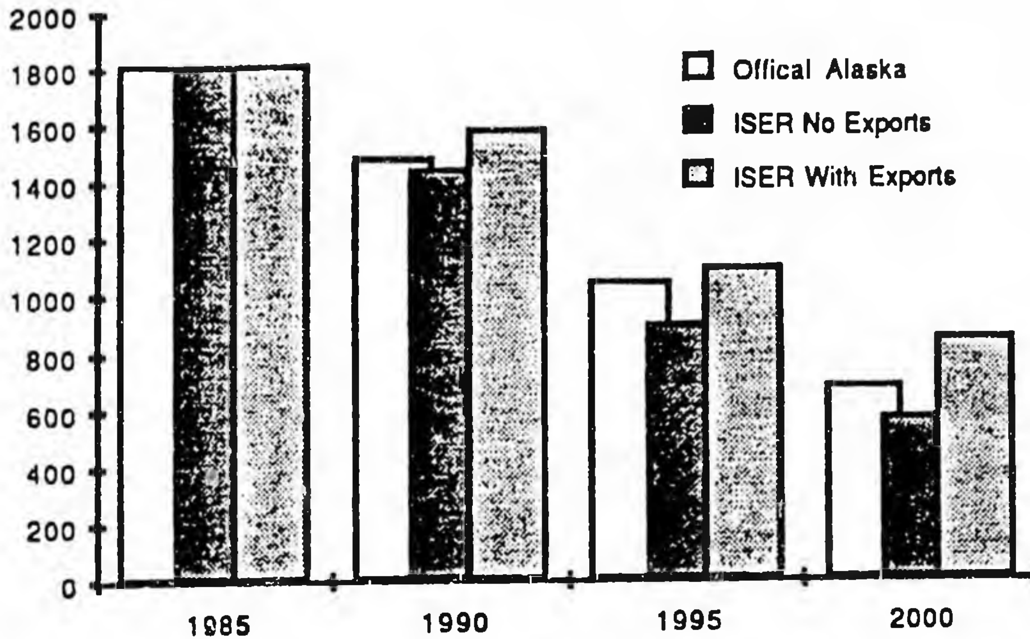
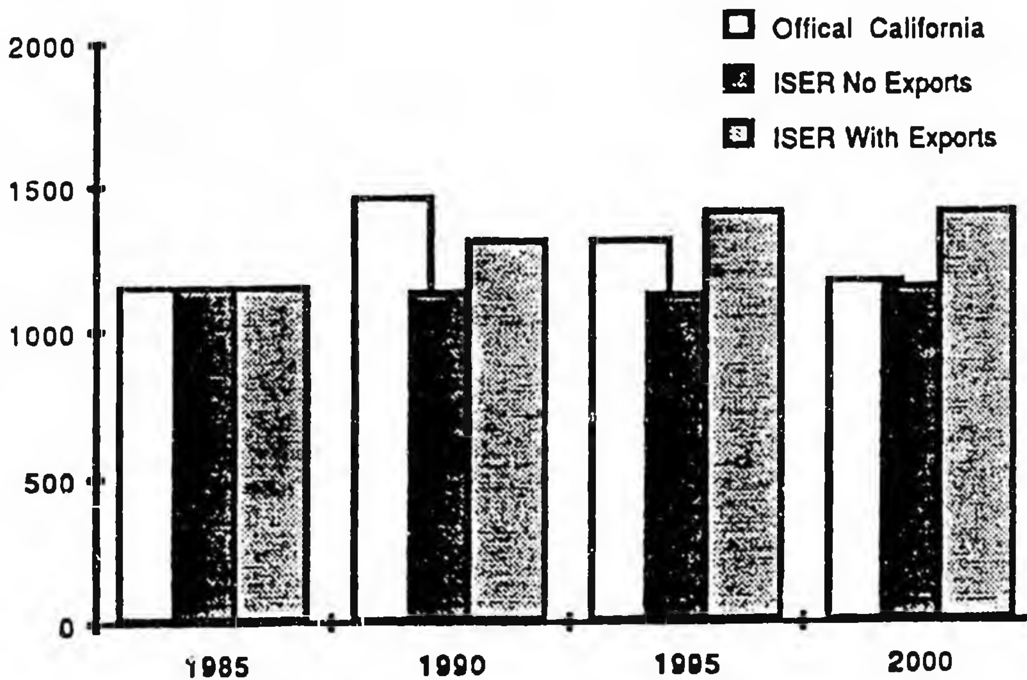


Figure 1.2.2

COMPARISON OF PROJECTED CALIFORNIA CRUDE-OIL PRODUCTION WITH AND WITHOUT EXPORTS



1.2.2 DIRECT GAINERS FROM EXPORTS: ALASKA, THE U.S. TREASURY, WEST COAST OIL PRODUCERS, CALIFORNIA. Even if these price increases did not affect the amount of oil produced in Alaska or California, the increase in producer sales revenues in the two States could be expected to total about $3 billion per year in the years 1987-1990, and total about $18 billion over the period 1987-1995. The direct beneficiaries would be the State of Alaska, the Federal Treasury, those oil companies that produce more crude oil in Alaska and California than they refine in the Pacific States (chiefly Standard, Arco, Exxon, Texaco and Shell), and State and local governments in California, in that order.

1.2.3 LITTLE OR NO IMPACT ON U.S. CONSUMERS. Higher wellhead prices in Alaska and California would have little or no adverse impact on U.S. consumers. They would not increase oil prices elsewhere in the United States because ANS prices at Gulf and East Coast refineries are already determined by the prices of Latin American, North Sea, or Middle Eastern crudes that could replace them. **The higher market value of Alaska and California crudes would not even have much effect on petroleum-product prices faced by West Coast consumers, because both the import and export of petroleum products are now permitted under federal law.** As a result, West Coast product prices are not determined by West Coast crude-oil prices, but rather by the prices at which residual oil can be exported from, and gasoline imported to, the region.

1.2.4 DIRECT LOSERS FROM EXPORTS: CERTAIN OIL COMPANIES; DOMESTIC SHIPPING INTERESTS. The combination of increased crude-oil costs and sticky petroleum-product prices implies that some crude-short West Coast refiners (those which refine more oil than they produce in the Pacific States) could be unfavorably impacted, along with the domestic maritime industry, for which tanker shipments between Valdez and other U.S. ports is now a major captive business. While it is the maritime interests that provide the greatest political support for the crude-oil export ban, any benefit they now receive is doomed to disappear quickly regardless of U.S. export policy. Our **analysis indicates that, if exports are not authorized, West Coast crude-oil production, and the need to ship "surplus" Alaska crude oil beyond California, will begin declining steeply in 1988 or 1989, and will be at an end by 1992.**

1.3 INCREASES IN ALASKA AND CALIFORNIA CRUDE-OIL PRODUCTION.

From a national standpoint, the most important effect of removing the ban on exporting ANS crude oil would be the greater incentives oil companies would have to invest in additional production at already-producing fields in Alaska and California, and to complete projects that are already underway or planned for several huge new fields. Alaska and California contain a number of projects, involving many billions of barrels of oil in known reservoirs, whose financial feasibility has become very sensitive to expected wellhead revenues since world oil prices collapsed in 1986. A $4-per-barrel increase in the market value

of new crude-oil production is equivalent to about 60 percent of the average mid-1986 wellhead price of ANS crude oil, and about 40 percent of the posted price of a typical California heavy crude oil (Kern River). The leverage that such a price differential would exert on production incentives in Alaska and California is clearly much greater than that which would be created for production elsewhere in the United States, by an import fee of, say, $5 per barrel.

1.3.1 PRODUCTION POTENTIALS IN ARCTIC ALASKA. The authors have examined the status, projected costs, and likely influence of wellhead-price expectations on the following ANS production ventures, all of which were underway or being planned or actively considered by industry before oil prices plunged early in 1986. The list may not contain every development prospect in known ANS reservoirs: there are several "tight holes" (completed exploration wells whose results are still a closely-held secret) on ANS federal offshore acreage.

Prudhoe Bay unit infill drilling
Prudhoe Bay unit extension drilling (Sag River and Eileen plays)
Prudhoe Bay unit tertiary recovery
Kuparuk River unit infill drilling
Kuparuk River unit extension drilling
Kuparuk River unit tertiary recovery
Milne Point unit (resumption of suspended production)
Gwyrdr Bay unit
Lisburne formation
Endicott unit
Seal Island unit
West Sak pilot project
Point Thomson unit.
and others.

Table 1.3 shows the authors' projections of most likely production levels for ANS crude oil, with and without exports, for the years 1987 through 2000. If the export ban is continued, ANS production is likely to fall from a peak of 1.8 million barrels per day (mmb/d) in 1987 to 1.4 mmb/d in 1990, 1.1 in 1995, and .9 mmb/d in the year 2000. Exports can be expected to improve the outlook by about 300 mmb/d in 1990. Beginning in the early-to-mid 1990s, however, declining production (in part the result of the export ban) will make the U.S. West Coast a net importer of crude oil. As a result, wellhead prices in Alaska and California will converge upward toward world-market levels and, by about the year 2000, production will be about the same without respect to earlier U.S. export policy.

1.3.2 PRODUCTION POTENTIALS IN CALIFORNIA. See Chapter 5. Table 1.3.2 shows the authros' projections of most likely production levels for California crude oil, with and without exports, for the years 1987 through 2000.

TABLE 1.3.1

ACTUAL AND PROJECTED ALASKA CRUDE-OIL PRODUCTION WITH AND WITHOUT THE EXPORT BAN

AREA AND/OR CATEGORY	SOURCE OF CASE	ACTUAL 1985	1986	PROJECTED 1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	TOTAL
ALASKA PRODUCTION (mb/d)		mb/d	mb/d	mb/d	mb/d	mb/d	mb/d	mb/d	mb/d	mb/d	mb/d	mb/d	mb/d	mb/d	mb/d	mb/d	mb/d	[illegible]
North Slope																		
	AK DPR						1148					842					53[illegible]	
Prudhoe Bay	export	1550	1552	1500	1500	1455	1261	1094	948	822	713	618	536	465	403	349	3[illegible]	[illegible]
	no export	1550	1552	1470	1313	1172	1047	1001	9[illegible]	925	713	618	536	465	403	349	3[illegible]	[illegible]
	difference			30	187	283	214	93	-16	-103	0	0	0	0	0	0	0	[illegible]
	AK DPR						222					129					6[illegible]	
Kuparuk River	export	180	240	260	255	246	230	216	202	198	178	165	152	146	137	128	12[illegible]	[illegible]
	no export	180	240	260	255	231	210	196	187	188	176	165	152	146	137	128	120	[illegible]
	difference			0	7	15	20	20	15	10	2	0	0	0	0	0	0	[illegible]
	AK DPR						27					2[illegible]					[illegible]	
Milne Point	export	3	19		20	20	30	24	19	15	12	10	8	6	5		[illegible]	6[illegible]
	no export	3	19		20	19	15	12	14	14	12	10	8	6	5	9	4	[illegible]
	difference			0	0	1	15	12	[illegible]	[illegible]	0	0	0	0	0	-2	-4	[illegible]
	AK DPR						57					117					5[illegible]	
Lisburne	export			40	52	60	36	80	90	60	50	60	80	65	55	49	32	[illegible]
	no export			40	50	60	51	48	52	52	76	60	80	65	55	49	32	[illegible]
	difference			0	0	0	25	32	38	15	2	0	0	0	0	0	0	[illegible]
	AK DPR						92					53					3[illegible]	
Endicott	export			40	50	100	100	100	100	88	77	67	59	51	45	27	24	[illegible]
	no export				40	80	100	102	104	92	77	67	59	51	45	27	22	[illegible]
	difference				10	20	0	-2	-4	-4	0	0	0	0	0	0	2	[illegible]
	AK DPR											33					57	
West Sak	export											50	100	120	150	15[illegible]	15[illegible]	[illegible]
	no export											15	46	84	133	15[illegible]	158	[illegible]
	difference											35	54	36	17	0	0	5[illegible]
Seal Island	export											40	80	80	80	71	64	15[illegible]
	no export											12	37	51	90	71	64	11[illegible]
	difference											26	43	15	0	0	0	2[illegible]
	AK DPR											26					371	
Other	export									45	55	66	80	96	115	139	16[illegible]	[illegible]
	no export									9	24	66	78	96	116	13[illegible]	165	[illegible]
	difference									36	31	0	1	0	0	0	0	25[illegible]
	AK DPR						1536					1226					76[illegible]	
NORTH SLOPE SUBTOTAL	export	1733	1869	1820	1892	1881	1701	1514	1349	1240	1114	1097	1096	1031	993	916	926	[illegible]
	no export	1733	1869	1790	1678	1562	1423	1359	1323	1281	1080	1034	1000	977	977	92[illegible]	928	[illegible]
	difference			30	214	319	278	154	27	-41	35	63	99	55	17	-6	-2	[illegible]
	AK DPR						22					18					8	
COOK INLET	export	66	47	42	38	34	31	28	25	22	20	19	16	15	13	12	11	119
	no export	66	47	39	32	27	22	21	22	22	20	18	16	15	13	12	11	10[illegible]
	difference			3	6	8	9	6	3	0	0	0	0	0	0	0	0	1[illegible]

TABLE 1.3.2

ACTUAL AND PROJECTED CALIFORNIA CRUDE-OIL PRODUCTION WITH AND WITHOUT THE EXPORT BAN

AREA AND/OR CATEGORY	SOURCE OF CASE	ACTUAL		PROJECTED														
		1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	TOTAL
ALASKA PRODUCTION (mb/d)		mb/d	mb/d	mb/d	mb/d	mb/d	mb/d	mb/d	mb/d	mb/d	mb/d	mb/d	mb/d	mb/d	mb/d	mb/d	mb/d	mil bbl
	CEC						490					535					532	
Thermally-Enhanced Oil Reco	export	468	450	444	437	431	425	437	450	463	476	490	495	505	514	522	532	2419
	no export	462	450	430	411	392	375	387	405	429	459	481	492	506	514	522	532	[illegible]
	difference			14	27	39	50	51	44	34	17	9	0	0	0	0	0	[illegible]
	CEC						377					357					1121	
All other onshore	export	504	495	463	433	405	379	374	368	363	358	355	350	347	344	341	338	[illegible]
	no export	504	495	452	413	376	345	349	355	360	358	353	350	347	344	341	339	[illegible]
	difference			11	20	29	34	25	14	3	0	0	0	0	0	0	0	[illegible]
	CEC						197					182	61				163	
State offshore	export	108	95	113	133	157	186	185	185	184	184	183	177	171	165	159	154	253
	no export	103	95	112	131	154	180	178	177	177	178	179	177	171	165	159	154	[illegible]
	difference			1	2	4	6	8	8	7	5	4	0	0	0	0	0	17
	(ADL for CEC)						405					208					155	
Federal OCS	export	81	77	111	162	230	330	343	356	370	395	400	400	400	402	400	456	[illegible]
	no export	81	77	103	136	181	240	271	311	250	395	400	400	400	400	405	400	1595
	difference																	0
							1804					1064					1731	
TOTAL CALIFORNIA PRODUCTION	export	1161	1118	1131	1162	1222	1328	1329	1359	1381	1403	1426	1424	1423	1423	1422	1423	[illegible]
	no export	1161	1113	1097	1091	1104	1140	1173	1246	1316	1391	1414	1424	1423	1423	1422	1422	[illegible]
	difference			34	72	119	188	156	112	64	22	12	0	0	0	0	0	253
							2022					2300					1887	
COMBINED ALASKA AND CALIFORNI	export	2960	2974	2993	3084	3139	3052	2881	2734	2643	2537	2541	2539	2470	2429	2258	2359	13783
	no export	2960	2974	2926	2801	2693	2585	2564	2592	2620	2481	2466	2440	2415	2413	2257	2361	1304
	difference	2960	2974	67	282	445	467	317	141	24	57	75	99	55	17	-9	-2	744
	NPC-lower						4514					3354					2735	
REMAINDER OF UNITED STATES	export	6011	5694	5276	4889	4530	4197	3931	3682	3449	3231	3026	2756	2509	2235	2081	1995	17432
	no export	6011	5694	5276	4889	4530	4197	3931	3682	3449	3231	3026	2756	2509	2225	2051	1995	[illegible]
	difference			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NPC-lower						7136					5654					4542	
U.S. crude oil & lease cond	export	8971	8668	8269	7972	7668	7249	6812	6416	6093	5768	5567	5295	4979	4714	4431	4254	[illegible]
	no export	8971	8668	8202	7690	7223	6782	6495	6274	6069	5711	5492	5196	4924	4698	4438	4255	[illegible]
	difference			67	282	445	467	317	141	24	57	75	99	55	17	-8	-2	744
	NPC-lower						1284					1089					942	
Natural-gas liquids	export	1609	1571	1491	1437	1382	1307	1228	1157	1096	1040	1034	955	898	850	799	767	[illegible]
	no export	1609	1571	1479	1386	1302	1223	1171	1131	1094	1030	998	937	888	847	800	767	[illegible]
	difference			12	51	80	84	57	25	4	10	14	18	10	3	-1	0	[illegible]

2. ALASKA AND CALIFORNIA IN U.S. NATIONAL OIL SUPPLY

2.1 PRODUCTION, RESERVES AND RESOURCES

Alaska and California and adjacent offshore lands accounted for 35 percent of U.S. crude-oil production in 1986[1] and, according to a 1985 report of the U.S. Geological Survey ("USGS"), 48 percent of the nation's "measurable" crude-oil reserves, and 29 percent of the expected "undiscoverable recoverable" crude-oil resources.[2]

2.1.1 UNDEVELOPED RESOURCES IN KNOWN POOLS. The Energy Department and USGS figures cited do not give proper emphasis to the strategic position of the two states in national oil supply, because **the most important crude-oil assets from the perspective of national oil supply for the rest of the the 20th Century are the known but undeveloped resources in Alaska and California.** Most reports and debates on national energy policy seem to neglect these petroleum deposits, which are also missing from the federal government's most frequently cited oil-resource statistics because, while they are not technically "proved", neither are they "undiscovered".[3]

The outlook for U.S. domestic oil production depends, at least through the 1990s, on the decisions major oil companies will make whether or not to invest in developing the crude oil that is known to exist in already-found pools and to be producible with existing technology. **Alaska and California totally dominate the nation's inventory of such undeveloped "oil-in-place".**[4]

2.1.2 ENHANCED RECOVERY IN PRODUCING FIELDS. **Most of the known but undeveloped petroleum in Alaska and California is made up of the oil in a number of already-producing "supergiant" fields[5], which conventional "primary" and "secondary" recovery[6] would leave behind in the reservoir.** Between now and the end of the Century, the production potential from thermally enhanced oil recovery ("TEOR") projects in six of the nation's seven largest-producing fields, Prudhoe Bay and Kuparuk River in Alaska, and the Kern River, Belridge, Midway-Sunset, and Wilmington) almost certainly surpasses the potential of all new-field and TEOR projects in the other 48 states.

2.2 NEW-FIELD DEVELOPMENT

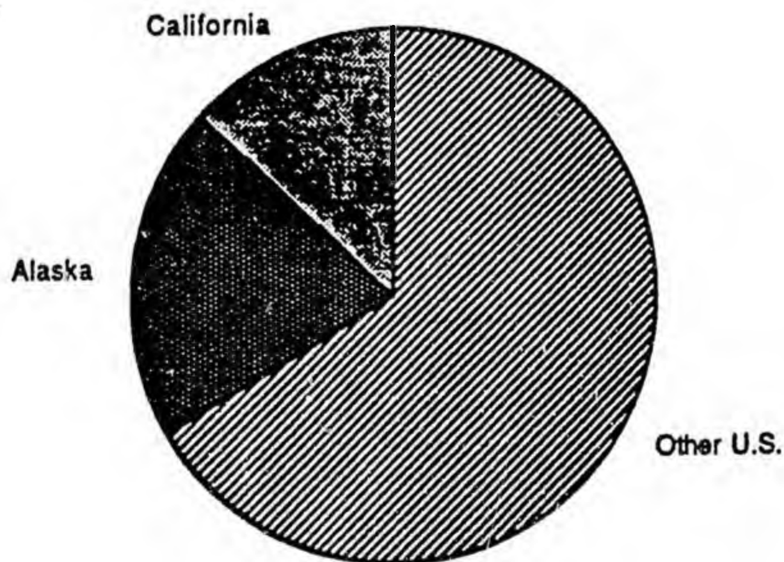
The inventory of known but undeveloped oil resources also contains a number of new giant and supergiant fields in Alaska and California from which substantial production has yet to begin, but to which the oil companies have already committed hundreds of millions of dollars in exploration, infrastructure, and development investment. Examples are the Endicott and Lisburne units on the Alaska North Slope, and the Hondo field in California's offshore Santa Ynez unit. Another instance is the West Sak deposit in Arctic Alaska, which may contain more "oil-in-place"[6] than any other field yet discovered in North America, and on which Arco recently suspended operation of a technically successful "pilot project" because field development does not seem financially warranted at current oil prices.

Figure 2.1

PROVED CRUDE-OIL RESERVES IN THE UNITED STATES
ALASKA AND CALIFORNIA, 1985

and

CRUDE-OIL PRODUCTION IN THE UNITED STATES
ALASKA AND CALIFORNIA, 1985



2.3 COST AND PRICE HANDICAPS

All of the TEOR and new-field investment projects mentioned here were under way, scheduled for development, or in process of planning when world oil prices collapsed in 1986. The financial feasibility of each of them, however, depends powerfully on the outlook for future oil prices and some of them are now in jeopardy. Despite the tremendous volumes of oil involved, there are several factors that make investment in Alaska and California production peculiarly sensitive to crude-oil prices received at the field (the "wellhead" price). These handicaps include relatively high production costs stemming from the remote location and harsh environment in the case of Alaska production, the low "quality" of typical West Coast crude oils, which cause them to sell at a significant price discount, and an exceptionally severe transport-cost burden, which is borne by the producers in the form of lower wellhead prices.

2.3.1 DEVELOPMENT COSTS. In the case of Arctic Alaska, there are the high transport costs for equipment and materials and high operating costs, which stem from the remoteness of the fields, horrible weather, soil fragility onshore and ice stress offshore.

2.3.2 HEAVY, HIGH-SULFUR SUPPLIES. Most of the additional production potential in California, and a large portion of the Alaska potential is, moreover, for "heavy" crude oil, which is more costly to to produce, as it requires TEOR techniques to maximize output. Most of California's additional heavy-oil potential is associated with steam-injection projects. Much of the West Coast supply also contains relatively large concentrations of sulfur and other contaminating elements.

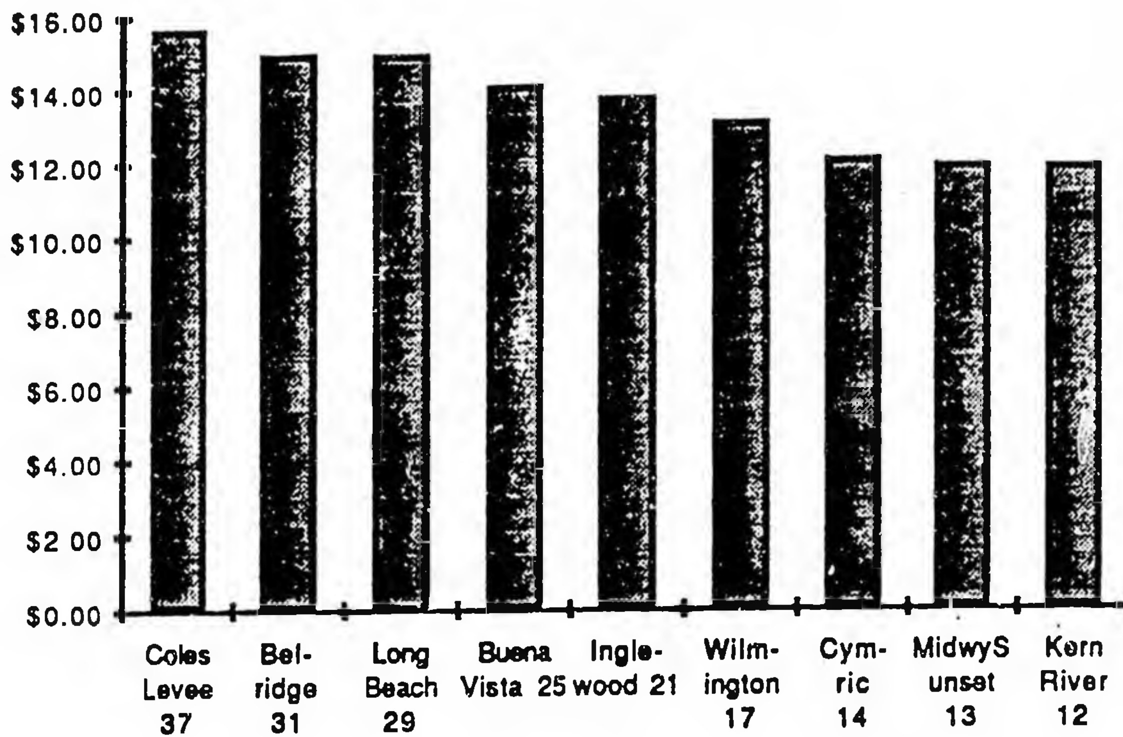
Despite its additional production costs, Figure 2.2 shows that heavy, high-sulfur oils sell at deep discounts relative to "average" grades of oil, The West Coast's price penalties for "gravity" and sulfur content are often greater than in other major world refining areas, because heavy oil is such a high proportion of available supply. Transport of heavy oil tends to be more costly, often requiring heated pipelines and tankage, or dilution with lighter hydrocarbons. Even more importantly, "low gravity" and high sulfur content together make typical Alaska and California crudes more costly to refine into high-value products like gasoline, jet fuel, and "middle distillates" (heating oil and diesel fuel). This is a particular disadvantage in California, where air-quality problems prevent the use of high-sulfur fuel oils, and seriously restrict even their processing and transportation.

2.3.3 TRANSPORT TO MARKET. Even more punishing for the economics of Alaska production is the high cost of moving the oil from field to market: In 1986, the Trans Alaska pipeline ("TAPS") toll averaged more than $6 per barrel, while tanker transport costs were on the order of an additional dollar per barrel to West Coast refineries, and $4 in tanker charges plus about one dollar for transit through the Panama pipeline, to refineries on the U.S. Gulf or East Coasts. (Under a settlement recently approved by the Federal Energy Regulatory Commission, TAPS charges will fall to about $4.50 in 1987, and $4.00 by

1990.) For oil from North Slope fields other than Prudhoe Bay, local pipeline charges on the North Slope must also be paid. All of these charges have to be

Figure 2.2

GRAVITY AND LOCATION PRICE DIFFERENTIALS
FOR CALIFORNIA CRUDE OIL



subtracted ("netted back") from the world market price, as seen at Lower-48 refineries, in order to determine a field price in Arctic Alaska. Wellhead prices at North Slope fields, therefore, tend to be on the order of $10 per barrel below the world market price, as measured by the prices of similar grades at the U.S. Gulf --- Arab Light for example. **In the Summer of 1986, the wellhead price of oil from Conoco's Milne Point unit, North of the Prudhoe Bay unit, actually fell below zero!** In January 1987, as a result of low (though positive) prices, Conoco suspended production from the field.

NOTES TO SECTION 2

1. U.S. Department of Energy, Energy Information Administration ("EIA"), Petroleum Supply Monthly.
2. U.S. Department of the Interior, Geological Survey ("USGS"), Circular 860.
3. The USGS report cited above does contain entries for "indicated" and "inferred" reserves, but the numbers for Alaska are clearly much too low relative to the volumes of "unproved" oil in known reservoirs enumerated below.
4. Oil in place is the volume of total liquid hydrocarbons in a reservoir, including both its recoverable "reserves" and the volumes that are not believed to be commercially recoverable.
5. A supergiant field is one believed to contain one billion barrels or more of recoverable oil, a giant contains more than one hundred million barrels.
6. Primary recovery is production that relies on natural subterranean (water or gas) pressures in the reservoir to drive oil to the surface, while secondary recovery depends on artificially-induced waterflood or gas injection. Tertiary or enhanced oil recovery ("EOR") employs heat, and/or solvents and other chemicals to assist production. The real-world demarcations among these production stages are often blurred: all three techniques are currently in use on the Prudhoe Bay reservoir, for example.

3. WEST COAST OIL PRICES AND THE CRUDE-OIL EXPORT BAN

3.1 WEST-COAST CRUDE-OIL PRICE LEVELS

Markets for crude oil on the U.S. Pacific Coast are physically and economically detached from markets elsewhere in the world. The structure of crude-oil prices in this market reflects the interplay of three factors that are peculiar to the region:

* The "surplus" of crude oil from Alaska and California, relative to the demand from refineries in the region;
* **The federal ban on foreign exports of crude oil transported by pipeline across federal lands;**
* The great share of ANS production, and of West Coast crude oil shipments to other U.S. markets, held by the three leading firms, and indeed by one firm --- Standard Alaska (Sohio).

One further characteristic of the regional market is worth noting:

* **Petroleum-product prices which, in contrast to crude-oil prices, are effectively linked with other Pacific Rim and world markets.**

3.2 THE WEST COAST CRUDE-OIL "SURPLUS"

Alaska and California crude-oil production substantially exceeds the demand for oil to be refined within the seven-state Pacific petroleum administration district ("PADD-V").[1] In 1986, production in the District (almost entirely in Alaska and California) averaged just about 3 million barrels per day ("mmb/"d), while net exports to other U.S. districts averaged 628 thousand barrels per day ("mb/d"), the bulk of which took the form of tanker shipments of ANS crude oil to the U.S. Gulf Coast. This figure was equivalent to 34 percent of Alaska production and 21 percent of the West Coast total.[2]

Producers of a commodity in an isolated region that is a net exporter of the commodity normally have to bear the cost, in the form of lower producer prices, of transporting the commodity to a market or markets capable of absorbing its surplus production. Thus, the fact that PADD-V is a net exporter guarantees prices at Coastal refineries in California, Washington, and Alaska that are lower than in other markets, such as the U.S. Gulf, Western Europe, or East Asia, which are net importers of crude oil. Figure 3.2 shows how the West Coast became a net exporter when ANS production commenced in 1977. Table 3.2 projects the West Coast crude-oil surplus through the year 2000.

3.3 THE WEST COAST CRUDE-OIL PRICE DISCOUNT.

The wellhead-price "discount" at which crude oil sells in a net exporting region such as PADD-V depends upon the cost of transporting it to an export market where refiners are willing to purchase the entire surplus. The market value of West Coast crude oil at its point of production thus tends to be the highest price it can command and yet be saleable in the export market, after addition of all shipping costs.

Figure 3.2
The West Coast Oil Surplus

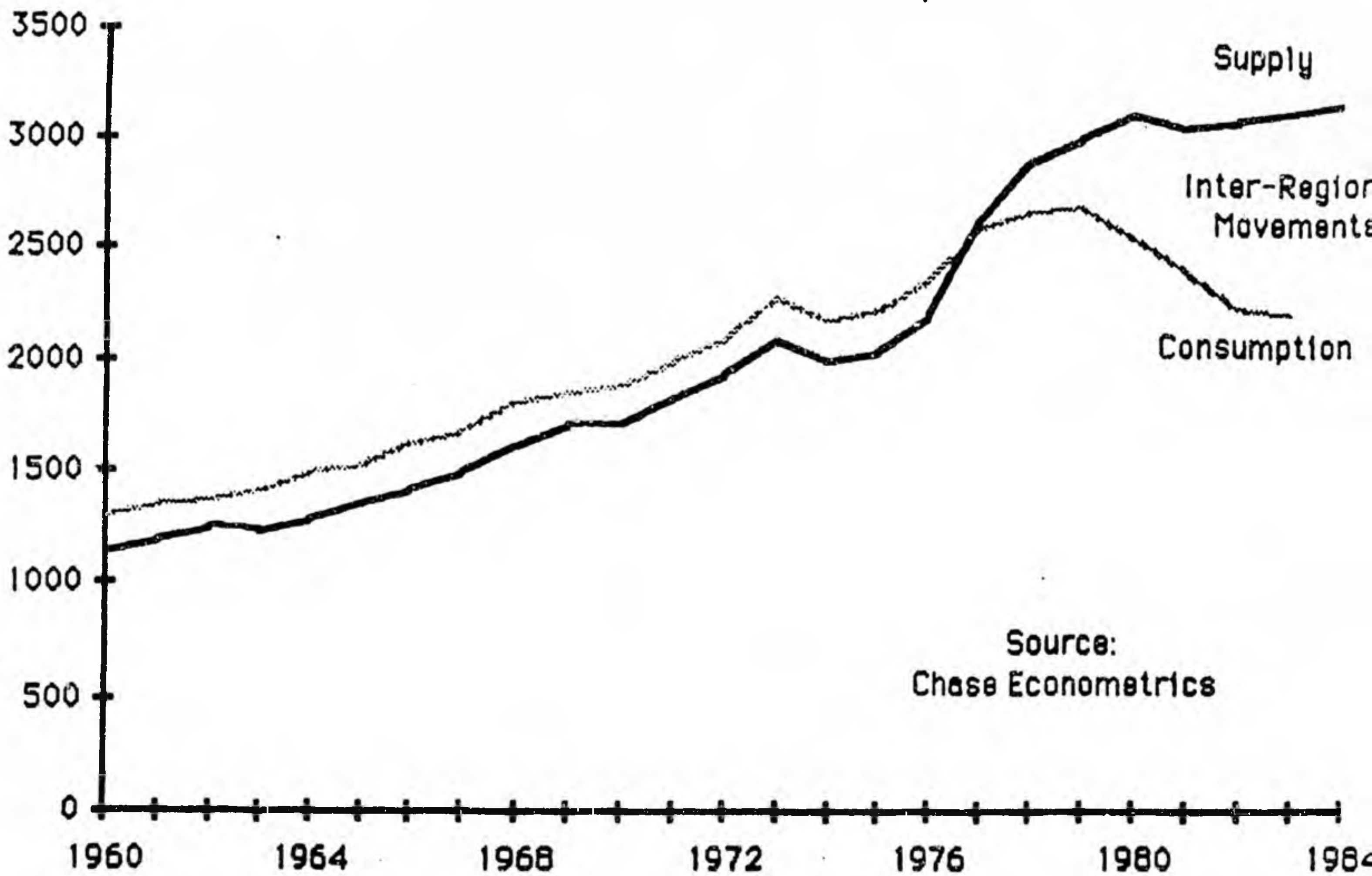


Table 3.2a

PROJECTED WEST COAST CRUDE-OIL BALANCES

AREA AND/OR CATEGORY		ACTUAL 1985	ACTUAL 1986	PROJECTIONS 1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	TOTAL
		mb/d	mb/d	mb/d	mb/d	mb/d	mb/d	mb/d	mb/d	mb/d	mb/d	mb/d	mb/d	mb/d	mb/d	mb/d	mb/d	[illegible]
PETROLEUM DEMAND																		
Refined petroleum products	export	2238	2273	2346	2408	2472	2537	2591	2646	2703	2760	2819	2825	2932	2839	2844	2851	[illegible]
	no export			2346	2408	2472	2537	2591	2646	2703	2760	2819	2825	2832	2839	2844	2851	[illegible]
	difference			0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Residual fuel oil	export	242	288	290	292	293	295	295	296	296	296	296	291	286	281	275	271	[illegible]
	no export			293	298	303	304	308	314	318	321	325	322	320	317	315	313	[illegible]
	difference			-3	-6	-9	-9	-12	-19	-22	-25	-29	-32	-34	-37	-39	-42	[illegible]
TOTAL WEST COAST PETROLEUM DEMAND	export	2480	2561	2636	2700	2765	2832	2887	2942	2999	3056	3115	3116	3117	3118	3120	3121	[illegible]
	no export			2639	2706	2774	2842	2899	2961	3021	3082	3144	3148	3152	3155	3159	3163	[illegible]
	difference			-3	-6	-9	-9	-12	-19	-22	-25	-29	-32	-34	-37	-39	-42	[illegible]
WEST COAST REFINERY RUNS	export	2274	2366	2403	2435	2468	2502	2529	2556	2585	2614	2643	2643	2644	2645	2645	2646	[illegible]
	no export			2405	2438	2472	2506	2535	2566	2596	2626	2657	2659	2661	2663	2665	2667	[illegible]
	difference			-2	-3	-5	-5	-6	-9	-11	-13	-14	-16	-17	-18	-20	-21	[illegible]
ALASKA AND CALIFORNIA PRODUCTION	export	2960	2974	2993	3084	3139	3052	2981	2734	2643	2537	2541	2539	2470	2429	2350	2357	[illegible]
	no export			2926	2801	2693	2585	2564	2592	2620	2481	2466	2440	2415	2413	2357	2361	13944
	difference			67	282	445	467	317	141	24	57	75	99	55	17	-9	[illegible]	[illegible]
REQUIRED LOW-SULFUR IMPORTS	export	177	132	166	188	191	194	196	198	200	202	204	205	205	205			
	no export			186	189	191	194	196	199	201	203	206	205	206	206	206	205	[illegible]
	difference			0	0	0	0	0	-1	-1	-1	-1	-1	-1	-1	-1	-2	[illegible]
WEST COAST CRUDE-OIL SUPPLY	export	3137	3156	3179	3272	3329	3246	3076	2931	2843	2740	2745	2744	2674	2634	2554	2564	[illegible]
	no export			3112	2990	2884	2779	2760	2791	2821	2684	2671	2646	2621	2619	2564	2567	[illegible]
	difference			67	282	445	467	316	141	23	56	74	98	53	15	-7	-41	[illegible]
WEST COAST "CRUDE-OIL SURPLUS"	export	863	790	776	837	862	744	548	375	259	126	102	100	30	-11	-91	[illegible]	[illegible]
	no export			707	552	412	273	225	225	225	58	14	-13	-40	-44	[illegible]	[illegible]	[illegible]
	difference			69	285	450	472	323	150	34	68	89	113	70	34	11	171	[illegible]
Shipments via U.S. W-E pipelines	export	45	131	40	71	104	225	225	225	225	225	225	225	225	225	225	225	[illegible]
	no export			40	71	104	225	225	225	225	225	225	225	225	225	225	225	983
	difference			0	0	0	0	0	0	0	0	0	0	0	0	0	0	
OTHER TANKER SHIPMENTS FROM (TO) W.C.	export	818	777	736	766	757	519	323	150	34	-99	-123	-125	-195	-236	-316	-302	690
	no export			667	481	307	48	0	0	0	-167	-211	-238	-265	-269	-326	-325	[illegible]
	difference			69	285	450	472	323	150	34	68	89	113	70	34	11	171	[illegible]
TOTAL TANKER SHIPMENTS FROM (TO) W.C.	export	995	959	922	954	948	713	518	348	234	103	82	80	10	-31	-111	-102	[illegible]
	no export			853	669	499	242	196	199	201	36	-6	-32	-59	-63	-120	[illegible]	911
	difference			69	285	449	471	322	149	33	67	88	112	69	32	9	151	[illegible]

3.3.1 CALIFORNIA CRUDE-OIL PRICES. The magnitude of the discount for California crudes is shown in figure 3.3: In mid-1986, California crudes (and oil from Alaska's Cook inlet region) tended to have posted wellhead prices about $3 per barrel below the prices of similar grades of oil produced in Texas or imported to the Gulf and East Coasts from Mexico, the North Sea, or the Middle East. This differential is a direct reflection of the additional cost a California producer would have to absorb, in order to ship a barrel of crude oil to a Gulf Coast terminal in which it could obtain a price based on world-market values.

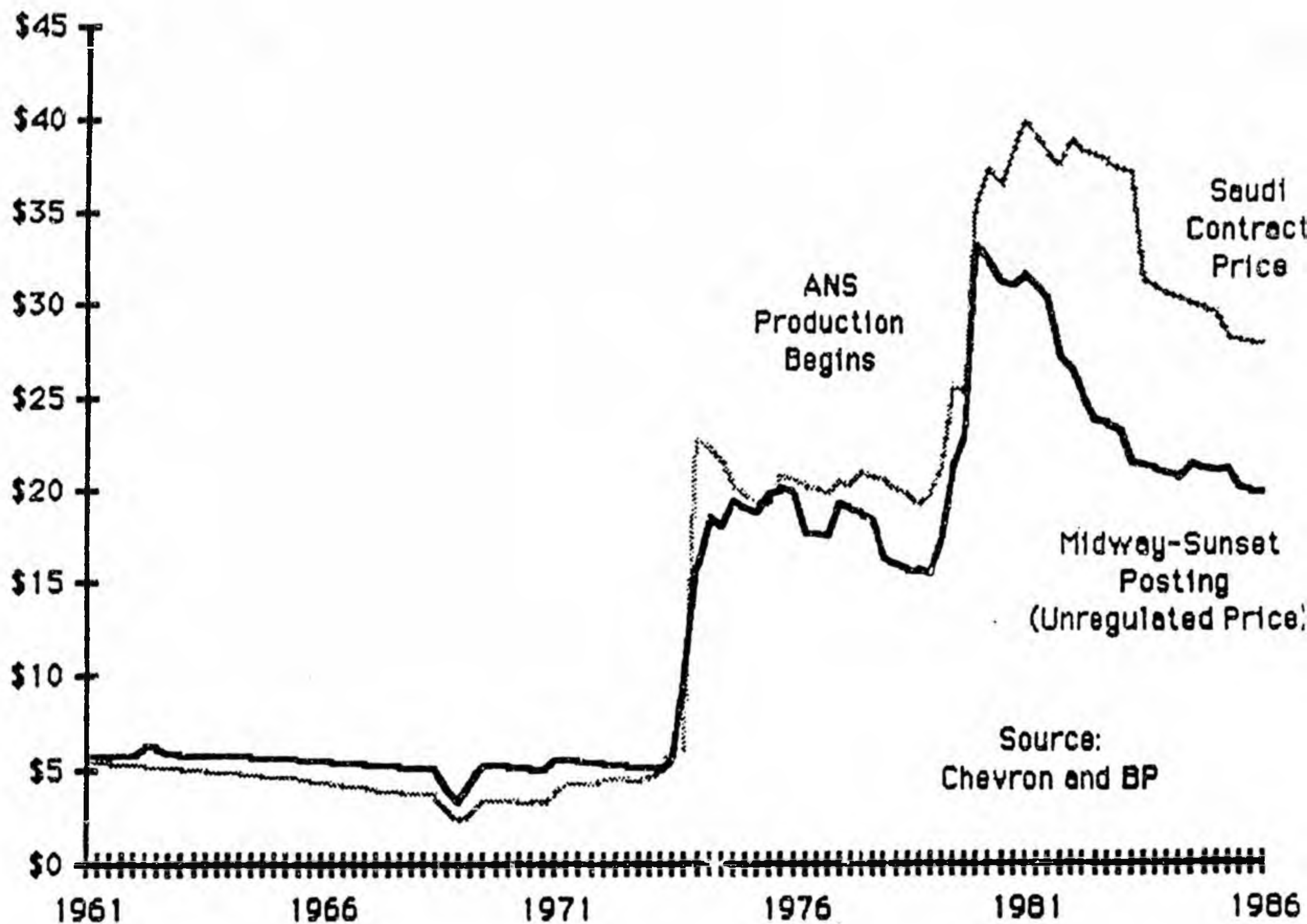
3.3.2 ANS CRUDE-OIL PRICES. Figure 3.3 also demonstrates that ANS crude oil sells for less on the West Coast than at the Gulf, as might be expected. The structure of prices for Alaska North Slope crude oil is, however, more difficult to characterize than the market for California crudes, almost all of which are refined within the State. The average differential between Gulf and West Coast refinery prices for ANS crude oil, as reflected in company reports to the State of Alaska for tax and royalty purposes, has cycled widely, but has centered at a value of about $2 per barrel.

3.3.3 PRICING ANOMALIES. This price differential, between average West Coast and Gulf Coast prices for ANS crude oil, is substantially less than the additional cost of transporting ANS oil beyond California to the Gulf Coast. Likewise, the sales prices reported for ANS crude oil in California have tended, until late 1986 at least, to be on the order of $1-to-$3 per barrel higher than the posted prices of comparable California crudes, even after appropriate adjustments were made for quality and intra-California transport costs. Price differentials among different grades of crude oil, and among similar crudes at different locations thus do not strictly reflect differentials in transport costs and refining characteristics, as they tend do in other markets.

Much of the variety in California petrolem pricing does indeed results from the heterogeneity of crude-oil qualities, or from bottle-necks in the intrastate oil-transport infrastructure. Crude oils of similar qualities at a single transaction point (e.g., Valdez, Los Angeles Harbor, or Bakersfield) may nevertheless vary by as much as $3 or $4 per barrel, depending on the identity of the seller, and the origin or destination of the commodity. These seeming price anomalies have generated a long stream of tax and royalty disputes between the producing companies and federal, state, or local taxing authorities, and several anti-trust suits. For reasons that will become apparent below, however, the details of and explanations for these pricing peculiarities are not crucial to the conclusions of this report. **Fundamentally, all West Coast crude oils are discounted relative to world-market values --- and the discount on the margin, where investment decisions are made, is about $4 per barrel. And it is the export ban that makes such discounts inevitable.**

Figure 3.3:

THE WEST COAST CRUDE-OIL PRICE DISCOUNT



3.4 EFFECT OF THE CRUDE-OIL EXPORT BAN ON WEST COAST OIL PRICES.

The current West Coast price discounts would not exist, in other words, if ANS producers were permitted to sell their crude oil in whatever markets gave them the greatest "netback" price. Without the current export prohibition, producers would market most of the crude which was surplus to the needs of the U.S. West Coast in East Asia rather than on the U.S. Gulf and East Coasts. The values of comparable grades of crude oil are almost exactly the same at East Asian ports as at the U.S. Gulf, because tanker charges for oil from the Middle East are nearly the same for the two importing regions. But on the margin, today's market values for ANS crude oil at Valdez reflect a deduction of up to $5 per barrel for transportation to a port on the U.S. Gulf. The comparable cost for shipments to Inchon or Yokohama in foreign-flag supertankers would be only about 75 cents cents per barrel. Thus, incremental supplies of crude oil produced in PADD-V would stand to gain more than $4 per barrel in wellhead value, if exports were allowed.

NOTES TO SECTION 3

1. The Petroleum Administration District No. V ("PADD-V") comprises the States of Alaska, Hawaii, California, Oregon, Washington, Arizona, and Nevada.
2. EIA, Petroleum Supply Annual and Petroleum Supply Monthly.

4. EFFECT OF THE EXPORT BAN ON ALASKA CRUDE-OIL PRODUCTION

4.1 STATUS OF NORTH SLOPE PRODUCING PROPERTIES AND PROSPECTS

4.1.1 PRUDHOE BAY. The Prudhoe Bay field, which was discovered in 1968, is the largest oil-producing property in North America. The main Sadlerochit reservoir originally had an estimated 23 billion barrels of oil in place, of which about 11 billion are considered recoverable by primary, waterflood and miscible-gas-recovery technologies. Production from this reservoir has been nearly steady at 1.5 million barrels per day ("mmb/d") since 1979, but all three major producing companies expect output to drop off rapidly beginning in late 1988 or early 1989. Average production in 1991 could be as low as 1.1 mmb/d.[1]

ARCO Alaska, Inc. is operator for the eastern area of the Prudhoe Bay unit and Standard Alaska Production Company (formerly Sohio) operates the western area. As of the end of 1986 the producers had invested $12-13 billion at Prudhoe Bay.

Prudhoe Bay was initially developed using 640-acre spacing for wells that commenced production at up to 20 mb/d each. Infill drilling at a spacing of 160 acres commenced shortly after production began in 1977; an 80-acre-spacing program commenced in 1981 and continues today. Further infill drilling over the next few years will result in well spacing at 40-acre intervals and recover an additional 80-100 million barrels. In 1986 a typical Prudhoe Bay well, with an average measured depth of 10,500 feet, cost about $2.4 million. By the end of 1986, 835 wells had been drilled and an additional 350 wells are currently planned for full field development.

To help maintain production rates, a $2-billion waterflood project began operating in 1984. The waterflood project will increase recovery by about 1 billion barrels. An $800-million natural-gas-liquids EOR ("miscible gas") project began operation in December 1986. The project will process 50 mb/d of natural-gas liquids ("NGLs") to be blended into the crude-oil stream in TAPS and, will eventually result in added recovery of 135 to 190 million barrels of oil, as well as 365 million barrels of NGLs.

Other Prudhoe Bay owners are Exxon Company, U.S.A., Amerada Hess, Chevron U.S.A., Louisiana Land & Exploration Company, Marathon Oil Company, Mobil Oil Corporation, Phillips Petroleum Company, Getty Oil Company (Texaco), Shell and British Petroleum.

4.1.2 EILEEN PROSPECT. The Eileen Field, also called West End because of its location at the west end of the Prudhoe Bay unit, involves the same Sadlerochit formation that contains the main Prudhoe Bay reservoir, and will be operated by Standard as part of the Prudhoe Bay unit. However, in the Eileen sector the reservoir is composed of carbonates, and has to be drilled separately because of its stratigraphic separation. The Eileen sector is said to have million barrels of oil in

place with about 150 million barrels of recoverable reserves. When developed, production from the field is expected to peak at 60-70 mb/d.

In 1985 when Standard announced plans to develop the Eileen field, the company estimated that the total field development cost would be about $300 million --- roughly $100 million for facilities and $200 million for the 72-well drilling program. Through 1986 the companies had spent $50 million on the project. Pipe for a 15-mile line to connect Eileen to a Prudhoe Bay processing center and well-line materials are in storage on the North Slope and the drill pads themselves have been completed. However, the uncertain oil-price outlook led the owners to suspend completion the Eileen project in December 1986. The gas-injection compressor, which will arrive on the 1987 sealift, will be stored on the North Slope; current planning is for a resumption of development in connection with an anticipated 1988 startup.

4.1.3 KUPARUK RIVER. The Kuparuk River field, centered onshore about 40 miles west of Prudhoe Bay, contains the second-largest producing oil reservoir in North America. Kuparuk, operated by Arco Alaska, Inc., is estimated to have about 5 billion barrels of oil in place, of which 1.5 billion are believed recoverable with primary and existing waterflood technology. Production, which began in 1981, reached a peak of 310 mb/d in January 1987. At the end of 1986 cumulative field-development costs were about $2.8 billion and full field development was expected to total $4 billion. Kuparuk production is expected to fall below 100 mb/d by the mid-1990s.

A field-wide waterflood project and a third production facility were added in 1986. However, in 1986, because of falling oil prices, Arco reduced the number of drilling rigs in Kuparuk from four to one. Initial production rates from Kuparuk wells ranged from 200 to 2,000 barrels per day. Since Kuparuk is a solution-gas-drive reservoir, rates will decline such that the average over the life of the field will be toward the low end of this spectrum.

At the end of 1986 a total of five hundred wells, with an average depth of about 6,000 ft. had been drilled in Kuparuk. In 1986 the typical Kuparuk well cost $1.5 million. Full development of Kuparuk will require more than 700 wells.

Other Kuparuk owners are Standard Alaska Production Company, BP Alaska Exploration, Inc., Mobil Oil Corporation, Chevron U.S.A., Inc, Union Oil Company of California, and Exxon Company, U.S.A.

4.1.4 MILNE POINT. Milne Point, operated by Conoco, Inc., is the smallest field on the North Slope yet brought into production, and the first field on which production has been interrupted because of low oil prices. The field, located about about 35 miles northwest of Prudhoe Bay encompasses upland and submerged tracts and is part of the Kuparuk River Cretaceous sands reservoir formation. The Milne Point unit has about 180 million barrels in place in the Kuparuk formation and about 1.6 billion in place in the Cretaceous sands formation. An estimated 60 million barrels are recoverable from the Kuparuk in the Milne field using primary and existing waterflood recovery technology.

An additional 40 million barrels could be recovered using tertiary and more advanced recovery techniques from the Cretaceous sands within the Milne field.

Production began in November 1985 and Conoco anticipated that 1986 production would reach 30 mb/d. From the start of production 45,000 b/d of water was injected into the Milne Point reservoir to maintain pressure and maximize recovery. Thus Milne became the first North Slope field to employ a secondary recovery technique during initial production. However, because of problems with the reservoir, peak production reached only 24 mb/d.

In February 1986, because of falling oil prices, Conoco suspended drilling operations at Milne Point. Milne Point production was shut down in January 1987, but is being maintained in a "warm" shutdown mode so that production could be resumed almost immediately if oil prices rose. By the end of 1986 Conoco had invested $471 million in the project. When Milne Point production was shut down the field had 34 production and injection wells, averaging 9,000 feet in depth. Drilling costs have averaged $2 million per well.

In its "warm" shutdown, Conoco is incurring $1 million per month in operating costs, nearly what the company would spend if the field were in production. Although low oil prices are the primary reason for the shutdown, other factors are that Conoco is not a TAPS owner and Milne is assessed a higher royalty than other North Slope producing fields. Conoco has indicated that lifting the export ban on ANS crude would provide a strong incentive for resuming production from the Milne Point field.

If production resumed, but no additional field development occurred, only about 15-20 million barrels would be produced from the field. However, Conoco indicated that an additional capital expenditure of about $35 million would allow production of the field's 60 million barrel reserve. No estimates are available regarding the cost of producing the Cretaceous pay in Milne, but would likely be more than double what has been spent at Milne to date.

Other Milne Point partners are Chevron U.S.A., Inc. and Cities Service Oil & Gas Corp.

While the Milne Point unit is rather small as North Slope producing properties go, its economically marginal status makes it better than the huge and prolific Prudhoe Bay and Kuparuk units, as an illustration of the development problems and production prospects for new fields in the Arctic.

4.1.5 LISBURNE. The Lisburne field, operated by Arco Alaska, Inc., includes onshore and offshore areas within the Prudhoe Bay Unit. The field underlies the the Prudhoe Bay producing formation and extends under Prudhoe Bay (the body of water). The field has an estimated 2.7 billion barrels of oil in place, exclusive of outlying portions of the field that are not expected to become economic. An estimated 250-300 million barrels are now considered recoverable under primary depletion supplemented by gas injection recovery technology. Waterflood recovery technology will probably eventually provided added

production, but no confident estimate of total volumes can be made prior to the accumulation of operating experience in the field.

Lisburne production began in December 1986 at an initial rate of 35 mb/d from 25 producing wells drilled to an average depth of 11,000 feet. Field production is expected to peak in the mid-1990s at 80-100 mb/d. As of December 1986 Lisburne field development costs totalled $780 million including $210 million for production and injection wells.

Lisburne development involves the construction of one offshore and five onshore drillsites which will accommodate a total of 192 wells. The offshore drillsite, which includes a gravel causeway to shore, will be designed for 24 production wells and eight gas-injection wells. Oil will be transported nine miles from the Lisburne Production Center to TAPS Pump Station One via a 16-inch pipeline.

When Lisburne production began in December 1986, cumulative project development costs were just under $1 billion. Well costs, the biggest component of Lisburne's long-term capital cost have been reduced from about $5 million to $3.5 million apiece, but owing to the much greater depth (14,000 ft. vs. 8,500 ft. at Prudhoe Bay), these wells are still much more costly than the average Prudhoe Bay production well. Full development is expected to cost on the order of $1.5 billion.

The offshore site has been delayed until at least 1990 pending completion of an environmental impact statment ("EIS") by the Army Corps of Engineers regarding the causeway. The offshore wells are needed to allow the most efficient drainage of the reservoir. Infill drilling is anticipated on 160-acre well spacing in the 1990's. Full field development will require 180 gas-injection and production wells.

Lisburne is a difficult reservoir to produce because it lies in an older geologic formation composed of limestone/dolomite, a rock that is less porous than the sandstone of the Prudhoe Bay and Kuparuk formations. Lisburne is the first reservoirs of this type to be developed in Alaska.

Exxon Company, U.S.A and Standard Alaska Production Company are partners in the Lisburne field.

4.1.6 ENDICOTT. The Endicott field, which is expected to begin production in late 1987, will be the first commercial production from the U.S. side of the Beaufort Sea. The field, centered about 15 miles northeast of the main Prudhoe Bay operating facilities, borders the eastern side of the Prudhoe Bay Unit. Endicott, operated by Standard Alaska Production Company, will be the third largest producing field in Alaska.

The Endicott field, which encompasses about 42,200 acres, has an estimated 1 billion barrels of oil in place with 350 million barrels recoverable from primary and existing waterflood technology. Production is expected to peak at 100 mb/d in 1988-1992.

The project development includes two man-made gravel islands about 2.5 miles off the coast of the Sagavanirktok River delta in water depths ranging from 8 to 10 feet. The islands are interconnected and connected to shore by a gravel causeway. The 45-acre main production

island is the largest island ever built in the Beaufort Sea. Initial production from Endicott will be from 32 to 34 wells drilled to an average depth of 10,400 ft. Initial production from Endicott wells is expected to be 3 to 5 mb/d, but this rate will fall off quickly. Full field development will require 100 wells.

The Endicott project has had the most dramatic drop in development costs of any North Slope field. Preliminary scoping of the project in the early 1980's estimated that field development would cost $3.8 billion. This approach was rejected as uneconomic. After substantial revisions, the owners allocated $2 billion for full field development of Endicott.

By the time oil prices began to plummet, Endicott module fabrication and island construction were well under way. Lower oil prices forced project planners to increase their cost cutting and efficiency efforts, but the biggest price break came from lower prices for module construction, gravel, tubular steel, and the like. Thus to date the primary impact of falling oil prices on Endicott has been that the field will be developed for a little more than half the authorized amount. The full field production costs are expected to be $1.14 billion: $550 million for facilities, $50 million for pipelines, $130 million for islands and causeways and $410 million for wells. By the end of 1987 all but $285 million of the $1.14 billion will have been expended with most of the remaining cost allocated for additional wells.

Falling oil prices caused a reduction in development drilling activity in the Prudhoe Bay, Kuparuk, Lisburne and Milne Point fields. There was no decrease in Endicott drilling because the two rigs, which had been specially built for Endicott field requirements, had long term contracts with high cost cancellation penalties. A significant difference between Endicott and Prudhoe Bay is that primary and secondary recovery capabilities will be part of the production facilities at Endicott from the outset. As a result waterflood, low pressure separation, gas reinjection and gas lift can be initiated at Endicott without additional capital expenditures.

Other partners in the Endicott Field are Amoco Production Co., Arco Alaska, Inc., Exxon Corp., Union Oil Co. of California, Doyon Ltd., Cook Inlet Region, Inc., and NANA Regional Corp. Inc.

4.1.7 WEST SAK. The 250-square-mile West Sak field, which is operated by Arco Alaska, Inc., is onshore and overlies a large portion of the Kuparuk River oil field. The reservoir, which has an estimated 15-to-40 billion barrels of oil in place, may turn out to be the largest accumulation of oil in the United States. However, using the technology so far developed in Arco's pilot project, State geologists estimate only about 750 million barrels to be recoverable. It is in order to note (1) that both the amount of oil in place and the ultimate production potential of West Sak and associated accumulations of heavy oil in the Cretaceous zone on the North Slope are highly controversial, indeed emotion-laden, issues among industry geologists and engineers, and (2) that we have yet to find any such authority who is willing to make an estimate for attribution. In the light of California experience with gigantic heavy-oil deposits, however (see Section 5), there is a good

chance that estimates of ultimately recoverable volumes will expand dramatically in the future. (More than one highly authoritative individual privately speculated about oil-in-place volumes "on the order" of 100 billion barrels; another, however, was vehement that "none of that stuff will be commercial in our lifetime.")

West Sak oil is a thick, molasses-like, low-grade crude. The reservoir is composed of unconsolidated mushy sand that tries to flow into the well bore when substantial flow rates are attempted. The West Sak field is at a shallower depth which is closer to an overlying 1,800 foot-thick layer of permafrost and has a reservoir temperature of about 70 degrees F., compared to 140° for the Sadlerochit.

To date the only development in West Sak has been a two-year pilot project that involved eight production wells and five water-injection wells and one water-source well in an area about one-half mile square. The production and injection wells were drilled to a depth of 4,000 feet. Water for the injection wells was heated and reinjected under high pressure into the West Sak formation. For the pilot project the producing wells, which were located less than 500 feet apart.

If West Sak proceeds to full development, the producing wells would probably be located on areas ranging from 20 to 40 acres, with injection wells located between them. Full development of West Sak with the established technology would require up to five thousand closely spaced production and injection wells.

In 1984 Arco had estimated that the West Sak could be in full production by the late 1980's; however, the company suspended work on the West Sak pilot project in December 1986. Arco is still evaluating the pilot project results and undertaking substantial research to determine how the reservoir can eventually be economical to produce.

The other West Sak pilot participants are BP, Standard, and Exxon.

4.1.8 SEAL ISLAND. In June 1984 Shell Oil Company announced that a second well at the Seal Island prospect in the Beaufort Sea confirmed that the discovery was a commercial one (at early 1984 oil prices) that could lead to the recovery of 300 million barrels of oil. The announcement represented the first commercial discovery in OCS waters on the U.S. side of the Beaufort Sea. The wells were drilled from a man-made gravel island in 39 feet of water about five miles off the coast, 12 miles from the northern edge of the Prudhoe Bay field. Initially Shell indicated that production could begin as early as 1992, however it is unlikely that production will begin before the early or late 1990s.

Drilling at Seal Island began in June 1983. The first well flowed at a rate between .6 and 5 mb/d and the second well tested at a stabilized rate of 5 mb/d. Oil was found in the Sadlerochit formation at depths below 12,750 feet. Oil from Seal Island is rated at 40 degrees gravity, lighter than the 26-to-27-degree oil produced at Prudhoe. Lighter weight oil sells for a higher price because it is a higher quality oil which is easier and less costly to refine into gasoline and jet fuel than Prudhoe Bay crude. A third well was drilled from Seal Island on a

Texas Eastern lease block to a depth of 14,490 feet and tested at up to 2.6 mb/d. The fourth well, on an Amoco lease, which was drilled to a depth of 16,200 ft., was plugged and abandoned without testing. Shell and partners paid $122 million for eight blocks in the Seal Island prospect, spent $33.2 million on gravel island construction and $86 million more to drill and test four wells.

In January 1986 Amerada Hess Corporation drilled a third well into the Seal Island prospect from a well located on Northstar Island which is 19,000 ft. northwest of the Seal Island discovery well. The Amerada Hess well flowed at rates of as much as 4.7 mb/d at a depth near 12,000 ft. This strike extended Shell's Seal Island discovery about 5 miles west. The Northstar operation may increase reserve estimates in the Seal Island area. Amerada Hess cancelled plans for further drilling when oil prices plunged. Shell's partners in the Seal Island prospect are Amerada Hess Corp, Amoco Production Co., Texas Eastern Exploration Co., and Murphy Oil U.S.A.

4.1.9 OTHER PROSPECTS IN ARCTIC ALASKA. In addition to the aforementioned fields, there are a number of other North Slope and Beaufort Sea prospects which may be developed if oil prices improve:

Ugnu Sands: The largest of these prospects is the Ugnu Sands, which underlie Kuparuk. The tarlike resource, estimated to contain about 10 billion barrels, would be much more difficult and expensive to produce than West Sak. The resource is not expected to be developed before the year 2000.

Sandpiper: Shell's Sandpiper Island, a $28-million gravel island in 49 feet of water is located about six miles from shore, and 11 miles northwest of Seal Island. The company completed one well in 1985 and Amoco took over operation of the second well in 1986. Oil flowed at stabilized rates of 500 to 2,500 b/d of 40-52 degree gravity oil. No announcements have been made regarding recoverable reserves.

Point Thomson: The Point Thomson Unit, operated by Exxon, is located on the coast of the Beaufort Sea about 50 miles east of the Prudhoe Bay field and just west of ANWR. Fifteen exploration wells in the Point Thomson Unit have indicated that the field is predominately gas --- with an estimated 6 trillion cubic feet in recoverable reserves. The field also contains an estimated 600 million barrels of crude oil and condensate in place. Various development strategies are under consideration, including a gas-cycling project that would allow recovery of liquids prior to installation of a transportation system for North Slope gas.

Colville Delta: In 1985 Texaco discovered oil in the Colville Delta area, which is located sixty miles west of Prudhoe Bay and about 8 miles west of the Kuparuk River Unit. The discovery well, which was located in water 1-1/2 to 2 feet deep and drilled led to a depth of 9,500 feet, flowed at rates of up to 1,075 b/d of 25 degree gravity oil. Following the discovery Texaco drilled two delineation wells, but results have not yet been reported. There is a chance that the field could extend as far north as Federal OCS waters. Amerada Hess also drilled one well on the Colville Delta prospect in 1986. If the Colville proves

to be economic and is eventually developed, the development will probably be similar to Kuparuk in a great number of wells will likely be required.

Gwydyr Bay: In early 1987 two independent Texas oil companies, Vaughn Petroleum, Inc., and CM Oil and Gas Corp., both of Dallas, drilled a well and a "sidetrack" well in the Gwydyr Bay unit; neither was deemed capable of production. Vaughn/CM plans an additional well in January 1988 and another in January 1989. The partnership estimates that the total costs for all three wells will be about $15 million. Nine exploration wells had been drilled in the Gwydyr Bay unit prior to the present Vaughn/CM program, of which four were deemed to be capable of commercial production.

Phoenix Prospect: Tenneco is evaluating the results of drilling on the Phoenix Prospect, using the Canmar Single Steel Drilling Caisson (SSDC) on a prefabricated mat in about 60 ft. of water north of the Colville River delta. The prospect is about 12 miles from the Mukluk venture, which was abandoned in 1983, and the operator hopes to find some of the oil that that was anticpated, but not present, in the Mukluk structure. As of February 1987, the project has cost $42.9 million and total project costs are budgeted at about $70 million. If the drilling results indicate a commercial property, production could begin five years after the development decision.

Niakuk: In 1986 Standard Alaska Petroleum Co. drilled another exploratory well in the Niakuk prospect area of Prudhoe Bay which is inside the barrier islands near Heald Point. Two earlier offshore probes yielded unconfirmed oil shows. The target is a possible fault block extension of Sag River pay, which has proved productive in Prudhoe Bay field. No information on the result has been made public.

Tern Prospect: In 1982 Shell drilled an exploratory well from the Tern Prospect, a gravel island in about 22 feet of water, about 10 miles offshore in the Beaufort Sea. Shell drilled a second well in 1983 and is currently drilling a third well from the island. No drilling results have been reported.

Arctic National Wildlife Refuge: The Arctic National Wildlife Refuge ("ANWR") is the best prospect for a Prudhoe Bay type find in the North Slope area. In November 1986 the U.S. Fish and Wildlife Service recommended that the Interior Department open ANWR's coastal plain for oil and gas leasing. The agency said the coastal plain has (only) a 19-percent chance of containing commercially producible hydrocarbons, but if such resources are present, there is a 95-percent probability of more than 4.8 billion barrels of oil in place and 600 million barrels of recoverable reserves. To date the only drilling in the refuge has been by Chevron on Kaktovik Inupiat Corporation lands. The results of this drilling are still confidential. Seismic studies have identified 26 potential oil structures in the coastal plain. ANWR is 50 to 150 miles from TAPS, however, and because of controversy over the necessary Congressional approval for petroleum development in the refuge, the earliest that production from the area could occur is the mid-1990's.

4.2 ALASKA NORTH SLOPE CRUDE-OIL PRODUCTION WITH AND WITHOUT THE BAN

4.2.1 PRODUCTION IN 1990, 1995, AND 2000 WITH THE BAN. Table 1.2.1 showed the most likely scenario of Alaska North Slope Oil production by field over the period 1987-2005, assuming the export ban is continued. Total ANS production falls from a peak of 1.79 mmb/d in 1987 to 1.42 mm/b in 1990, 1.03 mmb/d in 1995, and .93 mmb/d in the year 2000. Prudhoe Bay dominates total production volumes throughout, declining from 1.47 mmb/d in 1987 to 1.05 mmb/d in 1990, 0.62 mmb/d in 1995, and 0.36 mmb/d in the year 2000. Prudhoe Bay production volumes in the table do not include 50-60 mb/d of natural-gas liquids removed and added to the TAPS throughput from the miscible-gas EOR project.

Production from Kuparuk, the next largest North Slope oilfield, falls from 280 mn/d in 1987 to 210 mb/d in 1990, 166 mb/d in 1995, and 102 mb/d in the year 2000. Lisburne production is expected to increase from 40 mb/d in 1987 to 80 mb/d in the early 1990s before declining to around 30 mb/d in 2000. Production from the Endicott field is anticipated to begin in 1988 and increase quickly to 100 mb/d by 1990 before declining also to around 30 mb/d in 2000. Production from the smaller Milne Point field declines slowly from 20 mb/d after the anticipated resumption of output in 1988.

Without the opportunity to export North Slope crude, low projected wellhead prices are likely to discourage, or at least delay, development of new offshore fields such as Seal Island and any future OCS discoveries until the late 1900s. Likewise, commercial development of the huge accumulation of heavy oil overlying the Kuparuk River field is unlikely to be feasible until the price at TAPS pump station No. 1 rises at least $7 per barrel above the current level. The most likely scenario anticipates production rates reaching 80 mb/d for Seal Island and 150 mb/d from West Sak by the latter half of the 1990s. By 2000, we also anticipate that other now-undeveloped fields will contribute more than 150 mb/d of production.

4.2.2 ADDITIONAL PRODUCTION AVAILABLE WITHOUT THE BAN. Lifting the export ban has a large effect on currently marginal or submarginal oil fields such as Seal Island and West Sak because the value of new production would rise by more than the average wellhead values on the North Slope, as discussed in Chapter 3. However, an improvement in the wellhead price of incremental production of up to $4 per barrel would not be sufficient to bring commercial development of the Seal Island and West Sak prospects within the next seven years, given the assumed scenario for world oil prices. Development of these and other marginal fields would proceed more quickly, however. If world oil prices turn out to be higher than assumed for this report (say, in the vicinity of today's $18 per barrel, rather than the assumed $15), the sensitivity of North Slope production to the export ban would increase markedly.

Table 1.2.1 also showed the most likely production for ANS fields assuming that the export ban is lifted. Prudhoe Bay production declines somewhat more slowly because of additional drilling investment and

development of the Eileen play. Expansion of the miscible-gas EOR project to the western side of the Prudhoe Bay field is also possible at higher wellhead prices, but no additional production from this source is included in the figures in Table 1.2.1 Development of the Sag River and Niakuk plays adjacent to Prudhoe Bay may also be feasible, but were likewise ignored in the most-likely scenario for the assumed price.

Higher marginal wellhead prices available from exports would be likely to bring on additional drilling and EOR investments at Kuparuk, where oil-recovery is exceptionally sensitive to the pace of development, and the feasibility of ongoing development very sensitive, even in the short run, to realized prices. In the most likely scenario, Kuparuk production rates would be 20 mb/d higher in 1990 if the export ban is eliminated. Lesser incremental production volumes from lifting the ban are anticipated at the remaining fields. Development of the Lisburne field would proceed more rapidly, for example, bringing on higher production rates by 1990. Development plans for the Endicott field would be affected little, but field life would be extended several years by a $4-per-barrel price increase. Higher marginal wellhead prices would allow completion of the original development plans for Milne Point, which would tap 60 million barrels of total recoverable reserves.

Incremental ANS crude-oil production shown in Table 1.2.1 does not include the potential contribution of new discoveries on the federal OCS. Newly discovered fields would be brought into production more quickly under a higher anticipated wellhead price. Higher wellhead prices for incremental ANS production would also stimulate exploration activities on the North Slope, probably leading to further discoveries. Since these effects are not counted in the figures, the projected impact on Alaska crude-oil production of lifting the export ban are likely to be conservative.

4.3 IMPACT ON ALASKA STATE REVENUES.

Additional petroleum revenues that the State of Alaska may receive from lifting the export ban include petroleum lease revenues from producing fields (royalties and net-profit shares), production taxes (severance tax and conservation tax), state corporate income tax, and the state-assessed (but locally levied and received) petroleum property tax. First, we deal with additional revenues the state would receive owing to the higher wellhead prices as such, assuming there is no change in production volumes. Then, we examine the total effects on State revenue, including the effect on revenues from incremental production and the investments needed to bring it about.

4.3.1 IMPACT ON PETROLEUM REVENUES FROM BASE PRODUCTION VOLUMES. Table 4.3.1. shows the revenues the State could expect if exports continued to be prohibited; Table 4.3.2 is the State revenues to be expected from the prices that would prevail if exports were permitted if production volumes were unaffected. Table 4.3.2 shows the projection of additional state revenues under those circumstances. These figures assume that there is no change in the current state tax structure as it relates to the petroleum industry. The average wellhead prices for this scenario are calculated assuming that the

Table A.3.1
SUMMARY OF TOTAL ALASKA AND FEDERAL REVENUES
WITHOUT EXPORTS
(millions of 1987 dollars)

Year	Oil Produced (MMB/yr)	Royalty +Profit Share	Production Taxes	Property Taxes	State Income Tax	Total State Revenues	Total Federal Revenues
1987	653.4	461.5	396.3	228.2	129.9	1216.0	225.3
1988	612.3	479.6	395.5	227.5	124.0	1226.6	225.0
1989	570.3	488.7	370.1	225.8	117.7	1202.3	283.3
1990	519.6	483.6	327.4	222.0	109.8	1142.8	394.7
1991	496.1	534.5	353.2	210.1	106.4	1204.1	530.5
1992	482.9	515.0	335.5	198.1	102.7	1151.3	436.7
1993	457.9	493.8	319.9	193.2	99.7	1106.7	142.5
1994	394.2	415.7	229.2	211.0	91.1	947.0	-113.6
1995	377.4	386.3	193.3	235.5	92.3	907.3	96.0
1996	365.4	635.4	281.2	232.0	97.6	1246.1	732.5
1997	356.8	612.3	232.7	219.5	94.0	1158.4	691.7
1998	356.6	601.7	193.0	206.8	92.3	1093.7	682.8
1999	335.7	560.2	152.2	194.0	86.9	993.2	622.2
2000	337.2	562.4	161.7	180.9	84.7	989.8	690.4
2001	303.1	505.2	122.6	163.7	76.3	867.9	597.3
2002	272.5	556.9	90.6	146.5	68.5	862.3	480.2
2003	245.2	497.5	64.4	129.2	61.3	752.4	410.5
2004	220.6	444.4	44.6	112.0	54.5	655.5	347.9
2005	198.6	468.9	30.3	94.8	48.2	642.3	267.9
2006	173.8	408.6	22.1	77.5	40.7	548.9	221.6
2007	156.7	363.4	16.2	62.7	35.7	478.0	198.9
2008	141.4	322.9	11.1	49.3	31.3	414.6	176.0
2009	125.1	281.8	7.0	37.4	26.9	353.0	141.2
2010	113.0	249.8	3.7	31.7	24.1	309.3	109.1
2011	102.2	220.8	1.4	27.9	21.7	271.8	76.1
2012	92.4	194.5	0.2	24.1	19.5	238.2	46.3
2013	53.4	115.0	0.1	20.3	12.4	147.8	25.6
2014	48.7	99.6	0.1	16.5	11.0	127.2	15.0
2015	44.4	85.9	0.1	12.7	9.7	108.3	5.4
TOTAL	8617	12046	4355	3991	1971	22363	8749
NPV (10%)		4470	2372	1766	877	9485	3171

Table 4.3.2

SUMMARY OF TOTAL ALASKA AND FEDERAL REVENUES
WITH EXPORTS: PRODUCTION UNCHANGED
(millions of 1987 dollars)

Year	Oil Produced (MMB/yr)	Royalty +Profit Share	Production Taxes	Property Taxes	State Income Tax	Total State Revenues	Total Federal Revenues
1987	653.4	691.8	585.0	228.2	135.0	1640.0	693.4
1988	612.3	689.3	559.6	227.5	128.6	1604.9	649.7
1989	570.3	676.1	499.7	225.8	121.9	1523.5	666.6
1990	519.6	644.9	428.5	222.0	113.4	1408.8	727.0
1991	496.1	608.7	400.2	210.1	108.0	1326.9	683.2
1992	482.9	585.4	379.1	198.1	104.3	1266.9	581.8
1993	467.9	559.7	361.6	193.2	101.2	1215.6	277.9
1994	394.2	462.2	253.9	211.0	92.3	1019.4	-16.4
1995	377.4	427.8	211.8	235.5	93.3	968.5	184.2
1996	365.4	635.4	281.2	232.0	97.6	1246.1	732.5
1997	356.8	612.3	232.7	219.5	94.0	1158.4	691.7
1998	356.6	601.7	193.0	206.8	92.3	1093.7	682.8
1999	335.7	560.2	152.2	194.0	86.9	993.2	622.2
2000	337.2	562.4	161.7	180.9	84.7	989.8	690.4
2001	303.1	505.2	122.6	163.7	76.3	867.9	597.3
2002	272.5	556.8	90.6	146.5	68.5	862.3	480.2
2003	245.2	497.5	64.4	129.2	61.3	752.4	410.5
2004	220.6	444.4	44.6	112.0	54.5	655.5	347.9
2005	198.6	468.9	30.3	94.8	48.2	642.3	267.9
2006	173.8	408.6	22.1	77.5	40.7	548.9	221.6
2007	156.7	363.4	16.2	62.7	35.7	478.0	188.9
2008	141.4	322.9	11.1	49.3	31.3	414.6	176.0
2009	125.1	281.8	7.0	37.4	26.9	353.0	141.2
2010	113.0	249.8	3.7	31.7	24.1	309.3	109.1
2011	102.2	220.8	1.4	27.9	21.7	271.8	76.1
2012	92.4	194.5	0.2	24.1	19.5	238.2	46.3
2013	53.4	115.0	0.1	20.3	12.4	147.8	25.6
2014	48.7	99.6	0.1	16.5	11.0	127.2	15.0
2015	44.4	85.9	0.1	12.7	9.7	108.3	5.4
TOTAL	8617	13133	5114	3991	1995	24233	10976
NPV (10%)		5263	2940	1766	895	10864	4791

Table 4.3.3

DIFFERENCE IN TOTAL ALASKA AND FEDERAL REVENUES WITH AND WITHOUT EXPORTS: PRODUCTION UNCHANGED

(millions of 1987 dollars)

Year	Oil Produced (MMB/yr)	Royalty +Profit Share	Produc- tion Taxes	Property Taxes	State Income Tax	Total State Revenues	Total Federal Revenues
1987	0.0	230.3	188.6	0.0	5.1	424.0	468.1
1988	0.0	209.7	164.1	0.0	4.6	378.4	424.7
1989	0.0	187.4	129.6	0.0	4.1	321.2	383.7
1990	0.0	161.3	101.1	0.0	3.6	266.0	332.3
1991	0.0	74.2	47.0	0.0	1.7	122.9	152.6
1992	0.0	70.5	43.6	0.0	1.6	115.7	145.1
1993	0.0	65.8	41.7	0.0	1.5	109.0	135.4
1994	0.0	46.5	24.7	0.0	1.1	72.3	97.1
1995	0.0	41.6	18.5	0.0	1.1	61.2	88.2
1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1998	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1999	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2001	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2005	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2006	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2007	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2008	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2009	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2010	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2011	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2012	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2013	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2014	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2015	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1987-2015	0	1087	759	0	24	1871	2227
NPV (10%)		793	568	0	18	1378	1620
1987-2000	0	1087	759	0	24	1871	2227
NPV (10%)		793	568	0	18	1378	1620

Valdez price of ANS crude oil is $1 per barrel less than the world price of the representative crude oil. The TAPS tariff is assumed the same as in the no-export case.

Assuming production volumes do not change, eliminating the export ban would raise total state revenues by a cumulative $1.87 billion between 1987 and 1985. After 1995, the West Coast oil surplus is likely to disappear completely, so there would be no difference from the no-export case. The projected revenues shown in Tables 4.3.1 through 4.3.3 refer to calendar years, so that they will correspond to the use of calendar years for projection of production and revenues elsewhere in this report. Since Alaska's fiscal year ends on June 30, the corresponding fiscal years precede the calendar years by six months.

Lifting the ban would affect all types of revenues mentioned above except for property taxes, assuming there is no change in production investments for production rates. Main revenue increments in Table 4.3.2 come from royalties ($1.1 billion) and severance taxes (around $750 million). State leases for several North Slope fields include net-profit shares. However, the combination of low wellhead prices and the capital-recovery provision in the state regulations defer State revenues from this source except for Seal Island until after 2000.

4.3.2 TOTAL IMPACT ON PETROLEUM REVENUES. The total impact on Alaska State petroleum revenues of lifting the export ban includes the revenue generated by additional investments to increase production. Table 4.3.4 shows the total State petroleum revenues associated with the production scenario described in Section 4.2.2; Table 4.3.5 shows the increase relative to the no-export case. Considering now the projected change in production volumes, eliminating the export ban would be likely to raise total State revenues by $500 to $600 million annually through 1990. Because of increased oil production, revenues continue to be higher than they would be without exports by $119 million in 1995 and $35 million in 2000. By 2000, the cumulative increase in State petroleum revenues would exceed $3 billion.

Most of the additional revenues come in the form of royalties and severance taxes. Royalties are approximately $300 million greater and severance taxes about $200 million greater annually through 1990. After 1990, the incremental production revenues decline rapidly. Quicker development and depletion of reserves from Prudhoe Bay and Lisburne and the Economic Limit Factor ("ELF") in the state severance tax combine to reduce severance-tax revenues in Table 4.3.2 after 1993. In effect, lifting the export ban shifts severance tax revenues made available by the incremental production forward in time.

Some net-profit-share revenues are projected to be available from Seal Island starting about 2000, in addition to increased production taxes. Other North Slope fields with profit-share leases do not recover their capital investment soon enough to trigger profit-sharing, even considering the higher wellhead prices available from exports.

Although the increment to direct production revenues would be the main effect, lifting the export ban would be likely to generate nearly $600 million in petroleum property-tax revenues and $180 million

Table 4.3.4
SUMMARY OF TOTAL ALASKA AND FEDERAL REVENUES WITH EXPORTS: INCLUDING EFFECT OF INCREASED PRODUCTION
(millions of 1987 dollars)

Year	Oil Produced (MMB/yr)	Royalty +Profit Share	Production Taxes	Property Taxes	State Income Tax	Total State Revenues	Total Federal Revenues
1987	682.6	727.6	621.5	228.2	139.6	1716.8	710.3
1988	687.1	778.5	631.8	227.4	140.3	1778.1	572.1
1989	686.5	820.4	601.5	245.9	142.9	1810.8	710.4
1990	621.0	777.4	507.2	258.4	134.5	1677.5	642.9
1991	552.5	683.5	416.6	269.8	125.5	1495.5	740.4
1992	492.5	601.2	339.3	257.2	114.3	1312.0	506.5
1993	452.4	540.0	285.7	253.6	107.6	1186.9	130.4
1994	406.8	477.8	225.5	272.6	103.2	1079.2	19.7
1995	400.5	451.3	182.3	288.3	104.7	1026.7	239.7
1996	400.9	693.2	244.2	276.7	110.2	1324.3	767.6
1997	376.9	646.5	191.1	264.9	104.5	1207.1	694.5
1998	362.7	616.4	157.6	253.0	100.4	1127.4	647.0
1999	338.0	569.3	124.4	240.8	93.8	1028.3	577.6
2000	338.1	570.0	134.2	228.5	92.0	1024.7	638.5
2001	305.5	514.8	102.0	211.9	84.0	912.8	548.[illegible]
2002	276.2	558.6	75.4	195.4	76.5	905.9	437.0
2003	249.8	591.0	54.0	178.9	69.6	893.5	339.3
2004	226.0	527.2	38.3	162.4	63.1	790.9	282.0
2005	204.6	469.9	29.4	145.8	56.9	702.1	229.6
2006	185.4	418.5	22.4	129.3	51.2	621.3	183.0
2007	163.1	363.7	16.4	112.8	44.5	537.3	143.5
2008	148.0	323.3	11.3	96.2	39.7	470.4	109.1
2009	134.4	286.9	7.0	79.7	35.1	408.7	88.2
2010	122.1	254.0	3.7	64.4	30.7	352.8	82.1
2011	108.3	219.2	1.4	51.0	26.3	297.9	55.1
2012	98.6	192.7	0.2	37.8	22.6	253.3	33.9
2013	59.6	112.5	0.1	31.3	15.1	159.0	26.3
2014	54.8	96.9	0.1	24.9	13.3	135.2	17.1
2015	46.2	78.6	0.1	18.5	10.7	107.8	9.2
TOTAL	9181	13961	5025	5106	2253	26344	10212
NPV (10%)		5712	3019	2116	999	11845	4595

Table 4.3.5

DIFFERENCE IN TOTAL ALASKA AND FEDERAL REVENUES
WITH EXPORTS: INCLUDING EFFECT OF INCREASED PRODUCTION
(millions of 1987 dollars)

Year	Oil Produced (MMB/yr)	Royalty +Profit Share	Production Taxes	Property Taxes	State Income Tax	Total State Revenues	Total Federal Revenues
1987	29.2	266.0	225.2	0.0	9.6	500.9	515.0
1988	74.8	298.9	236.4	-0.1	16.3	551.5	347.1
1989	16.2	331.7	231.4	20.1	25.2	608.4	427.1
1990	101.4	293.8	179.8	36.4	24.7	534.7	248.2
1991	56.5	149.0	63.5	59.8	19.1	291.4	209.9
1992	9.6	86.3	3.8	59.1	11.6	160.9	69.8
1993	-15.6	46.2	-34.2	60.4	7.9	60.3	-12.0
1994	12.6	62.1	-3.7	61.7	12.1	132.1	133.2
1995	23.1	65.0	-11.0	52.8	12.5	119.4	143.7
1996	35.5	57.8	-37.0	44.7	12.6	78.2	35.1
1997	20.2	34.2	-41.5	45.4	10.5	48.6	2.8
1998	6.2	14.7	-35.3	46.1	8.1	33.7	-35.9
1999	2.3	9.2	-27.8	46.8	6.7	35.2	-44.7
2000	0.9	7.5	-27.5	47.5	7.3	34.9	-51.9
2001	2.4	9.6	-20.6	48.2	7.7	44.9	-48.8
2002	3.6	1.8	-15.1	48.9	8.0	43.6	-43.2
2003	4.6	93.6	-10.4	49.6	8.3	141.1	-71.2
2004	5.4	82.8	-6.3	50.3	8.5	135.4	-65.9
2005	6.0	0.9	-0.9	51.0	8.7	59.8	-38.3
2006	11.6	9.9	0.3	51.7	10.5	72.4	-38.6
2007	[illegible]	0.3	0.2	50.1	8.8	59.4	-45.4
2008	6.6	0.4	0.1	46.9	8.3	55.8	-66.9
2009	9.3	5.0	0.1	42.3	8.2	55.6	-52.9
2010	9.1	4.2	0.1	32.7	6.5	43.5	-27.0
2011	6.1	-1.6	0.0	23.1	4.6	26.1	-21.0
2012	6.1	-1.8	0.0	13.7	3.1	15.1	-12.4
2013	6.2	-2.5	0.0	11.0	2.7	11.2	0.7
2014	6.1	-2.7	0.0	8.4	2.3	8.0	2.2
2015	1.8	-7.3	0.0	5.7	1.0	-0.5	3.8
1987-2015	564	1915	670	1115	282	3981	1462
NPV (10%)		1242	648	349	121	2359	1424
1987-2000	473	1723	722	581	184	3210	1987
NPV (10%)		1204	659	266	106	2236	1509

in corporate income taxes between 1987 and 2000. Under Alaska law, the property-tax revenues are shared with local governments. The amounts shown in Table 4.3.5 include both the State and local shares of the incremental revenue. The increment to corporate income-tax revenues derives mainly from increases in the production and assets factors in the modified apportionment formula that the State uses for apportioning net income of firms involved in the petroleum industry.

4.4 OTHER ECONOMIC IMPACTS ON ALASKA.

Elimination of the export ban would have several directly stimulative effects on the state economy.

First, the petroleum industry would make additional development investments on the North Slope that would create (or preserve) hundreds of high-paying jobs in the petroleum-extraction, construction, and related industries.

Second, higher state revenues would prevent the State government from having to reduce expenditure as much as projected under continuation of the export ban. As approximately one-third of the State operating budget is transferred to local governments, local spending would also be much higher if exports are allowed. State and local spending would translate into higher construction and other private as well as public sector employment.

Third, higher petroleum revenues would be likely to forestall tax increases needed to pay for basic State and local services, and forestall elimination of the Permanent Fund dividends. Personal income in Alaska would thus be higher without the export ban.

These direct effects have complex multiplier effects on the state economy, which further increase jobs and income across the state. We make the following benchmark assumptions for the purposes of projecting the effects of eliminating the export ban on the Alaska economy:

1. Total petroleum employment, including exploration and headquarters employment, is about 1,000 higher.

2. Total State appropriations increase by the amount of the increase in revenues, with 85 percent of the increase going to operating expenditures and 15 percent to capital appropriations.

3. Higher revenues allow the Permanent Fund dividend to be retained for one additional year (1989), and reimposition of a State personal income tax deferred for one additional year (until 1990).

The authors used the MAP econometric model developed at ISER to project the indirect effects of higher petroleum and related industry employment and higher state revenues and spending on Alaska's population, employment, and per-capita income. Removing the export ban would increase total Alaska employment by about 12 thousand in 1990 and 15 thousand in 1991, mainly owing to reduced out-migration of younger workers resulting from more favorable employment opportunities within Alaska.

Real per-capita disposable income would increase by about $400 million (in constant 1987 dollars), owing to higher wage & salary receipts and lower tax rates. After 1991, these stimulating effects on the state economy would diminish only slowly, since the balance in the Permanent Fund --- and thus the revenues available form earnings of the Fund --- would remain higher.

NOTES TO SECTION 4

1. "Field", "reservoir", etc. The terms that distinguish various accumulations of hydrocarbons are not always employed the same way in Arctic Alaska as they are customarily used in most other producing regions, and their usage in Alaska itself is often inconsistent. This situation sometimes makes it difficult to reconcile resource or cost estimates from various sources. In the experience of the investigators, this confusion is compounded by the fact that company and state personnel are often unaware of the ambiguity of the unit for which they are supplying a resource or cost estimate.

The term that is used most loosely in Alaska is "field". Elsewhere an oil and/or gas field is composed of all those hydrocarbons formations continuously underlying a given surface area. Thus, the accumulations that are now referred to as the Prudhoe Bay, Lisburne, Kuparuk, and Eileen "fields" would elsewhere be designated as "pools" or even "sectors" of pools in the "Prudhoe Bay Field". (Indeed, Alaska's Oil and Gas Conservation Commission's Annual Report still designates Kuparuk River and Lisburne as subdivisions of the Prudhoe Bay field.) What is now commonly called the "Milne Point Field" would probably be the "Milne Point pool of the Kuparuk River formation of the Prudhoe Bay field."

In Arctic Alaska, the word "field" seems to be used for a smaller entity, usually (but not always) interchangeable with a "unit". Unit is, however, the most precisely and consistently employed term. But unit is a legal concept, rather than a geological one. It is defined in a "Unit Agreement" negotiated among leaseholders having working interests in a particular pool or pools, and approved by the Alaska Oil and Gas Conservation Commission. The agreement defines the unit's physical scope in three dimensions, stipulates the manner in which development and lifting costs, and produced hydrocarbons, are to be shared among the working interests, and designates an operator or operators for the property.

The upshot is that resources and reserves estimates from different authorities may differ because they are not referring to the same entity. It is almost correct to say that everybody now means the same thing when they refer to the Prudhoe Bay "field" --- the reference is to a three-dimensional entity that is congruent with the Prudhoe Bay unit. (Even here, is Eileen "in" or "out"?) Where a producing structure has not been delineated,

where no unit agreement has been adopted, and particularly where the potentially producing structures are not entirely even under lease, it may be utterly impossible to get various company and government geologists to agree on the physical entity they are talking about, much less the volume of hydrocarbons contained in, or recoverable from, that entity. Thus, one authority may estimate West Sak oil-in-place at 15 billion barrels; another may prefer a number on the order of 100 billion --- and they might both be right!

The authors of this report have attempted to impose some increment in the consistency of terminology relative to the information we received from State and company sources. The reader should be warned, however, that our success has been meager. (One conclusion that stems from the present study, but which is not within is terms of reference, is that something should be done about the present confusion. We suggest that the Alaska Oil and Gas Conservation Commission and/or the Alaska Chapter of the American Association of Petroleum Geologists to agree upon a scheme of terminology for accumulations of petroleum fluids that is both internally consistent and consistent with usage outside Alaska.)

5. EFFECT OF THE EXPORT BAN ON CALIFORNIA CRUDE-OIL PRODUCTION

5.1 CALIFORNIA CRUDE-OIL PRODUCTION, RESERVES AND RESOURCES

There are three major oil-producing regions in California --- the southern portion of the San Joaquin Valley, the Los Angeles Basin, and the state offshore and federal Outer Continental Shelf ("OCS") stretching from about San Luis Obispo south to the Los Angeles area.

California has six "supergiant" oil fields, Elk Hills, Midway-Sunset, Kern River, South Belridge, Wilmington, and Huntington Beach. The the new offshore finds in the Santa Ynez unit and the Santa Maria Basin finds will ultimately be regarded as several fields (which are not yet fully demarcated, however); total reserves in known reservoirs are now estimated at over 1.2 billion barrels. Midway-Sunset, Kern River, South Belridge, and Elk Hills are in the San Joaquin Valley; Wilmington and Huntington Beach in the Los Angeles Basin. Elk Hills is owned primarily by the federal government and for decades much of its oil was shut in as a Naval Petroleum Reserve.

Table 2-1 lists the major California crude-oil fields, their original oil-in-place, cumulative oil production to date, current proved reserves and in the case of heavy oil onshore cumulative production from TEOR (estimated by the California Energy Commission --- "CEC"), and production rates for 1985.

5.2 THE ECONOMICS OF CALIFORNIA CRUDE-OIL PRODUCTION

5.2.1 HEAVY-OIL ECONOMICS. The San Joaquin Valley is the oldest producing region in California and, ironically, offers the greatest potential for increased output from already-producing reservoirs. The valley's largest field, Midway-Sunset, was discovered in 1894 and originally contained 10 billion barrels of oil-in-place.[1] Its history in illustrates some key features in both the economics of domestic oil supply and the structure of West Coast oil markets.

California crude-oil fields tend to be geologically complex. Crude oil is usually produced from multiple zones truncated by a variety of fault blocks. Thus, the the crude oil lies in a number of pools for which maximizing recovery and minimizing production costs involves a variety of recovery techniques. Moreover, crude oil produced from the Midway-Sunset field spans virtually the entire range of crude-oil "gravities" (heaviness or viscosity), from 10 to 40 degrees API. The variety of crude-oil qualities creates both production and transport problems --- some of which will be described later.

In 1974 the Federal Energy Administration ("FEA") estimated Midway-Sunset's proved reserves at 644 million barrels, and forecast production to decline from 95.9 thousand barrels per day ("mb/d") in 1974 to 87.1 mb/d in 1984.[2] Actual production in 1984 was 138.9 mb/d, more than 60 percent higher than expected. The unanticipated increase arose from the widespread introduction of Thermally Enhanced Oil Recovery ("TEOR").

5.2.2 THERMALLY ENHANCED OIL RECOVERY ("TEOR"). The introduction of TEOR in the Midway-Sunset field has increased both production and the estimate of the amount of oil that could ultimately be recovered. In 1974 the FEA determined that out of 10 billion barrels of oil-in-place only 1.9 billion barrels constituted the "proved ultimate recovery" of the field. As of 1984 over 1.6 billion barrels had already been produced. Most dramatically, the CEC now estimates that more than 2 billion additional barrels will be recovered over the next thirty years through TEOR.[3] Thus, expected ultimate recovery from the Midway-Sunset field has risen from 19 percent of the original oil in the reservoir, to 36 percent --- a result of improved technology and higher oil prices.

Shell has acheived similar dramatic results in the South Belridge oil field. In 1981 Shell acquired the Belridge Oil Company and set about to increase production by means of TEOR. In 1980 South Belridge produced 59 mb/d; by 1986 gross production had more than doubled, to 166 mb/d. South Belridge's cumulative production plus its remaining recoverable reserves, as reckoned by the California Division of Oil and Gas, now exceed the figure the Division estimated for original oil-in-place less than a decade ago.

The economics of TEOR in California's heavy oil fields resembles the mining of coal or metallic ores more than it does the discovery and production of oil from new fields. Most of the capital investment in new fields is lease acquisition, development drilling, and (especially in frontier areas like Arctic Alaska, and on the OCS) infrastructure construction. Much of this cost is already sunk before the first production well is drilled. TEOR, on the other hand, tends to occur in reservoirs are not only known to exist but which have years or even decades of production history. While lease-acquisition and "finding" costs are almost nil, TEOR requires the constant drilling of new production and injection wells. A steam generator is required every few acres, with which to pump steam and/or hot water into the oil-bearing strata. The number of wells and steam generators required depends on the topography of field, the width of the deposit and its depth, the quality of the crude oil, and the density of the oil in place, and the qualities of the surrounding rock.

Once TEOR begins, the variable costs per barrel produced are high, relative to those of conventional oil production. Wells have to "worked over" frequently; and steam generators require maintenance, repair, and replacement. Electricity may have to be purchased from a utility, and if gas rather than the heavy oil itself is used as a fuel to raise steam it can amount to considerable expense.

One of the most important constraints on TEOR development is air-quality regulation. The state's environmental regulations are complex; in practice they limit the emissions permitted from TEOR steam generators to existing absolute levels. A TEOR producer can increase production, but only if the number of pollutants from existing production can be cut back. There are two choices --- natural gas can be substituted for heavy oil as a fuel or the producer can invest in scrubbers and other facilities to clean the exhaust.

A key effect of removing the ban on Alaska oil exports is the impact on the relative prices of heavy crude oil and natural gas. Last summer, spot-market gas delivered to San Joaquin Valley TEOR operators cost more than $2 per million btu ("mmbtu"), while heavy crude-oil prices fell locally to the equivalent of gas at about $1. At such prices it is uneconomic in most fields to burn gas in order to produce oil half its thermal value. Removing the ban on Alaska exports would raise the value of heavy oil by up to $3 per barrel, or $.50 per mmbtu, with little or no impact on gas prices. Thus heavy crude oil and gas prices would move closer to parity, and the economics of heavy oil production would improve.

The cogeneration potential of heavy-oil production has an important bearing on its economics. The effect is not, however, clear-cut. In most of the planned cogeneration projects the producer substitutes gas for oil as fuel in his steam generator. The waste heat is then used to generate electricity, which displace purchases by the operator or is sold outright to the utility. Many of the TEOR producers have contracts with Pacific Gas & Electric ("PG&E") or Southern California Edison ("SCE") to sell electricity. But, some of the best potential for TEOR is not covered by existing contracts and the contract value of electricity from a new cogeneration project is considerably less than from those negotiated a few years ago.

Since every oil field and project design for TEOR is different, there is no simple means to summarize production costs nor to assess the sensitivity of future oil production to wellhead prices. The CEC has quantified the relationship between "original mobile oil saturation" (a measure of the density of the oil in place) and the price required to make its extraction economically feasible. The Commission estimated that some of the most expensive projects cost about $17 per barrel and some of the least expensive, just under $10 per barrel. This range of esimates corresponds roughly to the costs cited by companies active in heavy oil production. When oil prices collapsed in 1986, Texaco suspended or terminated production from more than two thousand wells in the Kern River field, and about 30 mb/d of production was lost.

The cost of transporting heavy crude oil is also an important consideration in the economics of EOR development. Far and away the cheapest way to move crude oil overland is by pipeline. Even then the viscosity of heavy crude oil results in extraordinary costs --- the pipelines usually have to be heated or a diluent added. There are only two heavy-crude-oil pipelines that lead from the San Joaquin Valley, and none feed directly to a refinery center in the Los Angeles Basin. In order to ship heavy crude oil by pipeline a heavy-oil producer has to buy enough light crude oil to bring the viscosity of the oil mix down to the point at which it will flow through the pipe. This is expensive, and in some circumstances is not possible. Trucking is usually not a realistic alternative other than for short distances.

To get around the transport hurdle Shell has contracted for a unit train from the San Joaquin Valley to Los Angeles. There are (or were) plans to increase the number of unit trains, but these plans may be cancelled if crude-oil prices remain depressed. The Celeron or "All America" pipeline is scheduled to begin shipment from the Santa

Barbara area to Texas in 1987. This pipeline has a capacity of 300 mb/d and was planned for the forthcoming OCS production. However, since the pipeline runs through the San Joaquin Valley, Celeron plans a spur, in order to receive excess production from the heavy-oil fields if it meets the pipeline's gravity standards for shipment. In any circumstance the pipeline toil to Texas will be high, resulting of course in lower wellhead prices.

5.2.3 CALIFORNIA OFFSHORE PRODUCTION. The largest discoveries of crude oil in the United States in the last decade have been offshore California. Two of the discoveries are located in the federal OCS --- the Santa Maria Basin, north of Point Concepcion and the Santa Ynez Unit to the south. A third set of discoveries has been made in state waters off the coast midway between Point Concepcion and Santa Barbara. Table __ lists projects underway or understudy for these areas as well as the expected peak production, the project's status, and the project start date.

The Julius platform is planned for the northern part of the Santa Maria basin; Cities Service is the operator. The platform has not yet passed all environmental review. It is scheduled to begin production in 1989 and at peak will produce 40 mb/d. The Northern area has about 300 million barrels of estimated recoverable reserves and a potential production capacity of 125 mb/d with 6 platforms.

Unocal has already constructed the Irene platform off Point Pedernales. Production is beginning as this report is written, and will peak at 20 mb/d. A second platform, the Independence operated by Exxon has been put on indefinite hold. If constructed, the Exxon unit could produce another 20 mb/d. The Point Pedernales area has 125 million barrels of estimated reserves and could produce up to 67 mb/d from four platforms.

The southern part of the Santa Maria basin is known as Point Arguello and discoveries there have been the largest in the basin to date. Texaco's platform, Harvest, will have peak production of 46 mb/d and is due on stream in the fourth quarter of 1987. A Chevron platform, Hidalgo and Hermosa are under construction and will begin production in late 1987, peaking at 20 and 27 mb/d, respectively. The Southern area has an estimated 400 million barrels of reserves and could produce 170 mb/d from five platforms.

The Hondo field of the Santa Ynez unit has been producing crude oil since 1981. Exxon plans to dramatically expand the unit with three additional platforms, Harmony, Heritage, and Heather. Together the three new facilities will have peak production of 140 mb/d. The platforms are, however on hold while Exxon tries to obtain a change in air-quality rules. The Santa Ynez unit contains about 350 million barrels of estimated reserves and if five platforms were installed it could produce up to 170 mb/d beyond the quantities coming from the existing Hondo field.

In State offshore waters Arco's Coal Point project, which is a series of platforms near Santa Barbara, has just been certified and will produce at peak 80 mb/d. Further west Shell plans platform Hercules,

which would produce 30 mb/d after it is certified and completed in 1991. Unocal has a small project of 13 mb/d on hold just off Point Concepcion.

The unconstrained potential for the Santa Barbara area of the federal OCS is just over 500 mb/d. If everything identified in table ___ is completed on schedule, OCS production in the early 1990s would total just under 300 mb/d. But, as the table makes clear, the majority of the production is associated with platforms not yet constructed. Production from platforms in place or certain to be completed totals just over 100 mb/d. Thus, some 200 mb/d may depend on the level of oil prices.

DRAFT REPORT ON ALASKA BENEFITS AND COSTS OF EXPORTING ALASKA NORTH SLOPE CRUDE OIL

Institute of Social and Economic Research
University of Alaska - Anchorage

For the Alaska State Senate
Finance Committee

APPENDIX B: ASSUMPTIONS, METHODOLOGY, AND CALCULATIONS

A. CRUDE-OIL PRICES.

1. Crude-oil prices are specified in whole-dollar units, in order to emphasize (a) the investigators' concern with gross comparisons of values at various locations and under different transport options, and (b) the impossibility of making projections with any greater precision over the time span covered by this report.

2. All prices are in average 1987 U.S. dollars, unless otherwise specified. 1985 and 1986 actual values are converted to 1987 dollars using the GNP deflator; the GNP deflator is assumed to increase by 5 percent from 1986 to 1987.

3. The "world market price" is denoted by the average contract price of a representative domestic crude oil (the "marker" crude) widely traded at the U.S. Gulf, which is assumed to be $15.00 per barrel from 1987 through 1995, and $20.00 per barrel from 1996 through 2000. Projected investment behavior is based on the assumption that oil companies also expect these prices. The posted price of West Texas Intermediate was used as the marker price for purposes of assessing historical relationships among prices for various grades of crude oil and in various markets.

4. Landed prices of crude oils comparable in grade and quality to the marker crude are assumed to be the same at the U.S. Gulf Coast, the U.S. West Coast, and the Far East (Japan, Korea, and Taiwan).

5. If exports of ANS crude oil are permitted:

    5.1 The Valdez netback value of ANS crude would be the world market price less $1 per barrel, (the landed price of the marker crude in the Far East, less foreign-flag tanker costs and a small "penalty" for the inferior refining quality of ANS crude).

    5.2 The average wellhead value of California crude oil will also be the world market price less $1 per barrel, (the landed price of the marker crude in California, less pipeline transport charges in California and a penalty for the inferior refining quality of California crude).

6. If exports of ANS crude oil are not permitted:

6.1 And there is no "West Coast surplus" (i.e., all Alaska and California crude oil is refined on the West Coast):

Valdez prices of ANS crude oil and average wellhead prices of California crude oil will be $1 per barrel less than the world-market price (i.e., the same as if exports were permitted).

6.2 And the "West Coast surplus" requires excess crude oil to be shipped by tanker across Panama to the U.S. Gulf or East Coast,

6.2.1 The Valdez netback value of ANS crude oil shipped to those destinations will be the world-market price less $5 per barrel,

6.2.2 The average Valdez netback value of ANS crude oil refined on the West Coast will be somewhere between $1 and $5 less than the world market price, determined by the rule described in 6.4, and

6.2.3 The average wellhead price of California crude oil will be $5 per barrel less than the world market price.

6.3 And a West Coast surplus exists, but is small enough to be disposed of by pipeline shipments from California to the Gulf Coast states:

6.3.1 The Valdez netback value of ANS crude oil shipped to those destinations will be the world-market price less $3 per barrel.

6.3.2 The average Valdez netback value of ANS crude oil refined on the West Coast will be somewhere between $1 and $3 less than the world market price, determined by the method described in 6.4.

6.3.3 The average wellhead price of California crude oil will be $3 per barrel less than the world market price.

6.4 Valdez netback prices of ANS crude oil are projected as follows:

6.4.1 The average Valdez netback price for ANS crude oil refined on the West Coast is interpreted as a weighted average of (a) the world market price on the West Coast and (b) the netback value for shipments to the U.S. Gulf. The imputed world-market-priced component of the total volume of ANS crude refined on the West Coast is calculated for 1985 and 1986. The average of volumes for those two years is adjusted upward for later years in proportion to projected West Coast refinery runs. Average Valdez netback values for crude oil refined on the West Coast in future years are projected as weighted averages of this component at world-market prices, and the remainder at Gulf Coast netback prices. The effect is that "marginal" (additional or diminished) barrels always obtain the Gulf Coast netback price; see 6.4.3 below.

6.4.2 The average Valdez netback prices for all ANS crude oil is a weighted average of the netback price for ANS crude oil refined on the West Coast and ANS crude oil shipped beyond the West Coast.

6.4.3 Marginal ANS crude-oil prices (the change in sales revenues caused by a one-barrel increase or decrease in production) at Valdez, is the netback value of ANS crude oil from the U.S. Gulf Coast or the Far East (depending on the pricing case, as described in B below).

6.5 The prices of ANS crude oil on the North Slope (at TAPS pump-station No. 1) are as projected follows:

6.5.1 The TAPS pipeline charge for each year is projected, using forecast volumes of ANS production as pipeline throughputs, by an ARTA model developed for the North Slope Borough on the basis of the tariff settlement approved by the Federal Energy Regulatory Commission ("FERC") in 1985.

6.5.2 Average ANS crude-oil prices at Pump Station No. 1 are the average Valdez netback values, less the TAPS charge.

6.5.3 Marginal ANS crude-oil prices at Pump Station No. 1, is the netback value of ANS crude oil from the U.S. Gulf Coast or the Far East (depending on the pricing case, as described in B below), less the TAPS charge. **It is this value that is assumed to determine the ANS operators' investment behavior.**

B. PRICING AND PRODUCTION CASES

1. Alaska and California production is projected under three cases:

1.1 A Gulf Coast netback-pricing case, in which all West Coast crude-oil prices are determined as described in A.6.2,

1.2 A Far East netback-pricing case, in which all West Coast crude-oil prices are determined as described in A.6.1.

1.3 A combined no-export case, in which prices are determined as in A.6.2 until West Coast production falls to a level that tanker shipments to the Gulf or East Coasts. At that point, prices are determined as in A.6.3 until the West Coast surplus diminishes sufficiently to eliminate net movements of crude oil from California by pipeline to Gulf Coast refineries. From that time, pricing will be as in A.6.1. Production under this pricing case is assumed to be determined as in 4. below.

2. Alaska and California production under cases 1.1 and 1.2 is forecast as follows:

   2.1 Production from known ANS reserves is projected by ISER on the basis of the investigators' best information regarding operator plans and economic characteristics of each field.

   2.2 Production in ANS category "other" is adapted from values for Alaska "new discoveries" in the National Petroleum Council ("NPC") study, using the imputed supply-elasticity for that category, according to the methodology described in 3, below.

   2.3 Production forecasts for Cook Inlet are based on Alaska Department of Revenue projections, adjusted using the imputed supply elasticity for non-Alaska, non-TEOR production in the NPC study, according to the methodology described in 3, below.

   2.4 Production forecasts for TEOR in California are based on the model in the California Energy Commission ("CEC") 1987 Biennial Report and the pricing assumptions described above.

   2.5 Production forecasts for onshore California production other than TEOR are based on CEC forecasts, adjusted for the pricing assumptions described above using the imputed supply elasticity for Lower-48 onshore non-TEOR production in the NPC study, according to the methodology described in 3, below.

   2.6 Production forecasts for State offshore ("tidelands") production are based on CEC forecasts, adjusted for the pricing assumptions described above using an average of the imputed supply elasticities for Lower-48 onshore and offshore non-TEOR production in the NPC study, according to the methodology described in 3, below.

   2.7 Production forecasts for the federal OCS is projected by ARTA on the basis of the investigators' best information regarding operator plans and economic characteristics of each field.

3. Price-elasticities of supply for various components of the U.S. crude-oil supply under cases 1.1 and 1.2 are imputed from the National Petroleum Council ("NPC") report, Factors Affecting U.S. Oil and Gas Outlook (February 1987), by comparing forecasts of production in the various categories under two sets of price assumptions (the "lower-" and "higher-price trend", respectively). These imputed elasticities are as follows:

CATEGORY	1990	1995	2000
Existing Fields	.25	.43	.62
Developed Production	.20	.35	.51
Lower 48	.00	.00	.04
Onshore	.01	.03	.04
Offshore	.0	.0	.0
Alaska	.0	.0	.06
New Investment	.85	.85	.75
Lower 48	.76	.77	.67
Onshore	.82	.83	.79
Offshore	.58	.59	.24
Alaska	1.65	1.31	1.24
EOR	.59	1.20	1.48
Lower 48	.56	1.18	1.44
Onshore	.53	1.14	1.37
Offshore	1.37	2.00	0.46
Alaska	1.35	1.64	1.95
New Discoveries	**.44**	.93	1,95
Lower 48	1.95	1.51	.97
Onshore	2.56	1.72	.85
Offshore	1.04	1.18	.85
Alaska		2.02	2.58
Total	**.25**	**.43**	**.62**
<u>Other Subdivisions</u>			
Stripper wells	.44	.93	1.95
Natural-Gas Liquids	.19	.31	.36
Total Alaska	**.13**	**.33**	**.78**
Developed production	.0	.0	.06
New investment	1.65	1.31	1.24
New discoveries		2.02	2.58
Total Non-Alaska	**.23**	**.56**	**1.09**
Onshore conventi[illegible]	.26	.32	.48
Onshore TEOR	.56	1.18	1.44
Offshore	.23	.37.	.37

Note: A single-digit ".0" indicates that the calculated elasticity is slightly negative --- an improbable result, which we reject.

4. Alaska and California production under case 1.3 is projected following the course of case 1.1 (Gulf Coast netback pricing) until the year in which West Coast surplus falls enough that tanker shipments beyond the West Coast are not required. (That year turns out to be 1991, under the assumptions adopted for case 1.1)

Beginning in that year, producers are assumed to develop just enough additional production to keep the need for such shipments at zero, as long as it is possible under the following constraints:

4.1 For any field, the cumulative production in case 1.3 may never exceed the cumulative production that would have occurred under case 1.2. (All added production relative to case 1.1 must therefore be delayed production.)

4.2 For any field in any year, production under case 1.3 may not exceed the highest production level that would have been achieved in that or any subsequent year under case 1.2. (The result is that the need of the West Coast for tanker imports of crude oil in addition to that described in ?? will not last any longer under case 1.3 than it would have under case 1.2.)

C. WEST COAST AND U.S. SUPPLY-DEMAND BALANCES

1. Both West Coast and national petroleum supply-demand balances assume that ---

   1.1 Average refinery "gain" or "loss" is zero (i.e., the number of crude-oil barrels consumed by refineries is equal to the number of barrels of product produced).

   1.2 Average additions or reductions of stocks are zero, and average volumes of crude oil in transit are constant.

2. "Crude-oil" production figures include volumes of light hydrocarbons classified in production statistics as "lease condensate", but not those volumes classified as "natural-gas liquids" ("NGL").

   2.1 NGLs are nevertheless included in regional and national petroleum balances.

   2.2 NGL production for the U.S., other than the West Coast, is projected using the pricing assumptions of A. above, the NPC forecasts of NGL production under the lower- and higher-price trends, and and the price-elasticity of supply for NGL imputed from these cases under the methodology described in B.3.

3. Petroleum-products consumption is calculated as follows:

   3.1 Petroleum-products consumption for the U.S. under pricing case B.1.1 (and under B.1.3 while that case reflects case B.1.1 assumptions) is calculated using the the world-market price assumptions of A., above, the NPC forecasts of total U.S. consumption under the lower- and higher-price trends, and a price-elasticity of demand for all petroleum products imputed from these cases under the same methodology as is described for imputation of supply-elasticities for various production categories in B.3.

   3.2 U.S. petroleum-products consumption under pricing case B.1.2 (and under B.1.3 while that case reflects case B.1.2

assumptions) is the sum of U.S. petroleum-products consumption in the case described in 3.1 above, adjusted by the difference in West Coast residual-oil consumption calculated as described in 3.4.2.

3.3 The consumption of petroleum products in the U.S., other than on the West Coast, is assumed to be the same under all West Coast crude-oil pricing cases, because the differences between these cases do not affect the prices of crude oil except on the West Coast.

3.4 The consumption of petroleum products on the West Coast is the sum of refined-product and residual-oil consumption:

3.4.1 West Coast consumption of refined petroleum products is assumed to be unaffected by the differences in crude-oil prices between the various cases, because the ability to import refined products places a ceiling on West Coast product prices.

3.4.2 West Coast residual-oil consumption is assumed to grow at an annual rate of one percentage point less than West Coast consumption of refined products for so long as pricing case B.1.1 prevails, and at two percentage points less than West Coast consumption while pricing case B.1.2 prevails. This situation reflects an assumption that the price of residual oil derived from West Coast crude oils at West Coast refineries has some upward flexibility, reflecting the cost of shipping excess resid to Far Eastern markets, where it encounters world-market prices.

4. Crude oil refined on the West Coast is projected at the average of 1985-1986 levels, adjusted for each subsequent year by half the change in West Coast petroleum-products consumption.

5. The West Coast crude-oil surplus is defined as the sum of Alaska and California production, imports of low-sulfur crude oil as described below, less West Coast refinery runs, as described in 4. above.

5.1 West Coast imports of low-sulfur crude oil required because of refinery-design and air-quality constraints are projected at the average of 1985-1986 volumes, and adjusted proportionally to the volume of crude oil refined on the West Coast.

5.2 Tanker shipments from or to the West Coast (other than imports described in 5.1 above) are the difference between the West Coast crude-oil surplus, and shipments of West Coast crude oil to the U.S. Gulf States by the Four Corners and Celeron pipelines. These shipments are forecast on the basis of the 1985-1986 average, increasing at a constant annual rate, reaching 225 thousand barrels per day in 1990, and remaining at that level. (Pipeline and refinery-design bottlenecks in California are expected to perpetuate east-

ward movements in these pipelines even after the West Coast becomes a net importer of crude oil.)

6. U.S. crude-oil production is calculated as follows:

   6.1 For all pricing cases, non- West Coast production is ---

      6.1.1 Total U.S. production, calculated from the NPC lower-and upper-price trend cases, through use of the world-market pricing assumptions of this study and the imputed price-elasticity of supply for non-Alaska production, determined as in B.3, less

      6.2.2 Total projected California production under pricing case B.1.1.

   6.2 For each pricing case, total U.S. production is non-West Coast production, plus the West Coast production calculated for that case.

7. U.S. petroleum balances, net imports, and their balance-of payments impact, are projected as follows:

   7.1 Net U.S. oil imports are the difference between total U.S. petroleum-products consumption from 6. above and U.S. petroleum consumption as in 3. above.

   7.2 The net annual contribution of oil imports to the U.S. balance-of-payments deficit is projected as the product of net oil imports (in barrels per day), the assumed world-market price, and the number of days in the year.

   7.3 The effect of permitting ANS oil exports on the U.S. balance of payments is the reduction effected in the balance-of-payments deficit, as determined in 7.2.

D. WELLHEAD REVENUES

1. Alaska wellhead production revenues are the sum of:

   1.1 The product of ANS production volumes and the average Pump Station No. 1 netback price, and

   1.2 The product of the Cook Inlet production volumes and the average ANS netback value at Valdez. (This assumption requires that the higher refining value of Cook Inlet production is offset by scale economies in tanker shipments from Valdez.)

2. California wellhead revenues are assumed to be the product of California production and average California prices.

3. The reduction in wellhead values attributable to the export ban during the years 1981 through 1986 is estimated at $4 per barrel for California production and Alaska production shipped beyond the West Coast, and $2 per barrel for Alaska production processed in West Coast refineries.

E. ROYALTY AND TAX REVENUES

1. The reduction in Alaska petroleum-production revenues attributable to the export ban during 1981 through 1986 are calculated from the sales-revenue losses in D.3 above on the basis of ---

   1.1 A royalty rate of 12.5 percent,

   1.2 A marginal production-tax rate (on an ex-royalty tax basis) of 15 percent, and

   1.3 The prevailing marginal corporate income-tax rate.

2. Alaska royalties, production taxes, and corporate income taxes are based on the price forecasts described in A., the production projections described in B., and the assumptions and methodology employed by the Alaska Department of Revenue, Division of Petroleum Revenue, in its quarterly Petroleum Production Revenue Forecast.

3. The reduction in federal windfall-profits tax ("WPT") receipts attributable to the export ban in 1981 through 1985 is calculated on the basis of a marginal rate of 70 percent for Prudhoe Bay production and zero for production from other ANS fields, and an average marginal rate of 52 percent for Cook Inlet.

   3.1 The basis for WPT is wellhead receipts excluding royalties.

   3.2 State production taxes are treated as a credit against WPT.

   3.3 No WPT receipts are assumed for 1986 or for the future under any of the pricing cases, because the first-sale price did not and is not projected to exceed the WPT threshold level.

4. Federal income-tax receipts for Alaska crude oil shipped beyond the West Coast are estimated for 1981 through 1986, and for 1987 forward, on the basis of prevailing marginal rates, after exclusion of royalties, severance tax, state corporate income tax, and WPT.

5. No change in net federal income-tax receipts is attributed to any change in wellhead prices for Alaska or California crude oil refined on the West Coast. It is unlikely that West Coast refiners will be able to pass through higher feedstock prices in their product prices; thus, higher income-tax receipts generated in production are likely to be just about offset by smaller receipts from transportation and refining.

6. No change in net federal income-tax receipts is attributed to production developed in during or after 1987. Under the old tax law, most minerals-extraction operations, including oil-and-gas production projects, could be and are structured so as to generate negative net income-tax revenues on a present-value life-cycle basis. (I.e., the present value of tax preferences on minerals extraction are typically greater than the present value of the stream of taxes on current income.) Pending a reexamination of

this issue under the new tax law, we have assumed net life-cycle tax revenues on new oil-and-gas investment to be zero.

Alaska State Legislature

Official Business

P.O. Box V
State Capitol
Juneau, Alaska 99811

MAR 14 1989

MEMORANDUM

To: All Senators

From: Senator Jack Coghill

Re: Export of Alaskan Oil

Date: March 13, 1989

Attached you will find a letter from the "Coalition to Keep Alaska Oil."

Although I do not agree with the point of view expressed through out most of the letter, I though I might draw your attention to the third to the last paragraph on page two.

It states:

"Of course, exports would allow Japan and other Pacific Rim countries to reduce their trade imbalance with the U.S. and to promote their own energy security. Exports would also help British Petroleum, the largest producer of Alaska North Slope oil, to increase its profits. And the State of Alaska would reap at least another billion dollar tax windfall. But the United States as a whole would be the loser."

I'm sure you don't agree that the United States would be the "loser" if Alaskan oil was exportable, but so long as we are looking for new revenue sources, "exports" look like they would have major revenue impacts.

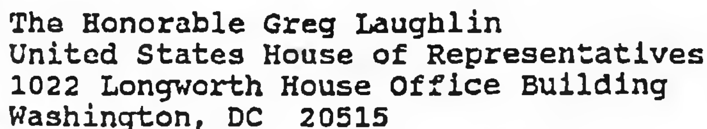
COALITION

TO KEEP

ALASKA

OIL

January 23, 1989



The Honorable Greg Laughlin
United States House of Representatives
1022 Longworth House Office Building
Washington, DC 20515

Dear Representative Laughlin:

We urge you to support H.R. 567, introduced by Representatives Howard Wolpe and Olympia Snowe, to extend the current restrictions on exports of Alaska North Slope crude oil. Section 7(d) of the Export Administration Act of 1979, which contains these restrictions, is due to expire together with the rest of the Act on September 30, 1990. Congress has consistently extended and strengthened these restrictions since 1979 by large bipartisan margins. With your support, the restrictions will now be extended indefinitely, promoting U.S. economic, energy, and military security.

Since the original Alaska oil export restrictions were first enacted by Congress in 1973, they have provided important and enduring benefits for the nation. Today, all two million barrels per day of Alaska North Slope production (representing over 25 percent of total U.S. crude oil output) is consumed domestically -- providing enormous energy security benefits to our nation. Furthermore, the restrictions have encouraged the establishment of an efficient transportation infrastructure to move crude oil from Alaska to the lower 48 states and Hawaii.

We have also been able to reduce our reliance on OPEC and on unstable Persian Gulf oil supplies. West Coast consumers have saved billions of dollars at the pump. And our domestic merchant marine continues to help supply the essential oil requirements of domestic economy and foreign ~~military~~ operations. With all these benefits, it makes no sense to relax or eliminate these export restrictions now.

Our reliance on imported oil today has surpassed 40 percent of our daily needs and is predicted to exceed 50 percent by the early 1990s. Between 1990-95, exports of Alaska oil to Japan and other Pacific Rim countries would:

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* Further increase U.S. dependence on oil from the unstable Persian Gulf region and necessitate the creation of a larger Strategic Petroleum Reserve at significant additional costs to the federal government;

* Increase consumer petroleum costs on the West Coast;

* Lead to the premature decline of the domestic tanker fleet, a development that will require the U.S. to rely more heavily on a foreign tanker fleet unable to cover U.S. shipping needs in the event of a national emergency;

* Force job losses in the maritime and related ship-supply industries on the West Coast;

* Not materially increase oil production in either Alaska or California, and thus not reduce our growing dependence on oil imports; and

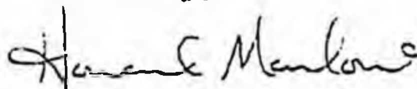
* Cause net federal revenue losses.

Of course, exports would allow Japan and other Pacific Rim countries to reduce <u>their</u> trade imbalance with the U.S. and to promote <u>their</u> own energy security. Exports would also help British Petroleum, the largest producer of Alaska North Slope oil, to increase its profits. And the State of Alaska would reap at least another billion dollar tax windfall. But the United States as a whole would be the loser.

Having consistently strengthened the Alaska oil export restrictions, Congress should now extend them indefinitely beyond 1990. What has worked effectively to promote U.S. national energy and security interests in the past will continue to work well in the future.

On behalf of all the members of our Coalition, I urge you to cosponsor H.R. 567 by calling Carolyn Jecks of Rep. Wolpe's staff or Alex Stoddard of Rep. Snowe's staff. Should you need a fact sheet or other information on this subject, please do not hesitate to call me.

Sincerely,



Howard Marlowe
Executive Director

Enclosure: List of Coalition Members

COALITION

TO KEEP

ALASKA

OIL

MEMBERS OF THE COALITION TO KEEP ALASKA OIL

AFL-CIO
American Institute of Merchant Shipping
American Maritime Officers Service
American Public Power Association
Americans for Indian Opportunity
Apex Marine Corporation
Auto Workers, United
CBI Industries, Inc.
Celeron Corporation
Citizen/Labor Energy Coalition
Consumer Energy Council of America
Consumer Federation of America
Cove Maritime Companies, Inc.
Dillingham Ship Repair
Food and Allied Services Trades Department, AFL-CIO
Industrial Union Department, AFL-CIO
Inlandboatmen's Union of the Pacific
Joint Maritime Congress
Labor-Management Maritime Committee
Ladies Garment Workers. International Union of
Longshoremen's and Warehousemen's Union, International
Machinists, International Association of
Marine Engineers' Beneficial Association, National
Marine Engineers' Beneficial Association, District 1
Marine Engineers' Beneficial Association, District 2
Maritime Institute for Research and Industrial Development
Maritime Trades Department, AFL-CIO
Masters, Mates & Pilots, International Organization
National Council of Farm Cooperatives
National Farmers Organization
National Farmers Union
National Maritime Council
National Maritime Union
Northville Industries
Oil, Chemical and Atomic Workers
OMI Corporation
OSG Bulk Ships, Inc.
Pacific-Texas Pipeline Company, Inc.
Port of Portland, Oregon
Steel Workers of America, United
Seafarers International Union
Shipbuilders Council of America
Sonat Marine, Inc.
Transportation Institute

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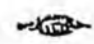

JOHNSTON AMENDMENT

EXPORT RESTRICTIONS

At the appropriate place insert the following new section:

"SEC. ____. CRUDE OIL EXPORT RESTRICTIONS.

"(a) Notwithstanding any other provision of law, no crude oil produced from lands in the Coastal Plain (except any such crude oil which (1) is exported to an adjacent foreign country to be refined and consumed therein in exchange for the same quantity of crude oil being exported from that country to the United States; such exchange must result through convenience or increased efficiency of transportation in lower prices for consumers of petroleum products in the United States as described in subsection (b)(1)(B) of this section, (2) is temporarily exported for convenience or increased efficiency of transportation across parts of an adjacent foreign country and reenters the United States, or (3) is transported to Canada, to be consumed therein, in amounts not to exceed an annual average of 50,000 barrels per day, in addition to exports under paragraphs (1) and (2), except that any ocean transportation of such oil shall be by vessels documented under section 12106 of title 46, United States Code) may be exported from the United States, or any of its territories and possessions, subject to subsection (b) of this section.

"(b) Crude oil subject to the prohibition contained in subsection (a) may be exported only if—

"(1) the President so recommends to the Congress after making and publishing express findings that exports of such crude oil, including exchanges—

"(A) will not diminish the total quantity or quality of petroleum refined within, stored within, or legally committed to be transported to and sold within the United States;

"(B) will, within 3 months following the initiation of such exports or exchanges, result in (I) acquisition costs to the refiners which purchase the imported crude oil being lower than the acquisition costs such refiners would have to pay for the domestically produced oil in the absence of such an export or exchange, and (II) not less than 75 percent of such savings in costs being reflected in wholesale and retail prices of products refined from such imported crude oil;

"(C) will be made only pursuant to contracts which may be terminated if the crude oil supplies of the United States are interrupted, threatened, or diminished;

"(D) are clearly necessary to protect the national interest; and

"(E) are in accordance with the provisions of the Export Administration Act of 1979 (50 U.S.C. App. 2401 and following); and

"(2) the President includes such findings in his recommendation to the Congress and the Congress, within 60 days after receiving that recommendation, agrees to a joint resolution which approves such exports on the basis of those findings, and which is thereafter enacted into law.

"(c) Notwithstanding any other provision of this section or any other provision of law, the President may export oil to any country pursuant to a bilateral international oil supply agreement entered into by the United States with such nation before June 25, 1979, or to any country pursuant to the International Emergency Oil Sharing Plan of the International Energy Agency.".

PURPOSE OF THE AMENDMENT

The amendment extends the export restriction provision of the Export Administration Act, currently applicable to oil transported by the Trans-Alaska Pipeline, to crude oil produced on the Coastal Plain. The amendment tracks the language of the Export Administration Act.

Alaska State Legislature

Senate Resources Committee

Senator Bettye Fahrenkamp, Chairman

Senator Jay Kerttula, Vice Chairman
Senator Dick Eliason
Senator Steve Frank
Senator Rick Halford
Senator Arliss Sturgulewski
Senator Fred Zharoff

P.O. Box V
Juneau, Alaska 99811
(907) 465-4907

M E M O R A N D U M

TO: Committee Members, Senate Resources Committee

FROM: Committee Staff

RE: Committee Meeting, February 13, 1989

DATE: February 13, 1989

On Monday, February 13 at 1:30 pm in the Butrovich Room, the Senate Resources will hear SB 33, Establishing the Willow Mountain Critical Habitat Area, and SB 60, Making a special appropriation to the Office of the Governor for activities to encourage the federal government to permit export of oil from the state.

SB 33 provides for the management of 22,720 acres of land near Hatcher Pass and Willow in Southcentral Alaska under the State Critical Habitat Area program. The Willow Mountain area supports unusually large concentrations of moose. The purpose of the bill is to preserve the high quality moose habitat supporting the high moose population.

SB 60 would appropriate $1.5 million for a major lobbying and public relations effort to remove the current ban on exporting North Slope oil.

This session, the U.S. Congress will probably begin to focus on reauthorizing the Export Administration Act (EAA), which expires in 1990. Section 7(d) now effectively prohibits the export of crude oil transported through TAPS.

Arlon Tussing, an oil and energy consultant and adjunct professor of economics at the Institute of Social and Economic Research at the University of Alaska, will present an overview of the political climate in Washington, D.C. and the prospects for successful state efforts to remove the ban.

John Katz, Director of State/Federal Relations, Office of the Governor, testifying on the teleconference network from Washington, D.C., will present the administration's perspective on the proposed lobbying effort.

At a time when the state is seeking to increase revenues without adversely impacting individuals or industry, allowing the foreign export of oil would provide a positive alternative to other revenue enhancement proposals.

Because of the glut of ANS on the West Coast, Alaska currently delivers about one third of its oil through the Panama Canal to the U.S. Gulf coast. Due to the lower cost of shipping Alaska North Slope oil (ANS) to Pacific Rim markets rather than the U.S. Gulf coast, oil exported overseas would have a higher wellhead value. This increase would result in greater industry profits, increased state royalties and taxes, incentives for development of marginal fields, greater federal revenues and reduction of the trade imbalance with Japan, and more trade opportunities with Pacific Rim nations.

The current export ban depresses the value of all crude oil produced in Alaska (and California) by $1.50 to $4.00 per barrel. Any new development suffers the full $4.00 penalty, and some analysts believe one effect of the ban is to reduce U.S. oil output by 500,000 barrels a day. An increase in wellhead value through removing the ban may make major projects in Alaska, such as West Sak Sands development, commercially viable.

Depending on the type and amount of exports allowed, additional revenues to the state are estimated to be anywhere from $56 million up to $1 billion per year.

Federal revenues would be expected to increase by about $1 billion a year due to higher leasing and tax revenues.

Of course reducing deliveries of ANS to the U.S. Gulf coast would require those refiners to increase their imports of foreign oil, but the net result would be less reliance by both the U.S. and the world as a whole on OPEC imports. Removing the ban would likely reduce the U.S. balance of payments deficit by about $3 billion per year.

In addition, the committee will take action on SJR 26, Urging adoption of a national energy strategy.

John Katz, Director of State/Federal Relations, Office of the Governor, testifying on the teleconference network from Washington, D.C., will present the administration's perspective on the proposed lobbying effort.

At a time when the state is seeking to increase revenues without adversely impacting individuals or industry, allowing the foreign export of oil would provide a positive alternative to other revenue enhancement proposals.

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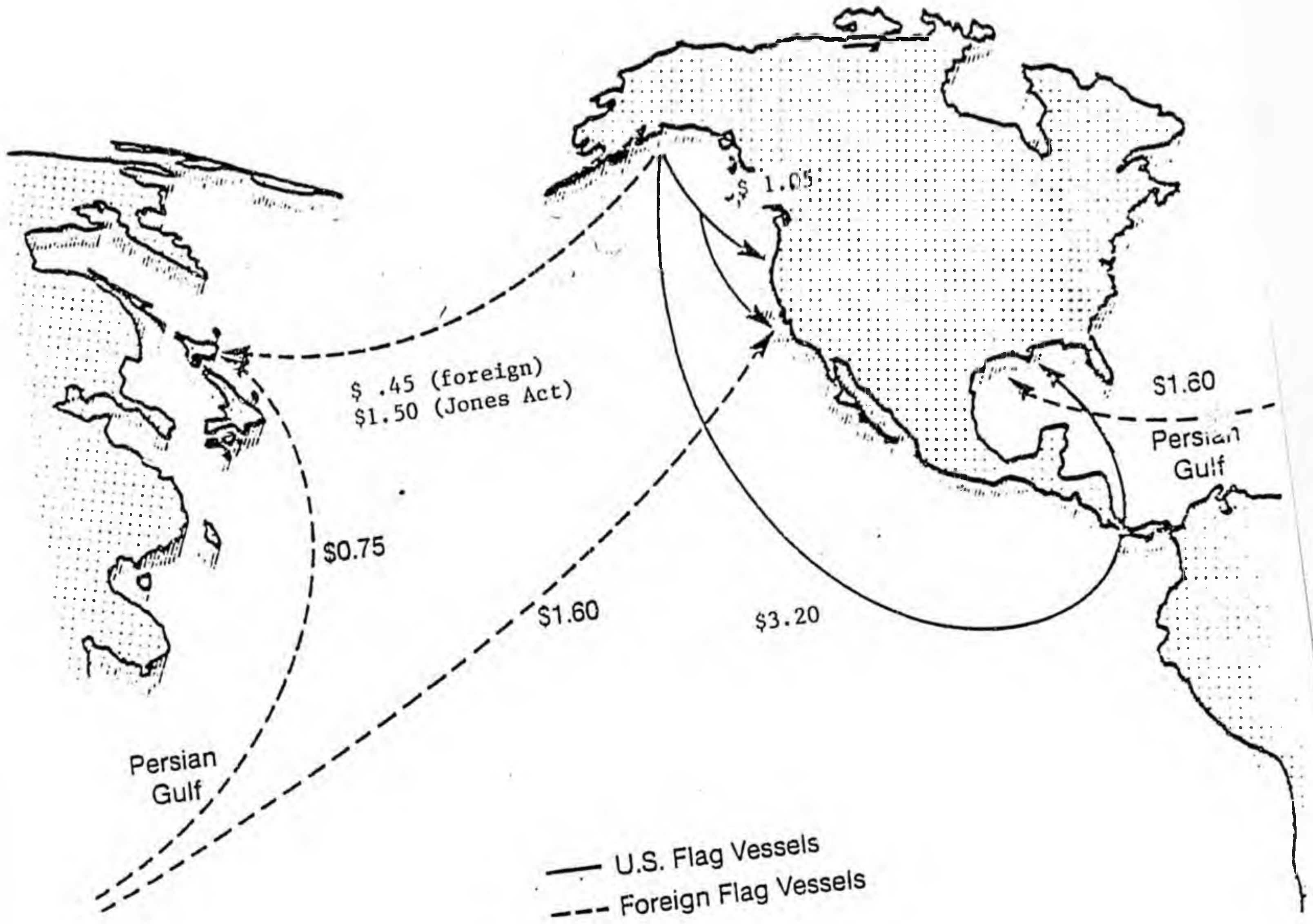
Figure 1
SHIPPING RATES
($/Barrel)



SOURCE: Oil industry estimates.

#87-003162
J-0Ф-export of AK Oil

Alaska State Legislature

JUN 26 1987

SENATE ADVISORY COUNCIL

Pouch V
State Capital
Juneau, Alaska 99811
Phone: (907) 465-3114

MEMORANDUM

TO: Senator Don Bennett
Alaska State Senate

ATN: Janice Adair

FROM: Lee Ann Lucas
Senate Advisory Council

DATE: 2/5/87

RE: Oil Export Restrictions

Referencing your request that this agency determine if other states have an oil export restriction act similar to Alaska's, I offer the following.

Congress has placed a number of statutory restrictions on the export of U.S. crude oil. These restrictions are:

* Section 7 of the Export Administration Act of 1979, as amended (50 U.S.C. App. 2406);
* Section 103 of the Energy Policy and Conservation Act (42 U.S.C. 6212);
* Section 28(u) of the Mineral Leasing Act of 1920 (30 U.S.C. 185), as amended by the Trans-Alaska Pipeline Authorization Act of 1973 (43 U.S.C. 1652);
* Section 201 of the Naval Petroleum Reserve Production Act of 1976 (10 U.S.C. 7430);
* Section 28 of the Outer Continental Shelf Lands Act of 1953 (43 U.S.C. 1343).

The main reason for this legislation was Congressional concern about the adequacy of oil supplies for the U.S. domestic market and the maintenance of low oil prices under the then prevalent price controls. It was widely held that any exports of price-controlled crude would have to be replaced by higher priced imports, which would raise consumer prices and add to inflationary pressures. Congress was also concerned about growing U.S. dependence on foreign oil supplies and wanted to ensure that U.S. crude oil reserves were utilized to reduce import dependence.

In 1973, Congress passed the Trans-Alaska Pipeline Authorization Act. In order to obtain Congressional support, the TAPS bill was amended to make Alaska North Slope (ANS) crude available only for domestic consumption. Subsequent legislation strengthened the export restrictions and no ANS crude has ever been available for export.

The Export Administration Act of 1979, as amended, is the principal statute that restricts the export of ANS crude oil. It applies the most stringent conditions of any legislation that restricts crude oil exports. Specifically, Section 7(d) of the EAA effectively prohibits the export of ANS crude oil unless it is pursuant to a bilateral international oil supply agreement entered into by the United States before June 25, 1979, or to any country pursuant to the International Emergency Oil Sharing Plan of the International Energy Agency. Section 7(d) does allow for ANS crude exports if the President makes certain findings and recommends to the Congress that exports be allowed, and thereafter obtains express Congressional approval within 60 days of the recommendation.

Congress recently passed the Export Administration Amendments Act of 1985 (EAAA). The EAAA continued and strengthened the restrictions on the export of ANS crude oil. While the EAAA runs for three years, the ban on ANS crude oil exports (Section 7(d)) was extended for five years.

Since Cook Inlet crude oil is not transported through TAPS, it does not fall under the above restriction. However, it is subject to the federal export restrictions generally applicable to domestic crude oil.

Section 103 of the Energy Policy and Conservation Act (EPCA) generally requires the President to prohibit the export of domestically produced crude oil, subject to certain possible exceptions. Should the President determine that the export of crude oil is in the national interest and consistent with the purposes of EPCA, a national interest finding may be made by the President and such oil can be exported.

In 1985, the Secretary of Commerce, with the concurrence of the Secretaries of State, Energy, and Treasury, determined that permitting the export of crude oil derived from Alaska's Cook Inlet is in the national interest and consistent with the purposes of the EPCA.

I contacted Steven Porter, Assistant Attorney General for the Department of Law in Anchorage. Mr. Porter has worked closely with DNR on oil issues. Attached is a copy of a memorandum written by Mr. Porter to Representative Szymanski in 1985 which summarizes federal restrictions on the foreign export of Alaska crude oil. The report by Congress on the export of Alaska North Slope crude oil mentioned on page 2 of Mr. Porter's memo is available in the Senate Advisory Council Library if you would like to review it.

There does not appear to be any other statutory restrictions on the export of U.S. domestic crude oil as strigent as the Export Administration Act of 1979 and subsequent amendments which focuses on the export of Alaska North Slope crude.

If I can provide additional information or be of further service, please call me.

LAL:lal
Attachments

U.S. oil export ban involves costs that hurt economy, rein energy search

The U.S. makes too many economic tradeoffs in its ban on crude oil exports outside North America.

The ban, a product of the Trans-Alaska Pipeline Act and adjustments to the Export Administration Act, is grounded in assumptions that no longer are valid. And it creates unnecessary costs that thwart development of new energy supply and clog the economy.

During the hectic environment created by the 1973-74 Arab oil embargo, Congress adopted the view that the U.S. should let none of its own production be sold overseas. At a time when the industrialized world felt doomed to perpetual petroleum shortage, when the strategic importance of crude oil became glaringly apparent, that seemed sensible. But events since then—mainly a dramatic decrease in consumption leading to what appears to be an extended oil surplus that will be magnified by new discoveries off California—have overturned the enduring-shortage scenario.

Strategic considerations of domestic production remain important, but they involve more than concern over where U.S. oil is sold. The export ban has produced economic inefficiencies far more threatening than near term chances for a supply interruption. By allowing exports, the U.S. could correct those inefficiencies and thus promote vital economic growth. It also could spur domestic energy development. And the ban could always be reimposed if these shipments ever posed a threat to energy security.

The export ban mainly affects production from Alaska, natural markets of which are the U.S. West Coast and Asia. The West Coast needs only about one-half the oil shipped from Valdez, so the remainder crosses Panama or circuits South America to reach refiners on the Gulf and East Coasts and in the Caribbean.

Shipment to Asia—probably Japan—in exchange for crude from foreign sources closer to those markets would be cheaper. That's partly because the routes are shorter. Also, the Jones Act requires that cargoes moving between U.S. coasts be shipped in U.S. vessels with U.S. crews, both of which are expensive by international standards. Thus, by proscribing international markets within easy reach of production, the U.S. creates a cost equal to the substantial difference between current shipping charges and what they would be if the less expensive alternative were legal. Ultimately, the cost is borne at the wellhead in the form of lower netbacks for North Slope production.

Depressed wellhead netbacks don't hurt just producers and Alaska. They limit exploration and development and thus reduce additions to U.S. oil reserves, which have much more to do with U.S. energy security than foreign sale of domestic production. Consumers, who have a great stake in energy supply security, therefore share the cost of wellhead netbacks depressed by nonmarket forces.

In fact, the main beneficiaries of the export ban are the ship owners. They enjoy Jones Act protection from foreign competition as well as a guaranteed market, so long as the U.S. closes foreign markets to Alaskan oil. The Heritage Foundation estimates that the Alaskan oil shipping business accounts for one-half of Jones Act traffic. It's not surprising, therefore, that U.S. ship owners and their friends in Congress lead the opposition to changes in laws blocking Alaskan crude exports or in the Jones Act itself.

Other groups could be hurt by an end to the export ban. Export of Alaskan crude might prove more profitable than movement of the oil inland from the West Coast via the proposed Northern Tier pipeline or alternative projects. Likewise, lifting of the export ban might encourage development of a North Slope LNG industry based on trade with Japan. That could doom the proposed gas pipeline from Alaska to the Lower 48. The Northern Tier oil pipeline and Alaskan gas line are major projects that would do much to facilitate U.S. energy transportation. But, if and when they are built, their economics shouldn't hinge on government market restrictions.

An end to the export ban might not trigger immediate exports to Japan because most North Slope producers already are committed to transportation arrangements linking U.S. markets. But it would encourage development of new petroleum supplies by opening market opportunities now closed by legalities that no longer serve U.S. economic or security objectives.

Alaska's well-travelled oil

America should sell it to the Japanese

Anybody seeking evidence that America could try harder to reduce its trade deficit with Japan need look no further than the Panama Canal. More than a third of the 1.8m-or-so barrels of oil gushing out of Alaska every day is shipped south to Panama, pumped through a pipeline across the isthmus, and reloaded on the other side bound for refineries on America's eastern seaboard. This tropical cruise is necessary because Congress forbids the export of Alaskan oil, choosing to ignore the first rule of salesmanship: do what your customers want. Since the 1970s, Japan has been begging to buy several billion dollars of Alaskan oil a year—enough to cut 5-10% off America's merchandise trade deficit with Japan.

It is true that most of the billions this would save from America's bilateral deficit with Japan would not reduce America's overall trade deficit as well. America now buys abroad one out of every three barrels it guzzles. So the crude sold to Japan would have to be replaced with stuff bought elsewhere. But the costs of America's present muddled policy are not really in dispute. Over half the crude now pumped from Alaska is used on America's west coast, where Alaska is indeed the cheapest source of supply. For the larger markets of America's east coast, Alaska plainly is not. According to guesses by America's own Federal Trade Commission, it would be about $800m a year cheaper to ship Alaskan oil to Japan, and supply America's east coast from South America or even the Middle East.

A main reason why America refuses to earn this money from Japan lies in a vague Congressional instinct that a ban on oil exports should make America more immune to OPEC's fiddling. This is the reverse of the truth. When the Americans entangle restrictive practices around their marketing of Alaskan oil, instead of sending it to the places where they could sell it most competitively, by definition they make the OPEC cartel's attempts at world-wide price-fixing easier. More immediately, much of the annual $800m that would be saved by eliminating the long trek across Panama would boost oil companies' profit margins on Alaskan oil. That should encourage the development of the vast new tracts of Alaska now being opened for oil exploration, and damage OPEC by increasing America's domestic production.

Two lobbies that weaken America

These facts are being hidden from the American public through hard lobbying by two special interest groups: merchant sailors and military planners. The sailors reckon

Alaskan oil exports would cost them jobs. The Jones Act requires cargoes bound from one American port to another, like Alaskan crude, to be carried in ships bearing the American flag. Cargoes bound for foreign ports escape the Jones Act, and are usually carried on foreign-flag ships at a fraction of the cost of sailing under the trade-unionised stars and stripes. The defence department wants to keep the flags flying because it has its eye on a fleet of American-flag tankers that could be commandeered in case of war. It prefers to tag the cost of maintaining that fleet on to oil consumers' bills rather than have the government pay it a subsidy directly.

Now that more of Alaska is being opened to oil explorers, the need to remove the ban on exports has become more urgent. Fewer oilmen will bid to dig in those frozen wastes if they cannot sell any output where they want. Unfortunately, because the ban has been written into the Export Administration Act, new laws will be required to change it. With Congress in its present protectionist mood, introducing trade legislation is like poking a hornets' nest. But protectionists should note that letting Japan buy Alaskan oil could prove a more useful bargaining tool than tariffs in extracting trade concessions from it. Unlike tariffs, which raise prices in America, exporting Alaska's oil would bring new benefits and strengths to the United States.

Lift Export Ban on Alaskan Crude

By Alan Bayless

With U.S. oil production declining and imports rising, some legislators in Washington are casting about for ways to stimulate the oil industry. The best policy would be to lift the ban on the export of Alaskan crude.

The U.S. could learn from Canada's example. In 1983, Ottawa decided to phase out the export restrictions it had imposed in 1975. The restrictions, and a decision to leave some Alberta oil in the ground, made Canada increasingly dependent on imports—contrary to the government's goal. As the nearby graph illustrates, Canada, which was a net crude exporter in the early 1970s, became a net importer in 1975 and remained one until 1983.

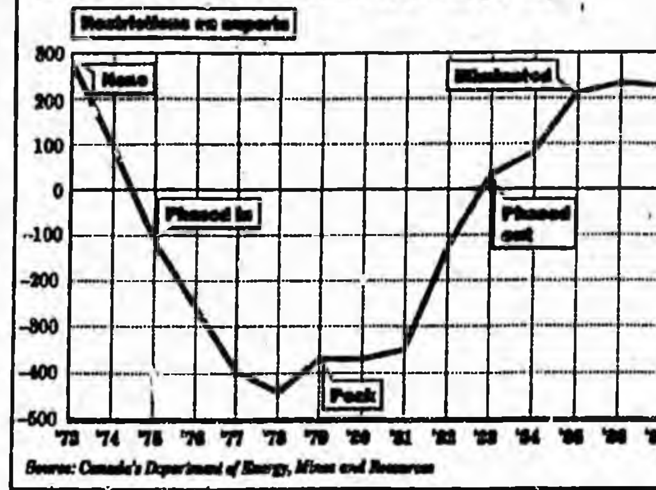
Along with the restrictions, Ottawa forced Alberta crude to move through a subsidized pipeline to Montreal and from there by subsidized tankers to the Maritime provinces. "It was inefficient. The best netback for Alberta oil producers was to sell in Chicago," admits David Oulton, director general of the Oil and Emergency Planning Branch of Canada's Department of Energy, Mines and Resources.

To be sure, the turnaround since 1983 isn't due only to the lifting of the export restrictions. Deregulation and higher prices also stimulated the oil industry and encouraged Canadians to use much less crude. Even so, Canada's re-emergence as a net oil exporter amazed energy experts, who had underestimated the country's ability to respond to market forces.

Lifting the export ban on Alaskan crude won't make the U.S. a net oil exporter, but it could increase U.S. oil output by up to 500,000 barrels daily in the early 1990s, according to a recent study by Arlon Tussing, a Seattle-based energy consultant, and his colleague Samuel Van Vactor.

Asia is the natural market for Alaskan crude, but in 1973, before the state's huge Prudhoe Bay field was developed, Congress decided to keep the supplies for the domestic market to promote oil self-reliance. Under the Jones Act of 1920, only high-cost, U.S.-flag tankers can carry Alaska crude to Panama, where it is unloaded, moved through an [illegible]-mile pipeline, and reloaded onto more U.S.-flag tankers for shipment to Gulf Coast refineries.

Mr. Tussing, also an adjunct professor at the University of Alaska, and Mr. Van Vactor, formerly a senior economist with the International Energy Agency, say that removal of the ban would likely boost oil production by 300,000 barrels a day in Alaska and by 200,000 barrels a day in California, assuming world oil prices of about $15 a barrel. The U.S. trade deficit would be cut by up to $3 billion a year and the federal budget deficit by up to $1 billion a year, while Alaska would gain $1 billion a year and state and local governments in California would get $500 million a year.



All this extra wealth would be created, they say, because the export ban depresses the wellhead value of all crude produced in Alaska and California by up to $4 a barrel. California's crude prices are hurt because Alaska producers flood that market to minimize the costly transit through Panama. Moreover, Messrs. Tussing and Van Vactor conclude that the California-crude discounts benefit refiners, not consumers, because refined products aren't subject to trade restrictions and are closely linked to world prices.

Of course, exports of Alaskan crude would force Gulf Coast and East Coast refiners to increase imports of foreign crude, a prospect that alarms many Americans even if there is a net trade benefit. From a security perspective, however, the U.S. has only exchanged one vulnerability for another, as demonstrated last month when a political strike closed the Panama pipeline for two days. Moreover, contracts could be worded to allow U.S. oil companies to divert Alaskan crude back to the domestic market if the U.S. faced a supply cutoff.

In any event, lifting the ban wouldn't lead to gas lineups, even in a crisis, as long as Washington didn't repeat the 1970s policy of imposing price controls and rationing. The U.S. would pay more for oil imports, but could charge more for exports. As with Canada, greater domestic production would be available before and during a crisis.

Removal of the U.S. export ban would hurt U.S. shipowners and seamen, since Alaskan crude could be moved less expensively in foreign tankers. Until now, the maritime industry has protected its position by asserting that the export ban has little impact on U.S. crude production and prices, even though the marginal cost of shipping Alaskan crude to Japan is as little as 50 cents a barrel, according to Mr. Van Vactor, compared with $3.50 or more to the Gulf Coast. The maritime industry also claims that a U.S.-flag tanker fleet is needed for national emergencies, but Mr. Tussing argues that an oil-supply crisis would create a surplus of foreign tankers, because higher world prices would reduce global oil demand. He says the foreign tankers—many of them controlled by U.S. companies—could readily be hired to serve U.S. interests on a commercial basis.

Although Alaska favors lifting the export ban, Gov. Steve Cowper is reluctant to press the issue, fearing it will hurt efforts to convince Congress that the Arctic National Wildlife Refuge should be opened to oil exploration. "People don't want to support the development of oil if it is going to be exported to foreign countries," he says.

Nevertheless, the Reagan administration has managed to put one chink in the ban by permitting exports from Alaska's relatively small Cook Inlet oil deposit. A second chink is contained in the proposed U.S.-Canada Free Trade Pact, which would permit the sale to Canada of 50,000 barrels of Alaskan crude daily.

Even though the crude would first be landed in the lower 48 states and would use U.S. tankers, a pro-maritime lobby group called the Coalition to Keep Alaska Oil opposes the exports to Canada. In recent testimony before a congressional subcommittee, coalition spokesman Howard Marlowe expressed concern that the opening will set a precedent when the export ban comes up for review again next year.

Judging from Canada's experience and the political volatility in Panama, Congress should overlook the coalition's concerns and permit all Alaskan oil to be exported. The prospect of 500,000 barrels a day of additional crude production ought to outweigh the interests of the maritime industry.

REVIEW & OUTLOOK

Crude Question

When Japan's Prime Minister Yasuhiro Nakasone visits Washington next week, we hope he asks President Reagan when the U.S. is going to get serious about opening the Japanese market to American products. That's right. When is the U.S. going to allow American goods into Japan?

Under the Export Administration Act of 1979, crude oil from the North Slope of Alaska must be sold within the United States. Removing this export prohibition would simplify a Rube Goldberg system of oil transport and reduce the U.S.-Japan trade deficit, perhaps by several billion dollars.

Every day, 1.6 million barrels of crude flow through the Alaska pipeline into tankers at the port of Valdez. From there, 900,000 to one million barrels are transported to West Coast refineries, at a cost of about $1.25 per barrel. Most of the remainder makes an unnecessarily long and expensive trip—by tanker to the West Coast of Panama, through a pipeline or the Panama Canal to Caribbean tankers, and thence to the U.S. Gulf Coast, at a cost of $4.50-$5.50 a barrel.

Without the export prohibition, one would expect much of the Gulf Coast oil to be sold to Asian countries, especially Japan. For one thing, transport costs across the Pacific are about 50 cents a barrel. For another, Japan wants to diversify its oil sources, to reduce its heavy dependency on the Persian Gulf. Meanwhile, it would be advantageous for Gulf Coast refiners to purchase more crude from Mexico and Venezuela (transport costs about $1 per barrel), which incidentally, could use the foreign exchange.

For the U.S., exporting more oil to Asia, importing more from the Caribbean, the balance of payments would be a wash. But trade tensions with Japan could be reduced. The U.S. would have more leverage in asking the Japanese not to underwrite Soviet development of energy resources in Sakhalin. And assuming 500,000 barrels a day of sales to Japan, at a wellhead price of $20, the U.S.-Japan deficit could fall by $3.65 billion.

It isn't clear that Japanese refiners would buy that much, of course. They have long-term contracts with existing suppliers, and their total demand for crude has been declining. Meanwhile, U.S. oil companies will want to recoup the investments they have made—in tanker fleets, the $300 million Panama pipeline—under the assumption that the export ban would continue. But over time, it will make more logistic and economic sense to send Alaskan oil to the Far East than to the Gulf.

The export ban was originally enacted as a result of heavy lobbying by environmentalists who opposed the Alaska pipeline, and wanted to make sure it was built only for reasons of national energy independence. But today, the ban is primarily supported by maritime unions. Oil shipped across the Pacific would go in foreign bottoms; in the U.S. trade, under the Jones Act, cargoes must be carried in overmanned U.S.-flagships with overpaid U.S. seamen.

So perhaps Mr. Nakasone should ask Mr. Reagan whether his trade negotiators will jawbone the U.S. Congress and domestic maritime unions as much as they press against the Japanese government. In keeping the Japanese market closed, both sides are culpable.

∫ — OIL EXPORT BAN

ANS EXPORT MODEL

Parameters:	
Alaska Royalty Sales (MMb/d)	.10 } ~~total~~ Exported
Producer Sales (Mmb/d)	.20
Transportation Cost	
Valdez to U.S. Gulf ($/b)	3.20
Valdez to U.S. West	1.05
Valdez to Japan Jones Act ($/b)	1.50
Valdez to Japan Foreign ($/b)	.45
Current Price Difference West/Gulf ($/b)	1.20
Post Export Price Difference West/Gulf	.00
Proportion Gulf Coast Sales	.30
ANS State Royalty %	.13
Total ANS Production	1.95
Average Severance Tax Rate	.12
Calculated Parameters	
West to Gulf Transport Differential	2.15
West to Japan Transport Differential Jones Act Tanker	.45

	Without West Coast Price Effect (Millions $)		With West Coast Price Effect (Millions $)	
Royalty				
State Sales Jones Act	18.62		49.28	
State Sales Foreign	30.11		60.77	
Royalty Invalue and Priced at Invalue				
Jones Act	2.7[illegible]		7.26	
Foreign	4.[illegible]4		8.96	
Severance Taxes				
Jones Act	13.37		73.53	
Foreign	21.62		81.78	
Totals		Unrestricted		Unrestricted
Jones Act				
Royalty	21.36	16.02	56.54	42.40
Severance	13.37	13.37	73.53	73.53
Total Revenue	34.73	29.39	130.07	115.93
Foreign				
Royalty	34.55	25.91	69.73	52.30
Severance	21.62	21.62	81.78	81.78
Total Revenue	56.17	47.53	151.51	134.08

Council, compensation.

(c) Each member of the Advisory Council who is appointed from private life shall receive $100 a day for each day during which he is engaged in the actual performance of his duties as a member of the Council. A member of the Council who is an officer or employee of the Federal Government shall serve without additional compensation. All members of the Council shall be reimbursed for travel, subsistence, and other necessary expenses incurred by them in the performance of such duties.

Travel expenses, etc.

SEC. 8. Nothing in this legislation shall be construed to restrict or infringe upon the authority of any Federal department or agency.

80 Stat. 525. 5 USC 7321-7327.

SEC. 9. Subchapter III of chapter 73 of title 5, United States Code, shall apply to the employees of the Committee and the employees of the Advisory Council.

Appropriation.

SEC. 10. There are hereby authorized to be appropriated for fiscal years 1970 and 1971 such sums as may be necessary to carry out the provisions of this Act, and any funds heretofore and hereafter made available for expenses of the Interagency Committee on Mexican-American Affairs established by the President's memorandum of June 9, 1967, shall be available for the purposes of this Act.

Report to President and Congress.

SEC. 11. The Committee shall, as soon as practicable, after the end of each fiscal year, submit a report to the President and the Congress of its activities for the preceding year, including in such report any recommendations the Committee deems appropriate to accomplish the purposes of this Act.

Expiration date.

SEC. 12. This Act shall expire five years after it becomes effective.

Approved December 30, 1969.

Public Law 91-182

December 30, 1969 [H. J. Res. 1041]

JOINT RESOLUTION

Establishing that the second regular session of the Ninety-first Congress convene at noon on Monday, January 19, 1970.

91st Congress. Second session.

Resolved by the Senate and House of Representatives of the United States of America in Congress assembled, That the second regular session of the Ninety-first Congress shall begin at noon on Monday, January 19, 1970.

Approved December 30, 1969.

Public Law 91-183

December 30, 1969 [H. R. 941]

AN ACT

To amend section 404(d) of title 37, United States Code, by increasing the maximum rates of per diem allowance and reimbursement authorized, under certain circumstances, to meet the actual expenses of travel.

Per diem, increase. 76 Stat. 472; 80 Stat. 1122.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That section 404(d) of title 37, United States Code, is amended by striking out "$16" and "$30", respectively, and inserting in place thereof "$25" and "$40".

Approved December 30, 1969.

Public Law 91-184

December 30, 1969 [H. R. 4293]

AN ACT

To provide for continuation of authority for regulation of exports.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

Export Administration Act of 1969.

SHORT TITLE

SECTION 1. This Act may be cited as the "Export Administration Act of 1969".

FINDINGS

SEC. 2. The Congress makes the following findings:

(1) The availability of certain materials at home and abroad varies so that the quantity and composition of United States exports and their distribution among importing countries may affect the welfare of the domestic economy and may have an important bearing upon fulfillment of the foreign policy of the United States.

(2) The unrestricted export of materials, information, and technology without regard to whether they make a significant contribution to the military potential of any other nation or nations may adversely affect the national security of the United States.

(3) The unwarranted restriction of exports from the United States has a serious adverse effect on our balance of payments.

(4) The uncertainty of policy toward certain categories of exports has curtailed the efforts of American business in those categories to the detriment of the overall attempt to improve the trade balance of the United States.

DECLARATION OF POLICY

SEC. 3. The Congress makes the following declarations:

(1) It is the policy of the United States both (A) to encourage trade with all countries with which we have diplomatic or trading relations, except those countries with which such trade has been determined by the President to be against the national interest, and (B) to restrict the export of goods and technology which would make a significant contribution to the military potential of any other nation or nations which would prove detrimental to the national security of the United States.

Export controls.

(2) It is the policy of the United States to use export controls (A) to the extent necessary to protect the domestic economy from the excessive drain of scarce materials and to reduce the serious inflationary impact of abnormal foreign demand, (B) to the extent necessary to further significantly the foreign policy of the United States and to fulfill its international responsibilities, and (C) to the extent necessary to exercise the necessary vigilance over exports from the standpoint of their significance to the national security of the United States.

(3) It is the policy of the United States (A) to formulate, reformulate, and apply any necessary controls to the maximum extent possible in cooperation with all nations with which the United States has defense treaty commitments, and (B) to formulate a unified trade control policy to be observed by all such nations.

(4) It is the policy of the United States to use its economic resources and trade potential to further the sound growth and stability of its economy as well as to further its national security and foreign policy objectives.

Restrictive trade practices or boycotts.

(5) It is the policy of the United States (A) to oppose restrictive trade practices or boycotts fostered or imposed by foreign countries against other countries friendly to the United States, and (B) to encourage and request domestic concerns engaged in the export of articles, materials, supplies, or information, to refuse to take any action, including the furnishing of information or the signing of agreements, which has the effect of furthering or supporting the restrictive trade practices or boycotts fostered or imposed by any foreign country against another country friendly to the United States.

AUTHORITY

SEC. 4. (a)(1) The Secretary of Commerce shall institute such organizational and procedural changes in any office or division of the Department of Commerce which has heretofore exercised functions relating to the control of exports and continues to exercise such controls under this Act as he determines are necessary to facilitate and effectuate the fullest implementation of the policy set forth in this Act with a view to promoting trade with all nations with which the United States is engaged in trade, including trade with (A) those countries or groups of countries with which other countries or groups of countries having defense treaty commitments with the United States have a significantly larger percentage of volume of trade than does the United States, and (B) other countries eligible for trade with the United States but not significantly engaged in trade with the United States. In addition, the Secretary shall review any list of articles, materials, or supplies, including technical data or other information, the exportation of which from the United States, its territories and possessions, was heretofore prohibited or curtailed with a view to making promptly such changes and revisions in such list as may be necessary or desirable in furtherance of the policy, purposes, and provisions of this Act. The Secretary shall include a detailed statement with respect to actions taken in compliance with the provisions of this paragraph in the second quarterly report (and in any subsequent report with respect to actions taken during the preceding quarter) made by him to the Congress after the date of enactment of this Act pursuant to section 10.

(2) The Secretary of Commerce shall use all practicable means available to him to keep the business sector of the Nation fully apprised of changes in export control policy and procedures instituted in conformity with this Act with a view to encouraging the widest possible trade.

Presidential determination.

(b) To effectuate the policies set forth in section 3 of this Act, the President may prohibit or curtail the exportation from the United States, its territories and possessions, of any articles, materials, or supplies, including technical data or any other information, except under such rules and regulations as he shall prescribe. To the extent necessary to achieve effective enforcement of this Act, these rules and regulations may apply to the financing, transporting, and other servicing of exports and the participation therein by any person. Rules and regulations may provide for denial of any request or application for authority to export articles, materials, or supplies, including technical data, or any other information, from the United States, its territories and possessions, to any nation or combination of nations threatening the national security of the United States if the President determines that their export would prove detrimental to the national security of the United States, regardless of their availability from nations other than any nation or combination of nations threatening the national security of the United States, but whenever export licenses are required on the ground that considerations of national security override considerations of foreign availability, the reasons for so doing shall be reported to the Congress in the quarterly report following the decision to require such licenses on that ground to the extent considerations of national security and foreign policy permit. The rules and regulations shall implement the provisions of section 3(5) of this Act and shall require that all domestic concerns receiving requests for the furnishing of information or the signing of agreements as specified in that section must report this fact to the Secretary of Commerce for such action as he may deem appropriate to carry out the purposes of that section.

Report to Congress.

Report

(c) Nothing in this Act, or in the rules and regulations authorized by it, shall in any way be construed to require authority and permission to export articles, materials, supplies, data, or information except where the national security, the foreign policy of the United States, or the need to protect the domestic economy from the excessive drain of scarce materials makes such requirement necessary.

(d) The President may delegate the power, authority, and discretion conferred upon him by this Act to such departments, agencies, or officials of the Government as he may deem appropriate.

Agricultural commodities exception.

(e) The authority conferred by this section shall not be exercised with respect to any agricultural commodity, including fats and oils, during any period for which the supply of such commodity is determined by the Secretary of Agriculture to be in excess of the requirements of the domestic economy, except to the extent required to effectuate the policies set forth in clause (B) or (C) of paragraph (2) of section 3 of this Act.

CONSULTATION AND STANDARDS

SEC. 5. (a) In determining what shall be controlled hereunder, and in determining the extent to which exports shall be limited, any department, agency, or official making these determinations shall seek information and advice from the several executive departments and independent agencies concerned with aspects of our domestic and foreign policies and operations having an important bearing on exports. Consistent with considerations of national security, the President shall from time to time seek information and advice from various segments of private industry in connection with the making of these determinations.

(b) In authorizing exports, full utilization of private competitive trade channels shall be encouraged insofar as practicable, giving consideration to the interests of small business, merchant exporters as well as producers, and established and new exporters, and provision shall be

made for representative trade consultation to that end. In addition, there may be applied such other standards or criteria as may be deemed necessary by the head of such department, or agency, or official to carry out the policies of this Act.

VIOLATIONS

Penalty.

SEC. 6. (a) Except as provided in subsection (b) of this section, whoever knowingly violates any provision of this Act or any regulation, order, or license issued thereunder shall be fined not more than $10,000 or imprisoned not more than one year, or both. For a second or subsequent offense, the offender shall be fined not more than three times the value of the exports involved or $20,000, whichever is greater, or imprisoned not more than five years, or both.

Communist-dominated nations, export prohibition; penalty.

(b) Whoever willfully exports anything contrary to any provision of this Act or any regulation, order, or license issued thereunder, with knowledge that such exports will be used for the benefit of any Communist-dominated nation, shall be fined not more than five times the value of the exports involved or $20,000, whichever is greater, or imprisoned not more than five years, or both.

(c) The head of any department or agency exercising any functions under this Act, or any officer or employee of such department or agency specifically designated by the head thereof, may impose a civil penalty not to exceed $1,000 for each violation of this Act or any regulation, order, or license issued under this Act, either in addition to or in lieu of any other liability or penalty which may be imposed.

(d) The payment of any penalty imposed pursuant to subsection (c) may be made a condition, for a period not exceeding one year after the imposition of such penalty, to the granting, restoration, or continuing validity of any export license, permission, or privilege granted or to be granted to the person upon whom such penalty is imposed.

(e) Any amount paid in satisfaction of any penalty imposed pursuant to subsection (c) shall be covered into the Treasury as a miscellaneous receipt. The head of the department or agency concerned may, in his discretion, refund any such penalty, within two years after payment, on the ground of a material error of fact or law in the imposition. Notwithstanding section 1346(a) of title 28 of the United States Code, no action for the refund of any such penalty may be maintained in any court.

62 Stat. 933; 68 Stat. 589.

(f) In the event of the failure of any person to pay a penalty imposed pursuant to subsection (c), a civil action for the recovery thereof may, in the discretion of the head of the department or agency concerned, be brought in the name of the United States. In any such action, the court shall determine de novo all issues necessary to the establishment of liability. Except as provided in this subsection and in subsection (d), no such liability shall be asserted, claimed, or recovered upon by the United States in any way unless it has previously been reduced to judgment.

(g) Nothing in subsection (c), (d), or (f) limits

(1) the availability of other administrative or judicial remedies with respect to violations of this Act, or any regulation, order, or license issued under this Act;

(2) the authority to compromise and settle administrative proceedings brought with respect to violations of this Act, or any regulation, order, or license issued under this Act; or

(3) the authority to compromise, remit, or mitigate seizures and forfeitures pursuant to section 1(b) of title VI of the Act of June 15, 1917 (22 U.S.C. 401(b)).

67 Stat. 577.

ENFORCEMENT

SEC. 7. (a) To the extent necessary or appropriate to the enforcement of this Act or to the imposition of any penalty, forfeiture, or liability arising under the Export Control Act of 1949, the head of any department or agency exercising any function thereunder (and officers or employees of such department or agency specifically designated by the head thereof) may make such investigations and obtain such information from, require such reports or the keeping of such records by, make such inspection of the books, records, and other writings, premises, or property of, and take the sworn testimony of, any person. In addition, such officers or employees may administer oaths or affirmations, and may by subpena require any person to appear and testify or to appear and produce books, records, and other writings, or both, and in the case of contumacy by, or refusal to obey a subpena issued to, any such person, the district court of the United States for any district in which such person is found or resides or transacts business, upon application, and after notice to any such person and hearing, shall have jurisdiction to issue an order requiring such person to appear and give testimony or to appear and produce books, records, and other writings, or both, and any failure to obey such order of the court may be punished by such court as a contempt thereof.

63 Stat. 7. 50 USC app. 2021 note. Ante, p. 169.

Recordkeeping.

Subpena power.

Availability of records.

Self-incrimination, exception.

(b) No person shall be excused from complying with any requirements under this section because of his privilege against self-incrimination, but the immunity provisions of the Compulsory Testimony Act of February 11, 1893 (27 Stat. 443; 49 U.S.C. 46) shall apply with respect to any individual who specifically claims such privilege.

Disclosure of confidential information, prohibition.

(c) No department, agency, or official exercising any functions under this Act shall publish or disclose information obtained hereunder which is deemed confidential or with reference to which a request for confidential treatment is made by the person furnishing such information, unless the head of such department or agency determines that the withholding thereof is contrary to the national interest.

(d) In the administration of this Act, reporting requirements shall be so designed as to reduce the cost of reporting, recordkeeping, and export documentation required under this Act to the extent feasible consistent with effective enforcement and compilation of useful trade statistics. Reporting, recordkeeping, and export documentation requirements shall be periodically reviewed and revised in the light of developments in the field of information technology. A detailed statement with respect to any action taken in compliance with this subsection shall be included in the first quarterly report made pursuant to section 10 after such action is taken.

EXEMPTION FROM CERTAIN PROVISIONS RELATING TO ADMINISTRATIVE PROCEDURE AND JUDICIAL REVIEW

SEC. 8. The functions exercised under this Act are excluded from the operation of sections 551, 553-559, and 701-706, of title 5 United States Code.

80 Stat. 381, 392.

INFORMATION TO EXPORTERS

SEC. 9. In order to enable United States exporters to coordinate their business activities with the export control policies of the United States Government, the agencies, departments, and officials responsible for implementing the rules and regulations authorized under this Act shall, if requested, and insofar as it is consistent with the national security, the foreign policy of the United States, the effective administration of this Act, and requirements of confidentiality contained in this Act—

(1) inform each exporter of the considerations which may cause his export license request to be denied or to be the subject of lengthy examination;

(2) in the event of undue delay, inform each exporter of the circumstances arising during the Government's consideration of his export license application which are cause for denial or for further examination;

(3) give each exporter the opportunity to present evidence and information which he believes will help the agencies, departments, and officials concerned to resolve any problems or questions which are, or may be, connected with his request for a license; and

(4) inform each exporter of the reasons for a denial of an export license request.

QUARTERLY REPORT

SEC. 10. The head of any department or agency, or other official exercising any functions under this Act, shall make a quarterly report, within 45 days after each quarter, to the President and to the Congress of his operations hereunder.

DEFINITION

"Person."

SEC. 11. The term "person" as used in this Act includes the singular and the plural and any individual, partnership, corporation, or other form of association, including any government or agency thereof.

EFFECTS ON OTHER ACTS

50 USC 86-88 note.

SEC. 12. (a) The Act of February 15, 1936 (49 Stat. 1140), relating to the licensing of exports of tinplate scrap, is hereby superseded; but nothing contained in this Act shall be construed to modify, repeal, supersede, or otherwise affect the provisions of any other laws authorizing control over exports of any commodity.

(b) The authority granted to the President under this Act shall be exercised in such manner as to achieve effective coordination with the authority exercised under section 414 of the Mutual Security Act of 1954 (22 U.S.C. 1934).

68 Stat. 848.

EFFECTIVE DATE

SEC. 13. (a) This Act takes effect upon the expiration of the Export Control Act of 1949.

Ante, p. 169.

(b) All outstanding delegations, rules, regulations, orders, licenses, or other forms of administrative action under the Export Control Act of 1949 or section 6 of the Act of July 2, 1940 (54 Stat. 714), shall, until amended or revoked, remain in full force and effect, the same as if promulgated under this Act.

50 USC app. 701 note.

TERMINATION DATE

SEC. 14. The authority granted by this Act terminates on June 30, 1971, or upon any prior date which the Congress by concurrent resolution or the President by proclamation may designate.

Approved December 30, 1969.

Public Law 91-185

December 30, 1969 [H. R. 14571]

AN ACT

To amend the Central Intelligence Agency Retirement Act of 1964 for Certain Employees, as amended, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That—

Central Intelligence Agency Retirement Act of 1964 for Certain Employees, amendment.

SECTION 1. Section 211(a) of the Central Intelligence Agency Retirement Act of 1964 for Certain Employees, as amended (78 Stat. 1043; 50 U.S.C. 403 note), is further amended by striking out "Six and one-half per centum" in the first sentence and inserting "Seven per centum".

Average pay computation. 78 Stat. 1045.

SEC. 2. Section 221 of the Central Intelligence Agency Retirement Act (50 U.S.C. 403 note) is amended:

(a) by striking out in paragraph (a) "five consecutive years of service," and inserting "three consecutive years of service (or, in the case of an annuity computed under section 232 and based on less than three years, over the total service),";

(b) by striking out from the first sentence of paragraph (b) "or remarriage of such surviving wife or husband" and inserting "or upon remarriage prior to attaining age sixty of such surviving wife or husband";

(c) by striking out in paragraph (c) the items "40 per centum", "$600", "$1,800", "50 per centum", "$720", and "$2,160", and inserting "60 per centum", "$900", "$2,700", "75 per centum", "$1,080", and "$3,240";

(d) by adding new paragraph (g):

Remarriage provisions.

"(g) In the case of remarriage on or after age sixty an annuity shall be payable if remarriage has occurred on or after July 18, 1966, and

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FRANK H. MURKOWSKI
ALASKA

United States Senate

WASHINGTON, D. C.

February 6, 1989

The Honorable Betty Fahrenkamp
Alaska State Senate
P.O. Box V
Juneau, AK 99811

Dear Betty:

I understand that you have introduced legislation to appropriate funds for the State of Alaska to use in lobbying Congress for the removal of the oil export ban.

I thought you might be interested in seeing my op-ed article on oil export and ANWR which will be published in the Friday edition of the Anchorage Times.

I hope you find it helpful.

Sincerely,

Frank H. Murkowski
United States Senator

Enclosure

Happy to talk to you at your convenience

EMBARGOED UNTIL 3:00 PM FRIDAY, FEBRUARY 10, 1989

IT WILL TAKE MORE THAN NEW LAW TO EXPORT OUR OIL

BY FRANK MURKOWSKI

THERE'S A SAYING THAT YOU CAN LEAD A HORSE TO WATER, BUT YOU CAN'T MAKE IT DRINK. ONE COULD USE IT TO SUM UP ALASKA'S EFFORTS TO EXPORT OUR OIL OVERSEAS.

HERE'S THE POSITION IN WHICH WE FIND OURSELVES REGARDING OIL EXPORT. FIRST, THERE'S THE 1912 JONES ACT WHICH REQUIRES THAT MARITIME COMMERCE BETWEEN TWO U.S. PORTS BE ABOARD U.S.-BUILT SHIPS AND CREWED BY U.S. SEAMEN. THEN THERE'S THE EXPORT ADMINISTRATION ACT AND THE PIPELINE AUTHORIZATION ACT THAT REQUIRE ALASKA'S OIL ONLY TO BE DELIVERED TO OTHER U.S. PORTS (NO EXPORT). OBVIOUSLY, THIS SCENARIO BODES WELL FOR THE U.S. MARITIME INDUSTRY -- FROM SHIP BUILDERS TO MARITIME UNIONS, WHO DEPEND HEAVILY ON THE ALASKA OIL TRANSPORTATION SYSTEM.

FROM THE STATE'S STANDPOINT, IF THE SITUATION WERE CHANGED AND OIL COULD BE EXPORTED OVERSEAS THE STATE OF ALASKA WOULD REALIZE AN INCREASE IN REVENUES. ON ONE HAND, THERE'S A GOOD CHANCE THAT OUR ROYALTY OIL (1/8 OF ALL PRODUCTION) WOULD SELL

THIS IS SIGNIFICANT, BECAUSE FOR THE FIRST TIME SINCE 1973, WHEN CONGRESS PASSED THE OIL EXPORT BAN AS PART OF THE TRANS-ALASKA PIPELINE AUTHORIZATION ACT, CONGRESS HAS ALLOWED LIMITED EXPORTS OF ANS CRUDE OIL. THIS PARTICULAR PROVISION IN THE FTA WAS NOT WITHOUT ITS OPPONENTS. LEADING THE FIGHT AGAINST THE OIL EXPORT PROVISION WERE THE MARITIME INDUSTRY (INCLUDING SHIP OWNERS, SHIP BUILDERS, SHIP REPAIR FACILITIES, AND MARITIME UNIONS), WHO'S MEMBERS BENEFIT TREMENDOUSLY FROM THE CURRENT DOMESTIC COMMERCE REQUIREMENT. THE MOVEMENT OF ANS CRUDE, IN FACT, CONSTITUTES THE LARGEST SINGLE SOURCE OF EMPLOYMENT FOR THE U.S. MARITIME FLEET. IF THE EXPORT BAN WERE REMOVED, THE MARITIME INDUSTRY STANDS TO LOSE MORE THAN 2,000 JOBS.

THEIR LOBBYING DURING THE DEBATE OF THE FREE TRADE AGREEMENT WAS INITIALLY SUCCESSFUL. IN THE FIRST DRAFT TEXT OF THE AGREEMENT, LANGUAGE WAS INCLUDED THAT WOULD HAVE REQUIRED THE OIL TO BE SHIPPED FROM ALASKA TO A PORT IN THE LOWER 48 BEFORE BEING EXPORTED TO CANADA. THE ADDED TRANSPORTATION COST THAT WOULD HAVE RESULTED FROM THIS REQUIREMENT WOULD HAVE SUBSTANTIALLY REDUCED THE BENEFITS OF EXPORTING THE OIL TO CANADA. HOWEVER, AFTER A LONG AND DIFFICULT NEGOTIATING PROCESS, TED, DON AND I WERE SUCCESSFUL IN REPLACING THIS REQUIREMENT WITH ONE PERMITTING DIRECT SHIPMENT FROM VALDEZ TO CANADA ABOARD U.S. FLAG VESSELS. SO WE ARE MAKING PROGRESS!

THOSE OF US WHO HAVE BEEN WORKING TO REMOVE THE EXPORT BAN ENTIRELY HAILED THE PROVISIONS IN THE FREE TRADE AGREEMENT AS AN IMPORTANT FIRST STEP. HOWEVER, SINCE THE FTA ENTERED INTO FORCE, WE HAVE YET TO SEE ONE U.S. OIL COMPANY TAKE ADVANTAGE OF THE EXPORT OPPORTUNITY CREATED BY THIS AGREEMENT.

THIS UNDERLIES AN IMPORTANT POINT: FOR ALL OF THE EFFORTS THAT THE STATE OF ALASKA AND CITIZENS OF ALASKA PUT INTO EFFORTS TO LIFT THE EXPORT BAN, WE MUST KEEP IN MIND THAT NEITHER THE STATE, NOR ITS CITIZENS, CAN MANDATE TO THE PRODUCERS WHERE THAT OIL MUST GO. IN 1967, IN RETURN FOR $900,000,000 AND 1/8 ROYALTY OF PRODUCTION, WE SOLD LEASES ON PRUDHOE BAY WHICH GAVE THE OIL COMPANIES THE RIGHT TO EXTRACT THE OIL, AND THE RIGHT TO MARKET THAT OIL AS THEY DETERMINED WOULD BE IN THEIR BEST INTEREST.

DESPITE OUR BEST EFFORTS, WE WON'T SEE ONE DROP OF ALASKA NOR[illegible] CRUDE EXPORTED--TO CANADA OR ANYWHERE ELSE--UNTIL THE PRODUCERS DETERMINE THAT IT IS THEIR BEST INTEREST TO DO SO.

THERE IS SOME JUSTIFICATION FOR THE MAJOR OIL COMPANIES RELUCTANCE TO PUSH FOR THE OUTRIGHT REMOVAL OF THE EXPORT BAN. THEY HAVE MADE VERY SIGNIFICANT FINANCIAL INVESTMENTS IN TRANSPORTATION SYSTEMS, USING U.S. BUILT AND U.S. CREWED TANKERS AND WEST AND GULF COAST REFINERIES BASED ON THE PREMISE THAT THEY

COULD ONLY SELL ANS CRUDE OIL ON THE DOMESTIC MARKET. IF THEY WERE TO EXPORT ANS CRUDE, SAY ON A BARREL FOR BARREL EXCHANGE FOR MEXICAN OIL, THEY WOULD HAVE TO RETROFIT THEIR REFINERIES TO PROCESS THE HEAVY MEXICAN CRUDE. IN OTHER WORDS, WERE THE BAN TO BE LIFTED, THE COMPANIES' INVESTMENTS COULD BE JEOPARDIZED.

THEREFORE, NOTWITHSTANDING THE INCREASED REVENUES THAT WOULD ACCRUE TO THE STATE AND FEDERAL GOVERNMENT IF THE EXPORT BAN WERE LIFTED TOMORROW, THERE REMAINS SOME QUESTION AS TO WHETHER OR NOT THE PRODUCERS OF THE OIL WOULD ACT IMMEDIATELY TO TAKE ADVANTAGE OF SUCH AN OPPORTUNITY.

DOES THIS MEAN THAT WE SHOULD GIVE UP OUR EFFORTS TO SEEK PASSAGE OF LEGISLATION THAT WOULD LIFT THE BAN? CERTAINLY NOT. ALLOWING MARKET FORCES TO DETERMINE WHERE ALASKA CRUDE OIL IS SOLD WOULD REMOVE A CUMBERSOME REGULATORY BURDEN AND GIVE U.S. PRODUCERS FLEXIBILITY TO RESPOND TO CHANGES IN THE INTERNATIONAL MARKET PLACE. BUT DO THE PRODUCERS WANT IT? SINCE ALASKA NORTH SLOPE OIL BEGAN PRODUCTION MORE THAN A DECADE AGO, I'VE YET TO SEE AN OWNER OF A PRUDHOE BAY LEASE OR ONE OF THE PRODUCERS REQUEST OF MY SENATE OFFICE A CHANGE IN THE LAW TO ALLOW THEM TO EXPORT ALASKA OIL.

ANWR IS MOVING FAST. FROM MY PERSPECTIVE, ALASKA MIGHT WANT TO CONCENTRATE OUR LIMITED RESOURCES ON OBJECTIVES THAT WE KNOW CAN MEAN JOBS AND CONTINUED REVENUES AFTER THE RESERVOIR AT PRUDHOE BEGINS TO DWINDLE -- AND THAT'S OPENING ANWR. AN EFFORT TO LOBBY FOR OIL EXPORT WOULD BE USED BY THE OPPONENTS OF ANWR AS AN ARGUMENT THAT ALASKA OIL IS NOT NEEDED FOR THE COUNTRY'S NATIONAL ENERGY SECURITY, IF WE TURN AROUND AND EXPORT THE OIL TO JAPAN. WE DON'T NEED THAT ADDITIONAL HANDICAP FOR THE ANWR FIGHT, WHICH IS NOW UNDERWAY. IF WE CAN GET ANWR OPENED UP IN THE NEXT FEW MONTHS, WE CAN THEN GO BACK AND CONCENTRATE OUR EFFORTS ON THE TASK OF REMOVING THE PROTECTIONIST BARRIERS ON MARKETING ALASKA RESOURCES TO THE MARKETS OF THE WORLD.

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CALIFORNIA INDEPENDENT PETROLEUM ASSOCIATION

10231 SLATER AVENUE, #200 • FOUNTAIN VALLEY, CA 92708-4785
(714) 963-8450 FAX (714) 963-9685

- CRUDE OIL
- NATURAL GAS
- GEOTHERMAL

FEB 23 1989

MEMORANDUM

DATE: February 7, 1989

TO: Charles H. Jones, Jr., Long Beach Oil Development
Douglas K. Brown, Mission Resources
David Kilpatrick, Santa Fe Energy
J.B. Williams, Santa Fe Energy
G. Neil Buttram, OXY USA, Inc.
William Stokes, Sun Exploration & Production
John Carmichael, ANGUS Petroleum Corp.
Murdock Baker, Seneca Resources
Jerry V. Hoffman, Berry Petroleum
Thomas C. Powell, Pennzoil Company
Lee C. McFarland, McFarland Energy, Inc.
Timothy Campbell, Campbell Energy Corporation
J. Russell Sherman, Atlantic Oil Company
Edward N. Gladish, Union Pacific Resources

FROM: Thomas Hunt, Executive Vice President

RE: Congressman Bill Thomas and Exports of ANS

The Congressman from Kern County plans to submit legislation which would effectively eliminate barriers now prohibiting export of ANS crude. As is the case with our association's view of this objective, it is one that requires a long term view, but nonetheless must have a start.

CIPA has supplied Congressman Thomas and his aide Mark Kirby with documents we have on file supporting the export of ANS, however, I would hope that your respective companies may have in house, or access to, other materials which would serve to support the Congressman and his staff in preparing a "Dear Colleague" letter, an instrument used to not only inform but also to solicit co-author interest as well. Particularly studies with California/USA economic impacts, environmental advantages, etc. would be beneficial.

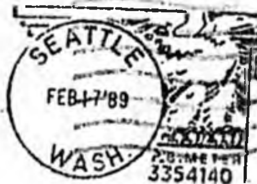
Those type documents, or perhaps complementing them with supporting materials of your own company's view of this critical subject, to be sent to Congressman Thomas would be appreciated and useful.

As CIPA focuses its attention on the lifting of this ban, copies of your letters and documents to my office would greatly advance our collective cause. Thank you for your attention to this matter. I welcome your calls as to direction and insights.

Enclosed is a copy of the ARTA report we sent to the Congressman today.

cc: J.C. "Chris" Hall, President
Drilling & Production Company
E.C. Kozlowski, Chairman
Western Avenue Properties
E. Del Smith, CIPA Washington, D.C.
E. Del Smith & Company
Arlon R. Tussing ✓
Arlon R. Tussing & Associates
ANS files

ARLON R. TUSSING & ASSOCIATES, INC.
1001 Fourth Avenue • Suite 4730
Seattle, Washington 98154



Senator Bettye Fahrenkamp
Attn: Danny Consenstein
Alaska State Senate Resources Committee
Juneau, AK 99510

WILLIAM M. THOMAS
20TH DISTRICT, CALIFORNIA

FOR IMMEDIATE RELEASE: MARCH 1, 1989
CONTACT: JEFF NELLIGAN (202) 225-2915
THOMAS INTRODUCES MEASURE REPEALING RESTRICTIONS ON EXPORT OF ALASKAN NORTH SLOPE CRUDE OIL

Congressman Bill Thomas (R-California) has introduced legislation repealing the current restrictions on the export of Alaskan North Slope (ANS) crude oil, which would strengthen U.S. energy and national security.

"This bill solves a daisy-chain of inter-related problems," said Thomas. "The heart of the bill is stimulating domestic production by allowing the immediate export of ANS crude oil, crude which currently must be refined in the United States. This results in a glut of oil, principally in West Coast ports, which keeps oil prices artificially low. Low prices reduce U.S. domestic production by an estimated 500 million barrels a day. With the lifting of export restrictions, the glut would end, prices would stabilize and production would increase. Increased production would result in more federal tax revenues and a reduction of the U.S. budget deficit. The value of this bill is that it goes a long way toward solving a string of critical problems," he added.

Alaskan North Slope oil fields were opened in 1973 for production under the restriction that ANS crude not be exported. This restriction has led ANS producers to ship crude to be refined to the West Coast, or through Panama for Gulf Coast and East Coast destinations.

"Oil producers get caught by wildly fluctuating prices and are forced to shut down production. And producing oil is not like sipping soda through a straw. If we stop taking oil from wells already in operation, reservoirs will repressurize and we'll ultimately lose currently-recoverable energy," Thomas said.

"The opponents of ANS crude export have relied on emotionally charged, but timeworn and fallacious arguments. First there is the idea that export controls make the U.S. less reliant on imported oil. In fact, the opposite is true. Export restrictions, in fact, make the U.S. <u>more reliant</u> on oil imports because the controls cause an oil glut on the West Coast, which drives down Alaska and California wellhead prices. Low prices, in turn, reduce domestic production by an estimated <u>500 million barrels daily</u>. This loss of domestic production can only be filled by an equivalent amount of imported crude, which <u>increases</u> U.S. reliance on imported oil. We must reverse this entire chain of events and my bill is the best way to do that," said Thomas.

The bill now goes to the House Foreign Affairs Committee's Subcommittee on International Economic Policy and Trade.

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I

101st CONGRESS
1st Session

H. R. 1135

To remove the restrictions on the export of Alaskan North Slope oil.

IN THE HOUSE OF REPRESENTATIVES

February 27, 1989

Mr. Thomas of California introduced the following bill; which was referred jointly to the Committees on Foreign Affairs, Energy and Commerce, Interior and Insular Affairs, and Armed Services

---

A BILL

To remove the restrictions on the export of Alaskan North Slope oil.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*
3 **SECTION 1. EXPORT ADMINISTRATION ACT AMENDMENTS.**
4 (a) Repeal.—Section 7(d) of the Export Administra-
5 tion Act of 1979 (50 U.S.C. 2406(d)) is hereby repealed.
6 (b) Conforming Amendment.—Section 7(k) of the
7 Export Administration Act of 1979 (50 U.S.C. App. 2406(k))
8 is amended by striking out "For purposes of subsection (d) of
9 this section, and for" and inserting in lieu thereof "For".

1 **SEC. 2. OTHER PROVISIONS OF LAW.**

2 The export of domestically produced crude oil transport-
3 ed by pipeline over right-of-way granted pursuant to section
4 203 of the Trans-Alaska Pipeline Authorization Act (43
5 U.S.C. 1652) shall not be subject to the restrictions con-
6 tained in section 28(u) of the Mineral Leasing Act of 1920
7 (30 U.S.C. 185), section 103 of the Energy Policy and Con-
8 servation Act (42 U.S.C. 6212), section 28 of the Outer Con-
9 tinental Shelf Lands Act (43 U.S.C. 1354), or section
10 7430(e) of title 10, United States Code, or any regulations
11 issued under any such provision of law.

○

Robert Clarke

3121 Nowell Avenue • Juneau, Alaska 99801 • (907) 586-2031

Communication • Public Affairs

J - SB 60

April 11, 1989

LEGISLATIVE ADVISORY

Re: 1989 Expiration of ANS Export Ban

Concerning the Alaska Legislature's past efforts and current interests in the new revenues inherent in the export of ANS oil:

Dr. Arlon Tussing, UofA adjunct professor and former chief economist to the U.S. Senate Energy Committee, will be in Juneau April 15, 1989.

Tussing and his associates have, through the Legislature's auspices, effected substantial progress in impeaching the federal ban economically to various agencies of the federal government. The 1986 ISER study conducted by Tussing, and subsequent updates, have effected considerable support in the federal administration, and in the Congress, for permitting the ban to expire in September '89, rather than re-extend it.

In view of current developments, specifically the Exxon-Valdez disaster, Tussing will be available to discuss the ban with concerned Legislators.

To make such arrangements, please call ARTA (206) 447-0321 or Bob Clarke at 586-2031.