ALASKA LEGISLATURE COMMITTEE FILES 1987-1988 8672
4943 HRES HB 164 (FILE 1) (see ELF)

ALASKA OIL SEVERANCE TAX POLICY

Alaska Department of Law: Juneau, Alaska
Jon K. Tillinghast, Asst. Atty. Gen.

Each day, some 1.57 million barrels of oil are drawn from the Sadlerochit and Kuparuk reservoirs which underly Alaska's Arctic coast. The oil is passed through the Trans-Alaska pipeline to the port of Valdez, and shipped by tanker to refineries along the Pacific coast and Gulf of Mexico. North Slope oil is the consummate asset in Alaska's economic portfolio. It builds schools in the villages of the Bering Sea: it saves lives in hospitals on the Arctic rim. And, as each tanker departs Alaska's territorial waters, the day when it will be gone draws nearer. In 15 years, North Slope production, including likely new discoveries, will probably be about half of what it is today.

For 250 years, Alaska has known brief and furious interludes of intensive natural resource development. In the main, however, Alaska's history has been one of poverty, stagnation and aftermath. Each profiteer who has dipped into Alaska's resource coffer has paid little for his reward, and has left to those who remained the consequences of his exploitation.

In the beginning, it was the Russian fur merchant. Between 1797 and 1821, the Russian American Co. took of Alaska's waters some 1,3000,000 fur seals and sea otters. Having rendered the sea otter apparantly extinct, the company left as its legacy not only barren waters, but a

diseased Aleut native population which stood at 12,000 in 1780, but numbered 2,200 sixty years hence.

The whalers came next, and after them the miners and fishermen. Each had their golden age--an age about as long as the life of an oil field--and each left behind remains as sad as those bestowed by their Russian predecessors.

Alaska's lot is such that it's economy will always be vulnerable to cycles. It is remote; it is inaccessible; and its weather and its terrain are hostile. For the foreseeable future, the state cannot expect a self-sustaining economy rooted in manufacturing or agriculture. Eight percent of Alaska's work force is involved in manufacturing, most of that being associated with raw processing of fish, timber and oil. The value of agricultural production in Alaska was only $5.5 million in 1960, and had increased to but $9 million by 1979.

Recurring and stable economic development in the extraction of Alaska's natural resources is limited by both the carrying capacity of the resource, and the extraordinarily high costs associated with any economic activity in the state. Although Alaska's commercial fisheries have recovered from the aftermath of systemmatic overfishing in pre-statehood years, that recovery has been achieved only by freezing the level of commercial gear through the state's limited entry legislation, and an aggressive state-funded hatcheries program. Timber

production peaked in Alaska in 1973, when 655 million board feet were harvested from the state's public lands. In 1979, some 493 million board feet were cut.

Alaska's mining industry --for minerals other than oil, gas and gravel--produced $17 million in minerals in 1959, and essentially the same amount in 1979. In 1976 (the last available data year), the per-square-mile valuation of hard rock mineral production in the eleven contiguous western states was $5,545. In Alaska it was $410, and decreased to $284 in 1979.

Regardless of the growth potential in Alaska's base industries--and in many cases that potential is substantial--the cumulative benefits of all recurring economic activities will not sustain a state which, even during the flush of oil revenue, faired poorly with its sisters in the provision of basic services and facilities. For example, Alaska has less than half the national average of hospital beds per capita. The state has .64 nursing home beds per 100,000, compared to the national average of 4.89. 17 percent of Alaska's homes are substandard or overcrowded, as opposed to a national average of 7.7%. The U.S. Environmental Protection Agency estimated in 1980 that it would require per capita expenditures of $783 to bring Alaska's publicly owned sewage treatment works to secondary treatment standards. The national average per capita cost was $128, and no other state had per capita costs over $300. Alaska shares honors with Mississipp. for the fewest

physicians per 100,000 residents--78, compared to the national average of 163. Less than one percent of the state's area is accessible by road.

The modest level of tax revenues capable of being generated by Alaska's base economy is the cause of the state's historical inability to achieve equal footing in the provision of rudimentary services. In 1959, the year of statehood, Alaska's tax revenues totalled $25 million. The Trans-Alaska Pipeline commenced operation in 1977. Between 1970 and 1976, per capita state expenditures, adjusted for inflation, remained virtually constant. While all corporations in the state are subject to the same income tax rate, in FY 1981 the state collected $860 million in income taxes from corporate oil producers, and $35 million in income taxes from all other corporate activity in the state.

Because of the backdrop against which it occurred, and the return of a "bust" period which imprudent fiscal management would ensure, no issue has more consumed the Alaska Legislature over the past decade than the establishment of sound tax policy during the brief, intensive and extraordinarily profitable period of oil production in Alaska. State government cannot alter the variations inherent in an extractive economy. However, no motivation more underlay statehood than did Alaska's need to steward the brief periods of intense wealth generation--largely by non-residents--in order to cushion the inevitable prolonged aftermath which Alaskans alone would be required to suffer.

Possessing the essential attribute of statehood--the power to tax--Alaska would be capable of evening the curves by establishing a tax structure which, among of other legal and policy considerations, was responsive to three fundamental concerns:

(1) "Boom" activities, for two reasons, tended to generate substantial profits which were exported in toto and virutally tax free. First, because of the marginal nature of Alaska's base economy, tax liability was of necessity often low. Of perhaps greater importance, the incidence and measure of taxation in Alaska's laws were drawn from experience with the base economy. The "boom activities" could be of a nature for which the incidence and measure of the tax were inappropriate, resulting in under-taxation. For example, the Alaska Legislature found in the mid-1970's that, largely because of the way that Alaska law measured the income of a multi-state corporation doing business in Alaska, the effective tax rate on a multi-state company producing oil in Alaska was about 2 percent, instead of the 9.4 percent paid by local Alaska companies;

(2) The "boom activity" inevitably aggravated the state's existing fiscal deficiencies through inflation and population increases, and the attendant increased needs for public services. In 1970, Alaska's population stood at 302,000. By the completion of pipeline construction in 1977, the state's population had swelled to 396,000. During the pipeline construction year of 1975, the Consumer Price

Index ("CPI") rose 7 percent nationwide. In Anchorage it rose 11.1 percent--although in the pre-construction years of 1967-73 that city's CPI had risen at substantially lower rates than the nationwide average. In 1981, an average American family of four spent $72 per week on food. In Fairbanks it spent $93, and in Barrow $180. Completion of the pipeline in 1977 also left an inevitably high unemployment rate among an artificially high work force. In 1978, Alaska had an 11 percent unemployment rate (the highest in the nation), against a national average of 6 percent; and

(3) The "boom" participants were not merely earning and exporting returns from Alaska's economic portfolio. They were raiding its corpus. And, with little but speculation as to whether there lay hidden future assets of the magnitude of Prudhoe Bay, it was incumbent upon the Alaska Legislature to ensure that the greatest long-term public value was made of this asset before it so soon and so finally evaporated.

Intensive oil exploration in the state began in 1954, when the Bureau of Land Management awarded 272 oil and gas leases covering some one-half million acres. At the time, any oil production would have been subject to the territory's general mining license tax, which was first enacted in 1913, and which levies a progressive 3-7 percent tax on net income from the mining operation.

The commencement of drilling activities under the 1954 leases elicited the territory's first interest in tax

legislation responsive to oil and gas production activities. In 1955, the legislature adopted Alaska's first oil and gas severance tax. Modelled after Oklahoma's statute, the act imposed a tax of one percent on the gross value of produced oil at the wellhead.

On September 29, 1957, Alaska became an oil producing territory with the discovery of the Swanson River oil field in the Kenai National Moose Range. Two years later, Alaska became a state, and thereafter a series of discoveries in upper Cook Inlet clearly entrenched oil production as a major component of Alaska's base economy. The first offshore discovery was the Middle Ground Shoal field in Cook Inlet in June, 1962, followed by the Trading Bay field (June 1, 1965), the Granite Point field (June 9, 1965) and the McArthur River field (October 24, 1965). Coupled with several gas discoveries during the same period, the value of Alaska oil and gas production rose from $301,000 in 1959 to $50.4 million in 1966.

Despite the success of Cook Inlet development--which was to eventually peak in 1970 with the production of some 81.6 million barrels of oil--the Alaska Legislature remained unwilling to increase the industry's severance tax liability above the conservative one percent rate established two years before oil was discovered. Statehood did not bring a rush to tax for taxation's sake, and the health of Cook Inlet activity did not convince the legislature that

oil development was anything other than another tentative component of Alaska's vulnerable base economy.

In 1967, the state finally increased the severance tax from one to two percent--for reasons hardly of its own making. In that year, the city of Fairbanks was devastated by savage floods, and the legislature was called into special session to provide emergency relief. Some $9 million in disaster appropriations were necessary. To fund a portion of the deficit, the legislature temporarily increased the severance tax.

Between 1966 and 1968, Cook Inlet production had expanded from 14 million barrels annually to 66 million barrels. Annual production was worth $187 million in 1968. The 1968 legislature concluded that higher severance tax rates were warranted in light of this swell in industry profitability. The decision was colored by perceived price reporting anomalies by Cook Inlet producers, and the result was an increase in the severance tax rate from one to three percent--plus the one percent disaster severance tax. Severance tax revenues grew the following year from $1.1 to $4 million.

By 1968, then, the state's oil severance tax remained at a level comparable to taxes assessed against even marginal components of the state's base economy. In 13 years, the tax had increased 3 percent from the initial hesitant levy on an unproven industry. In early 1968, however, the largest oil field ever found in the United

States was dicovered at Prudhoe Bay. It was immediately apparant that the brief window of intensive industrial activity heralded by the discovery would dwarf the booms of the past, and that a tax regime conservatively developed in response to Cook Inlet production would not be sufficient to manage the impacts and significance of Prudhoe Bay.

After nearly two years of study and debate, the legislature in 1970 adopted the state's first progressive severance tax rates--although the 1968 increase had been "progressive" in the sense that it was responsive to substantial increases in profitability in the one region where oil development was occurring. The rates established by the 1970 law were:

Daily Well Production	Rate (%)
Up to 300	3
Next 700	5
Next 1500	6
Above 2500	8

Since the 1967 disaster severance tax was repealed, the law had the effect of reducing the nominal rate on marginal wells. Severance taxes in FY 1971 increased from $5.9 million to $9.9.

Severance taxes are based upon value at the well-head--a sum which decreases with any increase in transportation costs to the point of ultimate sale. During the early 1970's, cost estimates for the Trans-Alaska Pipeline grew from $1.3 to $3 billion, and the state became concerned that

what the severance tax gaveth, high pipeline tarriffs imprudently allowed would taketh away.

The legislature's response in 1972 was to establish a combined floor on state royalty payments and severance taxes. The floor was established by applying the applicable severance tax rate, with a credit for royalties, to a wellhead price of $2.65/barrel. The law resulted in only a nominal increase in severance tax revenue in FY 1973-- from $11.4 million to $12 million.

The concept of a combined "floor" on severance taxes and royalties was an anethema to the oil industry. Royalty payments had been set by lease agreement with the state at 1/8 of the value of production--without a price "floor"--and the industry sued the state over the 1972 law as part of wide-ranging litigation dealing with state regulatory authority over pipeline construction and operation.

In 1973, Governor Egan called a special session of the legislature to attempt to settle the lawsuit. The state agreed to repeal the royalty portion of the "floor", and also agreed to repeal or modify a host of pipeline revenue and regulatory measures which the industry found objectionable, but only after the industry agreed to corresponding increases in the severance tax rate. Industry was willing at the time to sacrifice severance tax advantages for a removal of the royalty floor, together with substantial state

concessions in the area of pipeline regulation. The rates established in the 1973 special session were:

Daily Production	Rate
Up to 300	5
Next 700	6
Over 1000	8

The "floor" on the severance tax was retained, with a cents-per-barrel minimum tax established based on applying the applicable rate to a wellhead value of $3.375. The floor was to be adjusted, however, both by the API gravity of the oil, and by increases or decreases in the U.S. Bureau of Labor Statistic's Wholesale Price Index for crude oil.

The 1973 "package" was in fact a miscalculation by both sides. Neither side foresaw the Yom Kippur war months hence; the resultant embargo; the quadrupling of OPEC prices; and the imposition of federal price controls. The industry found the cents-per-barrel floor increasing through the WPI while federal price controls capped the value of "old" Cook Inlet oil. The legislature, on the other hand, was faced with potentially skyrocketing Prudhoe Bay profits, with only a 3 percent rate change separating the most profitable Prudhoe Bay operation from the most marginal well in Cook Inlet.

The sessions of the legislature between 1974 and 1978 were consumed with the controversy of oil industry taxation. In-depth studies were undertaken of the likely

profitability of Prudhoe Bay production, with an eye toward equalizing the impact of the severance tax on the state's producing regions, and evening out the boom-bust curve threatened by North Slope production. Information developed for the legislature suggested that Prudhoe Bay production would yield a 35 percent rate of return. The existing severance tax law, in short, was insufficiently progressive.

In 1977, the legislature fundamentally altered the state's severance tax. A single nominal rate of 12.5 percent was established. That rate, however, was reduced by a fraction called the "economic limit factor" ("ELF"). The ELF fraction had the effect of reducing the nominal rate as production from a well decreased, to the point where no tax was imposed when a well operated at its minimum economic limit.

The ELF fraction is a unique feature of Alaska's severance tax, and reflects the legislature's sensitivity to the very different circumstances of northern and southern oil development in the state. Cook Inlet production began to decline after 1970. As a well's productivity declines, the point approaches when production from the well is no longer economically justified. Near that level, even a very small flat rate severance tax will cause the well to be shut-in. The ELF fraction is thus not only consistent with principles of progressive taxation, but as well performs a critical conservation function. In Cook Inlet today, the average "ELF factor" is 30 percent, which means that the

average effective severance tax rate is 5 rather than the current nominal 15 percent. Numerous wells are currently operating at or near their minimum economic limit, which means that the effective tax rate for those wells is at or near zero.

The 1977 law also retained the cents-per-barrel floor, raising it to a base of $4.90/barrel for "old" oil and $6.53/barrel for all other oil. The floor was no longer indexed to the WPI.

As discussed previously, the adverse economic impacts and population increases caused by the North Slope boom peaked in the mid-1970's. Alaska's population grew by 10 percent in 1974, and again in 1975, as Trans-Alaska pipeline construction commenced. And even though real state spending per-capita remained virtually constant over that period (see above), the legislature found itself in 1975 with a $450 million revenue shortfall for the period 1975-77. Although increased demands for government services were substantially attributable to pipeline activity, revenues from North Slope development would not be received until the pipeline was completed. Thus, in 1975, the legislature was compelled to enact a two-year "reserves tax." The tax was levied on the value of the oil in the ground, and the tax paid was subsequently credited against later severance taxes.

The two-year reserves tax generated $494 million in revenues It also served to substantially reduce

severance tax payments in fiscal years 1978 and 1979--the first two years of pipeline operation.

The changes made by the Alaska Legislature to the severance tax in the 1970's were the product of a considered effort to make state oil tax policy responsive to the rapidly changing nature, impact and significance of oil production in the state. Although the changes were frequent, they were no more so than the events of the decade which necessitated them. The progressive divergence in the rate of taxation reflected the emergence of Prudhoe Bay as a uniquely profitable enterprise which could in all fairness be subjected to a higher effective severance tax rate with at worst no more severe impact than had been suffered by Cook Inlet operations. The amount of severance taxes imposed on North Slope development was itself influenced by the unquestionably high adverse economic impacts caused by pipeline construction.

The severance tax, however, was not made to pay the price of Prudhoe Bay's role in Alaska's long-term economic goals. To smooth the future economic curve during the brief period of North Slope development, the state, put simply, needed a savings account--a sum above those uncertain revenues which the state's future base economy would yield in order to fund the continuing needs of a population swollen by Prudhoe Bay itself. The state's response was the Permanent Fund--authorized as a constitutional amendment by the voters in 1976, and into

which is placed at least 25 percent of all money received by the state as the lessor of mineral acreage. In Alaska, then, "saving for the future" is a function not of tax policy, but rather of the state's role as proprietor.

In 1981, the state again altered its severance tax laws. As in 1973, it did so in response to oil industry litigation, and the net result was to materially decrease the tax liability on the production industry. As discussed previously, the state's corporate income tax, the fundamentals of which were enacted at the time of statehood, proved an inappropriate measure of a multi-state company's production income attributable to Alaska. In 1978, the legislature amended the income tax to insure that the tax levied on Prudhoe Bay production was at the same rate as that applicable to other taxpayers. The major Prudhoe Bay producers sued the state, seeking to have the income tax declared unconstitutional and some $1.8 billion (collected between 1978 and 1981) refunded.

In 1981, the legislature altered the income tax in order to reduce the state's exposure in the litigation. The amendments, however, substantially reduced the state's income tax receipts. In order to partially compensate for the lost revenues, the nominal severance tax rate was increased to 15 percent, and the ELF discount was disallowed for the first 10 years of production for highly productive wells.

The net result was a decrease in state severance and income tax revenues of some $225 million for upcoming FY 1983--although the decrease was not sufficient to induce the company's to dismiss the income tax litigation.

The fiscal impact of the 1981 package is dwarfed, however, by the current $4-6/barrel drop in world oil prices. Sound fiscal manaegment of Prudhoe Bay must cope not only with the location of the North Slope peak in Alaska's long-term economic continuum, but as well with the yearly and even monthly gyrations in world oil prices. Every $1 drop in oil prices lowers the state's severance tax by 4.5 percent, and has a similar effect on state royalty payments. The severance tax in turn represents about 30 percent of the state's unrestricted revenues.

Much of the popular criticism of Alaska's treatment of the oil industry flows from the events of FY 1982, when OPEC oil prices completed their two year ascension from $12 to $34 per barrel. In FY 1979, with North Slope wellhead values in the $6 range, the state received $1.13 billion in total unrestricted revenues. Total unrestricted state revenues for FY 1982-- the year in which oil prices peaked--were estimated in January, 1982 at $4.13 billion. This year's oil price decreases, however, are now predicted to cause a loss of $1.68 billion in revenues for the remainder of FY 1982 and for FY 1983. Similar drops are predicted for subsequent fiscal years.

AGO 484233

Th results are state revenues for FY 1983 of $2.74 billion--about the same as the $2.5 billion received for FY 1980. The state's flush of oil revenues lasted two years, and the state now finds itself in the position of making massive cuts in both its operating and capital budgets. The state's operating budget will not increase over FY 1982, despite inflation. The FY 1983 capital budget will be approximately one third of the amount authorized in FY 1982.

The response of the legislature has not been to increase oil production taxes. Indeed, with the exception of the 1967 disaster tax, and perhaps the 1975-77 reserves tax, Alaska's policy has been motivated not by monetary reaction, but rather by at least an attempt at principle. Prudhoe Bay is a unique phenomenon played out on an equally unique economic stage. Its astounding magnitude and profitability; its stark contrast in kind and degree to the state's marginal base activities on which Alaska's tax laws are otherwise based; and its fleeting presence on an otherwise depressed frontier, call for the development of tax policies that might seem inappropriate in other times and places. That, however, is the fulcrum of federalism, and it is our federal system which has allowed Alaska to intelligently manage this brief and consequential episode in its very difficult history.

STEVE COWPER
GOVERNOR

STATE OF ALASKA
OFFICE OF THE GOVERNOR
JUNEAU

March 3, 1987

The Honorable Ben Grussendorf
Speaker of the House
Alaska State Legislature
P.O. Box V
Juneau, AK 99811

Dear Representative Grussendorf:

Under the authority of art. III, sec. 18, of the Alaska Constitution, I am transmitting a bill relating to the oil and gas properties production tax The primary effect of the bill is to postpone the application of the "true" economic limit factor (ELF) to the Prudhoe Bay field. The bill also amends the economic limit factor provisions applying to all oil fields so that the ELF is not sensitive to changes in the value of oil.

Existing AS 43.55.011(a) provides that an oil producer must calculate its production (severance) tax by multiplying the nominal rate calculated under AS 43.55.011(b) and (c) by the economic limit factor determined under AS 43.55.013. The ELF is a formula that has the effect of reducing the severance tax rate. In 1981, the legislature made several changes in oil and gas taxes: the income tax was changed to substitute modified apportionment for separate accounting; the nominal rate of the severance tax was increased for some fields; and the application of the ELF to a lease or property with an ELF of more than .7 was suspended until after that lease or property had been in commercial production for 10 years. Ch. 116, SLA 1981. Suspension of application of the ELF was accomplished by providing that, if the ELF was more than .7, then the ELF was considered to be "one." AS 43.55.013(b)(3). Thus, when multiplying the severance tax rate by the ELF, the full amount of the tax is the product.

Only the Prudhoe Bay and Lisburne fields currently have an ELF greater than .7. The Lisburne ELF is expected to fall below .7 after fiscal year 1988, but the Prudhoe Bay ELF is expected to remain about .7 for a number of years. Prudhoe Bay will have been in production for 10 years in June, 1987; thus, absent an amendment to AS 43.55.013(b)(3), the "true" ELF, as calculated under AS 43.55.013(b)(1), will begin to apply to that field at that time.

The fiscal note on the 1981 legislation did not include projections beyond FY 1985, but an analysis by the Legislative Finance Division showed that application of the "true" ELF provision would cause state revenue to fall precipitously in FY 1988. Governor Hammond noted this possibility, but expressed "full confidence in the ability of the legislature to deal at that time" with adverse revenue consequences, should they prove to be serious. Statement of Governor Hammond on signing FCCSSB 524 (ch. 116, SLA 1981); see July 27, 1981 press release on oil and gas legislation. fourth page.

Application of the "true" ELF to Prudhoe Bay would result in serious consequences for the state in the coming fiscal year: state severance collections would be reduced by over 15 percent, and FY 1988 revenue would fall by $93,000,000 (already accounted for in the official "mean" forecast). Section 1 of the attached bill would prevent this precipitous decline in revenue by amending AS 43.55.013(b)(3) to delay the applicability of the true ELF to Prudhoe Bay for an additional five years. Section 1 of the bill also makes a conforming amendment to AS 43.55.013(b)(2) and (4). So long as the "true" ELF does not apply, the severance tax rate will be the full 15 percent of value, or $.80 a barrel, whichever is greater, subject to the adjustment in AS 43.55.012.

The bill also changes the ELF provisions for all oil fields to remove the sensitivity of the ELF to price fluctuations. An element of the ELF calculation is the "PEL," or "production at the economic limit." The PEL represents the number of barrels a producer must produce in order to recover the costs of production. Currently, the PEL is presumed to be 300 barrels per well per day, but the taxpayer may rebut this presumption at a hearing before the Department of Revenue. At the hearing, the PEL would be calculated by dividing the cost of production into the value of the oil. AS 43.55.013(d). If the price of oil drops, the producer may be able to prove an entitlement to a PEL in excess of 300 barrels; if so, the ELF for that producer will go down. Thus, if prices fall drastically, the state loses severance tax revenue not only because the severance tax is applied against a lower value of oil, but also because the severance tax rate itself goes down as the result of a PEL hearing. Earlier in 1986, because of low prices, we were faced with the possibility that the state might suffer from this double reduction in severance tax revenue.

Section 2 of the attached bill deals with that problem by repealing the portion of existing law that provides for a hearing to change the PEL. The PEL is then simply set at 300 barrels per day. As a result, the ELF will be sensitive to changes in the amount of production, but will no longer be sensitive to fluctuations in price or the costs of production. Section 3 of the bill repeals two subsections in AS 43.55.013 dealing with the two elements of the hearing: costs and values. These changes to not apply to the production of gas.

I urge your early consideration and passage of this bill.

Sincerely,

Steve Cowper
Governor

No. 1

STATE OF ALASKA 1987 LEGISLATIVE SESSION
FISCAL NOTE

REQUEST:

Bill Version : HB 164
Publish Date : HOUSE 3/4/87

Revision Date:
Title : An Act Relating to the Oil and Gas Properties Production Tax
Sponsor : Rules/Governor
Requestor : Rules

Agency Affected : Revenue
BRU :
Components :

EXPENDITURES/REVENUES: (Thousands of Dollars)

OPERATING	FY 87	FY 88	FY 89	FY 90	FY 91	FY 92
PERSONAL SERVICES						
TRAVEL						
CONTRACTUAL						
SUPPLIES						
EQUIPMENT						
LAND & STRUCTURES						
GRANTS, CLAIMS						
MISCELLANEOUS						
TOTAL OPERATING						
CAPITAL						
REVENUE		76,730.0	91,950.0	98,480.0	99,850.0	105,610.0

FUNDING: (Thousands of Dollars)

GENERAL FUND						
FEDERAL FUNDS						
OTHER						
TOTAL						

POSITIONS:

FULL-TIME						
PART-TIME						
TEMPORARY						

ANALYSIS : (Attach a separate page if necessary)

SEE ATTACHTED ANALYSIS

Vince K Wright

Prepared by : Chuck Logsdon
Division : Revenue/Research
Phone : 276-5364
Date : March 2, 1987

Approved by Commissioner : Hugh Malone
Agency : Department of Revenue
Date : 3/2/87

Distribution (by preparer):
Legislative Finance
Legislative Sponsor
Requestor
Office of Management and Budget
Impacted Agency(ies)
Senate Secretary

Revenue Impact of Extend5 (Million $)

Fiscal Year	Delta 30%	Delta Mean
1987	0	0
1988	76.73	96.26
1989	91.95	118.06
1990	98.48	128.33
1991	99.85	132.92
1992	105.61	139.09
1993	5.73	7.3
1994	3.9	7.64
1995	3.66	6.56
1996	4.55	5.28
1997	3.67	5.55
1998	2.01	3.91
1999	2.53	2.62
2000	-.16	2.08
2001	-.1	2.79
2002	-.82	2.68
2003	-.73	2.28
2004	.53	2.1
2005	.49	1.87

No. 1
HB 164
3/4/87

Production Impact of Extend5 (Million bbls/yr)

Fiscal Year	Prudhoe Bay	Kuparuk	Milne Point	Endicott	Lisburne	West Sak	Other Onshore	Other Offshore	Total
1987	0	0	0	0	-.01	0	0	0	-.01
1988	-.	-.12	-.94	-.02	-.02	0	0	0	-.97
1989	-.69	-.12	-.07	-.04	-.03	0	0	0	-.95
1990	-.6	-.12	-.11	0	-.03	0	0	0	-.86
1991	-.57	-.11	-.15	-.03	-.05	0	0	0	-.91
1992	-.52	-.1	-.15	-.06	-.05	0	0	0	-.88
1993	-.49	-.09	-.14	-.06	-.06	0	0	0	-.84
1994	-.44	-.11	-.14	-.04	-.07	0	0	0	-.8
1995	-.39	-.07	-.09	-.05	-.05	0	0	0	-.65
1996	-.35	-.08	-.12	-.05	-.05	0	0	0	-.63
1997	-.32	-.08	.01	-.04	-.06	0	0	0	-.49
1998	-.43	-.05	.03	-.03	-.09	0	0	0	-.57
1999	-.25	-.04	.02	-.01	-.02	0	-.02	0	-.32
2000	-.22	-.03	-.02	-.01	-.03	0	-.02	0	-.33
2001	-.2	-.03	.02	0	-.02	0	-.02	0	-.25
2002	-.18	-.02	.01	0	-.02	0	-.02	0	-.23
2003	-.16	-.01	-.01	0	-.01	0	-.01	0	-.2
2004	-.19	0	.04	0	-.01	0	-.01	0	-.17
2005	-.13	.01	.04	0	0	0	-.01	0	-.09
									0
									0
Total	-6.9	-1.15	-.87	-.44	-.68	0	-.11	0	-10.15

M E M O R A N D U M

STATE OF ALASKA

Department of Revenue

Petroleum Research Section

4-164

February 27, 1987

To: Vincent D. Wright, Chief of Research

From: Charles Logsdon, Petroleum Economist

Subject: More ELF

Per your request, I have examined the revenue and production impact of extending the 10 year period during which the ELF is subject to the .7 or greater test to 15 years and fixing the value of the Production at the Economic Limit (PEL) at 300 barrels per well per day. Prudhoe Bay and Lisburne are the fields currently producing with a calculated ELF greater than .7 and thus would be directly impacted by this change in the State severance tax law. On average, the calculated ELF for Prudhoe is not expected to fall below 0.7 over the next 5 years. We expect the Lisburne ELF to fall below 0.7 in FY 1989 and subsequent years.

By setting the PEL at 300, the ELF no longer would be sensitive to the price of oil or the cost of producing oil and would be totally dependent on per barrel productivity for a producing lease or property. Over the next 5 years as Prudhoe Bay production begins to decline the only reason for an ELF less than 0.7 would be if a significantly greater than expected number of additional wells were drilled. For example we currently expect Prudhoe to produce on average, 0.984 million barrels per day in 1992 from 465 wells providing an ELF of.7911. If this same amount of oil were produced from 705 wells, the ELF would be equal to .6906.

The following tables illustrate the revenue impact and production impact of extending the ELF time line to 15 years and fixing the value of PEL at 300. These results are generated by the DOR revenue simulation model using the December 1986 input assumptions. The most significant result other than the revenues generated is that there is almost no average expected effect on North Slope production.

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May 18, 1987

STANDARD
ALASKA PRODUCTION

Senator Jan Faiks
Alaska State Legislature
P.O. Box V
Juneau, Alaska 99811

Dear Senator Faiks:

In his letter of May 17 to the members of the Senate, the Commissioner of Revenue maintains that only by increasing the severance tax on Alaska's oil industry can Alaskans receive their fair share of economic benefits from Alaska's petroleum activity. The Commissioner cites as evidence the analysis of North Slope development expenditures prepared by our industry as proof of his claim.

We strongly believe the Commissioner has misrepresented this analysis and is wrong in calling for passage of HB 164 which increases severance taxes on the industry for the following reasons:

1. The numbers in the analysis do not include the billions of dollars paid to the state of Alaska as income taxes, property taxes, severance taxes, royalties or oil and gas conservation taxes during this period;

2. The figures represent dollars spent on capital terms only. For instance, the numbers do not include installation costs of North Slope facilities which total in the billions of dollars awarded to Alaskan contractors;

3. The Commissioner's letter ignors the fact that Alaska does not have the ability to manufacture many of the facilities (such as oil pipelines and production modules) which are necessary for oil production in Alaska;

4. The Commissioner neglects the millions of dollars spent by the industry each year in payroll and salaries for their employees and those of their contractors which provide services such as security, drilling rigs, catering and routine machine maintenance; and

5. We challenge the Commissioner's assertion that additional severance taxes will provide direct economic benefits to Alaskans. The additional funds will undoubtedly go to

continue to fund unnecessary high levels of government which recent polls indicate Alaskan citizens want to cut back.

We at Standard strongly urge you to oppose HB 164 and any other tax measure that would adversely affect the oil industry.

Sincerely,

R. A. Straub
Vice President
External Affairs

P.S. In the interests of clarity, I have attached for your information a paper prepared which is in response to an earlier paper prepared by the Office of Management and Budget.

cc: Commissioner Malone
Department of Revenue

Greg Erickson
Office of Management and Budget

The "ELF"
and
North Slope Oil Production

Information of Importance on CSHB-164

Major points Alaska policymakers should know:

- If CSHB-164 were enacted, Alaska would continue to have the highest effective severance tax rate in the nation.
- A Department of Revenue projection of "lost oil production" underestimates the likely impact of CSHB-164.
- CSHB-164 is a change in the structure of the ELF formula that goes far beyond its revenue effect on Prudhoe Bay. It should be looked at with caution.
- Investment funds for Endicott and Lisburne, new fields on the North Slope, have been largely generated by Prudhoe Bay. A tax "break" on marginal fields, cited by advocates for CSHB-164, would be offset by a larger tax bite on Prudhoe, which produces the investment funds for "marginal fields".

Standard Alaska Production Company, May 12, 1987

On April 21, 1987 the Office of Management and Budget issued a collection of material on the ELF, the Economic Limit Factor in Alaska's oil and gas severance tax. Many points made by OMB are misleading. Space limits limit our response to just a few.

OMB implies that if CSHB-164 were enacted, Alaska would still be within the range of severance taxes in other states. In fact, Alaska would continue to have the highest effective severance tax rate.

OMB uses only the Kuparuk field as an example, which accounts for only one seventh of Alaska's oil output, and cites an effective tax rate of 10.7%. However, *under CSHB-164 the average tax on all Alaska production would be 13.4%.* What accounts for the difference, of course, is the higher tax (almost 15%) that would apply to Prudhoe Bay, which provides most of Alaska's oil production.

CSHB 164 ANALYSIS: Including all Alaska oil production (FY 88)

STATE	CSHB 164 TAX AS PERCENT OF VALUE
Alaska (proposed)	13.4%
Louisiana	12.5%
Alaska (existing)	11.6%
Oklahoma	7.0%
Texas	4.9%
California	0%

OMB ANALYSIS: Looking only at Kuparuk (FY 88)

STATE	KUPARUK TAX AS A PERCENT OF VALUE
Louisiana	12.5%
Alaska (proposed)	10.7%
New Mexico	8.0%
Alaska (existing)	7.6%
Oklahoma	7.0%
Wyoming	6.0%
Texas	4.9%

The average severance tax rate of the four other top oil producing states is 6.1%. *The effective severance tax rate for Alaskan production under current law is almost twice the average of the other top oil producing states.* The new ELF would increase the effective rate another 1.8%, putting Alaska far above any other state.

But still, isn't OMB's point that CSHB-164 would keep taxes low on smaller fields other than Prudhoe, and actually decrease taxes on some small "marginal fields"?

What is obscured is that there are "marginal projects" within the Prudhoe Bay field itself, development programs that could apply more intensive development drilling or enhanced oil recovery to the reservoir. *These projects could recover huge amounts of oil - the equivalent of several fields like Endicott or Lisburne, two new "marginal fields" now under development.* In all likelihood, outside of ANWR *the biggest prospect for major new recoverable oil reserves is right in the Prudhoe Bay field itself.*

But still, isn't there a tax decrease on Endicott and Lisburne?

We believe OMB's figures overstate it. Our estimates of its effect are different, and that it does not amount to a significant savings. *It should also be pointed out that the 33% tax increase on Kuparuk (by OMB's figures) will have a serious adverse effect on further development in that field.* It is worth noting that the vast bulk of the investment funds for Lisburne and Endicott are coming from the Prudhoe Bay field, since Prudhoe owners are also involved in development of these smaller fields. The same is true for Kuparuk. Higher taxes on Prudhoe drains off capital that could be invested in new projects.

What about Milne Point? OMB cites that case. Doesn't it illustrate the "quirks" in the current ELF?

If there are problems in how the ELF applies to particularly marginal fields, the current statute provides a mechanism to solve them - the right to challenge the "economic limit" in the formula itself. A reasonable interpretation of the statute would protect truly marginal fields. CSHB-164 actually provides relief for small fields - marginal or not - and imposes a greater burden on larger fields, even those marginally economic. DOR could, by regulation, solve the "problems" cited by advocates for CSHB-164. They do not justify a change in the statute.

In recent House testimony, Standard said that with lower oil prices the state's overall "share" of oil production revenues have increased sharply. OMB says this is "false". Is it?

No. And OMB cites no data in making that claim. In fact, Standard's analysis is based on Department of Revenue data.

Standard testified that at $15 oil prices ($9 wellhead), the *state share* of net production income based on a Department of Revenue study, *would be 96% for FY 1988-1992.* The DOR study referenced is: "Sensitivity Analysis of Projected Revenue Collections", by John Larson et al. (December 1986). The purpose of the study was to provide the economic effect of Alaska's oil taxes at various wellhead prices. Following is page 93 of the study which addresses $15 oil prices ($9 wellhead). Page 93 is captioned, "Percentage Share Comparison - Calculation of State Petroleum Production Revenue as a Percentage of Petroleum Production Net Income."

TABLE II-9-8
PERCENTAGE SHARE COMPARISON
CALCULATION OF STATE PETROLEUM PRODUCTION REVENUES
AS A PERCENTAGE OF
PETROLEUM PRODUCTION NET INCOME
(1-1988A1) SENSITIVITY ANALYSIS 89/0 WHV

FISCAL YEAR	TOTAL PETRO PRODN GROSS INCOME MM$/Y	TOTAL PETRO PRODN NON TAX DEDUCTS MM$/Y	TOTAL PETRO PRODN NET INCOME MM$/Y	CURRENT LAW STATE PETRO PRODN REVENUE MM$/Y	REVENUE VS NET INCOME %	MOSS STATE PETRO PRODN REVENUE MM$/Y	REVENUE VS NET INCOME %
1986	6142.82	3384.18	2778.63	1867.26	67.20	1817.31	65.40
1987	5209.70	3471.83	2537.87	1845.76	72.65	1729.39	68.14
1988	5983.52	3856.79	2126.73	1688.29	79.38	1524.93	71.70
1989	5915.67	4101.18	1814.49	1663.12	91.66	1483.11	81.74
1990	5660.66	4021.98	1638.68	1583.60	96.67	1397.89	85.34
1991	5279.85	3859.62	1420.83	1468.74	103.37	1281.38	90.21
1992	4864.68	3780.83	1083.77	1356.61	124.99	1184.64	109.28
1993	4548.23	3803.49	744.74	1298.73	167.07	1126.53	147.31
1994	4318.88	3643.78	697.10	1202.65	172.49	1071.87	153.76
1995	4156.91	3343.68	813.23	1132.98	139.21	1030.62	126.73
1996	3720.82	3437.23	732.79	1014.65	138.46	934.24	127.49
1997	3442.69	2784.54	658.16	917.09	139.45	852.61	129.55
1998	3125.52	2454.54	648.98	829.96	124.66	778.04	116.30
1999	2960.87	2124.96	575.96	762.66	132.32	719.39	124.92
2000	2685.26	2182.13	503.13	698.61	138.73	662.77	131.73
2001	2674.83	2062.85	611.99	637.65	104.17	607.58	147.68
2002	2328.39	1959.97	368.42	569.07	154.49	565.37	153.46
2003	1920.78	1535.17	385.61	497.23	128.95	481.50	124.87
2004	1798.92	1490.76	308.16	458.12	148.67	447.62	145.26
2005	1696.31	1450.30	246.02	425.81	173.08	418.28	170.02
	27,704	19,420	8,084	7,758			

It is clear (and no one has contended otherwise) that the data is from the December DOR study. What is also difficult to dispute is:

- $7,758MM (current law state petroleum production revenue) divided by $8,084MM (total petroleum production net income) times 100 (to convert to a %) is 96%, and

- the schedule on page 93 is intended specifically to address the state share issue.

In conversations with Standard, Department of Revenue analysts agreed the information was not being misinterpreted.

The point Standard was making in its testimony is that low oil prices have dramatically reduced producers' net return on production revenues, and that state royalties and taxes, because they are levied on gross field revenues rather than net, become much larger as a percentage of the overall. *By increasing taxes, CSHB-164 would essentially reduce industry's share of net production income (as defined by Department of Revenue) to zero.* This is hardly an incentive for further development activity.

But don't pipeline profits offset that?

Although believing that transportation income is irrelevant in determining tax policy for production taxes, Standard testified that *inclusion of the transportation income still resulted in a state share of 59%* over the same period and at the same price.

OMB has numbers which indicate industry's "share" at much different levels. How is that?

OMB looks at 1982 through 1985, years with high oil prices, in their claim of a high industry "share". They also include pipeline income in the calculation. Our analysis looks five years into the future, using lower prices and assuming that low to moderate prices will continue for some time into the future. Governor Cowper, and many oil companies, have said that it is reasonable to assume $15 oil prices as a long-term "planning" figure, although prices have shown some recent short-term improvement. Additionally, we think there are also serious errors in the assumptions used in the OBM "share of the pie" analysis, particularly assumptions of federal tax liability.

The OMB report relying on a Department of Revenue analysis states that the cumulative loss of production from the new ELF is 21 million barrels. Do you agree?

No. Any sense of security associated with a loss of 21 million barrels is a false sense of security. Arco has estimated the "production lost" at a much higher figure - 200 million barrels just in Prudhoe Bay.

The likelihood that the 21 million barrel "lost production" is substantially understated is apparent from looking only at proposed additional development at Prudhoe over the next few years. We see the potential of the Prudhoe Bay reservoir, with current technology, at about ten billion barrels recoverable. Five billion barrels have been produced already. With facilities and wells now in place, four billion - for a total of nine - can be produced. *Recovering the additional one billion barrels will require additional capital investment in facilities and drilling. Many of these future investment decisions are only marginally economic. This future development and some of the expected production from the current wells and facilities is jeopardized by proposed changes in the ELF.*

CSHB-164 is no mere "technical correction" of state oil tax laws, or even just halting a scheduled reduction of the 15% severance tax on Prudhoe Bay. It is a restructuring of the ELF formula that eliminates its effectiveness as an incentive for further development drilling. Because of this, it should be looked at very cautiously.

How is Alaska's tax structure viewed by others?

In a two-year study of state economic policies published in March, 1987, "Making the Grade: The Development Report Card for the States" by the Washington-D.C.-based Corporation for Enterprise Development, *Alaska was rated 49th (tied with Tennessee) in the state policies toward economic development index.* A prime component in this index is an effective and equitable tax code. Alaska's low rating in the index is tied to Alaska's heavy dependence on oil revenues.

MEMORANDUM

STATE OF ALASKA

Department of Revenue

Petroleum Research Section

February 11, 1987

To: Vincent D. Wright, Chief of Research

From: Charles Logsdon, Petroleum Economist

Subject: New ELF

Per your request, I have examined the revenue and production impacts associated with changing the ELF to consider field size. This modification is similiar to the one outlined in HB 545 and presented in analysis done by myself in papers prepared for presentation to the tax committee.

Briefly, the modification is accomplished by introducing a scaling factor and also the rate of field production into the exponent of the current ELF formula. The value of this scaling factor determines at what level of production the resulting ELF is greater than under the current law. For instance, in HB 545 the factor has a value of 37,000,000 which, given a PEL of 300, translates into a break point of roughly 80,000 bbls/day. The analysis I did for the tax committee last December under the OMB modified alternative ELF used a factor with a value of 45,500,000. This translates into a break point of roughly 100,000 bbls./day. In the analysis contained in this memo I have used a factor value of 55,000,000, which results in a break point of roughly 120,000 bbls./day. A breakpoint of 120,000 bbls./day would increase the effective severance tax rate on Prudhoe Bay and Kuparuk production. It would reduce the effective severance tax rate on all other oil fields now producing or likely to produce in the next two years, including all Cook Inlet fields, Milne Point, Lisburne, and Endicott. This is because none of these fields are projected to produce at or above the 120,000 bbl./day level. I have attached a computer printout which illustrates the sensitivity of the change in effective tax rate on each field of different assumptions for production and well count using the 55 million scaling factor

Attachment 3

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To illustrate the effect of different scaling factors on the ELF calculation I have developed the following tables. The first table illustrates the break point for various values of the scaling factor i.e. the total field production which would result in a lower ELF than that currently calculated.

Factor	Breakpoint
20000000	43479 bbls./day
30000000	65219
40000000	86958
50000000	108698
60000000	130438
70000000	152177
80000000	173917
90000000	195656
100000000	217396
110000000	239136

The following table shows the calculated ELF by North Slope field for various values of the scaling factor.

			Factor/ELF							
Field	Prod.	Prod/Well	30MM	40MM	50MM	60MM	70MM	80MM	90MM	100MM
Prudhoe	1510000	2900	.9928	.9904	.9880	.9856	.9833	.9809	.9785	.9762
Kuparuk	230000	885	.8353	.7866	.7408	.6977	.6571	.6188	.5828	.5488
Milne	20000	900	.1317	.0670	.0341	.0173	.0088	.0045	.0023	.0012
Endicott	70000	900	.5603	.4619	.3808	.3140	.2588	.2134	.1759	.1450
Lisburne	35000	1400	.5021	.3990	.3171	.2521	.2003	.1592	.1266	.1006
West Sak	100000	550	.4545	.3495	.2687	.2066	.1589	.1221	.0939	.0722

The following two tables illustrate the revenue and production impact of modifying the ELF to include field size in the formulas using the 55 millon scaling factor. The results were generated by the PETREV monte carlo simulation model that DOR uses to forecast petroleum production revenues. Interestingly the revenue impacts are not that much different from those contained in the fiscal note prepared last year concerning HB 545. The average expected production impacts are also relatively low. The mildly negative impact on Lisburne production is a result of a slightly higher TAPS tariff, due to slightly lower throughput, more than offsetting the lower severance tax burden. The negative impact on West Sak reflects the probability that should this project become economic, production may exceed 120,000 bbls/day from a large number of low productive wells.

Revenue Impact of Field Size ELF, Field Factor = 55 Million
(Millions $)

Fiscal Year	Delta 30%	Delta Mean
1987	10.45	10.93
1988	88.18	112.29
1989	98.14	136.23
1990	109.61	147.04
1991	96.13	132.35
1992	94.18	127.23
1993	91.30	124.34
1994	81.51	118.59
1995	77.60	112.06
1996	69.74	98.74
1997	62.21	92.73
1998	49.52	82.14
1999	43.91	75.70
2000	33.42	72.90
2001	31.73	72.49
2002	27.43	73.42
2003	28.46	73.09
2004	23.53	62.25
2005	20.23	47.44

Production Impact of Expo55 (Million bbls/yr)

Fiscal Year	Prudhoe Bay	Kuparuk	Milne Point	Endicott	Lisburne	West Sak	Other Onshore	Other Offshore	Total
1987	0	0	.05	0	-.03	0	0	0	.02
1988	-1.97	-.32	.23	.65	-.05	0	0	0	-1.46
1989	-1.77	-.33	.37	2.16	-.06	0	0	0	.37
1990	-1.59	-.33	.39	2.13	-.07	0	0	0	.53
1991	-1.46	-.29	.39	2.1	-.1	0	0	0	.64
1992	-1.41	-.26	.36	2.01	-.1	0	.28	0	.88
1993	-1.25	-.23	.38	1.94	-.12	0	.51	0	1.23
1994	-2.59	-.38	.32	1.41	-.47	0	.53	0	-1.18
1995	-2.24	-.37	.29	1.69	-.41	-.63	.56	0	-1.11
1996	-2.16	-.3	.18	1.22	-.37	-.77	.48	0	-1.72
1997	-3.12	-.27	.19	.77	-.31	-1.13	.41	0	-3.46
1998	-2.57	-.16	.18	.41	-.28	-1.13	.38	.13	-3.04
1999	-2.18	-.1	.16	.06	-.21	-1.23	.58	.17	-2.75
2000	-1.93	-.07	.03	-.18	-.17	-1.23	.51	.18	-2.86
2001	-1.77	-.02	-.03	-.3	-.11	-1.26	.43	.21	-2.85
2002	-1.46	-.01	-.09	-.36	-.07	-1.32	.34	.23	-2.74
2003	-1.31	0	-.06	-.33	-.02	-1.12	.24	.23	-2.37
2004	-1.27	-.01	.01	-.34	-.02	-1.11	.22	.23	-2.29
2005	-1.13	-.04	-.03	-.26	-.04	-1.08	.18	.28	-2.12
Total	-33.18	-3.49	3.32	14.78	-3.01	-12.01	5.65	1.66	-26.28

THE EFFECT OF THE FIELD SIZE ELF ON THE PRUDHOE BAY SEVERANCE TAX RATE

	Producing Wells	Production (Bbl/day)	Current Elf	New ELF Field Size Factor = 55000000	Current Effective Tax Rate FY 1988	New Effective Tax Rate FY 1989	Increased Effective Tax Rate FY 1988
December DOR 1988 Mean	520	1510000	.8460	.9833	.1269	.1475	.0206
		Sensitivity Table					
	500	1450000	.8458	.9863	.1269	.1479	.0211
		1500000	.8500	.9872	.1276	.1481	.0205
		1525000	.8532	.9876	.1280	.1481	.0202
		1550000	.8555	.9880	.1283	.1482	.0199
		1575000	.8577	.9884	.1287	.1483	.0196
	520	1450000	.8399	.9857	.1260	.1479	.0219
		1500000	.8450	.9867	.1268	.1480	.0212
		1525000	.8475	.9871	.1271	.1481	.0209
		1550000	.8499	.9875	.1275	.1481	.0206
		1575000	.8522	.9879	.1278	.1482	.0204
	540	1450000	.8339	.9851	.1251	.1478	.0227
		1500000	.8393	.9861	.1259	.1479	.0220
		1525000	.8418	.9866	.1263	.1480	.0217
		1550000	.8443	.9870	.1266	.1481	.0214
		1575000	.8467	.9874	.1270	.1481	.0211
	550	200000	.0691	.2024	.0104	.0304	.0200
		225000	.1310	.3406	.0190	.0511	.0313
		250000	.1913	.4533	.0287	.0680	.0393
		275000	.2454	.5429	.0368	.0814	.0446
		300000	.2939	.6139	.0441	.0921	.0480

THE EFFECT OF THE FIELD SIZE ELF ON THE KUPARUK SEVERANCE TAX RATE

	Producing Wells	Production (Bbl/day)	Current ELF	New ELF Field Size Factor = 55000000	Current Effective Tax Rate FY 1988	New Effective Tax Rate FY 1988	Increased Effective Tax Rate FY 1988
December DOR 1988 Mean	260	250000	.5299	.6569	.0795	.0985	.0191
		Sensitivity Table					
	250	200000	.4864	.6500	.0730	.0975	.0245
		225000	.5370	.7187	.0806	.1078	.0272
		250000	.5787	.7698	.0868	.1155	.0287
		275000	.6137	.8087	.0921	.1213	.0293
		300000	.6433	.8382	.0965	.1258	.0293
	260	200000	.4686	.6357	.0703	.0953	.0251
		225000	.5206	.7069	.0781	.1060	.0279
		250000	.5636	.7601	.0845	.1140	.0295
		275000	.5996	.8006	.0899	.1201	.0301
		300000	.6302	.8319	.0945	.1248	.0303
	270	200000	.4511	.6213	.0677	.0932	.0255
		225000	.5014	.6951	.0757	.1043	.0286
		250000	.5486	.7504	.0823	.1126	.0303
		275000	.5857	.7925	.0879	.1189	.0310
		300000	.6172	.8250	.0926	.1238	.0312
	280	200000	.4358	.6069	.0651	.0910	.0260
		225000	.4884	.6833	.0733	.1025	.0292
		250000	.5337	.7406	.0801	.1111	.0310
		275000	.5719	.7843	.0858	.1176	.0319
		300000	.6043	.8181	.0906	.1227	.0321

THE EFFECT OF THE FIELD SIZE ELF ON THE MILNE SEVERANCE TAX RATE

2-18-87

	Producing Wells	Production (Bbl/day)	Current ELF	New ELF Field Size Factor = 55000000	Current Effective Tax Rate FY 1988	New Effective Tax Rate FY 1988	Decreased Effective Tax Rate FY 1988
December DOR 1988 Mean	22	20000	.5411	.0024	.0663	.0011	-.0651
Sensitivity Table							
	15	10000	.3998	0	.0490	0	-.0490
		15000	.5707	.0128	.0709	.0016	-.0693
		20000	.6765	.0967	.0829	.0118	-.0710
		25000	.7376	.2333	.0904	.0286	-.0618
		30000	.7794	.3704	.0955	.0454	-.0501
	20	10000	.2454	0	.0301	0	-.0301
		15000	.4569	.0019	.0560	.0002	-.0557
		20000	.5707	.0380	.0709	.0047	-.0662
		25000	.6565	.1336	.0804	.0164	-.0641
		30000	.7102	.2557	.0870	.0313	-.0557
	10	10000	0	0	0	0	0
		15000	.0848	0	.0104	0	-.0104
		20000	.2454	.0002	.0301	0	-.0300
		25000	.3662	.0003	.0449	.0010	-.0439
		30000	.4569	.0041	.0560	.0054	-.0506
	40	10000	0	0	0	0	0
		15000	0	0	0	0	0
		20000	.0295	0	.0036	0	-.0036
		25000	.1420	.0001	.0174	0	-.0174
		30000	.2454	.0037	.0301	.0005	-.0296

THE EFFECT OF THE FIELD SIZE ELF ON THE ENDICOTT SEVERANCE TAX RATE

3-18-87

	Producing Wells	Production (Bbl/day)	Current ELF	New ELF Field Size Factor = 55000000	Current Effective Tax Rate FY 1988	New Effective Tax Rate FY 1988	Decreased Effective Tax Rate FY 1988
December 1988 Mean	69	62500	.5397	.2227	.0461	.0273	-.0188
Sensitivity Table							
	50	40000	.4864	.1160	.0596	.0142	-.0454
		60000	.6433	.4152	.0788	.0509	-.0279
		80000	.7275	.6214	.0891	.0761	-.0130
		100000	.7794	.7423	.0955	.0909	-.0045
		120000	.8149	.8155	.0998	.0999	.0001
	75	40000	.2815	.0226	.0345	.0028	-.0317
		60000	.4864	.2378	.0596	.0291	-.0305
		80000	.6027	.4692	.0738	.0575	-.0164
		100000	.6765	.6267	.0829	.0768	-.0061
		120000	.7273	.7282	.0891	.0892	.0001
	90	40000	.1785	.0058	.0219	.0007	-.0212
		60000	.3998	.1609	.0490	.0197	-.0293
		80000	.5419	.3072	.0664	.0377	-.0287
		100000	.6172	.5616	.0756	.0688	-.0068
		120000	.6765	.6775	.0829	.0830	.0001
	110	40000	.0691	.0003	.0085	0	-.0084
		60000	.2939	.0872	.0360	.0107	-.0253
		80000	.4424	.2956	.0542	.0362	-.0180
		100000	.5411	.4799	.0663	.0588	-.0075
		120000	.6107	.6118	.0748	.0749	.0001

THE EFFECT OF THE FIELD SIZE ELF ON THE LISBURNE SEVERANCE TAX RATE

	Producing Wells	Production (Bbl/day)	Current Elf	New ELF Field Size Factor = 55000000	Current Effective Tax Rate FY 1988	New Effective Tax Rate FY 1988	Decreased Effective Tax Rate FY 1988
December DOR 1988 Mean	20	35000	.7475	.2855	.1124	.0420	-.0696
		Sensitivity Table					
	20	25000	.6565	.1336	.0985	.0200	-.0784
		35000	.7475	.3734	.1124	.0560	-.0564
		50000	.8220	.6250	.1233	.0939	-.0294
		75000	.8800	.8156	.1320	.1223	-.0097
		100000	.9095	.8920	.1364	.1339	-.0025
	35	25000	.4338	.0184	.0651	.0028	-.0623
		35000	.5787	.1544	.0868	.0232	-.0637
		50000	.6967	.4213	.1045	.0632	-.0413
		75000	.7935	.6916	.1190	.1037	-.0153
		100000	.8436	.8160	.1265	.1224	-.0041
	50	25000	.2454	.0012	.0368	.0002	-.0366
		35000	.4240	.0533	.0636	.0080	-.0556
		50000	.5787	.2704	.0868	.0406	-.0462
		75000	.7102	.5796	.1065	.0869	-.0196
		100000	.7794	.7423	.1169	.1114	-.0056
	80	25000	.0072	0	.0011	0	-.0011
		35000	.1695	.0023	.0254	.0003	-.0251
		50000	.3669	.0909	.0550	.0136	-.0414
		75000	.5536	.3896	.0830	.0584	-.0246
		100000	.6565	.6046	.0985	.0907	-.0078

MEMORANDUM State of Alaska

TO: Mary A. Nordale
Commissioner of Revenue

DATE: October 31, 1985

FILE NO:

TELEPHONE NO:

FROM: Vincent D. Wright VW
Chief, Research Section

SUBJECT: HB 353

The HB 353 versus current law analysis is virtually complete with the exception of the TAPS settlement impact. The incorporation of the TAPS settlement and its impact on HB 353 versus current law we hope to complete by the end of November.

I naturally have greater confidence in the results of this project as compared to our preliminary work in that we took the time to conduct a thorough analysis of all the revenue and expenditure items necessary to put together this report. The various items, particularly on the expenditure side, are very complex in their construction and require a great deal of time and effort in order to obtain accuracy and objectivity. I insisted on this approach, however, in the belief that our decision-makers would prefer being able to make informed, and therefore, responsible decisions.

The basis of this report is also much broader in scope than our original analysis in that we addressed additional questions such as the effect of differing tax structures on the "marginal fields", various definitions of the "pie", alternative price scenarios, and a much longer time period.

The scope of study, assumptions, and conclusions are attached but I would like to reiterate in this letter our basic conclusions in synopsis form.

1. If, for the years FY 1982 through FY 1985, the old separate accounting and severance tax laws had been in effect, the State would have received more revenue disregarding, of course, what might happen in future court actions.

2. Our projections indicate that under a proposal such as HB 353 and for the period projected (FY 1985 - FY 2005), the amount of cumulative revenue would be greater than under current tax law.

3. During the first few years, more revenue is generated under HB 353 than under current law. Our projections also indicate, however, that in later years a crossover point exists with the result that more revenue is generated under the current tax structure than under the HB 353 proposal. The causes for this are discussed in detail in the report.

4. Under both tax structures, revenues will decline on a year-to-year basis.

5. A proposal such as HB 353 is more oil price sensitive than the current tax structure. This means that if oil prices move up, the State would gain more revenue under an HB 353 type proposal than under existing law. It also means that if oil prices move down, the State will lose more revenue under an HB 353 type proposal than under existing tax law.

6. The State's share of the "pie" is defined via two approaches, both described in detail later in this report. In the period FY 1982 through FY 1985, there is no evidence to support a trend indicating that the State received more or less of the total "pie".

7. Based on the period FY 1985 through FY 2005 and under all scenarios, the State generally receives an increasing share of the "pie".

8. The proposed change from existing law to HB 353 does not, given our assumptions, materially effect the feasibility of developing the "marginal fields". However, there are other factors which must be considered that are explained in the body of this report.

9. The change in the price of oil does have a significant impact, relatively speaking, on whether or not a corporation would pursue the development of a "marginal field".

ANALYSIS OF HB 353

The following materials contain our analysis of the projected revenue impact of HB 353 based on the June, 1985, Petroleum Revenue Forecast assumptions. The analysis was performed for the time period fiscal year (FY) 1985 through FY 2005 and for three alternative oil price and production scenarios; moderate, low and high, corresponding approximately with the Mean, 30 percent and 70 percent forecast assumptions. The analysis shows the projected change in Petroleum Corporate Income Tax and Petroleum Severance Tax collections for the time period under the three scenarios, as a result of enacting HB 353 given the provisions and effective dates contained in that bill.

The materials also contain our analysis of the estimated revenue impact of SB 524 (current law) for the time period FY 1982 through FY 1985, given the oil and price and production which actually occurred during that time period. Again, the analysis shows the estimated change in Petroleum Corporate Income Tax and Petroleum Severance Tax collections for the time period as a result of the enactment of SB 524.

The materials are presented in the following order:

I. A description of the changes made and proposed changes to the Petroleum Corporate Income Tax and the Petroleum Severance Tax as a result of the enactment of SB 524 and the proposed enactment of HB 353.

II. A description of the methodology and assumptions used to estimate the revenue collections under the pre-SB 524 separate accounting Petroleum Corporate Income Tax for fiscal years 1982 through 1985 and to project what the revenue collections under the HB 353 separate accounting Petroleum Corporate Income Tax would be for fiscal years 1985 through 2005.

III. A description of the methodology and assumptions used to project what revenue collections will be under the current modified apportionment Petroleum Corporate Income Tax for fiscal years 1985 through 2005.

IV. Summary tables and descriptions showing the numerical results of the analysis.

V. Conclusions of our analysis and comparison with earlier analysis.

I.

Prior to enactment of SB 524, the Petroleum Corporate Income Tax was determined on a separate accounting basis and taxed at a maximum marginal rate of 9.4 percent. This separate accounting corporate tax structure was in effect for calendar years 1978 through 1981.

Under separate accounting, a corporation's gross petroleum production and gross petroleum pipeline transportation income was the starting point for calculation of taxable income. Gross petroleum production income was determined by taking the product of the corporation's field production and wellhead value. Gross petroleum pipeline transportation income was determined by taking the product of the corporation's pipeline thruput and tariff. Deductions from gross petroleum production or gross petroleum pipeline transportation income specifically associated with those activities in the State were allowed in calculating the corporation's net income subject to the tax rate.

The Oil Severance Tax, which was in effect prior to the enactment of SB 524, and which was an allowable deduction from gross petroleum production income under the separate accounting corporate tax, had a rate of 12.25 percent modified by an economic limit factor (ELF) for production from all fields. The effective tax rate, the product of 12.25 percent and the ELF, was levied against the product of net (after royalty share) production and gross wellhead value to determine the tax liability.

With enactment of SB 524, the current tax structure with respect to the Petroleum Corporate Income Tax and the Petroleum Severance Tax was put into effect. The determination of taxable income under the Petroleum Corporation Tax was changed from the separate accounting basis described above to a modified apportionment basis which is currently in effect.

Under the provisions of SB 524, modified apportionment was put into effect starting in calendar year (CY) 1982 with a maximum marginal tax rate of 9.4 percent. In addition, the maximum marginal tax rate for the last year that separate accounting was in effect, CY 1981, was increased to 11 percent. Under modified apportionment, a corporation's adjusted worldwide petroleum business federal taxable income is allocated to Alaska based on an apportionment factor to determine its Alaska net petroleum business income subject to the tax rate. If the corporation is engaged in both petroleum production and petroleum pipeline transportation in Alaska, the apportionment factor is calculated as the average of three factors. The factors are: (1) extraction, the corporation's Alaska net petroleum production divided by its total worldwide net petroleum production; (2) property, the corporation's Alaska average petroleum business property divided by its total worldwide average petroleum business property; and (3) sales, the corporation's Alaska petroleum business sales and tariffs divided by its total worldwide petroleum business sales and tariffs.

The Oil Severance Tax rate under the provisions of SB 524 was changed from 12.25 percent to 15 percent for production from the Sadlerochit and Cook Inlet fields. The ELF was set to equal 1.00 as long as the calculated ELF was .7 or greater or for the first 10 years of production. The tax rate for production from Kuparuk and other North

Slope fields remained at 12.25 percent for the first 5 years of production from the field and then went to 15 percent. The ELF provisions for these fields were the same as for Sadlerochit and Cook Inlet. This represents the current Oil Severance Tax structure and has been in effect since the beginning of FY 1982.

HB 353 proposes to once again change the tax structure with respect to the Petroleum Corporate Income Tax and the Petroleum Severance Tax. Under the provisions of HB 353, the Petroleum Corporation Income Tax would again be determined on a separate accounting basis, very similar to the method used prior to passage of SB 524. For corporations engaged in petroleum production or petroleum pipeline transportation, gross petroleum production and transportation income would be determined in the same manner as pre-SB 524. Deductions allowed in determining net taxable income would also be similar but with a few exceptions. Under HB 353, the Federal Crude Oil Windfall Profits Tax would not be an allowable deduction where it was under the pre-SB 524 separate accounting corporate income tax. Also, although Oil Severance Taxes are allowed as a deduction under both laws, HB 353 proposes to change the Oil Severance Tax law provisions. Thus, the severance tax would be different under each law. Under HB 353, corporations engaged in petroleum exploration activities in Alaska but with no petroleum production or pipeline transportation activities would also be subject to the separate

accounting tax. This was not the case under the pre-SB 524 law. The maximum marginal tax rate would remain at 9.4 percent. HB 353 would enact this new separate accounting Petroleum Corporate Income Tax beginning with CY 1985.

HB 353 would change the Oil Severance Tax rate back to 12.25 percent for all fields beginning in CY 1987. The ELF provisions would remain the same as in the current law.

II.

The analysis of Petroleum Corporate Income Tax collections under separate accounting was performed on a disaggregated basis by producing field and pipeline. Estimates and projections of gross production income and allowable production deductions were developed for all fields which have produced in Alaska since FY 1982 or which are projected to have commercial production by FY 2005. The fields included were Cook Inlet, Sadlerochit and Kuparuk, all of which are currently producing. In addition, the "marginal" North Slope fields of Milne Point, Endicott, Lisburne, West Sak and Point Thompson were also included. The only prospective North Slope field excluded was Seal Island as it is not expected to have commercial production before FY 2005. Estimates and projections of gross pipeline transportation income and allowable deductions were also developed for TAPS for fiscal years 1982 through 2005.

Actual gross production and wellhead values by field were used to derive estimated gross production income for fiscal years 1982 through 1985. Also, actual TAPS thruput and tariffs were used to derive estimated gross transportation income for this period.

Using the Petroleum Revenue Forecasting Simulation model with its feasibility analysis capabilities, six separate production scenarios by field were generated for fiscal years 1986 through 2005. This means that for each field where three different price scenarios and two different tax structures (current law and HB 353) are considered, then six different production scenarios will result. The three different future oil price scenarios corresponded approximately with the June, 1985 Forecast, Mean, 30 percent and 70 percent price assumptions. It should be noted that for the purposes of this sensitivity analysis, three distinct future price scenarios were used in the model whereas for the normal forecasting analysis, the Mean, 30 percent and 70 percent scenarios are a result of an entire probability distribution of inputs and outputs. Therefore, the correspondence with the June, 1985 Forecast will not be exact.

In addition, production effects by field for each future oil price scenario were analyzed assuming both the current tax structure and the proposed HB 353 tax structure would be in effect for the period. The results of this analysis indicated that the aggregate production impacts of HB 353 over the time period would be insignificant when compared to

the current tax structure. Cumulative North Slope production for the period FY 1986 through FY 2005 would be only 0.43 percent lower under HB 353 than under current law given the Mean case price scenario, 0.27 percent lower given the 30 percent case price scenario and 0.10 percent lower given the 70 percent case price scenario.

The impact of alternative price scenarios, however, was found to be much more significant than alternative law scenarios. Cumulative North Slope production through FY 2005 given the current law was found to be 3.39 percent lower under the 30 percent price scenario than under the Mean and 7.32 percent higher under the 70 percent price scenario when compared to the Mean.

This feasibility analysis was based on a real after tax discounted cash flow rate of return (DCFROR) analysis applied to each current and prospective North Slope field along with assumptions about oil prices, development and operating costs, effective tax rates and desired rates of return. A detailed description of the feasibility submodel can be found in the appendix to the June, 1985 quarterly Petroleum Production Revenue Forecast.

The gross production and wellhead values under HB 353 given each future price scenario generated by this analysis were used to project future gross production income by field. The sum of production from all North Slope fields under each price scenario was used to project TAPS thruput under each scenario. The TAPS tariff was assumed to remain at

$6.00 per barrel from FY 1986 through FY 2005 and along with TAPS thruput was used to project gross pipeline transportation income. Possible effects of the TAPS tariff settlement have not been considered in this analysis but will be analyzed in the near future. All wellhead value projections in this analysis assume a $6.00 per barrel TAPS tariff. If the tariff were changed it would impact wellhead value and therefore, also production and thruput which could in turn impact the tariff itself. So, the analysis is somewhat complex and will be presented separately.

Allowable separate accounting deductions by field and TAPS were estimated for FY 1982 through FY 1985 under the pre-SB 524 Petroleum Corporate Income tax law. Allowable deductions by field and TAPS were projected based on the three price and production scenarios for FY 1985 through 2005 under HB 353.

Deductions from gross production income by field were derived as follows:

Royalties which would have been deductible under the pre-SB 524 separate accounting law for FY 1982 through FY 1985 and which would be deductible under the proposed HB 353 for FY 1985 through FY 2005 were derived on the same basis. For each field, royalties were based on the State's royalty share of the field, the production from the field and the

field wellhead value less any field gathering and cleaning costs. For the period from FY 85 through FY 2005, under HB 353, royalties were different under each price scenario as each scenario had a different wellhead value and production associated with it.

Severance taxes were calculated as a deduction under both pre-SB 524 and proposed HB 353 income tax laws. However, since both SB 524 and HB 353 also change the severance tax law, the basis for calculation had to be different. For the period from FY 1982 through FY 1985 under the pre-SB 524 severance tax law, a rate of 12.25 percent modified by a calculated ELF was applied to the net after royalty share production multiplied by the wellhead value for all fields. Under HB 353, the current severance tax structure was applied to all fields from FY 1982 through the first half of FY 1987. The current tax structure taxes the Sadlerochit and Cook Inlet fields at a rate of 15 percent modified by an ELF set equal to 1.00 as long as the calculated ELF is .7 or above or for the first 10 years the field produces. Kuparuk and all other North Slope fields are taxed at a rate of 12.25 percent for the first 5 years of production and 15 percent thereafter with ELF provisions the same as for Sadlerochit and Cook Inlet. Since HB 353 proposes to change the severance tax law beginning in CY 1987, the proposed new tax structure was applied to all fields for the period from the second half of FY 1987 through FY 2005. That structure taxes production from all fields at a

rate of 12.25 percent with ELF provisions the same as under the current law. Severance taxes will be different under each price scenario for the period through FY 2005 as production and wellhead values would differ in each scenario.

Property taxes under the Alaska Petroleum Production and Pipeline Property Tax were computed as a deduction under both the pre-SB 524 law and the HB 353 proposal. The basis for each producing field was the same under both approaches. The property tax is levied at a rate of 2 percent on the assessed value of tangible production property in the field. Assessed value for production property is based on trended original cost of tangible investments considering both depreciation and replacement cost. Property taxes for most fields did not vary between one price scenario and another as the production differences were not great enough to require significantly different development costs given the capital cost functions of the Petroleum Revenue Forecasting model. The only fields for which there were property tax differences between alternative scenarios were West Sak and Sadlerochit due to the enhanced recover phase.

Federal Crude Oil Windfall Profits Tax (WPT) was calculated as a deduction under the pre-SB 524 law for the period from FY 1982 through FY 1985. The only fields subject to this tax are Sadlerochit and Cook Inlet. The tax calculation was based on the difference between wellhead value and the adjusted base price modified by a severance tax adjustment. This net windfall per barrel was multiplied by the

production from the field and then by the WPT rate of 70 percent to calculate the tax. The WPT is not an allowable deduction under HB 353 and therefore, was not deducted in calculation of net income under the tax.

Direct operating costs for each field are allowed as a deduction under both pre-SB 524 and HB 353. Operating costs were calculated for each field based on cost functions in the Petroleum Revenue Forecasting model. These functions were specified with a fixed component and a variable component which was a function of production volume. They also contained specific cost escalation rates. Operating costs varied between scenarios for each field as production volumes varied. It should be noted that operating costs used in this analysis are significantly higher than those used in the March, 1985 analysis of HB 353. This is because the operating cost estimates used in March were "bare bones" minimum estimates and included no well workovers or field engineering.

Depreciation of development costs and amortization of lease acquisition costs calculated on a units of production basis were deducted for each field for both pre-SB 524 and HB 353. Development costs include both tangible and intangible costs and are consistent with capital cost functions in the Petroleum Revenue Forecasting Model. Development cost scenarios for the fields considered did not vary with price scenarios except in the case of West Sak and Sadlerochit in the enhanced recovery

phase. Acquisition costs include lease bonus payments, successful exploration expenses and property taxes paid before production. Reserve estimates used for calculating units of production factors were based on estimated total recoverable reserves. Unit of production factors varied between scenarios as production volumes varied.

In addition to the aforementioned production deductions developed by field for analysis of pre-SB 524 and HB 353, three other deductions are allowed under both laws and were estimated on an aggregate basis instead of by field. These deductions were made against the total gross production income of all producing fields.

Uncapitalized interest and general overhead and administration expense were projected based on historical trends actually reported under the pre-SB 524 separate accounting law through CY 1981. The projections also consider the provisions of both laws which cap the maximum allowable deduction a corporation may claim for each item. The cap is the total expense of the corporation's consolidated worldwide business in those categories multiplied by the ratio of the cost of real and tangible personal property used in production in Alaska to the cost of real and tangible personal property used in the consolidated business worldwide.

Unsuccessful exploration and abandonment expenses are also allowed as a deduction under both pre-SB 524 and HB 353 separate accounting approaches. The projections were based on historical trends actually reported under the pre-SB 524 separate accounting law and allowing for

possible impacts on exploration expenditures of alternative price scenarios. The projected exploration expense was assumed to be deducted in the year of abandonment even though it may be that the corporation with the expense would have insufficient production income against which to write off their full exploration expense and hence, would have to carry losses forward. Also, as mentioned earlier under HB 353, corporations with exploration expenses but no production income would fall under separate accounting, a provision different from the pre-SB 524 law. This could increase total exploration expenses reported. However, these corporations would be carrying losses forward until they had production income to expense against and thus, this difference would not materially impact tax collections in the time frame of this analysis.

Deductions from gross transportation for TAPS were derived as follows:

All deductions allowed from gross transportation income are the same for both pre-SB 524 and HB 353 separate accounting approaches and therefore, were projected on the same basis throughout the FY 1982 through FY 2005 time period.

Direct operating costs were projected based on an operating cost function with both a fixed component and a variable component based on thruput. Specific cost escalation factors were also considered. The function was derived based on actual FERC filings. The projections differ between price scenarios as thruput varies.

Depreciation and amortization were calculated on a straight line basis and using useful life estimates as allowed by FERC. This would be the same regardless of thruput and those would not vary between scenarios.

Uncapitalized interest was calculated based on the actual TAPS debt schedule and would not vary between scenarios.

Property taxes under the Alaska Petroleum Production and Pipeline Property Tax were computed based on the assessed value of tangible TAPS property multiplied by the rate of 2 percent. The assessed value was assumed not to vary between scenarios.

Total separate accounting gross production income for all fields and gross transportation income for TAPS less all allowable production and transportation separate accounting deductions were calculated to arrive at net separate accounting income subject to the tax rate for each year. Pre-SB 524 provisions were applied for FY 1982 through FY 1985. HB 353 provisions were applied for FY 1985 through 2005. Thus, two estimates for FY 85 were made: one under pre-SB 524; the other under HB 353. This was done in order to be able to show the impact of SB 524 from FY 1982 through FY 1985 and also, the impact of HB 353 from FY 1985 through FY 2005. Net separate accounting income on a fiscal year basis was used to derive separate accounting tax liability on a fiscal year basis which in turn, was used to derive estimated separate accounting tax collections on a fiscal year basis.

III.

Under the current (SB 524) Petroleum Corporate Income Tax, corporate income is taxed on a modified apportionment basis as described earlier. The projection of future tax collections under this tax was performed on a disaggregated basis by corporation instead of by field. This is because under apportionment, the worldwide petroleum business income of each corporation is apportioned to Alaska based on factors specific to that corporation. Thus, for example, even though two corporations may have identical production, income and costs in Alaska they may not have the same taxable income under apportionment if their worldwide operations and hence, apportionment factors are different.

The current apportionment tax has been in effect since the beginning of CY 1982. Corporations thus far have filed returns for two years, CY 1982 and CY 1983, under this tax structure. The three major taxpayers are ARCO, Exxon and Sohio-BP which account for approximately 90 percent of the total tax collected. Using the information for CY 1982 and CY 1983 as a basis, projections of worldwide apportionable petroleum business income and Alaska apportionment factors for each of these three corporations were made on a calendar year basis through 2005. Calendar year tax liability for the "Big Three" corporations was thus derived. Based on the corporate ownership percentages of current and prospective fields the Big Three were assumed to continue to account for 90 percent

of total tax liability throughout the period to 2005. Thus, projections of total apportionment tax liability on a calendar year basis were derived and used to project apportionment tax collections on a fiscal year basis through FY 2005.

For each corporation, projections of Alaska Production, Property and Sales used in calculating the apportionment factors were made based on the various field production and development costs and TAPS thruput and tariff rates associated with the three different price scenarios. Also, the specific corporation's ownership percentage of each field and TAPS was considered. Worldwide income, production, sales and property projections were also made assuming different growth rates consistent with the various price scenarios.

IV.

The following tables summarize the results of our analysis under the Mean, 30 percent and 70 percent price and production scenarios.

There are three sections, each corresponding with a specific scenario.

Each section contains seven tables. The tables are described as follows:

Table 1:

The first part of Table 1 summarizes the estimated impact of SB 524 (current law) on both the Petroleum Corporate Income Tax and the Petroleum Severance Tax for FY 1982 through FY 1985.

The comparison on the Petroleum Corporate Income Tax side of the table is between the pre-SB 524 separate accounting corporate tax and the current apportionment corporate tax. Two sets of figures are shown for FY 1982. The first is as if apportionment had been in effect for the full year. The second is the actual amount collected for FY 1982 which is a combination of apportionment and separate accounting. The reason for this is that SB 524 put the current apportionment tax in effect at the beginning of CY 1982, midway through FY 1982, and also raised the maximum marginal rate under the pre-SB 524 separate accounting tax from 9.4 percent to 11 percent for the last year it was in effect, CY 1981.

The comparison on the Petroleum Severance Tax side of the table is between the pre-SB 524 severance tax and the current (SB 524) severance tax. Again, two sets of figures are shown for FY 1982, however, they are both the same because SB 524 changed the severance tax effective at the beginning of FY 1982.

The second part of Table 1 summarizes the projected impact of HB 353 on both the Petroleum Corporate Income tax and the Petroleum Severance Tax for FY 1985 through FY 2005.

The comparison on the Petroleum Corporate Income Tax side is between the current apportionment corporate tax and the proposed HB 353 separate accounting corporate tax. The figures presented assume the HB 353 separate accounting tax will be effective at the beginning of CY 1985, midway through FY 1985.

The comparison on the Petroleum Severance Tax side is between the current severance tax and the proposed HB 353 severance tax. The figures presented assume the HB 353 severance tax will be effective at the beginning of CY 1987, midway through FY 1987.

Table 2a:

Table 2a summarizes estimated and projected state petroleum revenues from production as a percentage of net production revenues.

Gross revenue for each year is the sum of production multiplied by wellhead value for all producing fields. Costs are all allowable, non-tax, separate accounting deductions associated with production. Net revenue for each year is gross revenue less costs.

State petroleum revenues include royalties, severance taxes, property taxes on production facilities and income taxes. Royalties and property taxes included are the same for all tax structures presented. Property taxes are gross and include amounts credited to local governments. Severance taxes are included on the same basis and timing

as those shown in Table 1 as to pre-SB 524, current (SB 524) and proposed HB 353 laws. Income taxes included are on the same basis and timing as those shown in Table 1 except separate accounting corporate tax under pre-SB 524 and HB 353 exclude amounts attributable to TAPS which are included in Table 1. No such adjustment was made to apportionment income taxes included under current law as it was not possible to calculate separately amounts attributable to TAPS.

Table 2b:

Table 2b summarizes estimated and projected state petroleum revenues from production and pipeline transportation as a percentage of net production and transportation revenues.

Gross revenue for each year is the sum of production multiplied by wellhead value for all producing fields plus thruput multiplied by tariff for TAPS. Costs are all allowable, non-tax, separate accounting deductions associated with production and pipeline transportation. Net revenue for each year is gross revenue less costs.

State petroleum revenues include royalties, severance taxes, property taxes on production and TAPS facilities and income taxes. Royalties and property taxes included are the same for all tax structures presented. Property taxes are gross and include amounts credited to local governments. Severance taxes are included on the same basis and

timing as those shown in Table 1 as to pre-SB 524, current (SB 524) and proposed HB 353 laws. Income taxes are included on the same basis and timing as those shown in Table 1. Separate accounting corporate tax included under pre-SB 524 and HB 353 includes amounts attributable to TAPS.

Table 3:

Table 3 summarizes income and deductions on a separate accounting basis for all petroleum production, pipeline transportation and exploration activities in the State. The fields included in production activities are Cook Inlet, Sadlerochit and Kuparuk, all of which are currently in commercial production. In addition, the prospective "marginal" North Slope fields of Milne Point, Lisburne, Endicott, West Sak and Point Thompson are also included. TAPS is included in transportation activities.

The figures presented in all columns from FY 1982 through the first FY 1985 row are based on pre-SB 524 separate accounting law. The figures presented from the second FY 1985 row through FY 2005 are based on the proposed HB 353 separate accounting law. As discussed earlier, the severance tax law and the WPT deductibility provisions are different under these two laws. The figures shown in the severance tax column were calculated based on pre-SB 524 severance tax law through the first FY 1985 row and on HB 353 severance tax law from the second FY 1985 row on.

Figures shown in the WPT column are included in total deductions and deducted in calculating net income only under pre-SB 524 law through the first FY 1985 row. All tax liability and collection figures shown in this table are calculated assuming the relevant tax structure is in effect for the full year.

Table 4:

Table 4 summarizes income and deductions on a separate accounting basis for all producing fields. All calculations are on the same basis as in Table 3 except only the producing fields are included.

Table 5:

Table 5 summarizes income and deductions on a separate accounting basis for TAPS. As discussed earlier, treatment of petroleum pipeline transportation income and deductions is the same under both the pre-SB 524 and the proposed HB 353 separate accounting tax laws. All figures presented are calculated assuming separate accounting is in effect for a full year.

Table 6:

Table 6 summarizes the impact of the WPT deduction on separate accounting tax liability. Only Sadlerochit and Cook Inlet production is subject to the WPT. All other North Slope fields are exempt.

HB 353 AND SB 524
ANALYSIS
JUNE, 1985
MEAN CASE ASSUMPTIONS

SUMMARY TABLES

TABLE 1

Old Law (Pre SB 524)

Current Law (AS43.20 & AS 43.55)

Proposed Law (HB 353)

(all current FY $)

Fiscal Year	To. Corp Inc Tax Collections: Pre SB 524	AS 43.20	Diff	Total Prodn Tax Liability: Pre SB 524	AS 43.55	Diff	Total Gain or Loss
82	837.62	242.50	-595.12 1)	1219.03	1581.70	362.67	-232.45
			Impact SB 524			Impact SB 524	Impact SB 524
82	837.62	668.90	-168.72 2)	1219.03	1581.70	362.67	193.95
83	796.15	236.00	-560.15	1098.94	1493.70	394.76	-165.39
84	782.86	265.10	-517.76	1032.93	1393.10	360.17	-157.59
85	797.00	168.60	-628.40	1013.86	1388.50	374.64	-253.76
			Impact HB 353	existing		Impact HB 353	Impact HB 353
	HB 353			AS 43.55			
85	448.48	168.60	279.88 3)	1388.50	1388.50	0.00	279.88
86	698.21	228.07	470.15	1204.74	1204.74	0.00	470.15
				HB 353			
87	607.04	241.37	365.67	979.68	1072.99	-93.31	272.36
88	567.21	249.25	317.96	685.93	830.45	-144.52	173.44
89	550.19	252.48	297.71	661.33	794.12	-132.79	164.92
90	519.30	254.00	265.30	640.39	761.26	-120.87	144.43
91	476.02	251.48	224.55	603.23	707.14	-103.91	120.64
92	466.96	248.45	218.51	610.04	715.61	-105.57	112.94
93	466.49	244.40	222.09	609.35	719.25	-109.90	112.19
94	434.06	236.82	197.24	562.39	660.96	-98.57	98.67
95	403.64	228.19	175.44	535.46	631.20	-95.74	79.70
96	370.16	219.58	150.58	490.99	580.20	-89.21	61.37
97	343.05	211.35	131.69	456.75	539.66	-82.89	48.81
98	321.93	204.13	117.80	427.43	503.60	-76.17	41.63
99	302.91	197.49	105.42	402.26	471.98	-69.72	35.70
2000	290.31	190.00	100.31	372.55	437.26	-64.71	35.60
01	257.19	180.10	77.09	326.22	377.30	-51.08	26.01
02	212.73	169.31	43.42	279.22	322.12	-42.90	0.52
03	170.62	159.82	10.81	245.16	280.13	-34.97	-24.16
04	141.77	150.55	-8.78	221.49	247.03	-25.54	-34.32
05	109.07	140.64	-31.57	201.86	221.37	-19.51	-51.08
SUM85-05	8157.35	4426.09	3731.26	11905.00	13466.87	-1561.87	2169.39

1) FY 1982 receipts are estimated as if AS43.21 were in effect for the whole year in column 2 then as if AS43.20 were in effect for the whole year in column 3 though each was in effect only half the fiscal year.

2) FY 1982 collections under SB 524 of $668.9m are comprised of $538.2m from AS43.21"OLD SEPARATE ACCT" law and $130.7 from AS43.20 "CURRENT MODIFIED APPORTIONMENT" law.

3) FY 1985 HB353 Corp. Inc. Tax includes $60.3m of AS43.20 already collected through December 31, 1984.

4) FY 1985 AS43.20 collections are expected to be low due to substantial refunds and credits for prior year's tax overpayments. Tax liability on a calendar year basis under AS43.20 was CY82, $236.50m; CY83, $224.01m; CY84 $241.54m.

5) Based on 6/85 Mean case price and production assumptions.

TABLE 2a
Calculation of State Petroleum Revenues as a
Percent of Adjusted Production Income
6/85 Forecast Assumptions Mean Case FY 85-05 Using WHV

Fiscal Year	Total Petroleum Production Gross Revenue	Cost Deductns	Net Revenue	State Petrol Revenues	State / Net Rev %
82	12958.93	1740.58	11218.35	3525.22	31.42%
				Pre SB 524	
				Impact SB 524	
82	12958.93	1740.58	11218.35	3525.22	31.42%
83	11941.70	2113.21	9828.49	3270.36	33.27%
84	11327.62	2511.29	8816.33	3148.49	35.71%
85	11382.33	2832.59	8549.74	3161.10	36.97%
				HB 353 as of 1/1/85 1)	
				Impact HB 353	
85	11382.33	2832.59	8549.74	3297.36	38.57%
86	10144.92	3016.23	7128.69	3133.99	43.96%
87	9186.96	3365.90	5821.05	2739.66	47.06%
88	9007.17	3588.61	5418.56	2386.40	44.04%
89	9143.65	3773.47	5370.17	2372.84	44.19%
90	9095.93	3923.57	5172.36	2363.66	45.70%
91	8808.87	3896.45	4912.42	2277.76	46.37%
92	9018.44	3900.45	5117.99	2314.22	45.22%
93	9112.08	3835.75	5276.33	2336.99	44.29%
94	8711.44	3691.57	5019.87	2233.22	44.49%
95	8469.24	3564.66	4904.58	2163.87	44.12%
96	8114.79	3453.17	4661.62	2058.35	44.16%
97	7908.83	3371.45	4537.38	1983.17	43.71%
98	7745.92	3316.04	4429.88	1918.21	43.30%
99	7613.86	3292.00	4321.86	1861.46	43.07%
2000	7505.98	3233.04	4272.94	1803.53	42.21%
01	7058.19	3191.10	3867.09	1646.97	42.59%
02	6540.09	3147.51	3392.58	1468.94	43.30%
03	6137.45	3175.88	2961.57	1311.45	44.28%
04	5800.91	3099.70	2701.21	1185.11	43.87%
05	5368.99	3063.13	2325.86	1051.88	45.23%

With AS 43.20 Corporate Income Tax & AS 43.55 Production Tax

Fiscal Year	Total Petroleum Production Gross Revenue	Cost Deductns	Net Revenue	State Petrol Revenues	State / Net Rev %
82	12958.93	1740.58	11218.35	3502.40	31.22%
				AS43.20 & 55	
82	12958.93	1740.58	11218.35	3928.80	35.02%
83	11941.70	2113.21	9828.49	3321.58	33.80%
84	11327.62	2511.29	8816.33	3220.43	36.53%
85	11382.33	2832.59	8549.74	3154.10	36.89%
				AS43.20 & 55	
85	11382.33	2832.59	8549.74	3154.10	36.89%
86	10144.92	3016.23	7128.69	2918.12	40.93%
87	9186.96	3365.90	5821.05	2728.41	46.87%
88	9007.17	3588.61	5418.56	2463.54	45.46%
89	9143.65	3773.47	5370.17	2446.11	45.55%
90	9095.93	3923.57	5172.36	2441.63	47.21%
91	8808.87	3896.45	4912.42	2354.81	47.94%
92	9018.44	3900.45	5117.99	2381.93	46.54%
93	9112.08	3835.75	5276.33	2390.22	45.30%
94	8711.44	3691.57	5019.87	2275.33	45.33%
95	8469.24	3564.66	4904.58	2202.06	44.90%
96	8114.79	3453.17	4661.62	2191.17	47.00%
97	7908.83	3371.45	4537.38	2010.93	44.32%
98	7745.92	3316.04	4429.88	1936.69	43.72%
99	7613.86	3292.00	4321.86	1871.94	43.31%
2000	7505.98	3233.04	4272.94	1802.25	42.18%
01	7058.19	3191.10	3867.09	1640.85	42.43%
02	6540.09	3147.51	3392.58	1473.12	43.42%
03	6137.45	3175.88	2961.57	1327.19	44.81%
04	5800.91	3099.70	2701.21	1199.96	44.42%
05	5368.99	3063.13	2325.86	1072.99	46.13%

1) FY 1985 HB353 Corp. Inc. Tax includes $60.8m of AS43.20 already collected through December 31, 1984 and half a year of the new tax.

2) Based on 6/85 Mean case price and production assumptions.

TABLE 2b
Calculation of State Petroleum Revenues as a
and as a Percent of Prod'n & Pipeline Income
6/85 Forecast Assuoptions Mean Case FY 85-05 Using WHV

Fiscal Year	-----Total Petroleum----- Gross Revenue	Cost Deductns	Net Revenue	State Petrol Revenues	State / Net Rev %
82	16455.80	2839.52	13616.28	3896.85	28.62%
				Pre SB 524	
				Impact SB 524	
82	16455.80	2839.52	13616.28	3896.85	28.62%
83	15469.75	3156.70	12313.06	3644.37	29.60%
84	14955.03	3492.67	11462.37	3544.02	30.92%
85	15135.98	3750.89	11385.10	3569.86	31.36%
				HB 353 as of 1/1/85 1)	
				Impact HB 353	
85	15135.98	3750.89	11385.10	3585.00	31.49%
86	13905.72	3905.70	10000.02	3544.03	35.44%
87	13017.77	4248.71	8769.06	3150.31	35.93%
88	12634.59	4451.25	8183.34	2780.27	33.97%
89	12632.58	4620.60	8011.98	2748.11	34.30%
90	12386.26	4760.52	7625.75	2717.11	35.63%
91	11789.54	4722.70	7066.85	2600.06	36.79%
92	11834.36	4712.14	7122.22	2613.25	36.69%
93	11738.58	4632.28	7106.30	2614.56	36.79%
94	11023.65	4473.66	6550.00	2479.92	37.86%
95	10538.09	4336.33	6201.77	2381.46	38.40%
96	9936.752	4216.39	5720.36	2248.00	39.30%
97	9515.632	4126.62	5389.01	2146.98	39.84%
98	9171.577	4062.83	5108.75	2059.32	40.31%
99	8885.202	4032.89	4852.31	1982.41	40.85%
2000	8645.682	3969.34	4676.34	1906.39	40.77%
01	8025.031	3925.09	4099.94	1729.17	42.18%
02	7343.314	3884.93	3458.38	1529.72	44.23%
03	6811.310	3922.66	2888.65	1352.87	46.83%
04	6367.785	3858.14	2509.65	1209.26	48.18%
05	5850.748	3834.13	2016.62	1059.29	52.53%

With AS 43.20 Corporate Income Tax & AS 43.55 Production Tax

Fiscal Year	-----Total Petroleum----- Gross Revenue	Cost Deductns	Net Revenue	State Petrol Revenues	State / Net Rev %
82	16455.80	2839.52	13616.28	3664.40	26.91%
				AS43.20 & 55	
82	16455.80	2839.52	13616.28	4090.80	30.04%
83	15469.75	3156.70	12313.06	3478.98	28.25%
84	14955.04	3492.67	11462.37	3396.43	29.64%
85	15135.99	3750.89	11385.10	3316.10	29.13%
				AS43.20 & 55	
85	15135.98	3750.89	11385.10	3316.10	29.13%
86	13905.72	3905.70	10000.02	3073.89	30.74%
87	13017.77	4248.71	8769.06	2877.95	32.82%
88	12634.59	4451.25	8183.34	2606.85	31.86%
89	12632.58	4620.60	8011.98	2583.19	32.24%
90	12386.26	4760.52	7625.75	2572.68	33.74%
91	11789.54	4722.70	7066.85	2479.43	35.09%
92	11834.36	4712.14	7122.22	2500.31	35.11%
93	11738.58	4632.28	7106.30	2502.37	35.21%
94	11023.65	4473.66	6550.00	2381.25	36.36%
95	10538.09	4336.33	6201.77	2301.75	37.11%
96	9936.752	4216.39	5720.36	2284.63	39.94%
97	9515.632	4126.62	5389.01	2098.16	38.93%
98	9171.577	4062.83	5108.75	2017.69	39.49%
99	8885.202	4032.89	4852.31	1946.71	40.12%
2000	8645.682	3969.34	4676.34	1870.79	40.01%
01	8025.031	3925.09	4099.94	1703.16	41.54%
02	7343.314	3884.93	3458.38	1529.20	44.22%
03	6811.310	3922.66	2888.65	1377.04	47.67%
04	6367.785	3858.14	2509.65	1243.58	49.55%
05	5850.748	3834.13	2016.62	1110.37	55.06%

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1) FY 1985 HB353 Corp. Inc Tax includes $60.8m of AS43.20 already collected through December 1, 1984 and half a year of the new tax.

2) Based on 6/85 Mean case price and production assuoutions.

TABLE 3
Pipeline, Production & Exploration
Income Tax Estimates
(all current FY $)

Fiscal Year	Total Revenue	State Royalty Share	Prod'n& Cons Tax	Total Property Tax	Total Oper'g Costs	Total Depre	Total Acquis Costs	Windfall Profits Tax	Interest Expense Uncap	Exploratn Costs	Admin Costs	Other Deductns	Total Deductns	Total Net Income	Liability------Collections------ HB 353 1)	HB 353 1)	AS 43.20 2)	Diff
82	16455.80	1564.30	1219.03	275.90	939.87	652.58	0.77	2017.66	720.69	190.90	236.20	148.58	7916.41	8539.40	802.70	837.62	130.72	706.90
83	15479.75	1442.73	1098.94	306.55	1100.56	780.16	0.98	1018.38	676.04	204.26	252.30	142.39	7023.30	8446.46	793.97	796.15	236.00	560.15
84	15.04	1370.57	1032.93	357.66	1259.34	998.45	1.09	412.33	614.13	218.56	264.90	136.20	6664.16	8288.87	779.15	782.86	265.10	517.76
85	15135.99	1362.44	1013.86	396.56	1449.17	1093.32	0.80	70.26	565.55	233.86	278.20	130.00	6594.01	8541.97	602.95	797.00	168.60	628.40
85	15135.99	1362.44	1377.52	396.56	1449.17	1093.32	0.80	69.59	565.55	233.86	278.20	130.00	6887.41	8248.58	775.37	581.52	168.60	412.92
86	13905.72	1220.61	1204.74	420.27	1477.66	1224.05	0.76	39.85	541.76	245.55	292.10	123.82	6751.52	7154.20	672.50	698.21	228.07	470.15
87	13017.78	1098.54	979.68	465.05	1599.63	1441.20	7.86	18.80	517.87	257.83	306.70	117.63	6791.98	6225.79	585.22	607.04	241.37	365.67
88	12634.59	1025.54	885.93	501.61	1644.96	1583.60	25.26	9.83	490.28	270.72	322.00	114.43	6664.33	5970.26	561.20	567.21	249.25	317.96
89	12632.59	1017.67	861.33	518.92	1672.48	1698.84	55.27	6.32	466.41	284.26	338.10	105.24	6818.52	5814.06	546.52	550.19	252.48	297.71
90	12386.27	1014.66	840.39	542.76	1760.02	1711.70	93.64	4.14	442.64	298.47	355.00	99.05	6958.33	5427.94	510.23	519.30	254.00	265.30
91	11789.55	983.67	803.23	537.14	1747.62	1653.39	124.08	2.71	418.55	313.57	372.80	92.86	6848.74	4942.81	464.62	476.02	251.48	224.55
92	11834.36	1008.16	810.04	528.09	1763.64	1618.38	129.44	1.72	393.54	329.07	391.40	86.67	6858.43	4975.93	467.74	466.96	248.45	218.51
93	11738.58	1022.99	809.35	515.73	1761.02	1535.91	130.52	0.70	367.83	345.52	411.00	80.48	6780.35	4958.23	466.07	466.49	244.40	222.09
94	11023.66	982.41	562.39	501.06	1727.71	1405.20	126.96	0.03	345.21	362.79	431.50	74.29	6519.52	4504.14	423.39	434.06	236.82	197.24
95	10538.10	958.25	546	484.11	1674.87	1305.73	124.63	0.00	328.97	380.93	453.10	68.10	6314.15	4223.95	397.05	403.64	228.19	175.44
96	9936.75	922.47	530.99	464.38	1649.40	1199.88	113.07	0.00	316.45	399.98	475.70	61.91	6094.23	3842.52	361.20	370.16	236.82	133.34
97	9515.63	904.71	456.78	442.44	1632.22	1116.78	97.80	0.00	304.62	419.98	499.50	55.72	5930.55	3585.08	337.00	343.05	211.35	131.69
98	9171.58	891.76	427.43	418.20	1621.84	1052.52	80.44	0.00	293.02	440.98	524.50	49.53	5800.22	3371.36	316.91	321.93	204.13	117.80
99	8865.20	884.73	402.26	392.51	1619.95	1002.70	70.07	0.00	283.10	463.03	550.70	43.34	5712.39	3172.81	298.24	302.91	197.49	105.42
2000	8645.68	877.78	372.55	365.75	1584.89	949.30	59.65	0.00	273.69	486.18	578.30	37.14	5585.42	3060.26	287.66	290.31	190.00	100.31
01	8025.03	831.91	326.22	313.85	1580.39	879.42	50.65	0.00	265.99	510.49	607.20	30.95	5397.07	2627.96	247.03	257.19	180.10	77.09
02	7343.31	775.51	279.22	262.26	1567.70	812.89	43.16	0.00	262.91	536.01	637.50	24.76	5201.92	2141.39	201.29	212.73	169.31	43.42
03	6811.31	725.47	245.16	211.62	1580.84	762.60	35.11	0.00	263.33	562.81	699.40	18.57	5104.91	1706.40	160.40	170.62	159.82	10.81
04	6367.79	684.66	221.49	161.34	1539.73	719.23	28.51	0.00	264.44	590.95	702.90	12.38	4925.63	1442.16	135.56	141.77	150.55	-8.78
05	5850.75	637.09	201.86	111.27	1507.31	672.99	24.26	0.00	264.88	620.50	738.00	6.19	4784.35	1066.40	100.24	109.07	140.64	-31.57

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1) These estimates assume the tax plan is in effect for the whole year; for FY 1982-85 this is Pre SB 524, for FY 1985-05 this is HB 353.
2) FY82 collections of $130.72m are the actual amounts collected or credited to CY82 liability. The estimate for a full year under AS43.20 in FY82 is $242.5m which would result in a difference of $595.12m as presented in column 4 of Table 1. FY 1985 AS43.20 collections are expected to be low due to substantial refunds and credits for prior year's tax overpayments. Tax liability on a calendar year basis under AS43.20 was CY82, $236.50m; CY83, $224.01m; CY84 $241.54m.
3) Based on 6/85 Mean case price and production assumptions.

TABLE 4
All Producing Fields
Income Tax Estimates
(mil current FY $)

Fiscal Year	Oil Prod'n (mil B/D)	Wellhead Value 1) (cur $)	Gas Prod'n (mcf/day)	Gas Price 1) (/mcf)	Total Revenue (cur $)	State Royalty Share	Prod'n Cons Tax	Property Tax	Total Oper'tg Costs	Depre Devel Costs	Amort of Acquis Costs	Windfall Profits Tax	Interest Expense	Explorato Costs (expen'd)	Admin Cost	Other Deductns	Total Deductns	Total Taxable Income	Total Tax Liability	Total Tax Collectns
82	1.6533	21.293	507000	0.590	12959.93	1564.30	1219.03	113.90	710.80	333.93	0.77	2017.66	119.40	190.90	236.20	148.58	6655.47	6303.46	592.53	627.99
83	1.7006	19.340	503000	0.670	11941.70	1442.73	1058.94	149.15	880.56	511.51	0.98	1018.38	121.20	204.26	252.30	142.39	5822.41	6119.30	575.21	579.54
84	1.7183	17.264	505000	0.670	11327.62	1370.57	1032.93	191.65	1038.34	729.80	1.09	412.33	122.40	218.56	264.90	136.20	5518.78	5808.83	546.03	553.33
85	1.7523	17.483	565091	0.971	11382.33	1362.44	1013.86	234.56	1237.67	824.67	0.80	70.26	127.40	233.86	278.20	130.00	5513.71	5868.61	551.65	550.24
85	1.7523	17.483	565091	0.971	11382.33	1362.44	1377.52	234.56	1237.67	824.67	0.80	69.59	127.40	233.86	278.20	130.00	5807.11	5575.22	524.07	393.05
86	1.7008	15.521	537824	1.097	10144.92	1220.81	1204.74	264.50	1266.70	955.46	0.76	39.85	131.60	245.55	292.10	123.82	5706.28	4438.64	417.23	443.94
87	1.7888	13.713	625000	1.700	9186.96	1098.54	979.68	315.51	1367.24	1172.55	7.86	18.60	136.10	257.83	306.70	117.63	5759.63	3427.32	322.17	345.93
88	1.6858	14.108	705650	1.306	9007.17	1025.54	695.93	358.30	1402.65	1314.95	25.26	9.83	138.60	270.72	322.00	114.43	5658.38	3348.79	314.79	316.63
89	1.6171	14.872	714549	1.400	9143.65	1017.67	681.33	381.84	1421.01	1430.19	55.27	6.32	139.40	284.26	338.10	105.24	5834.31	3309.33	311.08	312.00
90	1.5236	15.535	797830	1.570	9695.93	1014.66	640.39	411.91	1494.06	1443.05	93.64	4.14	140.30	298.47	355.60	99.05	5990.53	3105.40	291.91	296.70
91	1.3796	16.431	828950	1.706	8808.87	983.67	603.23	412.52	1467.67	1384.74	124.08	2.71	140.90	313.40	372.60	92.86	5895.87	2913.00	273.82	278.34
92	1.3820	17.691	902485	1.856	9018.44	1008.16	610.04	409.71	1473.64	1349.73	129.44	1.72	141.10	329.07	391.40	86.67	5928.36	3090.08	290.47	286.31
93	1.2133	19.063	920667	1.995	9112.08	1022.99	609.35	403.58	1459.67	1267.26	130.52	0.70	141.30	345.52	411.00	80.49	5871.67	3240.41	304.60	301.07
94	1.0481	20.548	893060	2.149	8711.44	982.41	562.39	395.14	1418.28	1136.55	126.96	0.03	141.20	362.79	431.50	74.29	5631.51	3079.93	289.51	293.28
95	0.9565	22.107	906549	2.270	8469.24	959.25	535.46	384.42	1358.12	1037.08	124.63	0.00	142.70	380.93	453.10	68.10	5442.79	3026.45	284.49	285.74
96	0.8435	23.745	920462	2.395	8114.79	922.47	456.99	370.92	1324.58	931.23	115.67	0.00	146.70	399.98	475.70	61.91	5237.55	2877.24	270.46	273.97
97	0.7449	25.858	936358	2.562	7908.83	904.71	456.78	355.21	1298.82	848.13	97.80	0.00	151.50	419.98	499.50	55.72	5088.15	2820.68	265.14	266.47
98	0.6617	28.124	954349	2.737	7745.92	891.75	427.43	337.20	1279.92	783.87	80.44	0.00	156.80	440.98	524.50	49.53	4972.43	2773.49	260.71	261.82
99	0.5910	30.529	963764	2.987	7613.86	874.73	402.26	317.74	1269.61	736.05	70.07	0.00	162.20	463.03	550.70	43.34	4896.73	2717.13	255.41	256.73
2000	0.5296	33.163	974739	3.244	7505.58	877.78	372.55	297.21	1223.13	660.65	59.65	0.00	168.00	486.18	578.30	37.14	4780.58	2725.40	256.19	255.99
01	0.4497	35.970	890983	3.550	7059.19	831.91	326.22	251.54	1207.04	610.77	50.65	0.00	174.00	510.49	607.20	30.93	4600.77	2457.42	231.00	237.30
02	0.3739	38.662	879667	3.847	6549.09	775.51	279.22	208.18	1181.44	544.24	43.16	0.00	180.40	536.01	637.50	24.76	4408.42	2131.67	200.38	208.03
03	0.3140	41.858	879601	4.172	6137.45	725.47	245.16	181.77	1178.94	493.95	35.11	0.00	187.10	562.81	669.40	18.57	4308.28	1829.17	171.94	179.05
04	0.2645	45.364	860541	4.518	5800.91	684.66	221.47	157.72	1170.38	455.58	28.51	0.00	194.00	593.95	702.90	12.38	4123.57	1677.34	157.67	161.24
05	0.2158	49.264	843787	4.896	5388.99	637.09	201.86	135.69	1168.44	424.34	24.26	0.00	201.40	620.50	733.00	6.19	3975.97	1413.02	132.82	137.04

1) These prices are weighted average wellhead values derived from the various values at the N. Slope and Cook Inlet fields evaluated in this study.

TABLE 5
Trans Alaska Pipeline
Income Tax Estimates
(mil current FY $)

Fiscal Year	Pipeline Thruput (mil B/D)	Tariff ($/B)	Total Revenue	Operat'g Costs/ Year	Amort & Deprec	Uncap Interest	Property Tax	Total Deduction	Net Income	Tax Liability (9.4%)
82	1.5600	6.11	3496.88	229.00	268.65	601.29	162.00	1260.94	2235.94	210.18
83	1.6300	5.93	3528.05	220.00	268.65	554.84	157.40	1200.89	2327.16	218.75
84	1.6536	6.01	3627.42	221.00	268.65	491.73	166.00	1147.38	2480.04	233.12
85	1.7140	6.00	3753.66	211.50	268.65	438.15	162.00	1080.30	2673.36	251.30
86	1.7173	6.00	3760.80	210.96	268.65	409.86	155.77	1045.24	2715.56	255.26
87	1.7492	6.00	3830.82	232.39	268.65	381.77	149.54	1032.35	2798.47	263.06
88	1.6564	6.00	3627.42	242.31	268.65	351.68	143.31	1005.95	2621.47	246.42
89	1.5931	6.00	3488.94	251.47	268.65	327.01	137.08	984.21	2504.73	235.44
90	1.5024	6.00	3290.34	265.96	268.65	302.34	130.85	967.80	2322.54	218.32
91	1.3610	6.06	2980.68	279.95	268.65	277.65	124.62	950.87	2029.81	190.80
92	1.2858	6.00	2815.92	290.60	268.65	252.44	118.38	930.07	1885.85	177.27
93	1.1993	6.00	2626.50	301.35	268.65	226.53	112.15	908.68	1717.82	161.48
94	1.0558	6.00	2312.22	309.43	268.65	204.01	105.92	888.01	1424.21	133.88
95	0.9447	6.00	2068.86	316.75	268.65	186.27	99.69	871.36	1197.50	112.57
96	0.8319	6.00	1821.96	324.82	268.65	169.75	93.46	856.68	965.28	90.74
97	0.7337	6.00	1606.80	333.40	268.65	153.12	87.23	842.40	764.40	71.85
98	0.6510	6.00	1425.66	341.92	268.65	136.22	81.00	827.79	597.87	56.20
99	0.5805	6.00	1271.34	351.34	268.65	120.90	74.77	815.66	455.68	42.83
2000	0.5204	6.00	1139.70	361.76	268.65	105.69	68.54	804.84	334.86	31.48
01	0.4415	6.00	966.84	373.35	268.65	91.99	62.31	796.30	170.54	16.03
02	0.3668	6.00	803.22	386.26	268.65	82.51	56.08	793.50	9.72	0.91
03	0.3077	6.00	673.86	401.90	268.65	76.23	49.85	796.63	-122.77	-11.54
04	0.2588	6.00	566.88	419.35	268.65	70.44	43.62	802.06	-235.18	-22.11
05	0.2108	6.00	461.76	438.87	268.65	63.48	37.38	808.38	-346.62	-32.58

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1) No gas production considered (26 TCF).
2) No TAPS settlement.
3) Some amount of total crude taken off at N. Pole i.e. does not go to Valdez.
4) Based on 6/85 Mean case price and production assumptions.
5) Seal Is. excluded.

ASSUMPTIONS:

Property taxes per AS43.56 @2% gross.

TABLE 6
WINDFALL PROFITS TAX DEDUCTION
(mil current FY $)

DEDUCTION FROM FY TAXABLE INCOME

Fiscal Year	Sadlerochit	Cook Inlet	Total	Impact on FY Tax Liability (Total * .094)
Under Pre-SB 524				
	a)			
82	1750.61	267.05	2017.66	189.66
83	848.78	169.60	1018.38	95.73
84	289.25	123.08	412.33	38.76
85	8.93	61.33	70.26	6.60
Under HB 353				
	b)			
85	8.51	61.09	69.60	6.54
86	-0-	39.85	39.85	3.75
87	-0-	18.80	18.80	1.77
88	-0-	9.83	9.83	.92
89	-0-	6.32	6.32	.59
90	-0-	4.14	4.14	.39
91	-0-	2.71	2.71	.25
92	-0-	1.72	1.72	.16
93	-0-	.70	.70	.07
94	-0-	.03	.03	-0-

Note:

1/ Based on 6/85 Mean case price and production assumptions.

2/ Windfall Profits Tax is phased out and no longer in effect in FY 1995 and thereafter.

3/ The reason for the slight difference in FY 85 under Pre-SB 524 compared to HB 353 is the difference in the Oil Severance Tax law and thus, the severance tax adjustment under the WPT.

a) For FY 1982 through 1985, these impacts are included in Tables 3 and 4 under the Pre-SB 524 separate accounting corporate tax. If the WPT was not a deduction for those years, the total tax liability columns would have been increased by these amounts.

b) For FY 1982 through 2005, these impacts are not included in Tables 3 and 4 under the HB 353 separate accounting corporate tax. If the WPT was a deduction for these years, the total tax liability columns would be reduced by these amounts. In FY 1985, the reduction would be approximately one half the amount because HB 353 goes into effect midway through the fiscal year.

HB 353 AND SB 524
ANALYSIS
JUNE, 1985
30% CASE ASSUMPTIONS

SUMMARY TABLES

TABLE 1
Old Law (Pre SB 524)
Current Law (AS43.20 & AS 43.55)
Proposed Law (HB 353)
(all current FY $)

Fiscal Year	To. Corp Inc Tax Collections Pre SB 524	AS 43.20	Diff	Total Prodn Tax Liability Pre SB 524	AS 43.55	Diff	Total Gain or Loss
82	837.62	242.50	-595.12 1)	1219.03	1581.70	362.67	-232.45
			Impact SB 524			Impact SB 524	Impact SB 524
82	837.62	668.90	-168.72 2)	1219.03	1581.70	362.67	193.95
83	796.15	236.00	-560.15	1098.94	1493.70	394.76	-165.39
84	782.96	265.10	-517.76	1032.93	1393.10	360.17	-157.59
85	797.00	168.60	-628.40	1015.36	1388.50	374.64	-253.76
			Impact HB 353	existing		Impact HB 353	Impact HB 353
	HB 353			AS 43.55			
85	448.48	168.60	279.88 3)	1388.50	1388.50	0.00	279.88
86	684.73	223.67	461.06	1172.84	1172.84	0.00	461.06
				HB 353			
87	563.79	232.71	331.08	904.34	939.98	-85.64	245.44
88	515.28	238.38	276.90	638.67	773.71	-135.04	141.86
89	491.39	241.26	250.13	610.81	737.88	-127.07	123.06
90	456.84	241.28	215.56	586.91	703.35	-116.44	99.12
91	410.91	238.09	172.82	541.91	642.15	-100.24	72.58
92	401.05	235.48	165.57	546.70	646.31	-99.61	65.96
93	401.31	232.44	168.87	552.78	639.54	-86.76	82.11
94	373.10	225.67	147.43	507.40	595.90	-88.50	58.93
95	344.91	217.58	127.33	480.40	562.13	-81.73	45.60
96	316.61	209.73	106.88	443.18	516.64	-73.46	33.42
97	292.49	202.00	90.49	415.23	484.75	-69.52	20.97
98	270.06	194.51	75.55	388.95	451.24	-62.29	13.26
99	247.16	187.15	60.01	361.51	418.64	-57.13	2.88
2000	226.90	178.63	48.27	332.77	384.15	-51.38	-3.11
01	184.23	167.79	16.45	283.19	328.46	-45.27	-28.82
02	141.64	156.78	-15.14	245.12	278.92	-33.80	-48.94
03	102.89	147.24	-45.15	214.35	243.63	-29.28	-74.43
04	70.65	137.62	-66.97	193.20	217.30	-19.10	-86.07
05	29.57	126.56	-96.99	181.65	199.81	-18.16	-115.15
SUM85-05	6973.24	4203.18	2770.05	10995.41	12375.83	-1380.42	1389.63

1) FY 1982 receipts are estimated as if AS43.21 were in effect for the whole year in colum 2 then as if AS43.20 were in effect for the whole year in colum 3 though each was in effect only half the fiscal year.

2) FY 1982 collections under SB 524 of $668.9m are comprised of $538.2m from AS43.21"OLD SEPARATE ACCT" law and $130.7 from AS43.20 "CURRENT MODIFIED APPORTIONMENT" law.

3) FY 1985 HB353 Corp. Inc. Tax includes $60.8m of AS43.20 already collected through December 31, 1984.

4) FY 1985 AS43.20 collections are expected to be low due to substantial refunds and credits for prior year's tax overpayments. Tax liability on a calendar year basis under AS43.20 was CY82, $236.50m; CY83, $224.01m; CY84 $241.54m.

5) Based on 6/85 30% case price and production assumptions.

TABLE 2a
Calculation of State Petroleum Revenues as a
Percent of Adjusted Production Income
6/85 Forecast Assumptions 30% Case FY 85-05 Using WHV

Fiscal Year	Total Petroleum Production Gross Revenue	Cost Deductns	Net Revenue	State Petrol Revenues	State / Net Rev %
82	12958.93	1740.58	11218.35	3525.22	31.42%
				Pre SB 524	
				Impact SB 524	
82	12958.93	1740.58	11218.35	3525.22	31.42%
83	11941.70	2113.21	9828.49	3270.36	33.27%
84	11327.62	2511.29	8816.33	3148.49	35.71%
85	11382.33	2832.59	8549.74	3161.10	36.97%
				HB 353 as of 1/1/85 1)	
				Impact HB 353	
85	11382.33	2832.59	8549.74	3297.36	38.57%
86	9837.72	3015.48	6872.24	3055.24	44.46%
87	8471.80	3356.83	5114.97	2532.10	49.50%
88	8329.60	3543.97	4765.63	2211.37	46.21%
89	8353.24	3632.71	4720.52	2186.06	46.31%
90	8258.78	3741.13	4517.65	2166.34	47.95%
91	7904.70	3688.01	4216.70	2064.21	48.95%
92	8107.26	3709.46	4397.81	2094.52	47.63%
93	8221.24	3673.21	4548.02	2123.74	46.70%
94	7885.09	3559.52	4325.56	2028.93	46.91%
95	7646.27	3432.19	4214.09	1957.90	46.46%
96	7363.98	3335.04	4028.95	1867.70	46.36%
97	7169.51	3252.94	3916.57	1796.94	45.88%
98	6955.00	3173.31	3781.69	1724.47	45.60%
99	6738.45	3115.29	3623.15	1649.99	45.54%
2000	6513.93	3032.96	3480.97	1573.83	45.21%
01	5912.10	2940.61	2971.49	1388.82	46.74%
02	5485.48	2915.17	2570.31	1232.63	47.96%
03	5109.57	2945.74	2163.83	1091.16	50.43%
04	4743.44	2867.67	1875.77	974.30	51.94%
05	4269.43	2865.16	1404.27	830.15	59.12%

With AS 43.20 Corporate Income Tax & AS 43.55 Production Tax

Fiscal Year	Total Petroleum Production Gross Revenue	Cost Deductns	Net Revenue	State Petrol Revenues	State / Net Rev %
82	12958.93	1740.58	11218.35	3502.40	31.22%
				AS43.20 & 55	
82	12958.93	1740.58	11218.35	3928.80	35.02%
83	11941.70	2113.21	9828.49	3321.58	33.80%
84	11327.62	2511.29	8816.33	3220.43	36.53%
85	11382.33	2832.59	8549.74	3154.10	36.89%
				AS43.20 & 55	
85	11382.33	2832.59	8549.74	3154.10	36.89%
86	9837.72	3015.48	6872.24	2848.45	41.45%
87	8471.80	3356.83	5114.97	2547.16	49.80%
88	8329.60	3543.97	4785.63	2316.57	48.41%
89	8353.24	3632.71	4720.52	2290.29	48.52%
90	8258.78	3741.13	4517.65	2274.97	50.36%
91	7904.70	3688.01	4216.70	2173.54	51.55%
92	8107.26	3709.46	4397.81	2194.70	49.90%
93	8221.24	3673.21	4548.02	2194.89	48.26%
94	7885.09	3559.52	4325.56	2101.34	48.58%
95	7646.27	3432.19	4214.09	2021.91	47.98%
96	7363.98	3335.04	4028.95	2019.17	50.12%
97	7169.51	3252.94	3916.57	1847.31	47.17%
98	6955.00	3173.31	3781.69	1766.06	46.70%
99	6738.45	3115.29	3623.15	1687.16	46.57%
2000	6513.93	3032.96	3480.97	1604.07	46.08%
01	5912.10	2940.61	2971.49	1428.57	48.08%
02	5485.48	2915.17	2570.31	1277.36	49.70%
03	5109.57	2945.74	2163.83	1148.81	53.09%
04	4743.44	2867.67	1875.77	1032.52	55.05%
05	4269.43	2865.16	1404.27	906.04	64.52%

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1) FY 1985 HB353 Corp. Inc. Tax includes $60.8m of AS43.20 already collected through December 31, 1984 and half a year of the new tax.

2) Based on 6/85 30% case price and production assumptions.

TABLE 2b
Calculation of State Petroleum Revenues as a
and as a Percent of Prod'n & Pipeline Income
6/85 Forecast Assumptions 30% Case FY 85-05 Using WHV

Fiscal Year	-----Total Petroleum----- Gross Revenue	Cost Deductns	Net Revenue	State Petrol Revenues	State / Net Rev %
82	16455.80	2839.52	13616.28	3896.85	28.62%
				Pre SB 524	
				Impact SB 524	
82	16455.80	2839.52	13616.28	3896.85	28.62%
83	15469.75	3156.70	12313.06	3644.37	29.60%
84	14955.03	3492.67	11462.37	3544.02	30.92%
85	15135.98	3750.89	11385.10	3569.86	31.36%
				HB 353 as of 1/1/85 1)	
				Impact HB 353	
85	15135.98	3750.89	11385.10	3585.00	31.49%
86	13648.51	3904.95	9743.57	3465.28	35.56%
87	12293.67	4239.30	8054.38	2942.14	36.53%
88	11908.05	4404.62	7503.44	2601.74	34.67%
89	11697.09	4473.67	7223.42	2550.43	35.31%
90	11377.10	4570.41	6806.69	2504.94	36.80%
91	10708.14	4505.98	6202.17	2370.74	38.22%
92	10766.04	4513.45	6252.60	2379.04	38.05%
93	10718.43	4463.08	6255.35	2389.15	38.19%
94	10099.08	4336.29	5762.79	2266.19	39.32%
95	9623.390	4198.63	5424.77	2167.20	39.95%
96	9118.502	4094.19	5024.32	2050.85	40.82%
97	8719.606	4004.47	4715.14	1955.51	41.47%
98	8319.520	3915.96	4403.56	1860.32	42.25%
99	7936.706	3850.96	4085.74	1764.81	43.19%
2000	7567.890	3762.81	3805.08	1669.50	43.88%
01	6769.499	3665.94	3103.56	1462.05	47.11%
02	6187.359	3643.99	2543.37	1284.50	50.50%
03	5687.426	3684.00	2003.43	1124.23	56.12%
04	5211.317	3616.86	1594.46	990.07	62.09%
05	4618.090	3624.93	993.16	828.28	83.40%

With AS 43.20 Corporate Income Tax & AS 43.55 Production Tax

Fiscal Year	-----Total Petroleum----- Gross Revenue	Cost Deductns	Net Revenue	State Petrol Revenues	State / Net Rev %
82	16455.80	2839.52	13616.28	3664.40	26.91%
				AS43.20 & 55	
82	16455.80	2839.52	13616.28	4090.80	30.04%
83	15469.75	3156.70	12313.06	3478.98	28.25%
84	14955.04	3492.67	11462.37	3386.43	29.54%
85	15135.99	3750.89	11385.10	3316.10	29.13%
				AS43.20 & 55	
85	15135.98	3750.89	11385.10	3316.10	29.13%
86	13648.51	3904.95	9743.57	3004.22	30.83%
87	12293.67	4239.30	8054.38	2696.70	33.48%
88	11908.05	4404.62	7503.44	2459.88	32.78%
89	11697.09	4473.67	7223.42	2427.37	33.60%
90	11377.10	4570.41	6806.69	2405.82	35.35%
91	10708.14	4505.98	6202.17	2298.16	37.05%
92	10766.04	4513.45	6252.60	2313.08	36.99%
93	10718.43	4463.08	6255.35	2307.04	36.88%
94	10099.08	4336.29	5762.79	2207.26	38.30%
95	9623.390	4198.63	5424.77	2121.60	39.11%
96	9118.502	4094.19	5024.32	2112.63	42.05%
97	8719.606	4004.47	4715.14	1934.54	41.03%
98	8319.520	3915.96	4403.56	1847.06	41.94%
99	7936.706	3850.96	4085.74	1761.93	43.12%
2000	7567.890	3762.81	3805.08	1672.61	43.96%
01	6769.499	3665.94	3103.56	1490.88	48.04%
02	6187.359	3643.99	2543.37	1333.44	52.43%
03	5687.426	3684.00	2003.43	1198.66	59.83%
04	5211.317	3616.86	1594.46	1076.14	67.49%
05	4618.090	3624.93	993.16	943.42	94.99%

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1) FY 1985 HB353 Corp. Inc Tax includes $60.8m of AS43.20 already collected through December 1, 1984 and half a year of the new tax.

2) Based on 6/85 30% case price and production assumptions.

TABLE 3
Pipeline, Production & Exploration
Income Tax Estimates
(mil current FY $)

Fiscal Year	Total Revenue	State Royalty Share	Prod'n& Cons Tax	Total Property Tax	Total Oper'g Costs	Total Depre	Total Acquis Costs	Windfall Profits Tax	Interest Expense Uncap	Exploratn Costs	Admin Costs	Other Deductns	Total Deductns	Total Net Income	Liability HB 353 1)	Collections HB 353 1)	Collections AS 43.20 2)	Diff
82	16455.80	1564.30	1219.03	275.90	939.80	602.58	0.77	2017.66	720.69	190.90	236.20	148.58	7916.41	8539.40	802.70	837.62	130.72	706.90
83	15469.75	1442.73	1098.94	306.55	1100.56	780.16	0.98	1018.38	676.04	204.26	252.30	142.39	7023.30	8446.46	793.97	796.15	236.00	560.15
84	14955.04	1370.57	1032.93	357.66	1259.34	998.45	1.09	412.33	614.13	218.56	264.90	136.20	6666.16	8288.87	779.15	782.86	265.10	517.76
85	15135.99	1362.44	1013.86	396.56	1449.17	1093.32	0.80	70.26	565.55	233.86	278.20	130.00	6594.01	8541.97	802.95	797.00	168.60	628.40
85	15135.99	1362.44	1377.52	396.56	1449.17	1093.32	0.80	69.59	565.55	233.86	278.20	130.00	6887.41	8248.58	775.37	581.52	168.60	412.92
86	13648.52	1187.44	1172.84	420.27	1477.66	1224.05	0.76	35.96	541.76	244.80	292.10	123.82	6685.50	6963.02	654.52	684.73	223.67	461.06
87	12293.68	1008.96	904.34	465.05	1597.00	1437.62	6.25	10.87	517.87	256.24	306.70	117.63	6617.65	5676.03	533.55	563.79	232.71	331.08
88	11908.06	946.18	638.67	501.61	1629.36	1562.56	17.75	4.06	490.28	268.23	322.00	114.43	6491.08	5416.98	509.20	515.28	238.38	276.90
89	11697.10	929.31	610.81	518.92	1625.11	1624.89	33.16	2.14	466.41	280.77	338.10	105.24	6532.71	5164.38	485.45	491.39	241.26	250.13
90	11377.10	922.19	586.91	539.00	1702.64	1619.49	57.70	0.51	442.64	293.90	355.00	99.05	6618.51	4758.59	447.31	456.84	241.28	215.56
91	10708.14	685.09	541.91	532.83	1686.99	1546.15	80.98	0.00	418.55	307.65	372.80	92.86	6465.81	4242.34	398.78	410.91	238.09	172.82
92	10766.04	908.04	546.70	523.25	1709.49	1516.09	94.23	0.00	393.54	322.03	391.40	86.67	6491.44	4274.61	401.81	401.05	235.48	165.57
93	10718.44	924.67	552.78	510.39	1715.39	1448.71	102.58	0.00	367.83	337.09	411.00	80.48	6450.92	4267.51	401.15	401.31	232.44	168.87
94	10099.09	690.42	507.40	495.27	1691.98	1333.24	107.22	0.00	345.21	352.86	431.50	74.29	6229.38	3869.70	363.75	373.10	225.67	147.43
95	9623.39	863.98	480.40	477.91	1640.12	1230.56	108.41	0.00	328.97	369.36	453.10	68.10	6020.92	3602.48	338.63	344.91	217.58	127.33
96	9118.50	833.24	443.18	457.82	1621.89	1127.87	103.73	0.00	316.45	386.63	475.70	61.91	5828.43	3290.08	309.27	316.61	225.67	90.93
97	8719.61	812.20	415.23	435.59	1606.92	1035.88	97.12	0.00	304.62	404.71	499.50	55.72	5667.49	3052.12	286.90	292.49	202.00	90.49
98	8319.52	769.94	388.95	411.37	1592.93	947.57	84.77	0.00	293.02	423.64	524.50	49.53	5506.22	2813.30	264.45	270.06	194.51	75.55
99	7936.71	770.14	361.51	386.00	1584.30	871.20	74.87	0.00	283.10	443.45	550.70	43.34	5368.61	2568.09	241.40	247.16	187.15	60.01
2000	7567.89	750.23	332.77	359.60	1542.66	802.43	64.20	0.00	273.69	464.19	578.30	37.14	5205.41	2362.48	222.07	226.90	178.63	48.27
01	6769.50	687.20	283.19	307.43	1513.33	709.22	53.36	0.00	265.99	485.69	607.20	30.95	4943.76	1825.74	171.62	184.23	167.79	16.45
02	6187.36	640.81	245.12	256.93	1516.82	647.61	45.77	0.00	262.91	508.62	637.50	24.76	4786.85	1400.51	131.65	141.64	156.78	-15.14
03	5687.43	601.02	214.35	206.77	1533.59	598.56	38.15	0.00	263.33	532.40	699.40	18.57	4706.14	981.29	92.24	102.09	147.24	-45.15
04	5211.32	564.20	198.20	157.02	1469.05	559.16	31.62	0.00	264.64	557.30	702.90	12.38	4536.28	675.04	63.45	70.65	137.62	-66.97
05	4618.09	509.52	181.65	107.53	1494.37	511.66	26.27	0.00	264.88	583.36	738.00	6.19	4423.63	194.46	18.28	29.57	126.56	-96.99

1) These estimates assume the tax plan is in effect for the whole year; for FY 1982-85 this is Pre SB 524, for FY 1985-05 this is HB 353.
2) FY82 collections of $130.72m are the actual amounts collected or credited to CY82 liability. The estimate for a full year under AS43.20 in FY82 is $242.5m which would result in a difference of $595.12m as presented in colum 4 of Table I. FY 1985 AS43.20 collections are expected to be low due to substantial refunds and credits for prior year's tax overpayments. Tax liability on a calendar year basis under AS43.20 was CY82, $236.50m; CY83, $224.01m; CY84 $241.54m.
3) Based on 6/85 30Y case price and production assumptions.

TABLE 4
All Producing Fields
Income Tax Estimates
(mil current FY $)

Fiscal Year	Oil Prod'n (mil B/D)	Wellhead Value 1) (cur $)	Gas Prod'n (mcf/day)	Gas Price 1) ($/mcf)	Total Revenue (cur $)	State Royalty Share	Prod'n Cons Tax	Property Tax	Total Oper'tg Costs	Depr Devel Costs	Amort of Acquis Costs	Windfall Profits Tax	Interest Expense	Explorato Costs (expen'd)	Admin Cost	Other Deductns	Total Deductns	Total Taxable Income	Total Tax Liability	Total Tax Collectns
82	1.6533	21.293	507000	0.590	12958.93	1564.30	1219.03	113.90	710.80	333.93	0.77	2017.65	119.40	190.90	236.20	148.58	6655.47	6303.46	592.53	627.99
83	1.7006	19.040	503000	0.670	11941.70	1442.73	1068.94	149.15	880.56	511.51	0.98	1018.38	121.20	204.26	252.30	142.39	5822.41	6119.30	575.21	579.54
84	1.7183	17.864	505300	0.670	11327.62	1370.57	1032.93	191.66	1038.34	729.80	1.09	412.33	122.40	218.56	264.90	136.20	5518.78	5808.83	546.03	553.33
85	1.7523	17.483	565091	0.971	11382.33	1362.44	1013.86	234.56	1237.67	824.67	0.80	70.26	127.40	233.86	278.20	130.00	5513.71	5868.61	551.65	550.24
85	1.7523	17.483	565091	0.971	11382.33	1362.44	1377.52	234.56	1237.67	824.67	0.80	69.59	127.40	233.86	278.20	130.00	5807.11	5575.22	524.07	393.05
86	1.7528	15.119	537624	1.097	9887.72	1187.44	1172.84	264.50	1266.70	955.40	0.76	35.96	131.90	244.80	292.10	123.82	5640.26	4247.46	399.26	430.46
87	1.7767	12.642	625030	1.200	8471.80	1008.96	904.34	315.51	1364.95	1158.97	6.25	10.87	136.10	256.24	306.70	117.63	5585.64	2886.16	271.30	303.29
88	1.6815	13.181	705650	1.306	8329.60	946.18	638.67	358.30	1369.04	1293.91	17.75	4.06	138.60	268.23	322.00	114.43	5487.12	2842.48	267.19	268.22
89	1.5509	14.111	714549	1.400	8353.24	929.31	610.81	381.84	1379.81	1356.24	33.16	2.14	139.40	280.77	336.10	105.24	5554.67	2798.56	263.06	264.10
90	1.4450	14.792	797830	1.570	8258.78	922.19	586.91	409.15	1444.35	1350.84	57.70	0.51	140.30	293.90	355.00	99.05	5658.38	2600.40	244.44	249.09
91	1.2987	15.548	858950	1.706	7904.70	885.09	541.91	408.21	1415.32	1277.50	80.98	0.00	140.90	307.65	372.80	92.86	5523.22	2381.49	223.86	229.00
92	1.2362	16.693	902485	1.856	8107.26	908.04	546.70	404.87	1426.59	1247.44	94.23	0.00	141.10	322.03	391.40	86.67	5569.07	2538.20	238.59	234.91
93	1.1542	17.924	920067	1.995	8221.24	924.67	552.78	398.24	1420.70	1180.06	102.59	0.00	141.30	337.09	411.00	80.48	5548.90	2672.33	251.20	248.05
94	1.0233	19.236	893060	2.149	7865.09	890.42	507.40	389.35	1387.87	1064.59	107.22	0.00	141.20	352.86	431.50	74.29	5346.69	2538.39	238.61	241.76
95	0.9146	20.654	906549	2.270	7646.27	863.98	480.40	378.22	1329.60	961.91	108.41	0.00	142.70	369.36	453.10	68.10	5154.79	2491.49	234.20	235.30
96	0.8127	22.114	920462	2.395	7363.98	833.24	443.18	364.36	1301.14	859.22	103.73	0.00	146.70	386.63	475.70	61.91	4975.82	2388.17	224.49	226.92
97	0.7190	23.983	936358	2.562	7169.51	812.20	415.23	348.36	1277.16	767.23	97.12	0.00	151.50	404.71	499.50	55.72	4828.73	2340.78	220.03	221.15
98	0.6318	25.944	954349	2.737	6955.00	789.94	388.95	330.37	1255.15	676.92	84.77	0.00	156.80	423.64	524.50	49.53	4682.57	2272.43	213.61	215.21
99	0.5576	28.054	943764	2.987	6738.45	770.14	361.51	311.23	1238.18	602.55	74.87	0.00	162.20	443.45	550.70	43.34	4558.17	2180.27	204.95	207.11
2000	0.4905	30.268	924739	3.244	6513.93	750.23	332.77	291.08	1187.35	533.78	64.20	0.00	168.00	464.19	578.30	37.14	4407.02	2106.91	198.05	199.77
01	0.3597	32.611	890983	3.550	5912.10	687.20	283.19	245.12	1148.61	440.57	53.36	0.00	174.00	485.69	607.20	30.95	4156.12	1755.98	165.06	173.31
02	0.3277	35.304	899667	3.847	5465.48	640.81	245.12	200.85	1139.16	378.96	45.77	0.00	180.40	508.62	637.50	24.76	4001.95	1483.53	139.45	145.65
03	0.2702	38.227	879601	4.172	5109.57	601.02	214.35	156.92	1140.21	329.91	39.15	0.00	187.10	532.40	669.40	18.57	3918.03	1191.54	112.00	118.87
04	0.2193	41.539	860541	4.518	4743.44	564.20	198.20	113.40	1078.95	290.51	31.62	0.00	194.60	557.20	702.90	12.38	3743.47	999.97	94.00	98.50
05	0.1642	46.078	843787	4.896	4269.43	509.52	181.65	70.15	1066.73	243.21	26.27	0.00	201.40	583.36	738.00	6.19	3626.48	642.95	60.44	68.83

1) These prices are weighted average wellhead values derived from the various values at the N. Slope and Cook Inlet fields evaluated in this study.

TABLE 5
Trans Alaska Pipeline
Income Tax Estimates
(oil current FY $)

Fiscal Year	Pipeline Thruput (mil B/D)	Tariff ($/B)	Total Revenue	Operat'g Costs/ Year	Amort & Deprec	Uncap Interest	Property Tax	Total Deduction	Net Income	Tax Liability (9.4%)
82	1.5680	6.11	3496.88	229.00	268.65	601.29	162.00	1260.94	2235.94	210.18
83	1.6300	5.93	3528.05	220.00	268.65	554.84	157.40	1200.89	2327.16	218.75
84	1.6536	6.01	3627.42	221.00	268.65	491.73	166.00	1147.38	2480.04	233.12
85	1.7140	6.00	3753.66	211.50	268.65	438.15	162.00	1080.30	2673.36	251.30
86	1.7173	6.00	3760.80	210.96	268.65	409.86	155.77	1045.24	2715.56	255.26
87	1.7452	6.00	3821.88	232.05	268.65	381.77	149.54	1032.01	2789.87	262.25
88	1.6340	6.00	3578.46	240.32	268.65	351.68	143.31	1003.96	2574.50	242.00
89	1.5269	6.00	3343.86	245.30	268.65	327.01	137.08	978.04	2365.82	222.39
90	1.4239	6.00	3118.32	258.29	268.65	302.34	130.85	960.13	2158.19	202.87
91	1.2801	6.00	2803.44	271.67	268.65	277.65	124.62	942.59	1860.85	174.92
92	1.2141	6.00	2658.78	282.90	268.65	252.44	118.38	922.37	1736.41	163.22
93	1.1403	6.00	2497.20	294.69	268.65	226.53	112.15	902.02	1595.18	149.95
94	1.0110	6.00	2214.00	304.11	268.65	204.01	105.92	882.69	1331.31	125.14
95	0.9028	6.00	1977.12	311.52	268.65	186.27	99.69	866.13	1110.99	104.43
96	0.8012	6.00	1754.52	320.75	268.65	169.75	93.46	852.61	901.91	84.78
97	0.7078	6.00	1550.10	329.76	268.65	153.12	87.23	838.76	711.34	66.87
98	0.6231	6.00	1364.52	337.78	268.65	136.22	81.00	823.65	540.87	50.84
99	0.5472	6.00	1198.26	346.12	268.65	120.90	74.77	810.44	387.82	36.46
2000	0.4813	6.00	1053.96	355.31	268.65	105.89	68.54	798.39	255.57	24.02
01	0.3915	6.00	857.40	364.69	268.65	91.99	62.31	787.64	69.76	6.56
02	0.3205	6.00	701.88	377.66	268.65	82.51	56.08	784.90	-83.02	-7.80
03	0.2639	6.00	577.86	393.38	268.65	76.23	49.85	788.11	-210.25	-19.76
04	0.2136	6.00	467.88	410.10	268.65	70.44	43.62	792.81	-324.93	-30.54
05	0.1592	6.00	348.66	427.64	268.65	63.48	37.38	797.15	-448.49	-42.16

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1) No gas production considered (26 TCF).
2) No TAPS settlement.
3) Some amount of total crude taken off at N. Pole i.e. does not go to Valdez.
4) Based on 6/85 30% case price and production assumptions.
5) Seal Is. excluded.

ASSUMPTIONS:

Property taxes per AS43.56 @2% gross.

TABLE 6
WINDFALL PROFITS TAX DEDUCTION
(mil current FY $)

DEDUCTION FROM FY TAXABLE INCOME

Fiscal Year	Sadlerochit	Cook Inlet	Total	Impact on FY Tax Liability (Total * .094)
Under Pre-SB 524				
	a)			
82	1750.61	267.05	2017.66	189.66
83	848.78	169.60	1018.38	95.73
84	289.25	123.08	412.33	38.76
85	8.93	61.33	70.26	6.60
Under HB 353				
	b)			
85	8.51	61.09	69.60	6.54
86	-0-	35.96	35.96	3.38
87	-0-	10.87	10.87	1.02
88	-0-	4.06	4.06	.38
89	-0-	2.14	2.14	.20
90	-0-	.51	.51	.05
91	-0-	-0-	-0-	-0-
92	-0-	-0-	-0-	-0-
93	-0-	-0-	-0-	-0-
94	-0-	-0-	-0-	-0-

Note:

1/ Based on 6/85 30% case price and production assumptions.

2/ Windfall Profits Tax is phased out and no longer in effect in FY 1995 and thereafter.

3/ The reason for the slight difference in FY 85 under Pre-SB 524 compared to HB 353 is the difference in the Oil Severance Tax law and thus, the severance tax adjustment under the WPT.

a) For FY 1982 through 1985, these impacts are included in Tables 3 and 4 under the Pre-SB 524 separate accounting corporate tax. If the WPT was not a deduction for those years, the total tax liability columns would have been increased by these amounts.

b) For FY 1982 through 2005, these impacts are not included in Tables 3 and 4 under the HB 353 separate accounting corporate tax. If the WPT was a deduction for these years, the total tax liability columns would be reduced by these amounts. In FY 1985, the reduction would be approximately one half the amount because HB 353 goes into effect midway through the fiscal year.

HB 353 AND SB 524
ANALYSIS
JUNE, 1985
70% CASE ASSUMPTIONS

SUMMARY TABLES

TABLE 1
Old Law (Pre SB 524)
Current Law (AS43.20 & AS 43.55)
Proposed Law (HB 353)

(mil current FY $)

Fiscal Year	To. Corp Inc Tax Collections Pre SB 524	AS 43.20	Diff	Total Prodn Tax Liability Pre SB 524	AS 43.55	Diff	Total Gain or Loss
82	837.62	242.50	-595.12 1) Impact SB 524	1219.03	1581.70	362.67 Impact SB 524	-232.45 Impact SB 524
82	837.62	668.90	-168.72 2)	1219.03	1581.70	362.67	193.95
83	796.15	236.00	-560.15	1093.94	1493.70	394.76	-165.39
84	782.86	265.10	-517.76	1032.93	1393.10	360.17	-157.59
85	797.00	188.60	-628.40 Impact HB 353	1013.86 existing AS 43.55	1388.50	374.64 Impact HB 353	-253.76 Impact HB 353
	HB 353						
85	448.48	168.60	279.88 3)	1388.50	1388.50	0.00	279.88
86	723.72	235.73	487.99	1262.27	1262.27	0.00	487.99
				HB 353			
87	664.57	260.61	403.96	1076.73	1180.56	-103.83	300.13
88	652.24	286.69	365.54	785.41	949.86	-164.45	201.09
89	666.33	305.76	360.57	778.54	930.19	-151.65	208.92
90	670.13	314.61	355.52	784.53	927.21	-142.68	212.84
91	644.76	313.14	331.61	749.98	872.96	-122.98	208.63
92	652.14	311.00	341.14	768.16	894.45	-126.29	214.85
93	664.12	306.83	357.23	772.90	912.04	-139.14	218.14
94	633.70	298.04	335.66	718.76	844.67	-125.91	209.75
95	604.66	287.54	317.12	691.55	819.80	-128.25	188.87
96	586.06	276.00	290.06	636.25	755.74	-119.49	170.57
97	531.12	263.02	268.09	588.58	700.65	-112.07	155.02
98	499.12	249.03	250.09	535.28	635.29	-100.01	150.08
99	464.59	234.66	229.93	481.42	567.82	-86.40	143.53
2000	429.55	219.24	210.31	426.21	502.15	-75.94	134.37
01	368.43	201.62	166.81	354.12	415.11	-60.99	105.82
02	297.67	183.82	113.85	285.39	333.00	-47.61	66.24
03	228.30	167.72	60.58	237.25	270.28	-33.63	26.95
04	158.93	152.99	5.94	195.90	221.31	-25.41	-19.47
05	103.98	139.26	-35.28	173.46	194.21	-20.75	-56.03
SUM85-05	10672.59	5175.91	5496.67	13691.19	15578.67	-1887.48	3609.19

1) FY 1982 receipts are estimated as if AS43.21 were in effect for the whole year in colusn 2 then as if AS43.20 were in effect for the whole year in colusn 3 though each was in effect only half the fiscal year.

2) FY 1982 collections under SB 524 of $668.9m are comprised of $538.2m from AS43.21"OLD SEPARATE ACCT" law and $130.7 from AS43.20 "CURRENT MODIFIED APPORTIONMENT" law.

3) FY 1985 HB353 Corp. Inc. Tax includes $60.9m of AS43.20 already collected through December 31, 1984.

4) FY 1985 AS43.20 collections are expected to be low due to substantial refunds and credits for prior year's tax overpayments. Tax liability on a calendar year basis under AS43.20 was CY82, $236.50m; CY83, $224.01m; CY84 $241.54m.

5) Based on 6/85 70% case price and production assumptions.