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6571 SENATE RESOURCES

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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
[illegible] SENSITIVITY ANALYSIS [illegible]

FISCAL YEAR	TOTAL PETRO PROD GROSS INCOME MM$/Y	TOTAL PETRO PROD NON TAX DEDUCTS MM$/Y	TOTAL PETRO PROD NET INCOME MM$/Y	CURRENT LAW STATE PETRO PROD REVENUE MM$/Y	REVENUE VS NET INCOME %	[illegible] STATE PETRO PROD REVENUE MM$/Y	REVENUE VS NET INCOME %
1986	6662.02	3304.10	2778.63	1867.26	67.20	1817.31	65.40
1987	6209.70	3671.03	2537.87	1841.76	72.65	1729.39	68.16
1988	5903.52	3456.79	2446.73	1942.20	79.38	1524.93	71.70
1989	5915.67	4101.18	1814.49	1663.12	91.66	1483.11	81.76
1990	5660.06	4021.90	1638.06	1583.60	96.67	1397.89	85.34
1991	5279.05	3851.02	1428.03	1468.74	103.37	1288.30	90.29
1992	4844.60	3780.83	1063.77	1351.61	126.99	1184.44	108.44
1993	4540.23	3805.49	744.74	1240.73	167.47	1126.53	147.31
1994	4340.80	3643.70	697.10	1202.45	172.49	1071.07	153.76
1995	4156.91	3343.68	813.23	1132.09	139.21	1030.62	126.73
1996	3770.02	3037.23	732.79	1010.65	138.66	934.24	127.49
1997	3442.69	2784.54	658.16	917.09	139.65	852.41	129.55
1998	3175.52	2654.50	640.98	879.96	124.06	778.01	118.58
1999	2904.07	2324.96	579.96	762.04	132.32	719.39	124.12
2000	2685.26	2182.13	503.13	698.01	138.73	662.77	131.73
2001	2474.88	2062.03	411.99	637.63	154.77	607.58	147.48
2002	2328.39	1959.97	368.42	589.07	159.89	565.37	153.46
2003	1920.70	1555.17	365.61	497.25	129.93	481.54	131.07
2004	1798.92	1490.76	308.16	450.12	146.07	447.62	145.26
2005	1691.51	1450.50	241.02	425.01	173.06	418.28	170.02
	27,704	19,620	8,084	7,750			

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.

STANDARD ALASKA PRODUCTION COMPANY

TESTIMONY

ON

House Bill 164

March 19, 1987

MY NAME IS BOB VAN HOOK. I AM TAX COUNSEL AT STANDARD ALASKA PRODUCTION COMPANY. WITH ME IS JIM PALMER, MANAGER OF GOVERNMENTAL AFFAIRS.

I'D LIKE TO START WITH A COMMENT ABOUT SEVERAL SUCCESSES IN ALASKA'S OIL INDUSTRY. THESE SUCCESSES HAVE BEEN GIVEN LITTLE NOTICE IN THIS PERIOD OF FALLING PRICES, BUT BY WORLD STANDARDS ARE REMARKABLE. THREE MAJOR PROJECTS WILL COMMENCE PRODUCTION BETWEEN DECEMBER 1986 AND DECEMBER 1987. THE PROJECTS ARE LISBURNE, ENDICOTT, AND THE CENTRAL GAS FACILITY AT PRUDHOE. THE CENTRAL GAS FACILITY ACTUALLY COMPRISES TWO PROJECTS. THE FIRST EXTRACTS NATURAL GAS LIQUIDS FROM A GAS STREAM AND COMBINES THE NATURAL GAS LIQUIDS WITH BLACK OIL SHIPPED DOWN TAPS. THE SECOND MANUFACTURES AND INJECTS MISCIBLE FLUID INTO THE RESERVOIR TO INCREASE RECOVERY. COLLECTIVELY, ADDITIONAL RECOVERY FROM THESE PROJECTS IS ESTIMATED TO BE 1.4 BILLION BARRELS. THE COST OF THE PROJECTS IS ESTIMATED AT $3.5 BILLION.

THESE PROJECTS DEMONSTRATE THAT THE OIL INDUSTRY HAS REINVESTED LARGE SUMS IN ALASKA AND HAS SIGNIFICANTLY INCREASED RECOVERY.

MOVING NOW TO H.B. 164: THIS BILL ESSENTIALLY LEAVES THE ECONOMIC LIMIT FACTOR OR ELF IN PLACE AT ALL FIELDS EXCEPT PRUDHOE. THIS SEEMS TO REFLECT THE THEORY THAT THE ELF IS GENERALLY A GOOD THING BUT IS UNNEEDED AT PRUDHOE. SAPC BELIEVES THAT THE ELF IS IMPORTANT FOR PRUDHOE AS WELL AS OTHER FIELDS. THIS BILL IS

ESPECIALLY IMPORTANT TO SAPC BECAUSE OF THE GREATER THAN 50% INTEREST THAT STANDARD HAS IN PRUDHOE.

ALASKA'S NOMINAL PRODUCTION (OR SEVERANCE) TAX RATE OF 15% IS THE HIGHEST IN THE NATION. LOUISIANA IS SECOND AT 12.5%. OKLAHOMA HAS A 7% RATE; TEXAS HAS A 4.6% RATE AND CALIFORNIA DOES NOT HAVE A PRODUCTION TAX. PRODUCTION TAX IS AN INCREASINGLY BURDENSOME TAX IN HIGH COST AREAS. THIS IS BECAUSE THE TAX IS BASED ON WELLHEAD VALUE WITHOUT ANY REDUCTION FOR OPERATING COSTS OR CAPITAL COSTS. THE ELF HAS THE EFFECT OF REDUCING THE PRODUCTION TAX RATE AS THE FIELD MATURES. DURING THIS PERIOD OF DECLINING PRODUCTION, OPERATING COSTS PER BARREL INCREASE AND CAPITAL COSTS RELATING TO ADDITIONAL RECOVERY INCREASE.

THE ELF ACTUALLY ENCOURAGES FULL FIELD DEVELOPMENT. ONE EXAMPLE IS THE DRILLING OF WELLS. THE ADDITION OF WELLS CONSISTENT WITH SOUND ECONOMIC AND RESERVOIR MANAGEMENT WILL GENERALLY INCREASE ULTIMATE RECOVERY WITHIN A FIELD BUT DECREASE SLIGHTLY THE AVERAGE PRODUCTION PER WELL WITHIN THE FIELD. THE ELF WILL DECREASE SLIGHTLY AS THE PRODUCTION PER WELL DECREASES. OVERALL THEN THE STATE WILL COLLECT TAXES ON MORE BARRELS.

THE HIGH SEVERANCE TAX RATE OF 15% WITHOUT ELF RELIEF CAN BE A SUBSTANTIAL LIMITATION ON MARGINAL PROJECTS OTHER THAN WELL DRILLING. FUTURE ENHANCED OIL RECOVERY PROJECTS ARE VERY EXPENSIVE YET MAY RESULT IN SIGNIFICANT ADDED RECOVERY, MORE RECOVERY IN SOME INSTANCES THAN ENTIRE FIELDS WHICH THE STATE IS APPARENTLY TRYING TO ENCOURAGE. INCREASING THE EFFECTIVE SEVERANCE TAX RATE ON THE FIELD CAN RESULT IN THESE MAJOR PROJECTS NOT BEING PURSUED.

H.B. 164 CHANGES THE EXISTING TAX STRUCTURE. THIS CHANGE WILL MAKE JUSTIFICATION OF FUTURE INVESTMENTS EXTREMELY DIFFICULT. THE TAX RATE WILL BE SUBSTANTIALLY HIGHER FOR 5 YEARS WITH A SEEMINGLY HIGH POTENTIAL FOR ANOTHER INCREASE WHEN THAT 5 YEARS IS UP. BETWEEN $460 MILLION AND $610 MILLION WILL BE TAKEN FROM PRUDHOE OWNERS AND WILL NOT BE AVAILABLE FOR REINVESTMENT. THIS TAX INCREASE COMES AT THE TIME PRUDHOE FACES DECLINE AND LOW PRICES, AND AT THE TIME NEW, VERY EXPENSIVE TECHNOLOGIES ARE BEING DEVELOPED WHICH COULD HAVE APPLICATION TO THE 12 BILLION BARRELS CURRENTLY CONSIDERED UNRECOVERABLE AT PRUDHOE.

GREAT RELIANCE IS BEING PLACED ON THE LOST PRODUCTION FIGURES GENERATED BY THE DEPARTMENT OF REVENUE. PRUDHOE HAS 12 BILLION BARRELS WHICH ARE CURRENTLY CONSIDERED UNRECOVERABLE. TECHNOLOGIES ARE BEING DEVELOPED WHICH MAY BE ECONOMIC AT PRUDHOE. STANDARD SERIOUSLY DOUBTS THAT THE DEPARTMENT OF REVENUE MODEL CAN FAIRLY PREDICT THIS TECHNOLOGICAL PROGRESS. MAJOR PROJECTS COULD BE FOREDONE.

IN ANALYZING A PROJECT, THERE ARE TWO MAJOR CONSIDERATIONS:

1. IS THE PROJECT ECONOMIC?

2. ARE OTHER PROJECTS MORE ECONOMIC IN USING THE FUNDS AVAILABLE?

THE DEPARTMENT OF REVENUE MODEL DOES NOT CONSIDER ALTERNATIVE PROJECTS AND DOES NOT CONSIDER WHETHER FUNDS ARE AVAILABLE. OVERALL, STANDARD BELIEVES THAT AN ACCURATE MODEL PREDICTING LOST PRODUCTIONS CANNOT BE DEVELOPED AND THAT THE SENSE OF SECURITY GENERATED BY THE DEPARTMENT OF REVENUE FIGURES IS A FALSE SENSE OF SECURITY.

THIS BILL WOULD ALSO ELIMINATE THE PEL CHALLENGE. SAPC OPPOSES THIS CHANGE AND BELIEVES THAT FIELD LIFE WILL BE SHORTENED AND TOTAL PRODUCTION REDUCED IF THE PEL CHALLENGE IS ELIMINATED.

IN CONCLUSION SAPC WOULD LIKE TO EMPHASIZE TWO POINTS.

1. THE OIL INDUSTRY HAS CONTINUED TO MAKE MAJOR CAPITAL INVESTMENTS IN ALASKA WITH SUBSTANTIAL ADDITIONAL RECOVERY RESULTING.

2. REMOVAL OF THE ELF AT PRUDHOE COULD SUBSTANTIALLY DECREASE ULTIMATE RECOVERY FROM THAT FIELD AND WILL CHANGE THE EXISTING TAX STRUCTURE MAKING JUSTIFICATION OF FUTURE INVESTMENTS EXTREMELY DIFFICULT.

LAW OFFICES
PRESTON, THORGRIMSON, ELLIS & HOLMAN
420 L STREET · SUITE 404
ANCHORAGE, ALASKA 99501
(907) 276-1969

MEMORANDUM

TO: Deborah Vogt

FROM: Joseph K. Donohue

DATE: April 28, 2986

RE: **Retroactive Amendments to ELF Factor**

You have requested an opinion concerning the constitutionality of enacting a bill which would retroactively either repeal, or amend the methodology for calculating, the economic limit factor under AS 43.55.013. Specifically, you have asked whether a bill enacted in February 1987 and made retroactive to January 1, 1987 would present any due process problem under the Fifth Amendment to the United States Constitution or under Article I, Section 7 of the Alaska Constitution.

The gross production tax on oil or gas is payable monthly. The tax is due on the 20th day of each month for oil or gas production which occurred during the preceding month. The tax is delinquent if not paid before the end of the month following the month of production. AS 43.55.020(a). Thus, the tax on January production is due on February 20 and is delinquent if not paid on or before February 28.

The economic limit factor is defined in AS 43.55.013 and the Department of Revenue has promulgated a number of regulations which interpret and implement of the provision. See 15 AAC 55.010-.040 and .090. The economic limit factor (ELF) is a concept which is designed to reduce the effective rate of taxation on a producing field as production from that field becomes increasingly marginal. The ELF is multiplied by the percentage-of-value amount set forth in AS 43.55.011(b) or the cents-per-barrel amount calculated under (c) to determine the tax due. AS 43.55.013(b)(2) and (3) provide that during the first 10 years of commercial production from a lease or property, an economic limit factor which is greater than .7 is deemed to be one for purposes of the calculation of tax liability. For example, for the period since 1981 when the .7 threshold was enacted as part of Ch. 116 SLA 1981, the ELF at Prudhoe Bay has been greater than .7 and, therefore, one. This, in turn, means that the ELF does not have any operative effect unless it is found to be less than .7 during the initial 10-year period. For Prudhoe Bay, the 10-year period expires in June 1987.

The ELF is derived by the use of a rather complicated mathematical formula which in turn is based on certain simplifying assumptions. For oil, the monthly production rate at the economic limit is presumed to be 300 barrels times the number of well days for the lease or property during the month for which the tax is to be paid. AS 43.55.013(d).

The taxpayer may rebut this presumption at a formal hearing by providing clear and convincing evidence of a different monthly production rate. The determination of the monthly production rate at the economic limit is made by dividing the value at the point of production under AS 43.55.013(f) into the average monthly direct operating costs calculated under subsection (e). The hearing must be held before February 15 of a year or within 6 months after commencement of oil production from a lease or property. The results of the hearing "shall be used for all oil production during that calendar year from the lease or property." AS 43.55.013(d). Therefore, the statute expressly calls for an annual determination with some retroactive effect on the monthly tax period preceding the hearing on the appropriate monthly production rate. This procedural approach makes administrative sense since it is more efficient to have this potentially difficult issue decided on an annual basis rather than on a monthly basis.

Perhaps the leading case on the question of whether a tax statute can apply retroactively to previous tax periods is Welch v. Henry, 305 U.S. 134 (1938). There, the United States Supreme Court upheld a corporate income tax amendment enacted by Wisconsin in March 1935 which was applicable to receipt of corporate dividends in 1933. The court held that, except for a narrow category of gift taxation cases, the legislature had broad authority to adjust or amend tax liability retrospectively.

The exception to this rule mentioned by the court pertained primarily to instances where voluntary irrevocable actions of taxpayers (e.g., making a bequest) were impacted by the retroactive imposition of a tax. The Supreme Court stated that the critical part of the constitutional test was whether "the nature or amount of the tax could not reasonably have been anticipated by the taxpayer at the time of the particular voluntary act which the statute later made the taxable event." 305 U.S. at 147. The cases cited by the court, e.g. Nichols v. Coollidge, 274 U.S. 531 (1927), and Untermeyer v. Anderson, 276 U.S. 440 (1928), were instances where the donor might well not have acted as he did had he anticipated the tax. The court said that the facts of each case and the nature of the tax would have to be examined to determine if retroactivity gives rise to such harsh and oppressive results that it offends the Constitution. The court stated "there are other forms of taxation whose retroactive imposition cannot be said to be similarly offensive, because their incidence

is not on the voluntary act of the taxpayer." 305 U.S. at 147. The court specifically listed property taxes, income taxes and benefit assessments. 305 U.S. at 147-148. The Supreme Court also noted that it was historically the practice of Congress and the Wisconsin Legislature to enact revenue or tax legislation in a given year and to give it effect to the entire calendar year.

The United States Supreme Court more recently upheld the retroactive increase in the minimum tax on preferences in United States v. Darusmont, 449 U.S. 292 (1981). There, an amendment to the Internal Revenue Code enacted in October 1976 was applied to the entire 1976 tax year. In addition to relying on Welch v. Henry, supra, the Supreme Court cited its earlier decision in Cooper v. United States, 280 U.S. 409, 411 (1930), which upheld the taxation of gains from "prior but recent transactions." The Supreme Court also relied on the analysis of Judge Learned Hand in Cohan v. Commissioners, 39 F.2d 540, 545 (2d Cir. 1930). Judge Hand, in resolving a similar issue involving retroactivity of a tax, held that nobody had a vested right in the rate of taxation. In responding to the question of whether the tax law change was foreseeable, Judge Hand stated that once a system of taxation is already in place, a taxpayer "must be prepared for such possibilities ... ." 39 F.2d at 545.

Other decisions which uphold tax law changes with arguably retroactive impacts in the face of due process challenges include Buttke v. Commissioner, 625 F.2d 262 (8th Cir. 1980) (involving the same minimum tax amendments subsequently upheld by the U.S. Supreme Court in United States v. Darusmont, supra) and Neild v. District of Columbia, 110 F.2d 146, 153 (D.C. Cir. 1940) (involving the constitutionality of the application of a new gross receipts tax measured by the prior year's receipts).

Sometimes retroactive tax laws are challenged under state constitutional provisions barring retrospective laws per se or interference with vested rights. The analytical approach taken by the courts is substantially similar. Under the first line of cases, tax bills which are applied to the entire calendar year in which they are enacted are generally found not to be retrospective in operation. See, e.g., Martin v. Board of Assessment Appeals, 707 P.2d 348 (Colo. 1985). In the Martin case, a law changing the factors to be corsidered in appraising condominiums which took effect in May 1982 and which was used to assess property values as of January 1, 1982 was upheld. The court held that to find an unconstitutional retrospective effect required a showing of an impairment of a vested right. The court concluded:

> ... [P]roperty owners have no vested right to have their taxable property assessed by particular methods employed in prior years. ... Since the statute only alters the factors which may be considered in determining actual value, it does not impair the taxpayers' vested rights, and therefore is not unconstitutionally retrospective in its operation. 707 P.2d at 352.

A "vested rights" challenge in the context of a severance tax increase led to an identical conclusion. In Belco Petroleum v. State Board of Equalization, 587 P.2d 204 (Wyo. 1978), a 1975 amendment to the state severance tax increased the amount of tax due for the previous year. Under the Wyoming severance tax, a taxpayer paid his 1974 tax in July 1975 computed on the value of gross production for previous year. In upholding the application of the 1975 increase to the July assessment, the court ruled that such an increase was not retrospective but merely called for a tax measured by or computed on the basis of antecedent facts or transactions. The court also found that there was no vested right in a specific tax rate.

On the basis of the foregoing state and federal cases, one can conclude that there is no vested right in a particular tax rate or in a particular method of determining a tax liability. The U.S. Supreme Court cases focus on whether the transaction was taxable during the period of retroactive coverage and whether said period is reasonable, whether the transactions were "prior but recent" in time with respect to the tax law change, whether the change was reasonably foreseeable and whether or not the taxpayer might have voluntarily acted as he did had he but known of the change.

The question before us involves the proposed repeal or modification of the ELF factor in February 1987, effective January 1, 1987. The retroactive period is at most two months. It would adjust a factor which is determined on an annualized calendar basis under present law. The affected taxpayers are those whose decision to invest and produce oil or gas has already been made and whose production is already subject to taxation. In the State of Alaska, amendments to the oil and gas production tax must certainly be viewed as foreseeable. In fact, the Legislature has discussed and debated changes to the ELF factor during the 1986 legislative session. Under these circumstances, I conclude that neither state nor federal due process limitations would be abrogated by the repeal or amendment of the ELF factor under consideration here. Furthermore, under the analyses set forth in Martin and Belco Petroleum above, a change in the tax rate or ELF methodology prior to February 20, 1987 might not even be viewed as having "retrospective" operation.

147.JKD:ls

FEB/86

MR. CHAIRMAN. MEMBERS OF THE FINANCE COMMITTEE. I AM BRIAN DAVIES. VICE PRESIDENT. PRUDHOE BAY PROGRAMS FOR SOHIO ALASKA PETROLEUM COMPANY. MY RESPONSIBILITIES INCLUDE PLANNING AND EVALUATION OF RECOVERY PROJECTS THAT WILL INCREASE PRODUCTION FROM THE PRUDHOE BAY FIELD.

WITH ME IS BOB VAN HOOK. TAX COUNSEL FOR SOHIO ALASKA PETROLEUM COMPANY.

SOHIO APPRECIATES THE OPPORTUNITY TO TESTIFY BEFORE YOU ON HOUSE BILL 545. ADDITIONALLY. WE WILL SUBMIT WRITTEN COMMENTS ON H.B. 502 AND PROPOSALS FOR PREPAYMENT.

WE ARE OPPOSED TO THE REVISION TO THE ECONOMIC LIMITATION FACTOR (ELF) CONTAINED IN H.B. 545 FOR SEVERAL REASONS. FIRST. WE VIEW THE CHANGE AS A TAX INCREASE. THERE IS SUBSTANTIAL ADDITIONAL TAX COST VS. EXISTING LAW. OUR INVESTMENT DECISIONS UNDERSTANDABLY HAVE BEEN BASED ON EXISTING LAW.

SECOND, JUST LIKE THE STATE, WE ARE SUFFERING FROM DECLINING OIL PRICES. AS A RESULT, SOHIO HAS GONE THROUGH A PAINFUL BELT TIGHTENING IN THE LAST SEVEN MONTHS. IN THAT PERIOD, BUSINESSES HAVE BEEN SOLD, PERSONNEL HAVE BEEN SUBSTANTIALLY REDUCED, AND THE EXPLORATION BUDGET HAS BEEN SUBSTANTIALLY CUT FOR 1986. INCREASING TAXES WOULD FURTHER LIMIT SOHIO'S ABILITY TO EXPLORE FOR AND PRODUCE OIL IN ALASKA.

THIRD, A RESULT OF MODIFYING THE ELF IN A MANNER THAT TAXES LARGER FIELDS SUCH AS PRUDHOE AND KUPARUK MORE HEAVILY IS THAT THERE WILL BE AN EARLIER DECLINE AND LOWER ULTIMATE RECOVERY FROM THESE FIELDS.

ADDITIONALLY, THIS BILL'S STATED GOAL OF ENCOURAGING THE DEVELOPMENT OF MARGINAL FIELDS IS <u>NOT MET</u> WITH REGARD TO SMALLER FIELDS LIKE ENDICOTT. CONTRARY TO OMB'S ANALYSIS, OUR OWN REVIEW SHOWS NO SIGNIFICANT REDUCTION IN SEVERANCE TAXES FOR THE ENDICOTT FIELD UNDER THIS PROPOSAL.

(9)

THE PROPOSAL FOR INCREASING TAXES ON LARGER, MATURE FIELDS, SUCH AS PRUDHOE BAY AND KUPARUK, FAILS TO RECOGNIZE THAT WITHIN SUCH FIELDS OPPORTUNITIES ARE AVAILABLE TO INCREASE THE OVERALL RECOVERY. THESE OPPORTUNITIES ARE GENERALLY MARGINALLY ECONOMIC AND THEY REQUIRE GREATER EXPENDITURES FOR EACH INCREMENTAL BARREL. THE ULTIMATE DEVELOPMENT OF EVERY FIELD IS GOVERNED BY THESE DECISIONS.

FOR EXAMPLE, ENHANCED OIL RECOVERY PROJECTS DESIGNED TO RECOVER BARRELS OF OIL THAT WOULD BE LEFT IN THE GROUND BY TRADITIONAL METHODS ARE VERY EXPENSIVE. INCREASING THE EFFECTIVE SEVERANCE TAX RATE ON A FIELD WILL DISCOURAGE THE ONGOING RESEARCH THAT THE COMPANIES ARE CONDUCTING RELEVANT TO DEVELOPING NEW ENHANCED OIL RECOVERY METHODS. IT IS NOT PRUDENT TO DISCOURAGE SUCH EFFORTS INASMUCH AS THE STATE WILL BE A MAJOR BENEFICIARY OF SUCH ENHANCED RECOVERY PROJECTS.

ON A LESS TECHNICAL BASIS, MORE WELLS IN THESE LARGER FIELDS WILL RESULT IN MAINTAINING MAXIMUM PRODUCTION LONGER AND WILL INCREASE THE ULTIMATE RECOVERY OF OIL. AGAIN, BOTH THE RISK TAKERS AND THE STATE GAIN FROM THESE ACTIONS.

(10)

THE PROPOSED LEGISLATION DISCOURAGES THE DRILLING OF ADDITIONAL WELLS FOR TWO REASONS. FIRST, ALL PRODUCTION WILL BE TAXED AT A HIGHER ABSOLUTE RATE. SECOND, THE INCENTIVE TO DRILL NEW WELLS WHICH IS CONTAINED IN EXISTING STATUTES IS SUBSTANTIALLY DECREASED.

THE DECISION TO DRILL ADDITIONAL WELLS INVOLVES A NUMBER OF FACTORS - ASSUMPTIONS ON THE PRICE OF OIL, TAX STABILITY, RESERVOIR PERFORMANCE AND GEOLOGICAL PREDICTIONS AS WELL AS COST ESTIMATES. THE RESULTS ARE TESTED AGAINST ALTERNATIVE USES OF FUNDS. BECAUSE THE DECISION IS BASED ON A COMPOSITE OF FACTORS, IT IS IMPOSSIBLE TO ASSESS THE <u>EXACT EXTENT</u> OF REDUCED FIELD DEVELOPMENT RESULTING FROM IMPLEMENTATION OF THIS PROPOSAL. I CAN SAY THAT THIS CHANGE <u>WILL</u> CURTAIL FIELD DEVELOPMENT.

(11)

EVEN WHERE A PARTICULAR OIL AND GAS FIELD HAS A LONG LIFE SUCH AS PRUDHOE BAY, INDIVIDUAL WELLS IN A FIELD BECOME MARGINAL OR REACH THEIR ECONOMIC LIMIT BEFORE THE LIFE OF OTHER WELLS IN THE FIELD. INCREASING THE ELF BASED ON PRODUCTION LEVELS FROM THE TOTAL FIELD WILL RESULT IN PREMATURE SHUT-IN OF SUCH WELLS AND WILL DISCOURAGE THE EXTENSIVE WELL WORKOVER ACTIVITIES THAT WILL BE REQUIRED TO MAXIMIZE RECOVERY FROM THE FIELD.

WE FEEL THAT THE PROPOSAL BEFORE YOU TO CHANGE THE SEVERANCE TAX ECONOMIC LIMIT FACTOR IS NOT IN THE INTEREST OF THE STATE. BEFORE ANY DECISION IS MADE, HOWEVER, THE SHORT AND LONG TERM IMPACTS FROM SUCH CHANGE SHOULD BE THOROUGHLY STUDIED TO MAKE SURE THAT THE POTENTIAL IMPACTS ON FUTURE INVESTMENT DECISIONS IN THE STATE ARE FULLY UNDERSTOOD. WE FEEL THAT A THOROUGH STUDY OF LONG-RANGE TAX POLICY SHOULD BE CONDUCTED BEFORE MAKING ANY MAJOR CHANGES TO THE EXISTING TAX STRUCTURE. SUCH APPROACH SHOULD ASSIST IN IDENTIFYING FOR THE STATE THE TAX STRUCTURE WHICH MAXIMIZES THE STATE'S REVENUES IN SUCH A WAY AS TO CONTINUE FOSTERING ECONOMIC GROWTH IN THE STATE.

(12)

IN SUMMARY, WE ARE OPPOSED TO H.B. 545 FOR THESE REASONS.

1. H.B.545 IS A TAX INCREASE AT A TIME WHEN THE OIL INDUSTRY IS BEING NEGATIVELY IMPACTED BY LOW PRICES.

2. IN CONTRAST WITH THE EXISTING ELF, H.B. 545 DISCOURAGES THE FULL DEVELOPMENT OF LARGE FIELDS BY REDUCING OR ELIMINATING THE MARGINAL ECONOMICS OF ENHANCED OIL RECOVERY; BY INCREASING THE COST OF NEW WELLS; AND BY REDUCING INCENTIVES TO MAINTAIN EXISTING PRODUCTION THROUGH WELL WORKOVERS.

3. AS OUR ANALYSIS OF THE IMPACT ON ENDICOTT SHOWS, H.B. 545 FAILS IN ITS STATED PURPOSE OF GIVING SEVERANCE TAX RELIEF TO ALL MARGINAL FIELDS.

PRUDHOE BAY CONTAINS 13 BILLION BARRELS OF OIL WHICH WILL <u>NOT BE</u> RECOVERED UNDER CURRENT DEVELOPMENT PLANS. SIMILARLY, KUPARUK CONTAINS 3.5 BILLION BARRELS THAT WILL BE LEFT. THESE BARRELS REPRESENT LARGE RESOURCES WHICH ARE MARGINAL. H.B. 545 IS A DISINCENTIVE TO ATTEMPT RECOVERY OF ANY OF THOSE ADDITIONAL BARRELS.

THANK YOU FOR YOUR ATTENTION.

(13)

MY NAME IS BOB VAN HOOK. I AM TAX COUNSEL AT STANDARD ALASKA PRODUCTION COMPANY.

THE TESTIMONY FOLLOWING IS INTENDED TO SUPPLEMENT, NOT REPEAT, STANDARD'S TESTIMONY LAST WEEK BEFORE THE JOINT SESSION OF THE HOUSE RESOURCE AND THE HOUSE FINANCE COMMITTEES. THE TWO POINTS I WOULD LIKE TO ADDRESS ARE THE PRODUCTION DISINCENTIVES IN THE COMMITTEE SUBSTITUTE FOR H.B. 164 AND A REVIEW OF THE STATE'S SHARE UNDER CURRENT LAW AND PRICE PROJECTIONS.

THE ADDITION OF WELLS CONSISTENT WITH SOUND ECONOMIC AND RESERVOIR MANAGEMENT AT PRUDHOE AND KUPARUK WILL RESULT IN MAINTAINING MAXIMUM PRODUCTION LONGER AND WILL INCREASE THE ULTIMATE RECOVERY OF OIL. SAPC BELIEVES THAT A REASONABLE DEVELOPMENT PLAN AT PRUDHOE WOULD INCLUDE THE ADDITION OF OVER 300 WELLS IN THE NEXT FIVE YEARS.

THE PROPOSED LEGISLATION WILL RESULT IN FEWER WELLS BEING DRILLED FOR THREE REASONS. FIRST, ALL PRODUCTION WILL BE TAXED AT A HIGHER ABSOLUTE RATE. LESS MONEY WILL BE AVAILABLE FOR INVESTMENT. SECOND, THE INCENTIVE WHICH IS CONTAINED IN EXISTING STATUTES TO DRILL NEW WELLS IS SUBSTANTIALLY DECREASED. THIS INCENTIVE RESULTS FROM THE FACT THAT IN MANY CASES, THE ADDITION OF A WELL WILL DECREASE SLIGHTLY THE AVERAGE PRODUCTION PER WELL IN THE FIELD WHICH IN TURN SLIGHTLY DECREASES THE ELF. THIRD, THE ELF PROVIDES AN INCENTIVE FOR THE EXTENSIVE WELL WORKOVER ACTIVITIES REQUIRED TO KEEP EXISTING WELLS PRODUCING.

TURNING NOW TO THE STATE'S SHARE UNDER CURRENT LAW AND PRICE PROJECTIONS. THE DEPARTMENT OF REVENUE IN DECEMBER RELEASED A STUDY WHICH CONTAINS AN ANALYSIS OF THE STATE'S SHARE AT A VARIETY OF WELLHEAD PRICES. STANDARD BELIEVES THAT THE FIGURES SHOW ANY INDUSTRY TAX INCREASE IN PROJECTED PRICE RANGES IS UNWARRANTED.

IN FACT, IN THE $14 TO $16 PRICE RANGE, WHICH THE GOVERNOR HAS REFERENCED AS A PLANNING BENCHMARK, THE STATE WILL BE COLLECTING 96% OF NET PRODUCTION INCOME OVER THE NEXT FIVE YEARS. NET PRODUCTION INCOME IS INCOME AFTER OPERATING COSTS AND OTHER EXPENSES BUT BEFORE ROYALTY AND STATE AND FEDERAL TAXES. ADOPTION OF THE COMMITTEE SUBSTITUTE WILL TAKE THE STATE'S SHARE OVER 100%. THE CHART YOU ARE LOOKING SUMMARIZES THE DOR ANALYSIS.

THESE FIGURES ARE TOTALS FOR FY 1988-1992.
$9 WELLHEAD (APPROXIMATELY $15 SALES PRICE)
DEPARTMENT OF REVENUE FIGURES 12/19/86

	- $MILLIONS IN CONSTANT $86 - CURRENT LAW	PROPOSED CS HB 164
Total Petroleum Production Gross Income	27704	27704
Total Operating Costs and Other Expenses	‹19620›	‹19620›
Total Petroleum Production Net Income	8084	8084
Allocation to State:		
royalty share	3330	3330
production tax	2509	3009 + 500
property tax	1274	1274
income tax	645	645
Total to State	7758	8258
% to State	96%	102%

(*This is a conservative estimate for the $15 sales price case.)

EVEN MORE STRIKING, PERHAPS, IS THAT UNDER THE PRICE ASSUMPTIONS IN THE MARCH REVENUE FORECAST THE STATE SHARE UNDER CURRENT LAW OVER FY 1987, 1988 AND 1989 WILL BE 155% OF NET INCOME FROM PRODUCTION.

THE VIEW HAS BEEN EXPRESSED THAT LOOKING AT THE STATE SHARE ON PRODUCTION INCOME IS MISLEADING UNLESS TRANSPORTATION INCOME IS INCLUDED. THERE ARE SEVERAL REASONS WHY TRANSPORTATION SHOULD NOT BE INCLUDED.

1. TAPS INCOME IS REGULATED. THE RATE OF RETURN CALCULATED RELIED ON TAX LAWS WHICH APPLY TO TRANSPORTATION INCOME NOT PRODUCTION INCOME. THE STATE HAS AGREED WITH THE TAPS TARIFF.

2. THE OWNERSHIP INTEREST IN NORTH SLOPE PRODUCTION AND TAPS IS NOT IDENTICAL. PRODUCERS WITH A SMALLER INTEREST IN TAPS THAN IN PRODUCTION ARE GETTING NO BENEFIT FROM TRANSPORTATION INCOME TO THE EXTENT OF THE LESSER INTEREST.

3. GENERALLY, IT IS INAPPROPRIATE TO JUSTIFY A TAX ON PRODUCTION BECAUSE OF ASSUMED PROFITS IN TRANSPORTATION.

EVEN INCLUDING PIPELINE INCOME, THE STATE SHARE IS ENORMOUS. AT THE $15 SALES PRICE, THE STATE SHARE OVER THE NEXT FIVE YEARS IS 59% OF PRODUCTION PLUS TRANSPORTATION NET INCOME.

THE EXTREME DIFFICULTIES FACING THE INDUSTRY UNDER CURRENT LAW AND PROJECTED PRICES ARE APPARENT FROM THE PERCENTAGES DISCUSSED ABOVE. THESE FIGURES ARE OF A WHOLLY DIFFERENT MAGNITUDE FROM THE TRADITIONAL 29% TO 31% FAIR SHARE ASSERTION BY THE STATE. STANDARD URGES THE COMMITTEE TO CONSIDER THE OVERWHELMING TAX AND ROYALTY BURDEN ON THE INDUSTRY UNDER EXISTING LAW AND NOT TO ENACT H.B. 164.

THESE FIGURES ARE TOTALS FOR FY 1988 - 1992

$9 WELLHEAD (APPROXIMATELY $15 SALES PRICE)

DEPARTMENT OF REVENUE FIGURES - 12/19/86

	-$MILLIONS IN CONSTANT $86-		-REFERENCE-	
	CURRENT LAW	PROPOSED HB 164	PAGE	COLUMN
Gross Receipts (NS)*	25094	25094	A-1	4
Gross Receipts (CI)**	2610	2610	A-2	8
‹less›: operating costs (NS)	‹5633›	‹5633›	A-1	8
depreciation expense (NS)	‹9240›	‹9240›	A-1	9
amortization expense (NS)	‹380›	‹380›	A-1	10
uncap interest expense (NS)	‹525›	‹525›	A-1	11
admin. & overhead expense (NS)	‹1200›	‹1200›	A-1	12
unsuccess explor. (NS)	‹720›	‹720›	A-1	13
operating costs (CI)	‹1208›	‹1208›	A-2	15
other deductions (CI)	‹714›	‹714›	A-2	16
Net Income	8084	8084	A-4	4
Allocation to State:				
royalty share (NS)	3004	3004	A-1	5
production tax (NS)	2399 (+500)	2899	A-1	21
property tax (NS)	1216	1216	A-1	7
income tax	645	645	A-3	12
oil royalty (CI)	71	71	A-2	9
gas royalty (CI)	255	255	A-2	10
oil production tax (CI)	0	0	A-2	11
gas production tax (CI)	110	110	A-2	13
property tax (CI)	58	58	A-2	14
Total to State	7758	8258	A-4	5
% to State	96%	102%		
Allocation to Industry & Federal Government:				
Net Income	8084	8084		
‹less›: Allocation to State	‹7758›	‹8258›		
Total to Industry & Federal Government	326	‹174›		
% to Industry and Federal Government	4%	‹2%›		

*North Slope

**Cook Inlet

ATTACHMENT TO STANDARD ALASKA PRODUCTION COMPANY
TESTIMONY ON CS FOR H.B. 164

NOTE: IN THE BODY OF THE SAPC TESTIMONY, REFERENCE WAS MADE TO A DECEMBER DEPARTMENT OF REVENUE STUDY WHICH CONTAINED CURRENT LAW INCOME PROJECTIONS. THE FOLLOWING SCHEDULES DETAIL THOSE PROJECTIONS IN TOTAL FOR THE FIVE YEAR PERIOD FY 1988-1992.

OIL PRODUCING ENTITIES-SEPARATE ACCT INDIVIDUAL INCOME TAX RATE
SENSITIVITY ANALYSIS 80/8 MAY

1 YR																				
1 AVG GROSS WELLHD VALUE OIL	TOTAL GROSS PROD VOL BBL/D	TOTAL GROSS REV $/BBL/D	ROYALTY SHARE $/BBL/D	PROD & SEVR TAX $/BBL/D	PDV $/BBL/D	OPER COSTS $/BBL/D	DEPREC EXPENSE $/BBL/D	AMORT EXPENSE $/BBL/D	UNCAP INTEREST EXPENSE ALLOWED $/BBL/D	ADMIN & OVERHD EXPENSE ALLOWED $/BBL/D	EXPLOR (UNSUCCES) EXPENSE ALLOWED $/BBL/D	TOTAL DEDUCT $/BBL/D	TOTAL TAXABLE INCOME $/BBL/D	TOTAL WINDFALL TAX $/BBL/D	WINDFALL PROFITS TAX $/BBL/D	TOTAL DEDUCT W/WPT $/BBL/D	TOTAL TAXABLE INCOME W/WPT $/BBL/D	TOTAL TAX LIAB W/WPT $/BBL/D	PROD TAX CURRENT $/BBL/D
10.00	131.04	3738.56	492.66	303.19	314.81	1133.47	1367.89	8.56	105.00	210.00	100.00	4133.56	1104.00	103.95	0.00	4133.31	2104.04	103.95	302.49
11.00	143.00	5400.19	486.01	458.31	314.56	1137.10	1621.47	20.33	105.00	210.00	111.00	4851.70	937.49	90.00	0.00	4851.70	937.49	90.00	301.53
12.00	133.00	5334.35	320.19	454.70	331.00	1132.17	1348.38	42.33	105.00	210.00	111.00	4813.01	714.68	87.31	0.00	4813.01	714.68	87.31	351.30
13.00	133.00	5168.19	456.62	462.42	355.01	1101.00	2026.32	66.49	105.00	210.00	111.00	5071.77	615.42	35.05	0.00	5071.77	615.42	89.05	332.09
14.00	142.00	5332.19	526.02	469.01	365.01	1155.44	6006.02	86.36	105.00	210.00	111.00	4912.97	259.22	24.32	0.00	4912.97	259.22	24.32	492.31
15.00	143.00	6336.76	341.07	364.01	376.10	1009.40	1040.02	86.24	105.00	210.00	111.00	1120.21	46.50	4.30	0.00	1120.21	46.50	4.30	437.41
16.00	146.00	6699.92	344.01	364.14	322.01	1025.42	1299.09	83.04	105.00	210.00	111.00	4443.00	-243.90	-22.03	0.00	4443.00	-243.90	-22.03	381.13
17.00	150.00	1859.31	486.60	280.20	220.01	1050.31	1040.01	82.01	105.00	210.00	111.00	4396.37	-337.14	-30.49	0.00	4396.37	-337.14	-30.49	344.70
18.00	165.00	3462.45	440.45	319.00	217.01	1005.24	3400.00	79.03	105.00	210.00	111.00	4168.37	-442.12	-42.21	0.00	4168.37	-442.12	-42.21	304.51
19.00	165.00	3462.31	322.00	316.09	200.51	930.22	1092.00	62.05	105.00	210.00	111.00	3760.01	-849.47	-43.57	0.00	3760.01	-849.47	-43.57	260.11
20.00	173.00	3760.07	310.55	306.03	183.04	840.00	1201.20	58.09	105.00	210.00	111.00	3373.02	-838.15	-42.01	0.00	3373.02	-838.15	-42.01	225.01
21.00	173.00	3754.10	322.22	303.06	169.20	841.03	1101.62	46.01	105.00	210.00	111.00	3033.35	-809.17	-43.45	0.00	3033.35	-677.17	-43.45	196.12
22.00	173.00	3613.00	233.30	336.10	150.22	816.45	810.15	20.09	105.00	210.00	111.00	2624.26	-686.96	-37.05	0.00	2624.26	-686.96	-37.05	143.09
23.00	183.00	3463.36	218.35	332.03	136.17	603.00	602.41	17.02	105.00	210.00	111.00	2237.36	-631.96	-34.00	0.00	2237.36	-631.96	-34.00	143.00
24.00	183.00	3462.20	187.01	303.00	126.43	433.20	369.00	14.03	105.00	210.00	111.00	2250.01	-646.61	-36.20	0.00	2250.01	-646.61	-36.20	123.00
25.00	183.00	3462.20	148.50	92.54	103.00	460.63	432.65	13.00	105.00	210.00	111.00	2111.31	-646.16	-42.43	0.00	2111.31	-646.16	-42.43	110.11
26.00	183.00	1210.00	136.20	83.36	93.53	502.67	534.53	11.05	105.00	210.00	111.00	1965.36	-675.36	-43.48	0.00	1965.36	-675.36	-43.48	100.43
27.00	183.00	913.00	105.03	64.16	70.00	423.15	361.10	6.09	105.00	210.00	111.00	1665.33	-547.33	-31.45	0.00	1665.33	-547.33	-31.45	80.00
28.00	81.00	813.00	90.01	50.33	49.36	411.44	316.41	6.98	105.00	210.00	111.00	1393.43	-376.43	-34.66	0.00	1393.43	-376.43	-34.06	71.04
29.00	81.00	121.00	86.00	32.03	44.42	400.00	310.70	6.07	105.00	210.00	111.00	1337.50	-388.50	-34.26	0.00	1337.50	-388.50	-34.26	63.73
		25094	3004		1216	5633	9240	380	525	1200	720								2399
2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21

COLUMN N

(page 91, 12/19/86 DOR Study

TABLE II-9-6
CURRENT LAW-MODIFIED APPORTIONMENT (ASSUMED) INCOME TAX ESTS
(8-1986$)

SENSITIVITY ANALYSIS $17/B WHY

FISCAL YEAR					CALENDAR YEAR	TOP 3 COMPANIES				FISCAL YEAR	
FISCAL YEAR	TOTAL AK OIL & GAS PROD'N MMB/Y EQUIV	CHG TOTAL AK OIL & GAS PROD'N %	APPORT FACTOR CHG FACTOR	NET PROFIT APPORT FACTOR	CALENDAR YEAR	US NET PROFIT MM$/Y	AK TAXABLE INCOME MM$/Y	AK TAX LIAB MM$/Y	TOTAL AK TAX LIAB MM$/Y	FISCAL YEAR	TOTAL AK TAX COLLECT MM$/Y
1986	876.67	0.0000	1.0000	0.2737	1986	4009.50	1360.61	124.00	140.00	1986	183.32
1987	786.60	1.3396	1.0087	0.2783	1987	4009.50	1338.56	123.82	139.11	1987	139.93
1988	683.68	-3.1613	0.9795	0.2699	1988	4009.50	1297.16	122.01	135.56	1988	137.36
1989	662.39	-4.1153	0.9993	0.2670	1989	4009.50	1280.00	120.70	130.11	1989	134.84
1990	650.38	-4.7663	0.9690	0.2561	1990	4009.50	1231.78	115.79	128.65	1990	131.31
1991	595.53	-8.6281	0.9452	0.2397	1991	4009.50	1152.66	108.35	120.39	1991	124.18
1992	561.76	-8.0330	0.9613	0.2233	1992	4009.50	1070.13	100.97	112.19	1992	116.16
1993	542.98	-7.1502	0.9535	0.2108	1993	4009.50	1013.59	95.31	105.90	1993	108.95
1994	455.35	-9.6701	0.9584	0.1959	1994	4009.50	942.08	88.55	98.39	1994	102.03
1995	410.80	-9.9391	0.9351	0.1818	1995	4009.50	872.22	81.99	91.10	1995	94.63
1996	363.68	-11.3460	0.9263	0.1663	1996	4009.50	799.01	75.10	83.54	1996	87.29
1997	323.05	-11.0172	0.9284	0.1527	1997	4009.50	735.16	69.10	76.78	1997	80.05
1998	281.62	-12.9964	0.9155	0.1385	1998	4009.50	666.31	62.63	69.59	1998	73.07
1999	256.82	-8.7385	0.9132	0.1294	1999	4009.50	622.17	58.48	64.98	1999	67.22
2000	233.78	-8.9722	0.9617	0.1266	2000	4009.50	580.65	54.52	60.58	2000	62.72
2001	212.66	-9.0365	0.9613	0.1128	2001	4009.50	540.50	50.81	56.45	2001	58.05
2002	195.15	-8.2333	0.9665	0.1053	2002	4009.50	506.46	47.61	-52.90	2002	54.62
2003	169.22	-23.5321	0.8470	0.0883	2003	4009.50	426.70	39.92	44.36	2003	50.68
2004	137.15	-8.0904	0.9470	0.0878	2004	4009.50	398.34	37.44	41.60	2004	42.94
2005	126.55	-7.7297	0.9698	0.0779	2005	4009.50	374.53	35.21	39.12	2005	40.33

1	2	3	4	5	6	7	8	9	10	11	12

COLUMN #

[illegible]-SEPARATE ACCT [illegible] INCOME TAX ESTS
SENSITIVITY ANALYSIS [illegible]

OIL GROSS WELLHEAD VALUE $/B	OIL GROSS PROD VOL MMB/Y	OIL GROSS REV MM$/Y	GAS GROSS WELLHEAD VALUE $/MCF	GAS GROSS PROD VOL BCF/Y	GAS GROSS REV MM$/Y	TOTAL GROSS REV MM$/Y	OIL ROYALTY SHARE MM$/Y	GAS ROYALTY SHARE MM$/Y	OIL PROD & CONS TAX CURRENT MM$/Y	OIL PROD & CONS TAX [illegible] MM$/Y	GAS PROD TAX MM$/Y	PPT TAX MM$/Y	OPER COSTS MM$/Y	OTHER DEDUCT MM$/Y	TOTAL TAXABLE INCOME MM$/Y	TOTAL TAX LIAB MM$/Y	WINDFALL PROFITS TAX MM$/Y	TOTAL TAXABLE INCOME W/WPT MM$/Y	TOTAL TAX LIAB W/WPT MM$/Y
15.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.00	[illegible]	[illegible]
15.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.00	[illegible]	[illegible]
15.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.00	[illegible]	[illegible]
15.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.00	[illegible]	[illegible]
15.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.00	[illegible]	[illegible]
15.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.00	[illegible]	[illegible]
15.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.00	[illegible]	[illegible]
15.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.00	[illegible]	[illegible]
15.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	.00	.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.00	[illegible]	[illegible]
15.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	.00	.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.00	[illegible]	[illegible]
15.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	.00	.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.00	[illegible]	[illegible]
15.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	.00	.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.00	[illegible]	[illegible]
15.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	.00	.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.00	[illegible]	[illegible]
15.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	.00	.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.00	[illegible]	[illegible]
15.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	.00	.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.00	[illegible]	[illegible]
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15.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	.00	.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.00	[illegible]	[illegible]
15.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	.00	.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.00	[illegible]	[illegible]
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						2610	71	255	0	0	110	58	1208	714					
2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21

COLUMN #

(page 87, 12/19/86 DOR Study)

(page 93, 12/19/86 DOR Study

TABLE II-9-8
PERCENTAGE SHARE COMPARISON
CALCULATION OF STATE PETROLEUM PRODUCTION REVENUES
AS A PERCENTAGE OF
PETROLEUM PRODUCTION NET INCOME
11-17-86 SENSITIVITY ANALYSIS 1978 WAY

FISCAL YEAR	TOTAL PETRO PROD GROSS INCOME $MIL/Y	TOTAL PETRO PROD NON TAX DEDUCTS $MIL/Y	TOTAL PETRO PROD NET INCOME $MIL/Y	CURRENT LAW STATE PETRO PROD REVENUE $MIL/Y	REVENUE VS NET INCOME %	XXXXX STATE PETRO PROD REVENUE $MIL/Y	REVENUE VS NET INCOME %
1986	6162.82	3384.19	2778.63	1867.26	67.20	1817.31	65.40
1987	6209.70	3671.83	2537.87	1843.76	72.65	1727.39	68.06
1988	5985.52	3856.79	2128.73	1688.29	79.38	1524.93	71.70
1989	5915.67	4101.18	1814.49	1663.12	91.66	1483.11	81.74
1990	5660.06	4021.98	1638.08	1583.60	96.67	1397.89	85.34
1991	5279.83	3859.02	1420.83	1468.74	103.37	1284.30	90.39
1992	4866.60	3780.83	1085.77	1351.62	124.49	1186.40	109.44
1993	4548.23	3803.49	766.74	1280.73	167.07	1126.53	147.31
1994	4340.88	3643.78	697.10	1202.45	172.49	1071.87	153.76
1995	4156.91	3343.68	813.23	1132.08	139.21	1030.62	126.73
1996	3770.02	3037.23	732.79	1014.65	138.46	934.21	127.49
1997	3442.69	2784.54	658.16	917.85	139.45	852.61	129.55
1998	3125.52	2456.54	668.98	829.76	124.04	778.04	116.30
1999	2900.87	2326.96	573.90	762.46	132.32	719.39	125.92
2000	2685.26	2182.13	503.13	698.08	138.73	662.77	131.73
2001	2474.03	2062.85	411.19	637.65	154.77	607.58	147.68
2002	2328.39	1958.97	369.42	589.07	159.89	565.37	153.46
2003	1920.78	1535.17	385.61	497.23	128.95	482.50	129.87
2004	1798.92	1498.76	300.16	458.12	148.67	447.62	145.23
2005	[illegible]	1650.50	246.82	425.81	173.08	418.28	170.02
	27704	19620	8084	7758			
1	2	3	4	5	6	7	8

COLUMN #

NEWS RELEASE

STATE OF ALASKA

OFFICE OF THE GOVERNOR
P.O. BOX A
JUNEAU, ALASKA 99811

STEVE COWPER,
GOVERNOR

MAY 3 1989

FOR INFORMATION CONTACT:

DAVID RAMSEUR
PRESS SECRETARY

TERENCE O'MALLEY
DEPUTY PRESS SECRETARY

(907) 465-3500

FOR IMMEDIATE RELEASE
May 1, 1989
No. 89-79

COWPER COMMENTS ON SENATE COMMITTEE ELF VOTE

JUNEAU--Gov. Steve Cowper issued the following statement about today's Senate Resources Committee vote approving a bill modifying the Economic Limit Factor tax break for the oil industry. The bill (HB118) passed after it was amended to appropriate a portion of the receipts to the Oil and Hazardous Substance Release Response Fund.

"The Senate Resources Committee acted courageously and responsibly by passing this bill. The committee change, to dedicate a portion of the receipts for an oil spill clean-up fund, makes it more important than ever that this bill pass the Legislature.

"Congratulations are due to the committee chairperson, Sen. Bettye Fahrenkamp, and to Sen. Jim Duncan, who proposed the amendment. Both are owed a debt of gratitude by Alaskans for standing up to oil industry pressure.

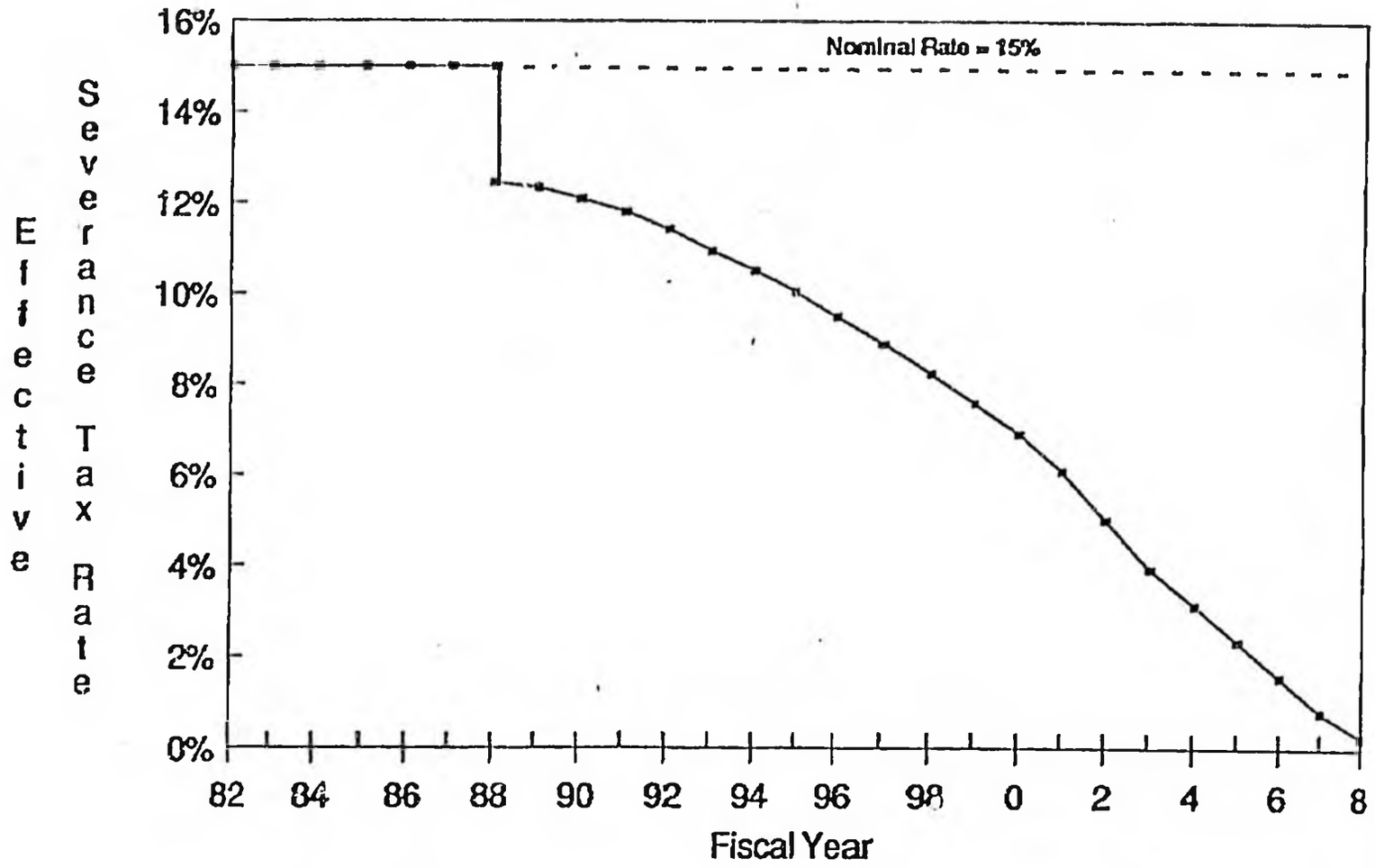
"The next step for Elf is a hearing in the Senate Finance Committee. I'm hopeful committee co-chairman Sen. Rick Uehling will give the bill prompt and serious consideration. All Alaskans deserve for this bill to be voted up or down on the Senate floor and not held in the shadows of a committee.

-MORE-

"The House bill reduces taxes or leaves them at zero for every oil field in Alaska except two, where it eliminates a huge tax break on the two most productive and profitable fields in the U.S. and Canada. It's a responsible bill that encourages development and creates jobs for Alaskans."

-30-

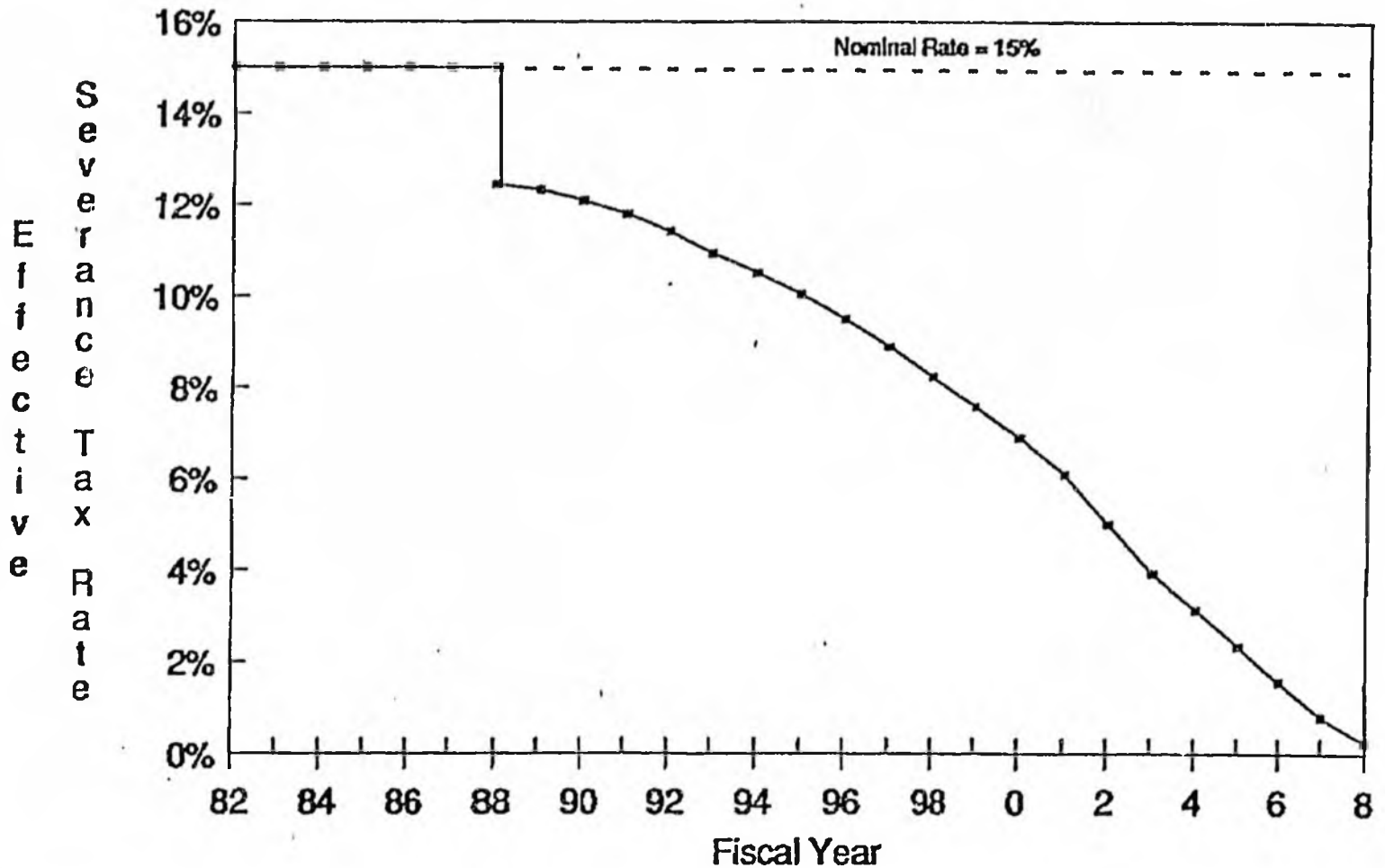
The Tax Rate at Prudhoe Bay Collapsed on July 1, 1987



Source: Alaska Dept. of Revenue Spring 89 Forecast

Date: April 21, 1989

The Tax Rate at Prudhoe Bay Collapsed on July 1, 1987

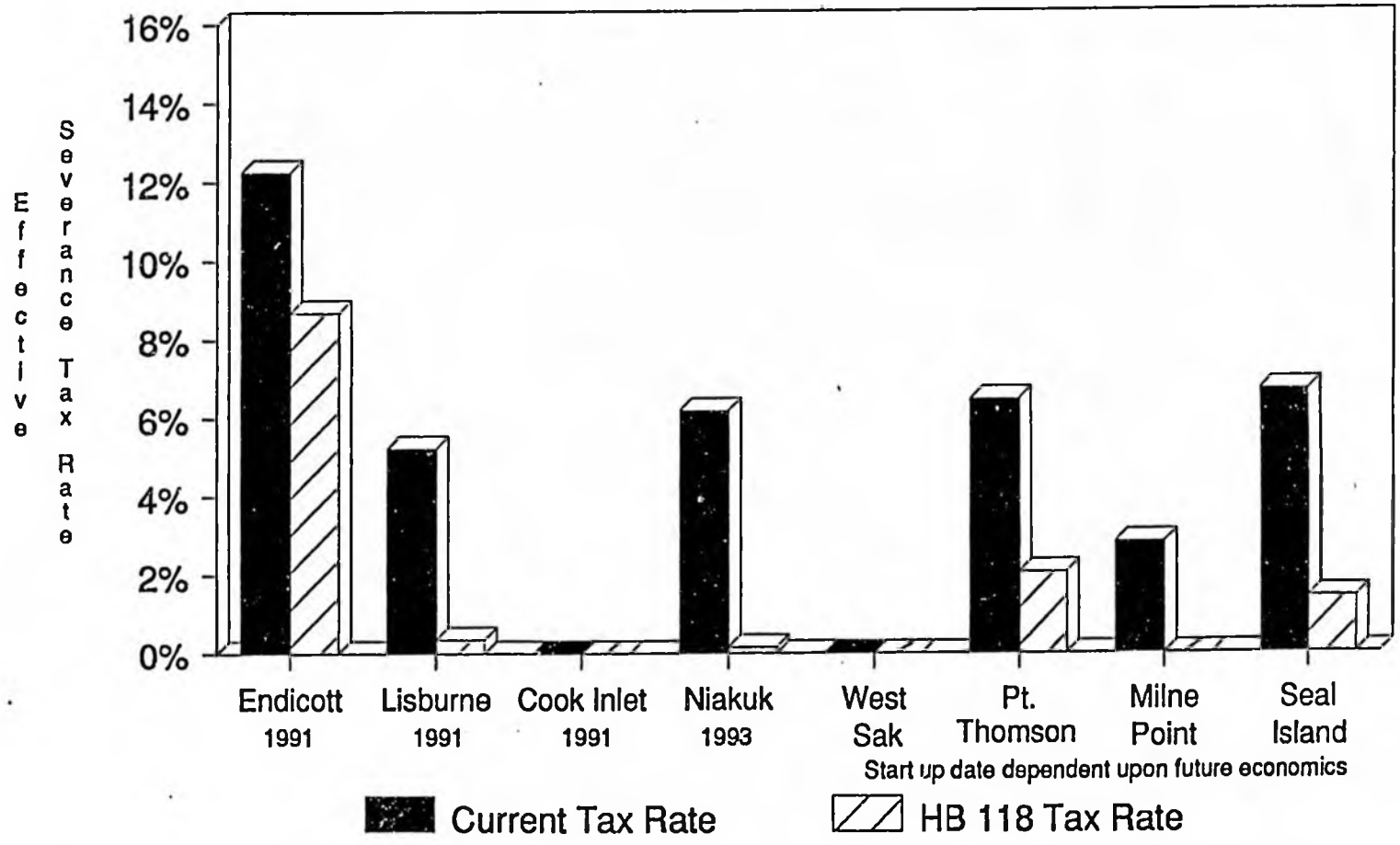


Source: Alaska Dept. of Revenue Spring 89 Forecast

Date: April 21, 1989

Fields Where Taxes Would Decrease Under HB 118

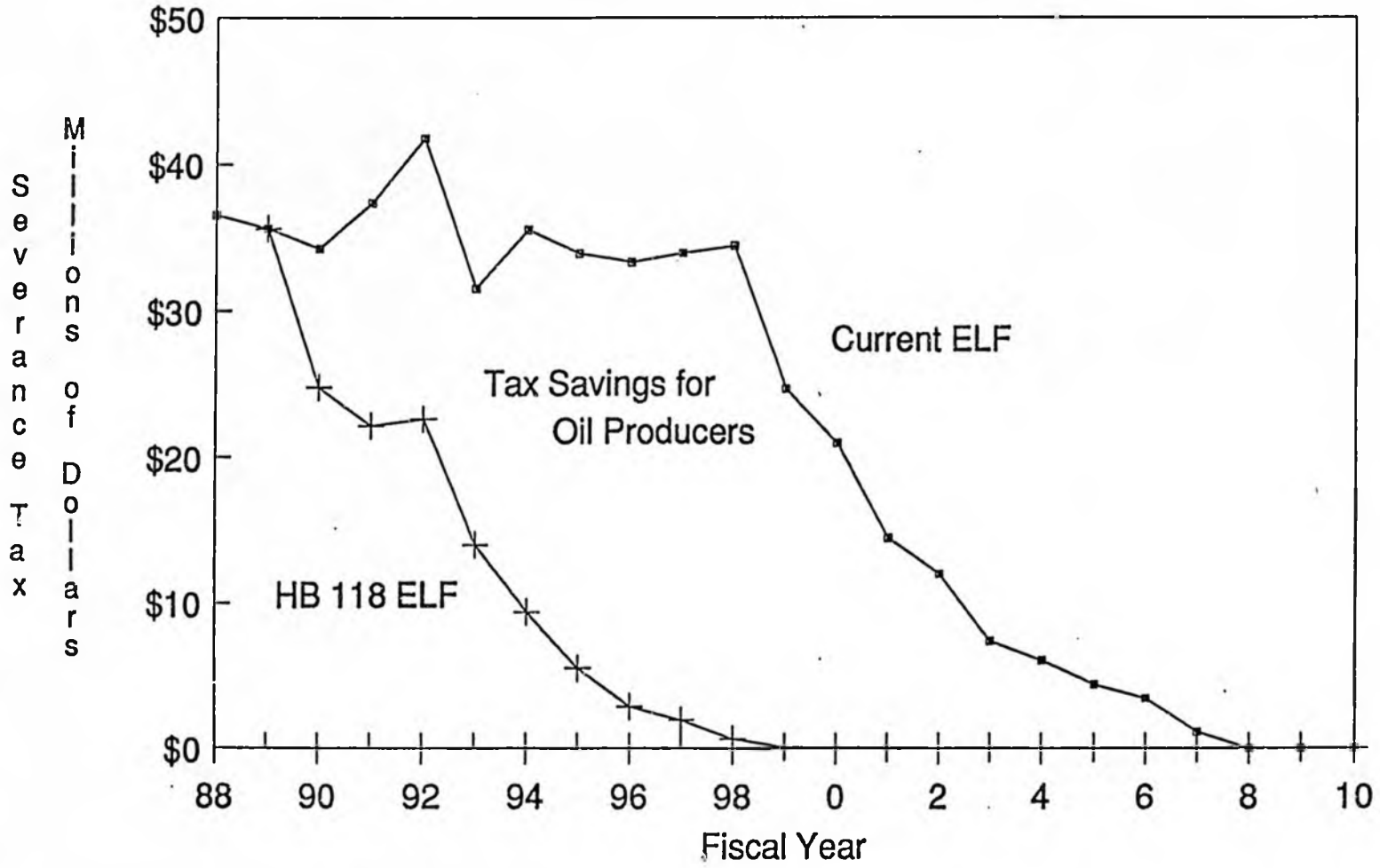
(For Representative Years)



Source: Department of Revenue

Date: February 7, 1989

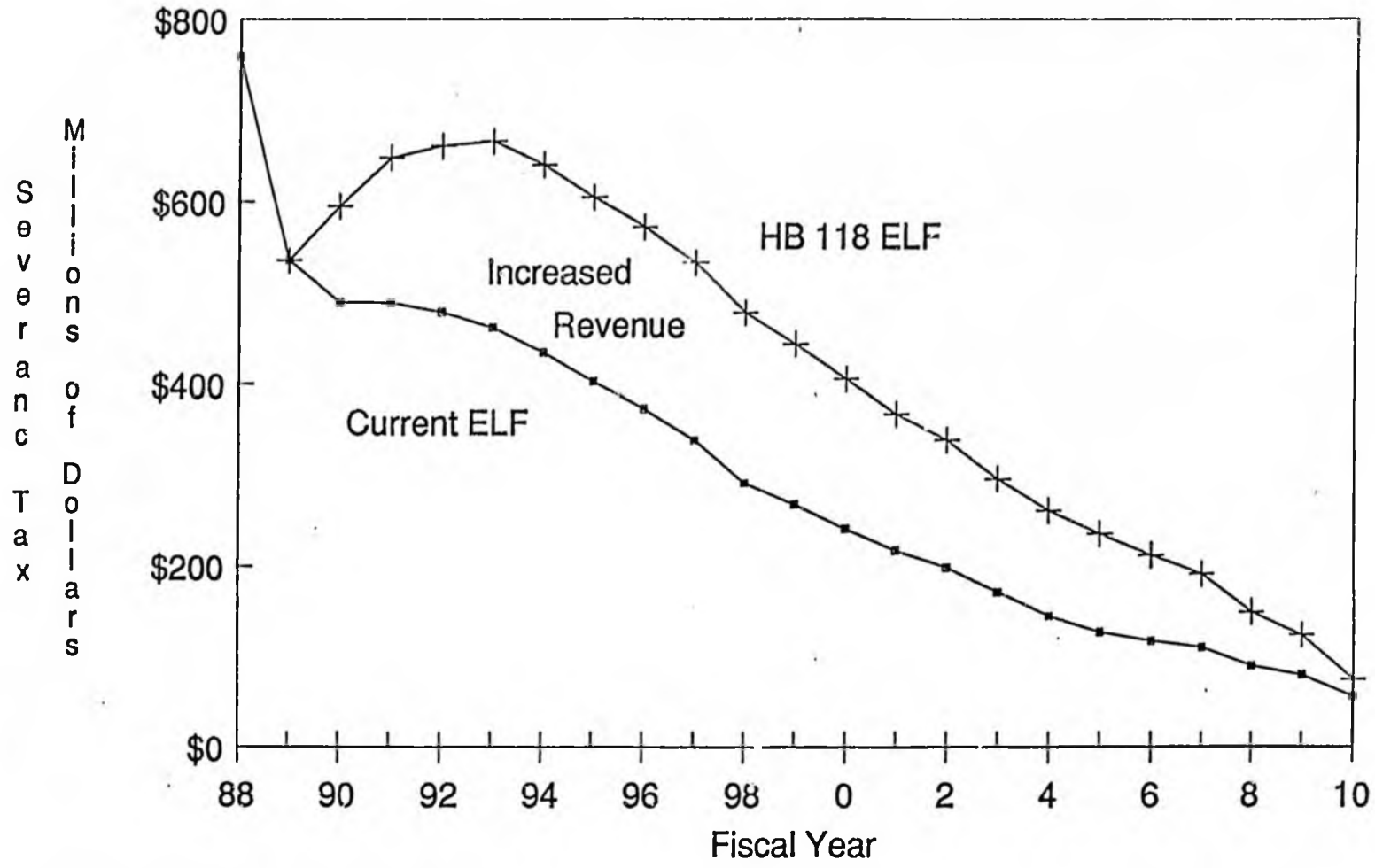
HB 118 Gives a Tax Savings for Producers at Oil Fields Other than Prudhoe Bay and Kuparuk



Note: Revenues are from severance taxes on fields other than Prudhoe Bay and Kuparuk

Date: February 15, 1989

HB 118 Raises More Severance Tax Revenue from Prudhoe Bay and Kuparuk



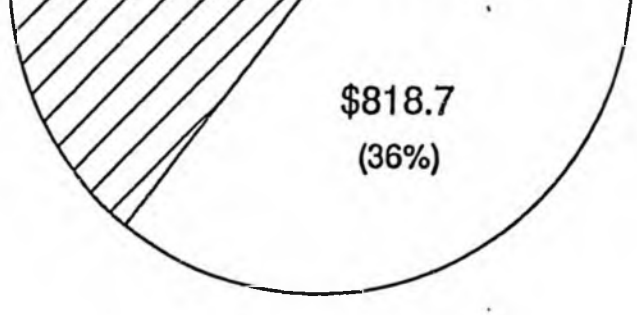
Note: Revenues are from severance taxes on Prudhoe Bay and Kuparuk

Date: February 15, 1989

SEVERANCE TAX, also called production tax, is a tax on oil removed from the ground. The tax compensates for the depletion of the state's non-renewable resources.

Date: February 7, 1989

Severance Taxes are an Important Part of Alaska's Revenues



$2305.8

Total Unrestricted General Fund Revenues For Fiscal Year 1988

Date: February 7, 1989

The Economic Limit Factor or ELF is a fraction which reduces severance taxes as well productivity declines.

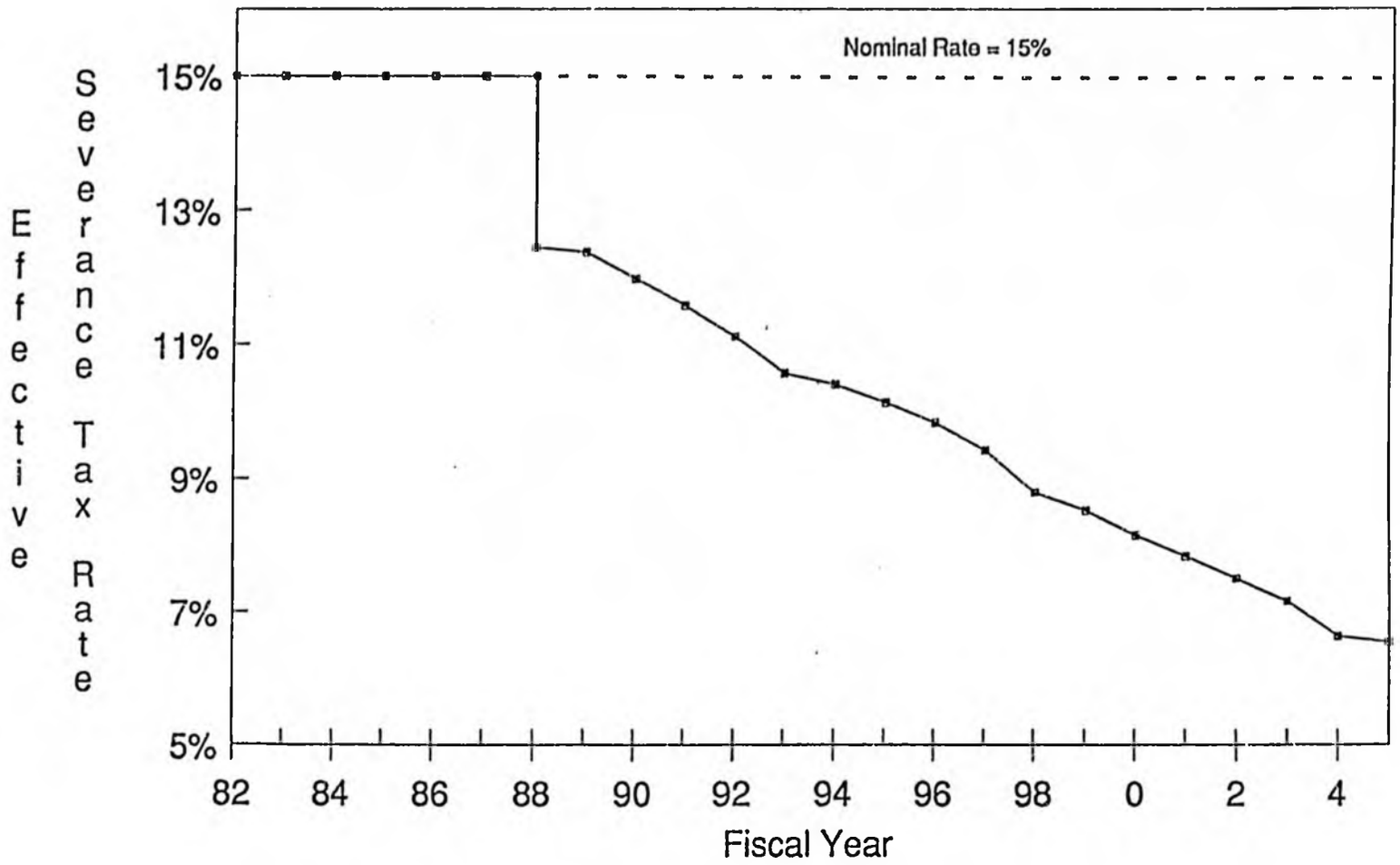
Date: February 7, 1989

EFFECTIVE SEVERANCE TAX RATE
equals nominal severance tax rate times ELF.

For example, 15.00% times 0.824 equals
an effective severance tax rate of 12.36 %

Date: March 3, 1989

The Tax Rate at Prudhoe Bay Collapsed on July 1, 1987

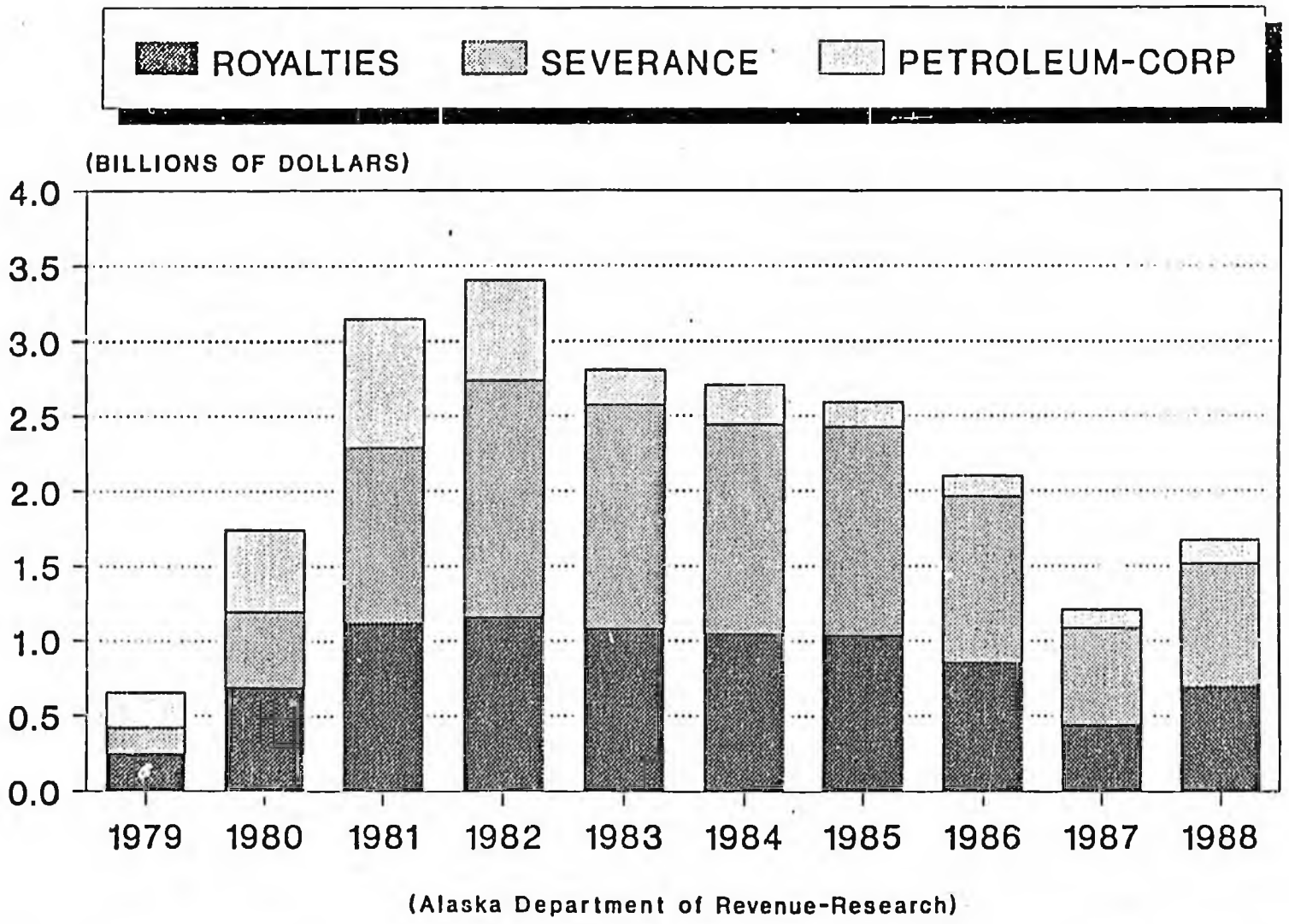


HOW REVENUE NEUTRAL WERE THE 1981 CHANGES?
($mm)

	What collections would have been under pre 1982 Law			Actual Collections			
	Petro. Corp. Income Tax	Sev. Tax	Total	Petro. Corp. Income Tax	Sev. Tax	Total	Loss from change in Law
1982	980	1219	2199	669	1582	2251	52
1983	915	1099	2014	236	1494	1730	(284)
1984	836	1033	1869	265	1393	1658	(211)
1985	812	1014	1826	169	1389	1556	(268)
1986	658	805	1463	134	1108	1242	(221)
1987	375	464	839	120	649	769	(70)
Total	4576	5634	10210	1593	7615	9208	(1002)*

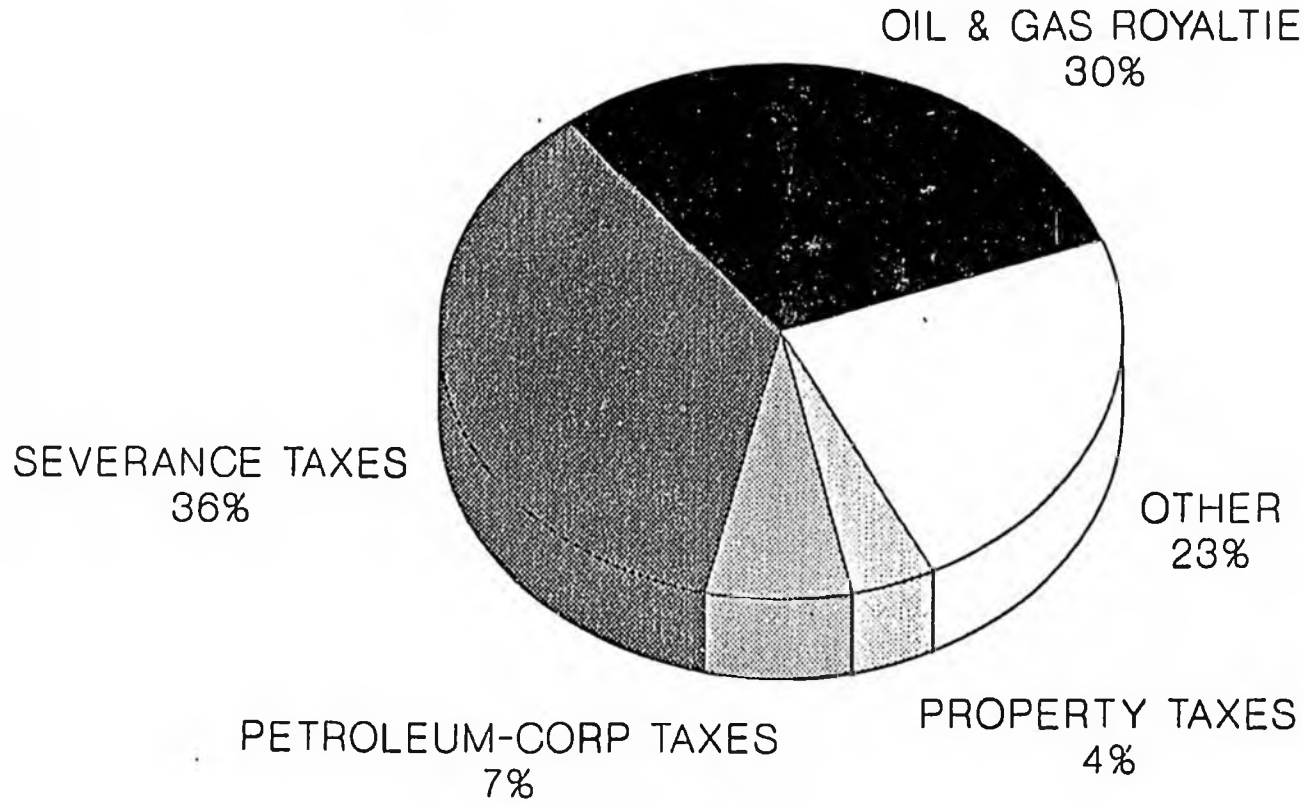
*Had the Legislature authorized deduction of the Federal Windfall Profits Tax the total loss over the period would have been $670 mm

SELECTED PETROLEUM REVENUES
(FY 1979 - 1988)



(Alaska Department of Revenue-Research)

GENERAL FUND UNRESTRICTED REVENUES
(FY 1988)



(Alaska Department of Revenue-Research)

Severance Tax Receipts as Percentage of Gross Wellhead Value - Prudhoe Bay

Year	Wellhead Price ($/bbl)	Volume (mmbbl)	Gross Value ($mm)	Sev Tax ($mm)	Sev Tax as % of Gross Value	Loss from ELF ($mm)
1982	24.45	557	13619	1787	13.1%	NA
1983	20.27	560	11351	1499	13.1%	NA
1984	19.73	562	11088	1455	13.1%	NA
1985	18.48	564	10423	1368	13.1%	NA
1986	12.74	563	7173	941	13.1%	NA
1987	8.08	567	4581	601	13.1%	NA
		(Suspension of ELF on Prudhoe Bay ends)				
1988	10.68	565	6034	657	10.9%	135
1989	7.36	540	3974	430	10.8%	92
1990	7.00	502	3514	368	10.5%	93
1991	7.56	466	3523	357	10.1%	105

Original sponsor: Finance Committee

BY THE SENATE SPECIAL COMMITTEE ON OIL AND GAS

IN THE HOUSE

SENATE CS FOR CS FOR HOUSE BILL NO. 118 (Oil & Gas)

IN THE LEGISLATURE OF THE STATE OF ALASKA

SIXTEENTH LEGISLATURE - FIRST SESSION

A BILL

For an Act entitled: "An Act relating to the oil and gas properties production tax; and providing for an effective date."

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

* Section 1. AS 43.55.013(b) is repealed and reenacted to read:

(b) The economic limit factor for oil production of a lease or property shall be computed according to the following formula:

(1-[PEL/TP]) exp ([150,000/(TP/Days)] exp [(460 X WD)/PEL])

where: PEL = the monthly production rate at the economic limit;

TP = the total production during the month for which the tax is to be paid;

WD = the total number of well days in the month for which the tax is to be paid;

Days = the number of days in the month for which the tax is to be paid; and

exp = exponent.

* Sec. 2. This Act takes effect July 1, 1989.

STATE OF ALASKA
1989 LEGISLATIVE SESSION

Bill Version: SCS CSHB 118 (Oil & G.
Publish Date:

FISCAL NOTE

REQUEST:

Revision Date: April 4, 1989
Title: Oil & gas properties production tax - ELF
Sponsor: House Finance Committee
Requestor: Senate Oil & Gas

Agency Affected: Department of Revenue
BRU: Oil & Gas Audit Division
Components:

EXPENDITURES/REVENUES: (Thousands of Dollars)

	FY 89	FY 90	FY 91	FY 92	FY 93	FY 94
OPERATING						
PERSONAL SERVICES	0	0	0	0	0	0
TRAVEL	0	0	0	0	0	0
CONTRACTUAL	0	0	0	0	0	0
SUPPLIES	0	0	0	0	0	0
EQUIPMENT	0	0	0	0	0	0
LANDS & STRUCTURES	0	0	0	0	0	0
GRANTS, CLAIMS	0	0	0	0	0	0
MISCELLANEOUS	0	0	0	0	0	0
TOTAL OPERATING	0	0	0	0	0	0
CAPITAL	0	0	0	0	0	0
REVENUE	Varies (See estimate attached)		181,000	192,000	207,000	207,000

FUNDING: (Thousands of Dollars)

GENERAL FUND	0	0	0	0	0	0
FEDERAL FUNDS	0	0	0	0	0	0
OTHER	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0

POSITIONS:

FULL-TIME	0	0	0	0	0	0
PART-TIME	0	0	0	0	0	0
TEMPORARY	0	0	0	0	0	0

ANALYSIS: See attached page for analysis.

Prepared By: Roger Marks
Division: Dept. of Revenue, Oil & Gas Audit Division
Phone: 277-5627
Date: April 27, 1989

Approved by Commissioner: Hugh Malone
Agency: Department of Revenue
Date: 4/27/'89

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

page 1 of 4

Fiscal Analysis of HB 118

This bill modifies the economic limit factor (ELF) formula used in computing the production (severance) tax on oil.

The bill (1) introduces the rate of field production into the exponent of the current ELF formula and (2) repeals the so-called "rounding rule," the provision of current law which states that for any month during the first 10 years of commercial oil production for which the computed ELF of a lease or property exceeds 0.7 the ELF shall be considered to be one.

The bill carries an effective date of July 1, 1989, but does not explicitly state the date on which it first begins applying to oil production. That date will determine how much revenue is raised for FY 89 and FY 90. The following table shows the revenue raised for each date.

If the bill applies to oil produced after this date	Revenues Raised for FY 89	Revenues Raised for FY 90
12/31/88	64	171
01/31/89	50	171
02/28/89	37	171
03/31/89	24	171
04/30/89	12	171
05/31/89	0	171
06/30/89	0	158
07/31/89	0	145
08/31/89	0	132

The severance tax is paid monthly for the prior month. For example, the tax for production in April is due in May.

This fiscal note was calculated using the oil price and production assumptions of the Department of Revenue's Spring 1989 Petroleum Production Revenue Forecast mid-case scenario. That forecast was predicated on Alaska North Slope crude prices at the U.S. Gulf of $14.29 a barrel in FY 89 and $16.41 a barrel in FY 90.

Additional revenues for future years in millions of dollars are as follows:

1995	194
1996	180
1997	165
1998	157
1999	148
2000	139
2001	129
2002	110

2003	86
2004	69
2005	45
2006	21
2007	4
2008	(3)
2009	0
2010	0

A price - revenue matrix is included. It is based on an application date of December 31, 1988.

Price/Revenue Increase for HB 118
(Millions of $)

Saudi Light ($/bbl)	ANS @ US Gulf ($/bbl)	Fiscal Year 1989	1990	1991	1992	1993	1994	1995
10	11	35	85	88	98	104	104	99
12	13	48	115	116	129	146	148	139
14	15	63	151	153	161	174	175	164
16	17	78	187	189	198	213	214	200
18	20	92	223	226	235	253	253	236
20	22	107	259	262	272	283	277	258

Department of Revenue
April 28, 1989

Price/Revenue Increase for SCS CSHB 118 (OIL AND GAS)'
(Millions of $)

ANS @ US Gulf ($/bbl)	Fiscal year 1990*	1991	1992	1993	1994	1995
11	85	88	98	104	104	99
13	115	116	129	146	148	139
15	151	153	161	174	175	164
17	187	189	198	213	214	200
20	223	226	235	253	253	236
22	259	262	272	283	277	258

*Assumes 5/31/89 application date

Size of Field Where Taxes Will Increase or Decrease Under HB 118

HB 118 modifies the ELF statute in two ways which affect the relationship of field size to the tax rate for the field: (1) by modifying the formula; and (2) by repealing the "rounding rule." (Under current law, if a field has an ELF of greater than 0.7 for the first ten years of the field, the ELF is elevated to 1.0. This is called the "rounding rule.") The combined effect of these two changes will increase the severance tax on fields producing an average of more than approximately 150,000 barrels per day, and will reduce the severance tax on fields producing an average of less than approximately 150,000 barrels per day. An analysis of these two changes and the underlying assumptions follows.

The change in the formula would raise taxes on fields which produce more than approximately 115,000 barrels per day and for which the rounding rule does not apply. (Only Prudhoe Bay and Kuparuk fit this description. The rounding rule does not apply to them now because Prudhoe Bay is older than ten years and Kuparuk's current ELF is less than 0.7.) The Bill would cut taxes -- or leave them at zero -- for any field producing less than approximately 115,000 barrels per day. If a field produces an average of less than 300 barrels per well per day, their taxes are zero under current law and the new Bill.

The Bill also initially decreases the ELF for new higher productivity (where average well productivity is greater than 1500 barrels per day) large fields (over the 115,000 barrel per day level). Under current law, fields producing more than an average of 1500 barrels per well per day will have an ELF of greater than 0.7, and would have an initial effective ELF of 1.0 because of the rounding rule. Since the first ten years of the field is when the greatest proportion of oil is produced (upwards of 75 percent), these large fields could have reduced weighted average severance taxes over the entire life of the field under the Bill since it eliminates the rounding rule.

The repeal of the rounding rule will only benefit fields whose ELF's would be greater than 0.7 for the first ten years of the field, and will only benefit such fields initially, the first ten years at most. (If the ELF for such a field dropped to 0.65 in year 4, for example, the proposed ELF only helps it out for the first three years.) Depending on the dynamics of the field, specifically its per well productivity and its decline profile as well as the discount rate used to evaluate the time value of money, the repeal of the rounding rule may or may not help such fields over the entire life of the field as measured by the weighted average severance tax rate over the life of the field. For instance, if a field has a reduced ELF for the first ten years, but an increased ELF for the next 20 years, its average severance tax rate over the 30 year period may or may not be lower under HB 118 than under current law.

The exact size of field that will benefit over the entire life of the field will depend on its well productivity, decline profile, and the discount rate. We estimate that a field with the same well productivity and decline characteristics as Endicott, for example, (which produces 100,000 barrels per day and produces 2500 barrels per well per day average), but with peak production of 280,000 barrels per day, would have the same discounted (8%) weighted average effective ELF over the life of the field under the Bill as it would under current law. Fields producing less than that amount would have a lower ELF than under current law.

The question was what size field would benefit from HB 118 and there were two answers. The first answer stems from the change in the formula itself and that was approximately 115,000 barrels per day. The second answer stems from the repeal of the rounding rule and that was estimated at 280,000 barrels per day. The final step necessary to get a single answer is to weight these two effects.

The two effects were weighted as follows. First, if a field produced less than 115,000 barrels per day, it would benefit from the formula. Second, it was assumed that if a field were to benefit from repeal of the rounding rule, it would be a field that produced 280,000 barrels per day. Finally, it was necessary to estimate the probability that a field would benefit from repeal of the rounding rule.

A field would benefit from repeal of the rounding rule if its ELF would be greater than 0.7 and it produced more than 115,000 barrels per day. To have an ELF of greater than 0.7, its average per well productivity must be approximately 1450 barrels per day or more. Thus, we need to see what is the probability of a field having average per well productivity of 1450 barrels per day and total production of greater than 115,000 barrels per day.

To gauge this probability, we looked at the characteristics of the fields actually producing in Alaska. There were five fields considered: Prudhoe Bay, Kuparuk, Milne Point, Lisburne, and Endicott. The prospective fields were not considered since their characteristics are not really known. The Cook Inlet fields were not considered since any field that will benefit from the proposed ELF is probably on the North Slope.

Of the five fields, only one, Prudhoe Bay, had production of greater than 115,000 barrels per day and average well productivity of greater than 1450 barrels per day. Thus, there is a one in five chance (0.2) that a field would have these characteristics. The two effects were weighted as follows:

$$\begin{aligned} .2 \times 280{,}000 &= 56{,}000 \\ + .8 \times 115{,}000 &= \underline{92{,}000} \\ & \quad 148{,}000 \end{aligned}$$

That is how the 150,000 barrel figure was derived.

DEPARTMENT OF REVENUE
April 28, 1989

SECTIONAL ANALYSIS OF SCS CSHB 118 (OIL AND GAS): LEGISLATION REVISING THE ECONOMIC LIMIT FACTOR

Section 1. This section modifies the severance tax's Economic Limit Factor (ELF) as it relates to oil production.

Under current law and under this section, the ELF statute reduces the effective severance tax rate on oil production by applying a formula which considers productivity. The ELF formula always produces a fraction between zero and one. That fraction is multiplied with the nominal tax rate to get the effective tax rate. This means that the higher the ELF, the higher the actual tax paid; the lower the ELF, the lower the actual tax paid. This also means that if the ELF is zero, the severance tax rate is zero.

This section changes the ELF statute in two ways.

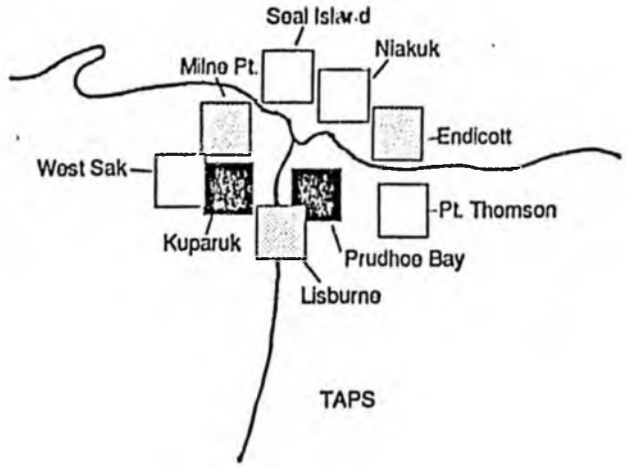
First, this section modifies the formula for calculating the "economic limit" of oil production. The current law considers only average per-well productivity of the field. The formula here adds consideration of total field productivity to the current ELF formula. Second, this section repeals the provision of current law which states

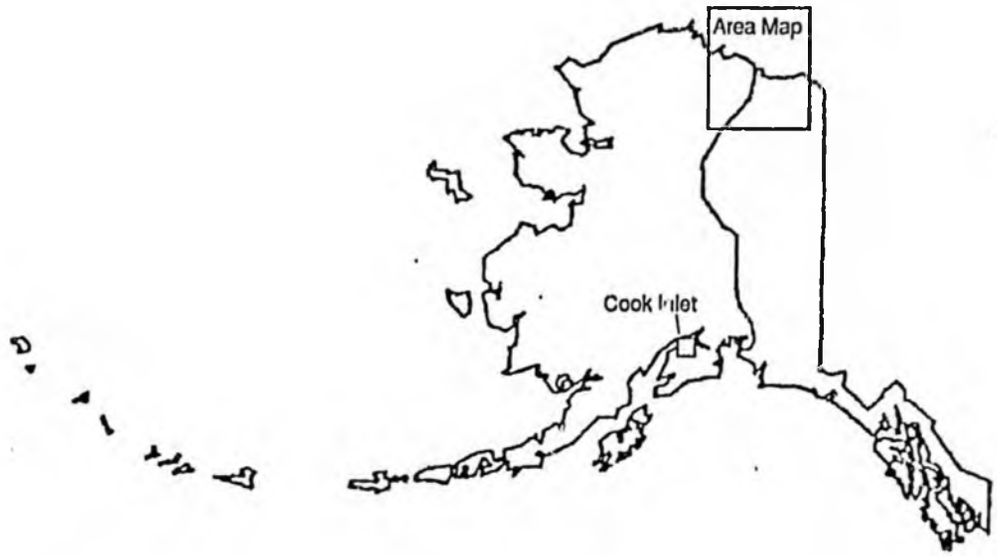
that for any month during the first 10 years of commercial oil production for which a lease or property's computed ELF exceeds 0.7, the ELF shall be considered to be one. This section's repeal of this "rounding" rule of current law would result in initial lower taxes for any field in this situation.

Compared to current law, these two changes raise taxes on fields producing on average more than 300,000 barrels a day and reduce taxes on fields producing on average less than 300,000 barrels a day.

Section 2. This section sets an effective date of July 1, 1989.

State of Alaska
Approximate Field Locations
(Current and Prospective Fields)



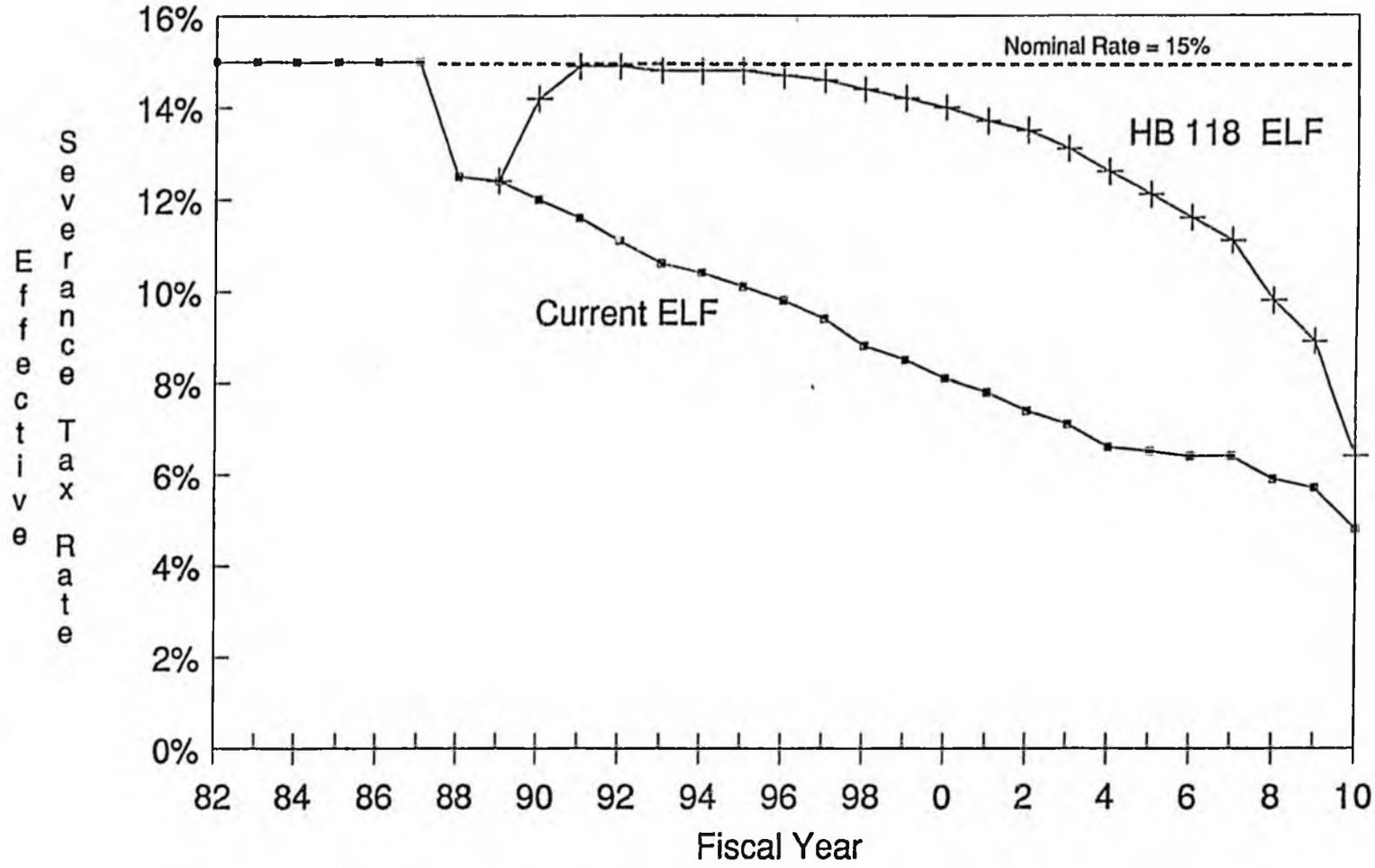


Legend

- Existing Fields - Taxes Up
- Existing Fields - Taxes Down or stay at zero
- Prospective Fields - Taxes Down or stay at Zero

Date: April 20, 1989

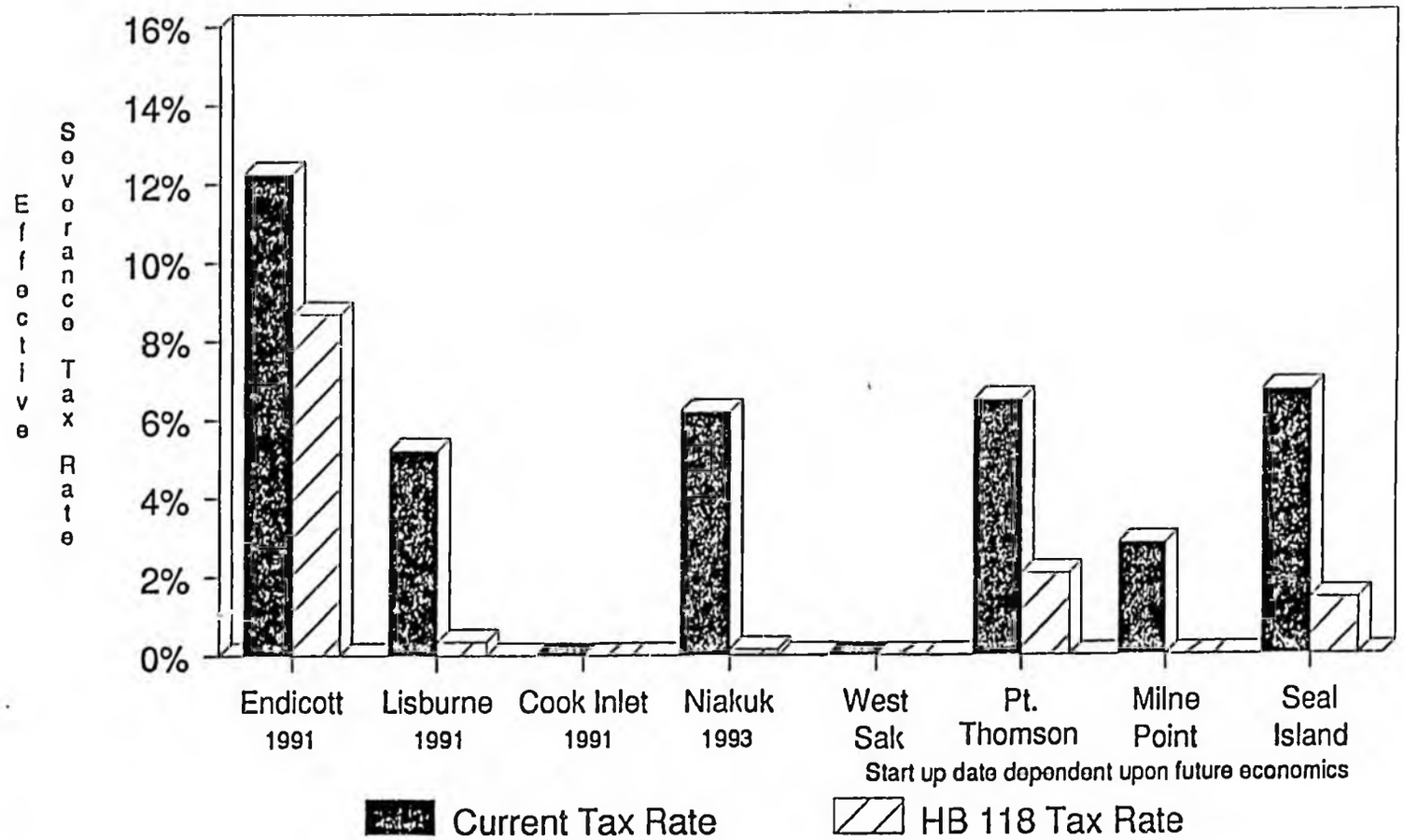
The Tax Rate on Prudhoe Bay Has Dropped Sharply



Date: February 16, 1989

Fields Where Taxes Would Decrease Under HB 118

(For Representative Years)



Source: Department of Revenue

Date: February 7, 1989

Fields Where Taxes Would Increase Under HB 118

Field	Current Tax Rate[1]	HB 118 Tax Rate[1]
Prudhoe Bay	11.59	14.91
Kuparuk	8.36	13.18

[1] Estimated effective severance tax rate for 1991.

Date: February 7, 1989

Effective Severance Tax Rates Under Different ELF Formulas

Field	Volume (mmbbl/day)	Wells	Current Law	SB 97	HB 118
Prudhoe	1.452	634	12.1%	14.7%	14.9%
Kuparuk	.279	342	7.4%	11.1%	12.6%
Milne ('91)	.031	39	5.9%	0.8%	0.1%
Endicott	.106	44	12.3%	9.8%	9.8%
Lisburne	.044	60	5.4%	1.3%	0.4%
Niakuk ('93)	.021	12	12.3%	2.4%	0.3%

Based on the mid-case scenario of the Department of Revenue's Spring 1989 forecast for FY 1990, unless otherwise indicated. Nominal rates are 15% for Prudhoe Bay and Kuparuk and 12.25% for the other fields. Well numbers are adjusted for well days.

Synopsis of Alaska Fields

Field	Volume (bbls/day)	Wells	Daily Volume p/well
Current Fields			
North Slope			
Prudhoe Bay	1,471,701	709	2076
Kuparuk	312,319	331	944
Lisburne	36,441	55	663
Endicott	98,774	39	2533
Cook Inlet			
Beaver Creek	322	2	161
Granite Point	7,351	29	253
McArthur River	18,872	75	252
Middle Ground Shoals	7,494	41	183
Swanson River	5,162	27	191
Trading Bay	3,638	40	91
Prospective Fields			
Milne Point	30,000	40	750
West Sak	150,000	4000	38
Point Thomson	50,000	50	1000
Seal Island	100,000	100	1000
Niakuk	20,000	12	1667

For current fields, actual February 1989 data. For prospective fields, the expected values at peak production.

Top Ten Lower 48 Fields

	Volume (bbls/day)	Wells	Daily Volume p/well	*Effctv Sev Tax Rate - Alaska Law
1. Belridge South (CA)	165,981	6000	28	0.00%
2. Midway-Sunset (CA)	157,526	9180	17	0.00%
3. Kern River (CA)	128,490	6709	19	0.00%
4. East Texas (TX)	111,225	9363	12	0.00%
5. Elk Hills (CA)	107,244	1099	98	0.00%
6. Yates (TX)	91,890	1146	80	0.00%
7. Wilmington (CA)	81,975	2050	40	0.00%
8. Wasson (TX)	78,510	2152	36	0.00%
9. Spraberry Trend (TX)	60,585	7321	8	0.00%
10. Slaughter (TX)	55,792	3001	19	0.00%

*Either Current Alaska Law or HB118.

U.S. fields with reserves exceeding 100 million bbl

State	Field	Disc. date	1988 prod.	Cum. prod. 1-1-89	Est. rem. reserves	Est. No. wells
			1,000 bbl			
ALABAMA						
	Citronelle, 1955		1,827	147,861	7,000	435
ALASKA						
	Endicott, 1978		36,098	43,099	324,902	37
	Granite Point, 1965		2,787	109,535	16,213	29
	Kuparuk River, 1969		112,055	503,337	994,945	328
	Lisburne, 1967		14,600	35,600	175,689	49
	McArthur River, 1965		7,040	529,040	34,960	76
	Middle Ground Shoal, 1962		2,737	155,889	5,263	42
	Prudhoe Bay, 1967		576,335*	6,053,018†	3,533,665	691
	Swanson River, 1957		2,154	209,490	8,846	29

*Includes about 30.66 million bbl of condensate. †Includes about 138.66 million bbl of condensate.

State	Field	Disc. date	1988 prod.	Cum. prod. 1-1-89	Est. rem. reserves	Est. No. wells
			1,000 bbl			
ARKANSAS						
	Smackover, 1922		2,654	556,907	9,097	2,100
CALIFORNIA						
	San Joaquin Valley					
	Belridge South, 1911		60,593	677,063	435,286	6,000
	Buena Vista, 1909		1,574	647,274	39,271	895
	Coalinga, 1890		10,212	753,545	161,198	2,174
	Coalinga Nose, 1923		1,285	458,685	17,370	78
	Coles Levee North, 1938		442	160,432	2,748	85
	Cuyama South, 1949		469	218,191	6,938	105
	Cymric, 1909		8,479	199,303	40,000	1,013
	Edison, 1929		1,470	134,391	25,670	674
	Elk Hills, 1911		39,144	693,374	579,776	1,099
	Fruitvale, 1928		577	115,553	13,709	274
	Greeley, 1535		237	112,547	1,763	27
	Kern Front, 1912		1,500	173,056	55,230	950
	Kern River, 1899		46,659	1,204,479	743,000	6,709
	Kettleman North Dome, 1928		172	456,648	1,298	44
	Lost Hills, 1910		5,627	178,293	61,603	1,634
	McKittrick, 1535		2,551	266,822	90,919	931
	Midway-Sunset, 1894		57,497	1,679,347	373,953	9,180
	Mount Poso, 1926		5,620	263,250	79,280	411
	Rio Bravo, 1937		151	116,051	1,319	15
	Yowlumne, 1974		6,570	81,363	27,015	65
	Coastal Area					
	Carpinteria, 1955		2,690	88,101	29,299	114
	Cat Canyon E. & W., 1908		2,735	298,275	46,930	512
	Dos Cuadras, 1959		4,371	212,304	54,140	140
	Elwood, 1923		317	105,705	2,283	7
	Honda, 1959		9,952	89,621	112,223	20
	Orcutt, 1901		906	165,674	10,235	136
	Point Pedernales, 1982†		6,515	11,715	331,544	10
	Rincon, 1927		1,118	148,759	14,832	240
	San Ardo, 1947		4,641	408,351	122,903	600
	Santa Maria valley, 1934		1,751	198,131	40,408	172
	South Mountain, 1915		727	145,584	12,035	352
	Ventura, 1919		7,072	894,742	97,026	570
	Los Angeles Basin					
	Beta, 1976		6,013	40,423	173,825	60
	Beverly Hills, 1900		2,034	122,615	42,356	116
	Brea Olinda, 1880		2,143	383,594	54,787	720
	Coyote East, 1909		584	108,663	13,212	103
	Coyote West, 1909		808	249,559	7,481	113
	Dominguez, 1923		607	269,266	7,448	113
	Huntington Beach, 1920		5,816	1,066,368	72,044	990
	Inglewood, 1924		2,790	345,453	54,149	366
	Long Beach, 1921		2,466	909,757	17,216	410
	Montebello, 1917		526	192,357	10,267	155
	Richfield, 1919		1,494	189,165	27,412	203
	Santa Fe Springs, 1919		987	613,077	9,035	151
	Seal Beach, 1924		876	203,118	14,119	168
	Torrance, 1922		1,693	212,083	35,847	365
	Wilmington, 1932		23,921	2,292,229	495,633	2,050
COLORADO						
	Rangely, 1933		12,492	739,418	35,000	488

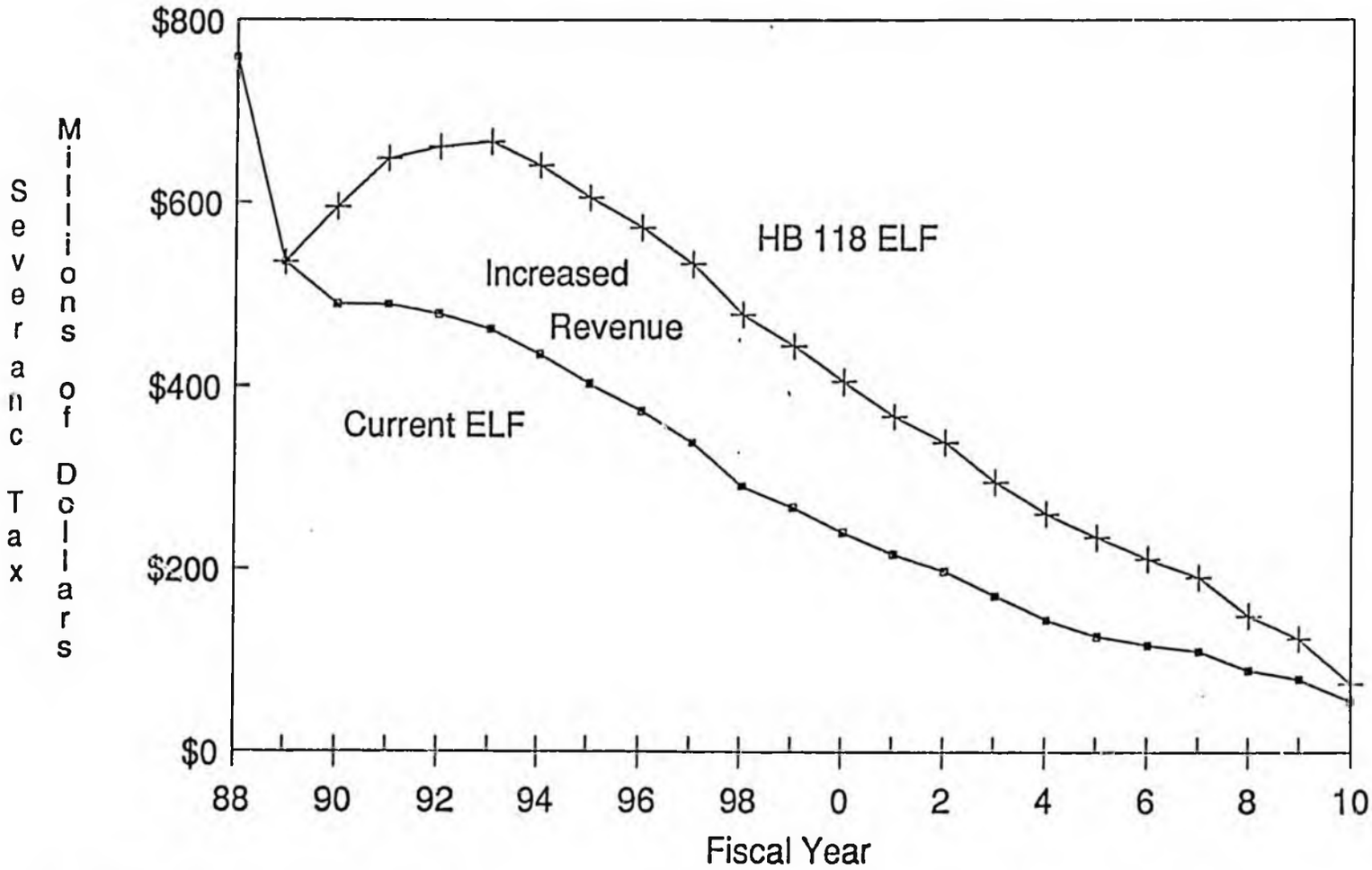
State	Field	Disc. date	1988 prod.	Cum. prod. 1-1-89	Est. rem. reserves	Est. No. wells
			1,000 bbl			
FLORIDA						
	Jay, 1970		4,676	360,612	55,944	121
ILLINOIS						
	Clay City, 1938		2,448	393,850	6,000	2,600
	Lawrence, 1906		2,919	394,521	5,500	2,700
	Louden, 1936		1,345	388,237	3,555	1,340
	Main, 1906		2,066	233,273	5,000	3,356
	New Harmony, 1939		1,072	153,545	4,000	1,140
	Salem, 1938		2,167	386,983	4,500	1,325
KANSAS						
	Bemis-Shutts, 1928		1,169	244,247	4,405	973
	Chase-Silica, 1930		1,019	301,003	4,499	1,103
	El Dorado, 1915		839	296,734	2,615	822
	Hall-Gurney, 1931		1,032	145,677	4,051	1,130
	Trapp, 1929		1,200	225,958	4,643	1,000
LOUISIANA						
	Offshore					
	Bay Marchand Blk. 2, 1949		5,547	596,972	53,759	120
	Eugene Island Blk. 330, 1990		7,353	269,080	55,920	169
	Grande Isle Blk. 16, 1948		1,659	263,729	35,645	44
	Grande Isle Blk. 43, 1955		6,312	272,255	85,628	126
	Mississippi Canyon Blk. 194, 1980		4,929	116,868	76,311	44
	Main Pass Blk. 41, 1957		2,985	237,554	23,334	112
	Main Pass Blk. 306, 1969		1,776	201,869	78,335	94
	South Pass Blk. 27, 1954		1,659	125,317	73,198	118
	South Pass Blk. 61, 1958		9,140	152,151	45,000	156
	South Pass Blk. 62, 1965		3,331	106,364	91,594	73
	South Pass Blk. 55, 1969		4,032	100,875	89,252	61
	Ship Shoal Blk. 204, 1968		1,591	66,070	38,930	40
	Ship Shoal Blk. 207, 1967		1,023	87,818	38,000	25
	Ship Shoal Blk. 208, 1962		4,117	160,169	65,274	67
	South Timbalier Blk. 21, 1939		1,324	216,239	47,133	45
	South Timbalier Blk. 135, 1956		1,390	139,337	25,663	37
	West Delta Blk. 30, 1949		6,754	446,083	47,375	153
	West Delta Blk. 73, 1962		4,469	188,700	86,291	73
	Onshore South					
	Bay de Chene, 1941		390	96,382	17,952	24
	Bay St. Elaine, 1928		321	164,908	25,292	18
	Bayou Sale, 1941		769	161,369	3,417	20
	Black Bay West, 1953		1,971	144,799	10,432	94
	Caillou Island, 1930		2,308	602,231	74,020	136
	Cote Blanche Bay West, 1940		741	181,594	46,374	86
	Delta Farms, 1944		293	115,351	7,019	13
	Garden Island Bay, 1934		1,406	221,261	31,954	144
	Golden Meadow, 1938		894	135,439	4,290	176
	Grand Bay, 1938		454	170,514	3,760	41
	Hackberry, East, 1927		777	109,087	7,603	60
	Hackberry, West, 1928		1,771	141,995	6,492	107
	Iowa, 1931		134	99,303	697	25
	Jennings, 1901		315	116,409	700	181
	Lafitte, 1935		1,665	255,304	9,550	111
	Lake Barre, 1929		941	204,023	20,057	31
	Lake Pelto, 1929		477	117,000	17,415	23
	Lake Washington, 1931		2,353	242,390	16,376	93
	Leeville, 1931		447	141,646	7,221	27
	Paradis, 1939		725	126,650	8,600	31

State	Field	Disc. date	1988 prod.	Cum. prod. 1-1-89	Est. rem. reserves	Est. No. wells
			1,000 bbl			
	Quarantine Bay, 1937		761	172,672	1,654	71
	Timbalier Bay, 1938					
	Venice, 1937		858	181,878	7,590	59
	Vinton, 1910		287	161,001	900	96
	Weeks Island, 1945		816	225,939	21,355	33
	West Bay, 1940		1,349	228,246	16,355	79
	North					
	Caddo-Pine Island 1905		3,310	360,899	12,888	10,689
	Delhi, 1944		675	211,707	34,651	58
	Haynesville, 1921		761	168,237	2,373	166
	Homer, 1919		434	98,375	1,908	199
	Rodessa, 1935		331	106,027	1,506	67
MISSISSIPPI						
	Baxterville, 1944		2,609	239,164	10,391	316
	Heidelberg, 1944		2,829	174,809	12,171	316
	Tinsley, 1939		834	29,677	3,197	173
MONTANA						
	Bell Creek, 1967		958	129,836	22,984	91
	Cut Bank, 1925		994	162,459	37,169	575
	Pine, 1951		1,302	105,145	5,657	96
NEW MEXICO						
	Denton, 1949		652	139,693	3,000	179
	Empire-Abo, 1957		1,424	219,883	50,017	405
	Eunice-Monument, 1929		2,500	125,414	10,894	879
	Hobbs, 1928		8,480	297,482	20,000	613
	Maljamar, 1926		1,865	144,961	5,070	851
	Vacuum, 1923		12,359	432,242	40,000	1,556
NORTH DAKOTA						
	Beaver Lodge, 1951		1,704	111,574	16,684	132
	Billings Nose, 1978		2,560	61,669	51,744	152
	Little Knife, 1977		3,392	51,437	57,924	131
	Mondak, 1976		439	13,165	82,837	96
OKLAHOMA						
	Burbank, 1920		1,135	536,746	8,377	1,105
	Eola-Roberson, 1920		746	103,124	8,210	603
	Fitts, 1934		2,663	199,894	12,000	589
	Glenn Pool, 1905		1,170	327,865	5,000	714
	Golden Trend, 1945		4,333	474,100	28,000	1,396
	Healdton, 1913		1,938	334,645	9,563	1,000
	Hewitt, 1919		3,152	266,371	13,515	923
	Oklahoma City, 1928		902	816,170	5,966	174
	Postle, 1955		1,215	106,393	14,921	226
	Sho-Vel-Tum, 1905		18,398	1,167,379	60,000	7,616
	Scanner Trend, 1945		4,147	295,544	20,000	4,746
TEXAS						
	District 2					
	Greta, 1933		746	147,570	12,530	100
	Lake Pasture, 1953		2,194	87,784	12,644	143
	Tom O'Connor, 1934		10,350	747,849	55,000	646
	West Ranch, 1938		2,640	350,034	8,504	307
	District 3					
	Arenoso, 1935		1,068	264,836	15,112	106
	Conroe, 1931		3,864	727,215	35,728	278
	Giddings, 1971		8,656	278,570	148,033	2,281
	Hastings, 1934		3,084	697,237	72,764	206
	Magnet Withers, 1936		1,834	110,960	5,000	150
	Oyster Bayou, 1941		864	160,204	18,036	39
	Thompson, 1931		3,972	472,540	27,350	262
	Tomball, 1932		400	121,055	9,858	85
	Webster, 1937		5,304	573,192	20,000	243
	District 4					
	Agua Dulce-Stratton, 1928		360	146,623	24,751	94
	Borregos, 1945		192	114,021	20,185	40
	Kelsey, 1958		200	114,359	36,247	60
	Plymouth, 1925		400	122,823	3,300	60
	Seeligson, 1925		156	271,483	55,544	42
	TCB, 1944		456	112,700	52,358	30
	White Point E, 1938		60	104,034	6,340	21
	District 5					
	Alabama Ferry, 1983		3,600	14,600	86,400	253
	Van, 1928		3,096	521,960	15,000	366
	District 6					
	East Texas, 1930		40,597	5,009,747	988,759	9,363
	Fairway, 1950		2,424	192,691	17,777	100
	Hawkins, 1940		8,244	821,644	42,372	442
	Neches, 1953		1,416	103,980	6,036	163
	Quitman, 1948		1,680	121,346	8,440	208
	District 8					
	Anderson, 1946		1,500	181,888	6,500	28
	Block 31, 1945		3,556	220,069	12,000	325
	Cowden, N., 1930		13,596	488,092	40,000	1,210
	Cowden, S. Foster, Johnson, 1932		9,696	500,796	40,000	1,593
	Dollarhide, 1945		2,568	193,780	11,448	202
	Dune, 1939		2,928	183,000	18,704	771
	Fullerton, 1942		7,452	348,200	22,000	870
	Goldsmith, 1934		7,248	755,516	33,752	2,036
	Howard Glasscock, 1925		5,844	404,508	26,000	2,208
	Iatan, E., 1926		3,372	142,956	12,000	1,304
	Jordan, 1937		480	128,975	2,520	135
	Keystone, 1930		1,872	313,050	9,374	812
	McElroy, 1926		7,884	465,549	56,800	1,600
	Means, 1934		7,020	228,598	20,000	713
	Midland Farms, 1944		4,608	241,980	18,615	415
	Sand Hills, 1931		2,760	248,207	21,800	1,312
	TXL, 1964		2,004	262,515	6,500	600
	Waddell, 1927		708	100,712	3,792	188
	Ward Estes, N., 1929		3,408	364,177	76,435	1,562
	Westbrook, 1923		2,000	88,020	16,000	718
	Yates, 1926		33,540	1,171,820	782,685	1,146
	District 8-A					
	Anton-Irish, 1944		3,554	175,910	24,190	239
	Cogdell Area, 1949		1,656	252,219	41,204	103
	Diamond M., 1948		1,908	229,415	16,063	474
	Kelly-Snyder, 1948		11,592	1,234,982	115,038	805
	Levelland, 1938		17,328	484,144	50,000	3,012
	Prentice, 1951		6,216	161,036	20,000	437
	Salt Creek, 1950		10,404	247,340	12,552	173
	Seminole, 1935		17,004	524,765	36,000	624
	Slaughter, 1935		20,364	1,029,800	50,000	3,001
	Spraberry Trend, 1951		22,212	653,388	60,000	7,321
	Wasson, 1936		28,656	1,711,998	60,000	2,152
	Welch, 1942		3,324	144,228	14,000	651
	District 10					
	Panhandle, 1921		7,812	1,423,286	41,240	11,643
UTAH						
	Altamont, 1955		3,047	89,493	231,216	227
	Aneth, 1955		5,340	354,004	30,000	461
	East Anschutz Ranch, 1979		12,755	80,365	727,799	28
	Red Wash, 1951		1,075	77,511	13,377	146
WYOMING						
	Brady, 1950		2,438	54,537	49,251	22
	Byron, 1918		1,119	120,633	7,656	67
	Elk Basin, 1915		2,968	446,695	25,750	170
	Frannie, 1928		1,122	116,020	5,000	63
	Garland, 1906		2,625	154,685	6,000	225
	Grass Creek, 1914		2,414	185,120	9,000	288
	Hamilton Dome, 1918		2,853	268,103	6,000	239
	Hartzog Draw, 1976		6,647	66,722	283,739	157
	Hilite, 1959		541	75,416	55,885	93
	Lance Creek, 1918		163	107,805	400	24
	Little Buffalo Basin, 1914		2,666	118,653	9,389	154
	Lost Soldier, 1916		2,308	192,073	6,000	71
	Oregon Basin, 1912		8,669	388,180	30,000	500
	Painter Reservoir, 1979		1,739	31,674	80,674	31
	Salt Creek, 1908		5,210	629,689	25,000	1,217
	Wertz, 1920		3,500	99,695	15,000	65
	Whitney Canyon, 1980		1,652	10,379	105,485	29

Department of Revenue
April 20, 1989

There is no statutory or precise legal definition of the term "marginal field." The proposed ELF modifications benefit "marginal fields" in the same way that a graduated personal income tax benefits poorer people; the law need not contain a precise definition of the term. Generally, the term "marginal field" refers to a field whose relatively low total daily production and/or relatively low average per well productivity adversely affect the economics of its operation.

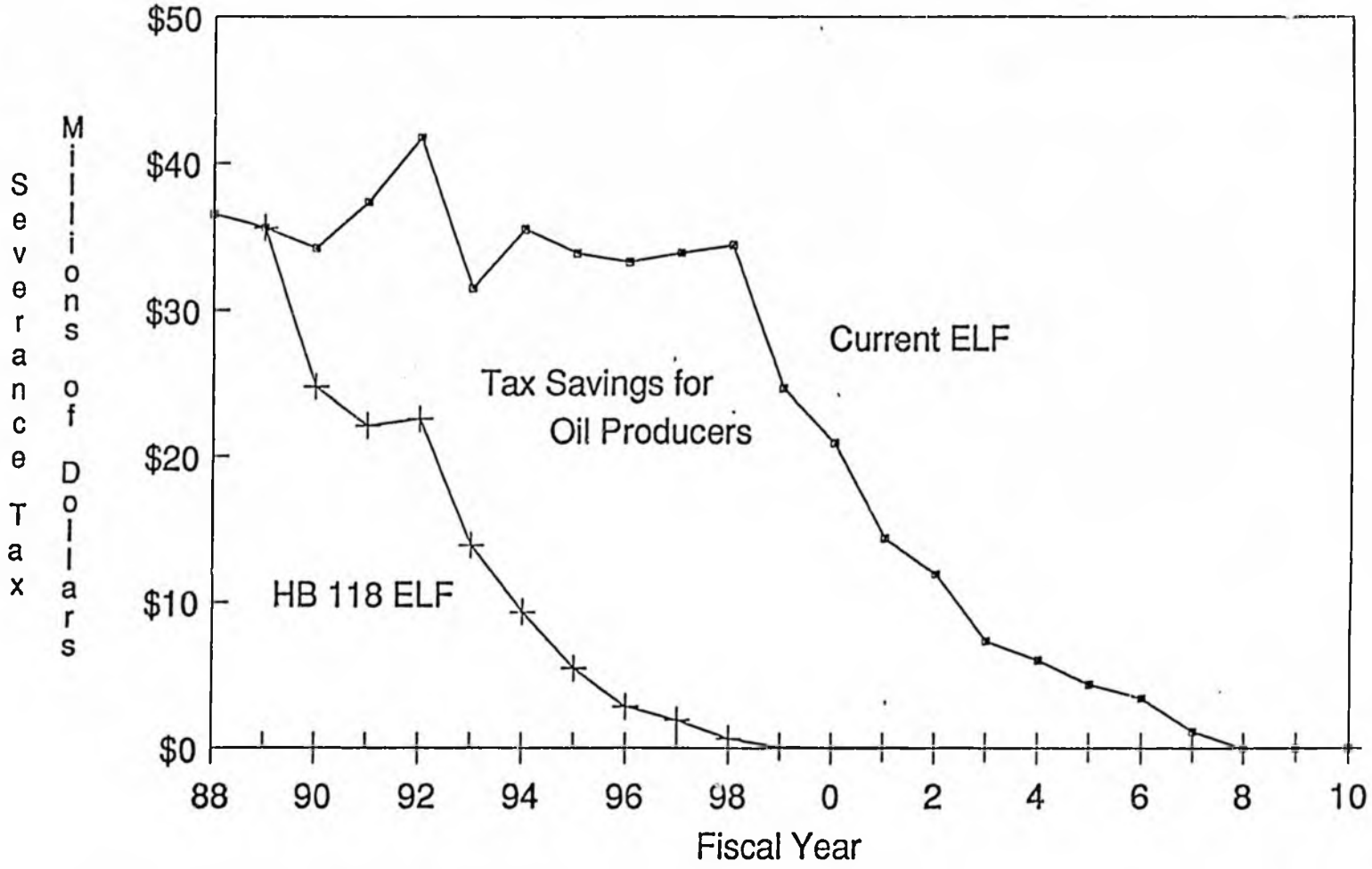
HB 118 Raises More Severance Tax Revenue from Prudhoe Bay and Kuparuk



Note: Revenues are from severance taxes on Prudhoe Bay and Kuparuk

Date: February 15, 1989

HB 118 Gives a Tax Savings for Producers at Oil Fields Other than Prudhoe Bay and Kuparuk



Note: Revenues are from severance taxes on fields other than Prudhoe Bay and Kuparuk

Date: February 15, 1989

Attachment 3

Comparative Severance Tax Payments
1987 Production and Collections
10 Top Oil Producing States

	Production[1] (1000's of bbls)	Severance Tax[2] (1000's of $)	$/Bbl	Severance Tax Rank
Texas	760,145	1,178,052	1.55	6
ALASKA	715,855	648,500	0.91	8
California	364,572	14,600	0.04	10
Louisiana	173,409	439,237	2.53	4
Oklahoma	132,970	372,883	2.80	2
Wyoming	112,597	138,915	1.23	7
New Mexico	71,533	262,290	3.67	1
Kansas	59,120	159,952	2.71	3
North Dakota	41,351	90,665	2.19	5
Utah	35,477	22,781	0.64	9

[1] Source: Department of Energy

[2] Source: Petroleum Independent, September 1988

MEMORANDUM

State of Alaska
Office of the Governor
Division of Policy

TO: The Hon. Alyce Hanley DATE: April 20, 1989

FROM: Gregg Erickson

SUBJECT: Corporate Profits Earned Alaska

During the March hearings on the ELF legislation in the House you requested information on the net income earned by the fishing industry.

Based on tax data from the Department of Revenue, we estimate that 1987 taxable corporate net income in Alaska totaled $2.010 billion. Of this, $24 million (1.2 percent) was earned by corporations in fishing or fishing related fields.

Based on Dept. of Revenue data, we estimate taxable oil company income at $1.681 billion, or 84 percent of the total.

Taxable income may differ substantially from the income shown on a company's books of account. This is especially true under the special taxation arrangements adopted for the oil industry by Alaska in 1981. The recent study by Professor Deakin found that 1987 oil industry net income totaled $3.182 billion. Based on the Deakin analysis, it is likely that the oil industry accounts for more than 90 percent of total book income attributable to Alaska. The figure cannot be determined precisely, however, because comparable figures for non-petroleum book income are not available for the state.

cc: Senate Special Oil and Gas Committee

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL AND GAS
ROYALTY ACCOUNTING SECTION

PARTICIPATING PERCENTAGES -
KUPARUK RIVER UNIT

WORKING INTEREST OWNER	OWNER'S AREA PARTICIPATION PERCENTAGE
ARCO	56.30096
BP	38.75643
UNOCAL	4.24961
MOBIL	.36600
EXXON	.21800
CHEVRON	.10900
	100.00000

d:kprkpcts
sms 4/11/89

KUPARUK

ADJUSTED FOR RSA AND
SECTION 37.110 - PBUOA

EXHIBIT 26A
AREA VALUES
OIL RIM AND GAS CAP PARTICIPATING AREAS

WORKING INTEREST OWNER *	OWNER'S AREA PARTICIPATION PERCENTAGE		AREA INVESTMENT COST ALLOCATION %
	OIL RIM	GAS CAP	
SAPC	50.6830966	13.8397816	49.8501784
ARCO	21.7799635	42.5649413	21.9309351
EXXON	21.7776490	42.5647901	21.9485810
MOBIL	1.8915771	0.2843666	2.1176717
PHILLIPS	1.8805235	0.2629370	2.1065745
CHEVRON	0.6717745	0.4830700	0.7106113
AMERADA HESS	0.5379191	-	0.5379191
TEXACO	0.5484215	-	0.5484215
LL&E	0.0397591	-	0.0397591
MARATHON	0.0499044	-	0.0499044
SHELL	0.1376744	-	0.1376744
BPAE	0.0017373	0.0001134	0.0017587

*LEGEND:

Amerada Hess	--Amerada Hess Corporation
Arco	--Arco Alaska, Inc.
BPAE	--BP Alaska Exploration Inc.
Chevron	--Chevron U.S.A., Inc.
Exxon	--Exxon Corporation
Texaco	--Texaco Producing Inc.
LL&E	--The Louisiana Land and Exploration Company
Marathon	--Marathon Oil Company
Mobil	--Mobil Oil Corporation
Shell	--Shell Western E & P Inc.
Phillips	--Phillips Petroleum Company
SAPC	--Standard Alaska Production Company

PRUDHOE BAY

October 1987

Participating Percentages
Lisburne Participating Area
Prudhoe Bay Unit

Working Interest Owner	Owner's Area Participating Percentage
ARCO Alaska, Inc.	40.00
Exxon Corporation	40.00
BP Exploration	20.00

LISBURNE

Participating Percentages
Kuparuk Participating Area
Milne Point Unit

Working Interest Owner	Owner's Area Participating Percentage
Conoco	72.14933
Chevron	17.37352
OXY	10.47715

3648A

MILNE POINT

EXHIBIT L

Area Participations and Acreage Participations
for the
Endicott Participating Area
(Revised April 1985)

Working Interest Owner	Area Participation (%)	Acreage Participation (%)
Amoco Production Company	10.4940	12.0142
ARCO Alaska, Inc.	0.0234	0.0586
Cook Inlet Region, Inc.	0.6456	0.4919
Doyon, Limited	0.1291	0.0984
Exxon Corporation	21.0206	24.7098
NANA Regional Corporation, Inc.	0.3874	0.2952
Sohio Alaska Petroleum Company	56.7825	50.8591
Union Oil Company of California	10.5174	12.0728
	100.0000	100.0000

ENDICOTT

Figure 3

HYPOTHETICAL SEVERANCE TAX RATES RESULTING WHEN PER-WELL PRODUCTIVITY IS HELD CONSTANT AND AVERAGE DAILY PRODUCTION PER FIELD IS VARIED--UNDER EXISTING LAW, SB 97, AND HB 118

(Approximate FY 90 averages shown in highlighting.)

Average Daily Production for the Field	PRUDHOE 2,290 barrels per well per day			KUPARUK 817 barrels per well per day			LISBURNE 730 barrels per well per day		
	Existing Law	SB-97	HB-118	Existing Law	SB-97	HB-118	Existing Law	SB-97	HB-118
10,000	12.1%	1.1%	0.0%	7.4%	0.0%	0.0%	5.4%	0.0%	0.0%
20,000	12.1%	4.1%	0.7%	7.4%	0.2%	0.0%	5.4%	0.1%	0.0%
30,000	12.1%	6.4%	2.9%	7.4%	0.9%	0.1%	5.4%	0.5%	0.0%
40,000	12.1%	7.9%	5.2%	7.4%	1.8%	0.5%	5.4%	1.1%	0.2%
50,000	12.1%	9.0%	7.0%	7.4%	2.8%	1.3%	5.4%	1.8%	0.7%
60,000	12.1%	9.8%	8.5%	7.4%	3.7%	2.3%	5.4%	2.4%	1.4%
70,000	12.1%	10.4%	9.5%	7.4%	4.5%	3.4%	5.4%	3.1%	2.2%
80,000	12.1%	10.9%	10.4%	7.4%	5.3%	4.5%	5.4%	3.6%	3.1%
90,000	12.1%	11.3%	11.0%	7.4%	5.9%	5.5%	5.4%	4.2%	3.8%
100,000	12.1%	11.6%	11.5%	7.4%	6.5%	6.4%	5.4%	4.6%	4.6%
200,000	12.1%	13.2%	13.7%	7.4%	9.9%	11.2%	5.4%	7.5%	8.7%
300,000	12.1%	13.8%	14.3%	7.4%	11.3%	12.8%	5.4%	8.9%	10.2%
400,000	12.1%	14.1%	14.5%	7.4%	12.2%	13.5%	5.4%	9.6%	10.9%
500,000	12.1%	14.2%	14.7%	7.4%	12.7%	14.0%	5.4%	10.1%	11.3%
600,000	12.1%	14.4%	14.8%	7.4%	13.0%	14.2%	5.4%	10.4%	11.5%
700,000	12.1%	14.5%	14.8%	7.4%	13.3%	14.4%	5.4%	10.7%	11.7%
800,000	12.1%	14.5%	14.8%	7.4%	13.5%	14.5%	5.4%	10.9%	11.8%
900,000	12.1%	14.6%	14.9%	7.4%	13.7%	14.6%	5.4%	11.0%	11.8%
1,000,000	12.1%	14.6%	14.9%	7.4%	13.8%	14.6%	5.4%	11.1%	11.9%
1,100,000	12.1%	14.7%	14.9%	7.4%	13.9%	14.7%	5.4%	11.2%	11.9%
1,200,000	12.1%	14.7%	14.9%	7.4%	14.0%	14.7%	5.4%	11.3%	12.0%
1,300,000	12.1%	14.7%	14.9%	7.4%	14.1%	14.8%	5.4%	11.4%	12.0%
1,400,000	12.1%	14.7%	14.9%	7.4%	14.1%	14.8%	5.4%	11.4%	12.0%
1,500,000	12.1%	14.7%	14.9%	7.4%	14.2%	14.8%	5.4%	11.5%	12.1%
1,600,000	12.1%	14.8%	14.9%	7.4%	14.2%	14.8%	5.4%	11.5%	12.1%

Division of Policy, 4/19/89.

STATE OF ALASKA
THE LEGISLATURE

LEGISLATIVE AFFAIRS AGENCY

POUCH Y STATE CAPITOL
JUNEAU ALASKA 99811
907 465 3800

MEMORANDUM February 6, 1989

SUBJECT: Retrospective application of the economic limit factor tax amendments, CSHB 118 ( )

TO: Representative Cliff Davidson, Co-Chair
House Resources Committee

FROM: Jack Chenoweth
Legislative Counsel

The amendments requested are enclosed. The drafts differ only as to the date of retrospective application of each. The draft identified as 6-0652E applies the economic limit factor (ELF) retrospectively to oil produced after June 30, 1987; the draft identified as 6-0652H applies the economic limit factor retrospectively to oil produced after December 31, 1988. (A subsequent memo from your office specified different alternative dates. Mechanically changing a date in any of these drafts is not a significant drafting problem.)

It is my understanding that these provisions limit the applicability of the ELF to the state's major producing fields and that, as a consequence, the tax liability of some taxpayers subject to the severance tax, AS 43.55, would be increased, while the liability of others may decrease. 1/

1/ Under AS 43.55.020(a):

> The gross production tax on oil or gas shall be paid monthly. The tax is due on the 20th day of each calendar month on oil or gas produced from each lease or property during the preceding month. If the tax is not paid before the end of the month in which it becomes due, the tax becomes delinquent.

Thus, tax liability is incurred and remitted on a monthly, not an annual basis. For oil production during December, 1988, the tax became due and payable January 20, 1989, and tax liability for oil production during January, 1989, becomes due and payable February 20, 1989.

A retroactive tax adjustment will apply if there is a valid public purpose served by giving retrospective effect to that adjustment. Here, the committee's deliberations may be critical. As a committee substitute for HB 118 is considered, it would, in my judgment, be important to develop a record on which a court, if called upon to consider an argument, would conclude that there was a public purpose served by giving the adjustment a retrospective effect.

A reasonable retrospective application will be sustained. The farther back the retroactive provision is given effect, the less likely a court would be to sustain the provision without a clear showing of public purpose. (To foreclose a claim altogether, this office has discouraged retrospective application of severance tax adjustments beyond the narrow period recognized under AS 43.55.020(a), that is, a change amending the economic limit factor to be made retroactive only to the beginning of the month in which the bill is to take effect. That approach should not create any problems of retrospective applications since the tax liability would not have become due on that date.)

I

RETROSPECTIVE APPLICATION OF THE AMENDMENTS:

Tax statutes may be made retroactive. 2/ The threshold

2/ This office has also recently considered proposed retrospective application of severance tax adjustments, specifically relying on the federal and state constitutional prohibitions against passage of ex post facto laws. There are two ex post facto law prohibitions of the federal constitution. Article I, section 9, clause 3 is a limitation on the federal government, while article I, section 10, clause 1 imposes a similar limitation on the states. Alaska's constitution also contains a limitation in section 15 of article I.

Our previous conclusion that federal and state constitutional prohibitions against enactment of ex post facto laws would support a challenge to the amendment's retrospective application was surely in error. Federal court decisions have limited the application of the limitations to criminal or penal consideration is that the retrospective application of the measure must not impair an obligation of contract.

The impairment of contract consideration appears to be inapplicable in this instance. Retrospective application of a newly-enacted statute may, in some instances, impair obligations of contract, in violation of article I, section 10 of the United States Constitution and article I, section 15 of the State Constitution. However, the Alaska Supreme Court appears to have cut off an impairment of contract argument applicable to retrospective application of a tax amendment in Atlantic Richfield Co. v. State, 705 P.2d 418 (Alaska, 1985). To the argument that the oil and gas corporate income tax then in litigation impaired the obligation of the state's underlying lease contracts, the court concluded that "[the] argument [was] without merit":

> . . . No lease provision has been impaired. In entering into the leases the state could not, and did not, contract away its power as a sovereign to tax income earned in the state. Merrion v. Jicarilla Apache Tribe, 455 U.S. 130, 102 S.Ct. 894, 71 L.Ed.2d 21 (1982) disposes of this issue:
>
> > Contractual arrangements remain subject to subsequent legislation by the presiding sovereign. Even where the contract at issue requires payment of a royalty for a license or franchise issued by the government entity, the government's power to tax remains unless it "has been specifically surrendered in terms which admit of no other reasonable interpretation." St. Louis v. United R. Co., 210 U.S. 266, 280, 28 S.Ct. 630, 634, 52 L.Ed. 1054 (1908).
>
> 455 U.S. at 148, 102 S.Ct. at 907, 71 L.Ed.2d at 36 (citations omitted); see also Exxon v. Eagerton, 462

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statutes, concluding that retrospective tax legislation is not prohibited by the ex post facto clause. Personal Finance Co. v. United States, 86 F. Supp. 779 (D.Del., 1949). See 16A Am. Jur. 2d secs. 636, 677. Decisions in other state courts have similarly concluded. Parlato v. McCarthy, 69 A.2d 648 (Ct., 1949), Walker v. Commonwealth, 130 S.W.2d 27 (Ky., 1939). The Alaska Supreme Court has not extended application of the state constitutional ex post facto prohibition beyond penal or criminal matters. Danks v. State, 619 P.2d 720 (Alaska, 1980); Creekpaum v. State, 753 P.2d 1139 (Alaska, 1988).

U.S. at 187-94, 103 S.Ct. at 2304 - 2307, 76 L.Ed.2d at 508-12.

705 P.2d 418, at 438.

*

If legislation acts retrospectively, the nature and duration of its retrospective application should be reasonable. The arguments favoring a reasonable retrospective operation arise out of the equal protection and due process clauses of the state and federal constitutions.

Federal equal protection considerations:

State legislation retroactively imposing a tax is not necessarily and certainly invalid under the equal protection clause of the Fourteenth Amendment to the federal constitution. The inquiry to be made is one of whether the retroactivity impairs substantial, vested rights, and is reasonable in the circumstances. As to retroactively imposed new taxes, the courts have been reluctant to find a violation because of the impairment of a vested right. Welch v. Henry, 305 U.S. 134, 83 L.Ed. 87, 59 S.Ct. 121 (1938), rehearing denied 305 U.S. 675, 83 L.Ed. 437, 59 S.Ct. 250 (1938). 3/ Several state courts have agreed. See Garrett

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3/ In Welch, the United States Supreme Court concluded that a Wisconsin state statute, enacted in 1935 and operating retrospectively to tax corporate dividends earned in 1933 which, when received, were deductible from gross income, did not violate the equal protection clause. The tax rates applied to the dividends differed from the rates applicable to other types of taxable income. As to the retrospective application of the new tax to dividends that were, when earned, exempt from tax, the court noted that:

> The equal protection clause does not preclude the legislature from changing its mind in making an otherwise permissible choice of subjects of taxation. The very fact that the dividends were relieved of tax [in 1933], when the need was less, is basis for the legislative judgment that they should bear some of the added burden when the need is greater.

Freight Lines v. State Tax Commission, 135 P.2d 523, at 526, 527 (Utah, 1943); Colonial Pipeline Co. v. Commonwealth, 145 S.E.2d 227 (Va., 1965), reh. den. (1966), app. dismissed, 384 U.S. 268, 16 L.Ed.2d 523, 86 S.Ct. 1476 (1966). 4/

> Numerous retroactive revisions of the federal and Wisconsin revenue laws . . . have imposed taxes on subjects previously untaxed and shifted the burden of old taxes by changes in rates, exemptions, and deductions. It has never been thought that such changes involve a denial of equal protection if the new taxes could have been included in the earlier act when adopted. If some retroactive alteration in the scheme of a tax act is permissible, as is conceded, it seems plain that validity, so far as equal protection is concerned, must be determined, as in the case of any other tax, by ascertaining whether the thing taxed falls within a distinct class which may rationally be treated differently from other classes. If such changes are forbidden in the name of equal protection, legislatures in laying new taxes would be left powerless to rectify to any extent a previous distribution of tax burdens which experience had shown to be inequitable, even though constitutional.

83 L.Ed. 87, at 92.

4/ In Garrett Freight Lines v. State Tax Commission, 135 P.2d 523 (Utah, 1943), the Utah Supreme Court, called upon to determine whether an excise tax levied on the use of diesel motor fuel that was used prior to the date the legislative act became law, found no equal protection violation:

> It is well settled that a tax does not necessarily violate the Federal Constitution merely because it contains retroactive features. Milliken v. United States, 283 U.S. 15, 21, 51 S.Ct. 324, 75 L.Ed. 809 [(U.S., 1931)]; Billings v. United States, 232 U.S. 261, 34 S.Ct. 421, 58 L.Ed. 596 [(U.S., 1914)]; Welch v. Henry, 305 U.S. 134, 59 S.Ct. 121, 125, 83 L.Ed. 87 [(U.S., 1938)] . . . .
>
> . . .
>
> Neither the Federal Constitution nor the Utah

Federal due process considerations:

Retroactive imposition of a tax is not necessarily a violation of the due process clause of the Fourteenth Amendment to the federal constitution. The leading case is Welch, cited earlier, in which the United States Supreme Court determined:

> The objection chiefly urged to the taxing statute is that it is a denial of due process of law because in 1935 it imposed a tax on income received in 1933. But a tax is not necessarily unconstitutional because retroactive. Milliken v. United States, 283 U.S. 15, 21, 75 L.Ed. 809, 814, 51 S.Ct. 324 [(1931)], and cases cited. Taxation is neither a penalty imposed on the taxpayer nor a liability which he assumes by contract. It is but a way of apportioning the cost of government among those who in some measure are privileged to enjoy its benefits and must bear its burdens. Since no citizen enjoys immunity from that burden, its retroactive imposition does not necessarily infringe due process, and to challenge the present tax it is not enough to point out that the taxable event, the receipt of income, antedated the statute.

83 L.Ed. 87, at 93. But the assertion that due process is not violated is not absolute and, the court has said that

> In each case it is necessary to consider the nature of the tax and the circumstances in which it is laid before it can be said that its retroactive application is so harsh and oppressive as to transgress the constitutional limitation.

Id.

Similarly, in Garrett Freight Lines, earlier cited, the Utah Supreme Court determined that the due process clause is not

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Constitution has any provision in terms prohibiting retroactive legislation -- excepting that which forbids the enactment of ex post facto laws. [Citations omitted.] That clause relates to criminal and penal matters and does not affect legislation such as the statute here involved. Calder v. Bull, 3 Dall. 386, 390, 1 L.Ed. 648, 1 Kent Commentaries 409; 3 Story on Constitution 212; 18 C.J.S. Constitutional Law, sec. 435, p. 886.

a limitation on the state's ability to retrospectively impose a tax:

> Although basing its case upon the due process clause, appellant does not show wherein the tax constitutes any arbitrary and oppressive discrimination except to assert that a tax based upon a transaction consummated prior to passage of the act amounts to a taking of property without due process. It has many times been questioned whether the due process clause constitutes any limitation upon the taxing power. In this connection we quote from Mr. Justice Sutherland of the United States Supreme Court in an opinion upholding the validity of a statute of the State of Washington levying a tax upon the sale of oleomargarine:
>
> > Except in rare and special instances, the due process of law clause contained in the Fifth Amendment is not a limitation upon the taxing power conferred upon Congress by the Constitution. * * * And no reason exists for applying a different rule against a state in the case of the Fourteenth Amendment. * * * That clause is applicable to a taxing statute such as the one here assailed only if the act be so arbitrary as to compel the conclusion that it does not involve an exertion of the taxing power, but constitutes, in substance and effect, the direct exertion of a different and forbidden power, as, for example, the confiscation of property. * * * Collateral purposes or motives of a Legislature in levying a tax of a kind within the reach of its lawful powers are matters beyond the scope of judicial inquiry. * * * Nor may a tax within the lawful power of a state be judicially stricken down under the due process clause simply because its enforcement may or will result in restricting or even destroying particular occupations or businesses, * * * unless, indeed, as already indicated, its necessary interpretation and effect be such as plainly to demonstrate that the form of taxation was adopted as a mere disguise, under which there was exercised, in reality, another and different power denied by the Federal Constitution to the state.

A. Magnano Co. v. Hamilton, 292 U.S. 40, 54 S.Ct. 599, 601, 78 L.Ed. 1109.

Garrett Freight Lines, 135 P.2d 523, at 527.

Courts have, however, considered retrospective tax legislation unconstitutional as a violation of the due process clause when, as Welch concludes, in light of "the nature of the tax and the circumstances in which it is laid," the legislation is "so harsh and oppressive as to transgress [that] constitutional limitation." Welch v. Henry, 305 U.S. 134, 59 S.Ct. 121, 83 L.Ed. 87, at 93. The question is typically one of the degree of harshness, based upon consideration of factors such as (1) the effect of the retroactive application of legislation amending a tax on a taxpayer's voluntary act that was influenced by the taxpayer's understanding of tax incidence or consequence at the time of that act, especially if the tax to be imposed or amended is "novel," (2) the sufficient certainty of the taxpayer's expectation of money that is jeopardized by the retroactive legislation, (3) the length of the period of the legislation's retrospective application, and (4) the importance of the public purpose to be served by the action. The first three elements are, to some degree, based on the taxpayer's expectations, while the fourth involves a determination of a public interest that necessitated the actual enactment.

Computation and payment of the severance tax is not greatly determinative of taxpayers' taxable activities that generate the tax liability, nor does this proposed legislation seem to strike at activities of a taxpayer that reasonably relied on the current severance tax rates before this bill proposed amendment of that tax. It is the length of the period of the legislation's retrospective application and the importance of the public purpose to be served that need be most carefully considered.

The state's strongest case would be one that suggests that the purpose of the retroactive provision was remedial and that its impact was limited to the shortest period practicable. One benchmark date that might serve that purpose is July 1, 1988 (start of the current fiscal year, if, indeed, the principal purpose of the retroactive application is to meet revenue shortfalls in this fiscal year); a number of cases would sustain the argument that the legislation may be retrospective over the calendar or fiscal period of its enactment. An alternative--riskier because of the length of the period over which that retroactivity would reach back, but perhaps stronger from the point of view of public policy considerations--would be that date in 1987 when the ten-year exemption from the ELF's operation expired

and the economic limit factor became applicable to the state's major producing fields. But this would probably be justified only if the state could demonstrate that the conditions that suggested in 1981 that adoption of the ELF would benefit production are now shown to have been inaccurate or incorrect.

State due process and equal protection considerations:

Nothing in my quick research suggested that an analysis under the state's "due process" clause, article I, section 7, would reach a conclusion at variance with the decisions based on the comparable federal provision discussed above.

State "equal protection" analysis differs, though the conclusion reached under that analysis is consistent with the conclusions reached under the analysis applicable to the federal provisions. In State v. Erickson, 574 P.2d 1 (Alaska, 1976), the court established a "single test" approach for state-constitution based equal protection analysis, essentially requiring that the court (1) ascertain the purposes of the legislation to determine whether they are legitimate; (2) determine whether the means chosen to accomplish the objectives actually do so; and (3) balance the importance of the state's interest against the constitutional right involved. The state has plenary authority to tax. Assuming an adequate record--and the April, 1988, "ELF Policy Perspective" document may be sufficient--the ELF adjustments now proposed, adding to tax liability on the major producing fields that are most profitable but continuing or reducing rates on marginally producing fields, seems to bear a strong correlation to the state's efforts to impose a tax burden on an oil field's production that is consistent with the field's economics. By that analysis, if the retrospective application of the change is reasonable, the court should reject any state constitutional equal protection-based claim.

II

IS THERE A NEED FOR A SEVERABILITY CLAUSE?

A severability clause is not needed, and one has not been included in either draft. In the absence of a severability clause, you may rely on AS 01.10.030.

III

TO THE EXTENT THAT THE BILL MAKES A RETROACTIVE TAX REDUCTION, MAY THE LEGISLATURE PROVIDE FOR THAT TAX