HB

118

SENATE COMMITTEE REPORT

FURTHER

5/1/89

DATE TURNED INTO OFFICE 5/6/89

Mr. President:

Finance Committee considered CSHB 118 (RES) efd fld

oil and gas properties production tax

and recommended

[ ] replace with CS) [] same title
[✓] or adopt SCS CS HB 118 (O&G)) [✓] new title
[] technical title change (HB only)

[ ] attached amendment(s) and

[ ] letter of intent adopted

[ ] do pass

[ ] do not pass

[ ] no recommendation

[✓] individual recommendations

[ ] further referral to

FISCAL NOTE(S) [✓] zero DOR [ ] fiscal impact [ ] appropriation no FN
[ ] new [ ] updated [✓] previous
[✓] same as previous fiscal note(s) published 4/27/89

MEMBERS SIGNING DO PASS	OTHER RECOMMENDATIONS
[signature], with Retroactive amendment	[signature] - do not pass
	[signature] - Needs Amend.
	[signature] - do not pass
	[signature] No Rec-
	[signature] (Co Chair) (NO REC)

Chair: signature and recommendation
[signature] Co-CHAIR
No REC

[ ] Committee Backup attached

STATE OF ALASKA
1989 LEGISLATIVE SESSION

Bill Version: SCS CSHB 118 O&G
Publish Date: 4/27/89

FISCAL NOTE

REQUEST:

Revision Date: April 4, 1989
Title: Oil & gas prope[illegible] 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

Adopted

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)

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

Offered: 4/27/89
Referred: Resources and Finance

6-0652U

Original sponsor: Finance Committee

IN THE HOUSE

BY THE SENATE SPECIAL COMMITTEE ON OIL AND GAS

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.

6-5000Ah
Cramer
Pearce
5/6/89

AMENDMENT

OFFERED IN THE SENATE

TO:

* Sec. ___. (a) The sum of $1,000,000 is appropriated from the general fund to the Department of Administration for payment as a grant under AS 37.05.315 to the Municipality of Anchorage, Anchorage Economic Development Corporation, for incentive programs that create new, permanent jobs by providing initial job training, the expansion of publicly-owned roads, ports, airports, utilities, other public works, and other prudent programs needed in support of new or expanded business activity that creates new jobs by servicing markets outside the state, or providing goods or services that were not previously provided by state firms.

(b) It is the intent of the legislature that expenditures from the appropriation in (a) of this section not exceed $7,500 for each permanent full-time job, that the corporation secure contractual and financial commitments from recipients regarding job creation before disbursing money from the appropriation, and that the grant be used to encourage the creation of permanent jobs outside the petroleum industry.

Introduced: 4/17/89
Referred: State Affairs, Oil and Gas, Resources and Finance

6-1194E
SFC: 5/4/89

Senate - Printed

BY ELIASON, JONES, AND ADAMS

IN THE SENATE

SENATE BILL NO. 284

IN THE LEGISLATURE OF THE STATE OF ALASKA

SIXTEENTH LEGISLATURE - FIRST SESSION

A BILL

For an Act entitled: "An Act relating to certain revenue from mineral sources and 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 37.13.010(a) is amended to read:

(a) Under art. IX, sec. 15 of the state constitution, there is established as a separate fund the Alaska permanent fund. The Alaska permanent fund consists of

(1) 25 percent of all mineral lease rentals, royalties, royalty sale proceeds, net profit shares under AS 38.05.180(f) and (g), and federal mineral revenue sharing payments received by the state <u>before July 1, 1989,</u> from mineral leases issued on or before December 1, 1979, and 25 percent of all bonuses received by the state from mineral leases issued on or before February 15, 1980;

(2) 50 percent of all mineral lease rentals, royalties, royalty sale proceeds, net profit shares under AS 38.05.180(f) and (g), and federal mineral revenue sharing payments received by the state from mineral leases issued after December 1, 1979, and 50 percent of all bonuses received by the state from mineral leases issued after February 15, 1980;

(3) <u>43 percent of all mineral lease rentals, royalties, royalty sale proceeds, net profit shares under AS 38.05.180(f) and (g), and federal mineral revenue sharing payments received by the state on or after July 1, 1989, from mineral leases issued on or</u>

SFC 5/4/89
Malone
DOR

HB 118 ELF

- Revises the Severance "Tax Brackets" for Alaska Oil Fields.

- Progressive Approach
- Big Fields Pay More
- Small Fields Pay Less

- Raises About $170 Million A Year (March 31, 1989 Mid-Case Revenue Scenario)

SFC 5/4/89

SCS CSHB 118 (RESOURCES)

LEGISLATION REVISING THE ECONOMIC LIMIT FACTOR (ELF)

Presented to the

Finance Committee

by the

Department of Revenue

May 4, 1989

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QUESTIONS AND ANSWERS ON

SCS CSHB 118 (RESOURCES)

Why should the Legislature modify the ELF?

This legislation promotes economic development, creates jobs, raises revenue, and protects the interests of the people of Alaska in their resources.

What tax does the Economic Limit Factor formula affect?

The Economic Limit Factor (ELF) formula affects the severance tax on oil. The severance tax -- also called the production tax -- is a tax on oil removed from the ground. The tax compensates for the depletion of the state's non-renewable resources. The severance tax has provided more than a third of the state's unrestricted General Fund revenue in the past decade.

What is the Economic Limit Factor?

The ELF is a formula which reduces the severance tax actually paid on oil. The ELF formula produces a fraction which reduces severance taxes as the productivity of a well declines. This reduced severance tax rate is the "effective" severance tax rate -- that is, it is the rate the producer actually pays. The effective severance tax rate is the "nominal" severance tax rate (the one set out, or "named" in statute, which is normally 15 percent for mature fields) multiplied by the ELF. Here's an example which shows the tax rate on Prudhoe Bay now:

15% nominal tax rate

multiplied times ELF of 0.824

equals an effective severance tax rate of 12.36%

The higher the ELF, the higher the actual tax paid. The lower the ELF, the lower the actual tax paid. A low ELF provides a large tax break.

Why do we have the ELF?

The ELF was originally created in 1977 to encourage oil companies to develop marginal oil fields, and to extend the life of producing fields when production at those fields became marginal.

How did we get to where we are today?

In 1981, the Legislature sharply reduced the state's corporate income tax on oil and gas producers by abandoning separate accounting. (The changes were made because the separate accounting law had been challenged in court, but the state later won the lawsuit.) In an attempt to compensate for the expected loss of revenues from the changes made in the corporate income tax, the Legislature raised the severance tax rate from 12.25% to 15%. Because the ELF formula would have cut into this needed revenue, the Legislature -- as a stopgap measure -- suspended the ELF at Prudhoe Bay until 1987.

Even at the outset, this attempt to compensate failed. The 1981 changes in the income tax and severance tax had the net effect of costing the state more than $1 billion in lost revenues between fiscal years 1982 and 1987.

In 1987, the impact of the 1981 tax changes became even more negative for the state. When the stopgap provision ended in 1987, this additional tax break caused the effective severance tax rate at Prudhoe Bay to drop sharply. (Graphic #1 shows this sharp drop for Prudhoe Bay.) This sharp drop immediately cut Alaska's total revenue by $135,000,000 in FY 88, and has cost the state more than $70 million more for FY 89 by the middle of March of 1989.

Why do people want to change the ELF now?

The current ELF is not giving Alaska an attractive enough tax climate to encourage development of marginal oil fields. Instead of helping marginal fields, the ELF formula now mostly provides a massive and unnecessary tax break to two fields which are not marginal at all -- Prudhoe Bay and Kuparuk. These are the largest oil fields in the United States, and two of the most profitable as well.

House Bill 118 would target tax breaks toward marginal fields and away from these two large, high-profit fields. The bill would give tax breaks to currently producing marginal fields such as Endicott and Lisburne and to prospective marginal fields at Niakuk, Point Thomson, Milne Point, and Seal Island. It would leave taxes at zero at West Sak and all the Cook Inlet fields. (See Graphic #2.)

In fact, HB 118 would cut -- or leave at zero -- the taxes on every oil field in Alaska except Prudhoe Bay and Kuparuk.

HB 118 would reduce the tax breaks given to Prudhoe Bay and Kuparuk. The current ELF gives a 20 percent tax break to Prudhoe Bay, and more than a 40 percent tax break to Kuparuk. HB 118 would reduce -- but not eliminate -- the tax breaks given to these two large fields.

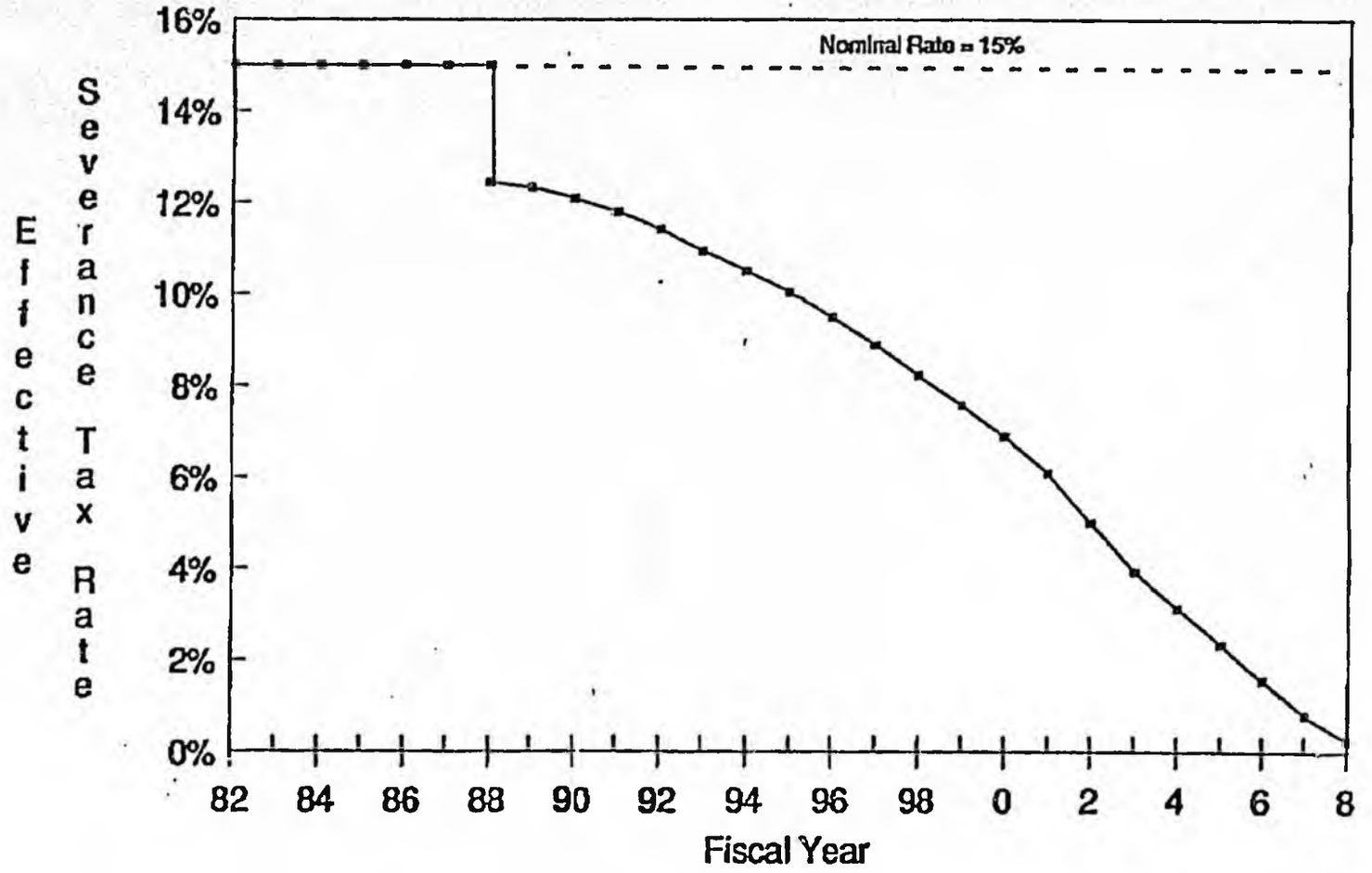
Graphic #3 shows the tax savings provided by HB 118 for producers at all other fields except Prudhoe Bay and Kuparuk. Graphic #4 shows the increased revenues generated from Prudhoe Bay and Kuparuk by HB 118. The legislation on balance raises substantial revenues.

How much revenue would HB 118 raise?

Assuming the mid-case scenario projection of the Fall, 1988 Department of Revenue forecast, the legislation would generate $235 million for FY 89 and FY 90.

The long-term fiscal impact is substantial as well. For the FY 91 - FY 95 period, the legislation would raise $981 million.

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

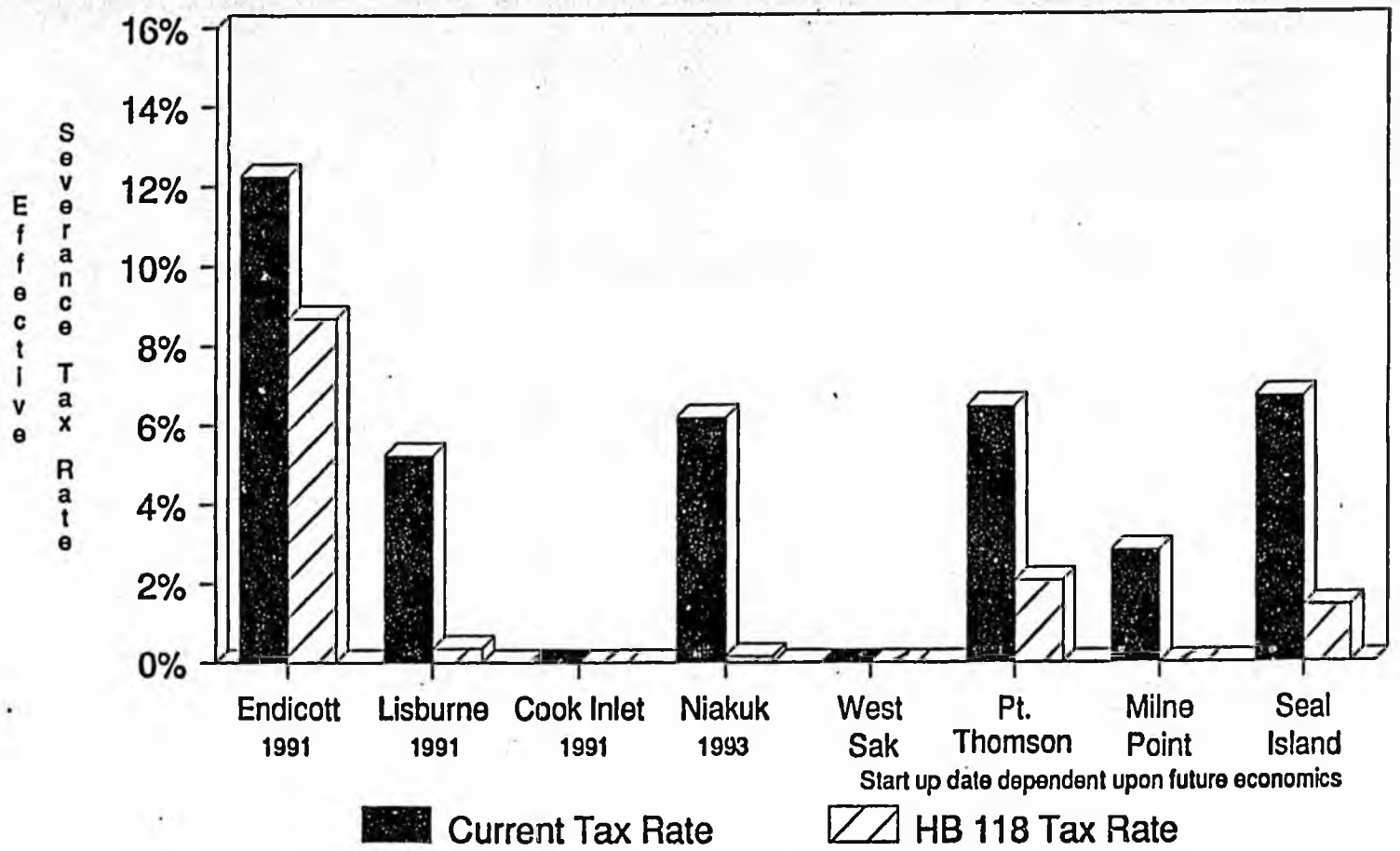


Source: Alaska Dept. of Revenue Spring 89 Forecast

Date: April 21, 1989

Fields Where Taxes Would Decrease Under HB 118

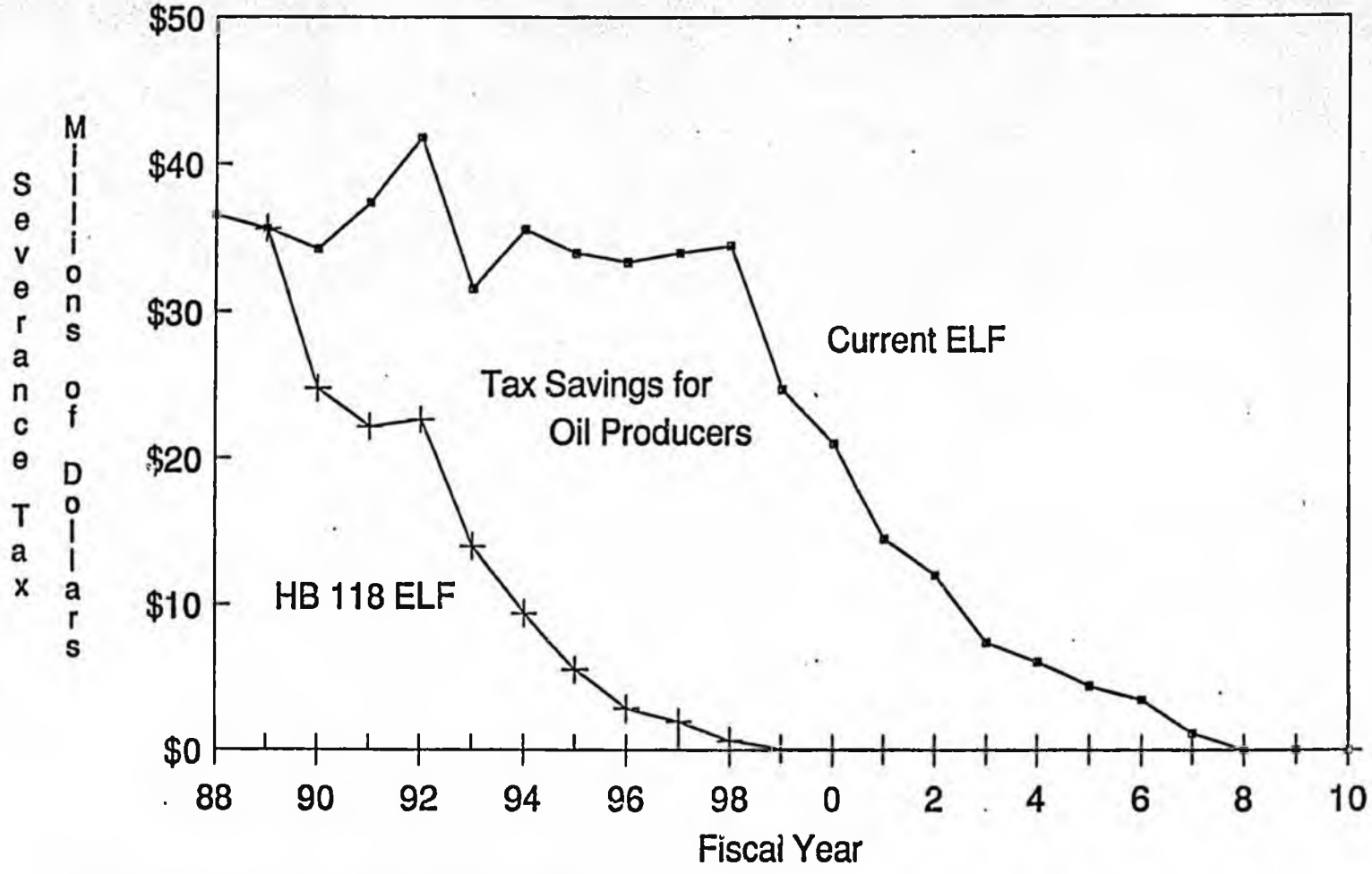
(For Representative Years)



Source: Department of Revenue

Date: February 7, 1989

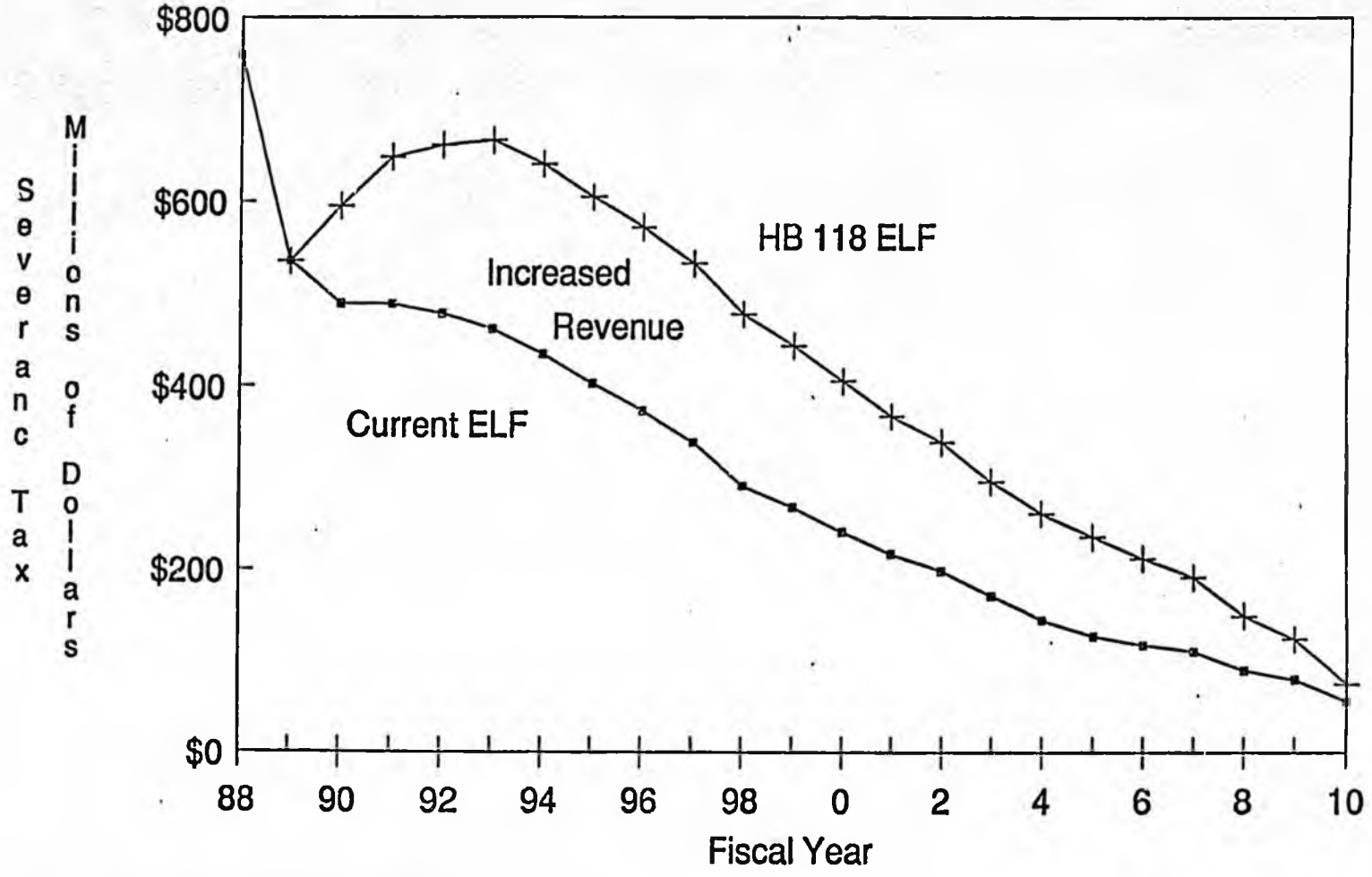
HB 118 Gives a Tax Savings for Producers at Oil Fields Other than Prudhoe Bay and Kuparuk



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



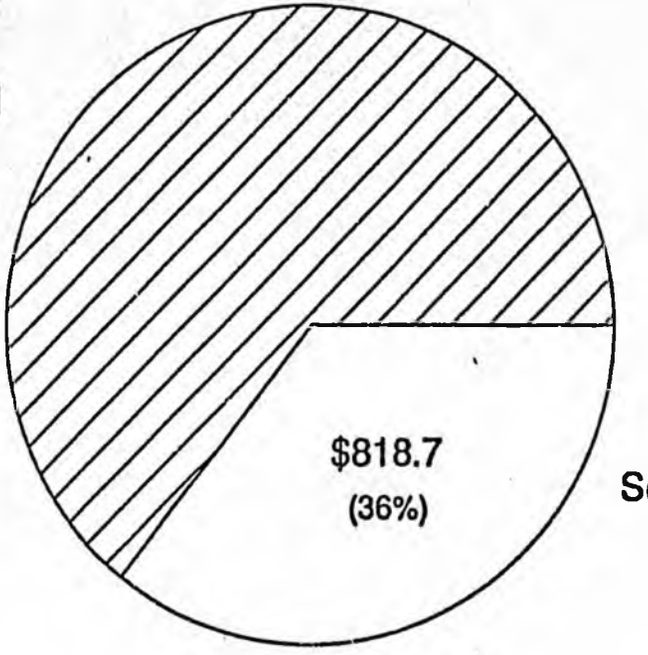
Note: Revenues are from severance taxes on Prudhoe Bay and Kuparuk

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.

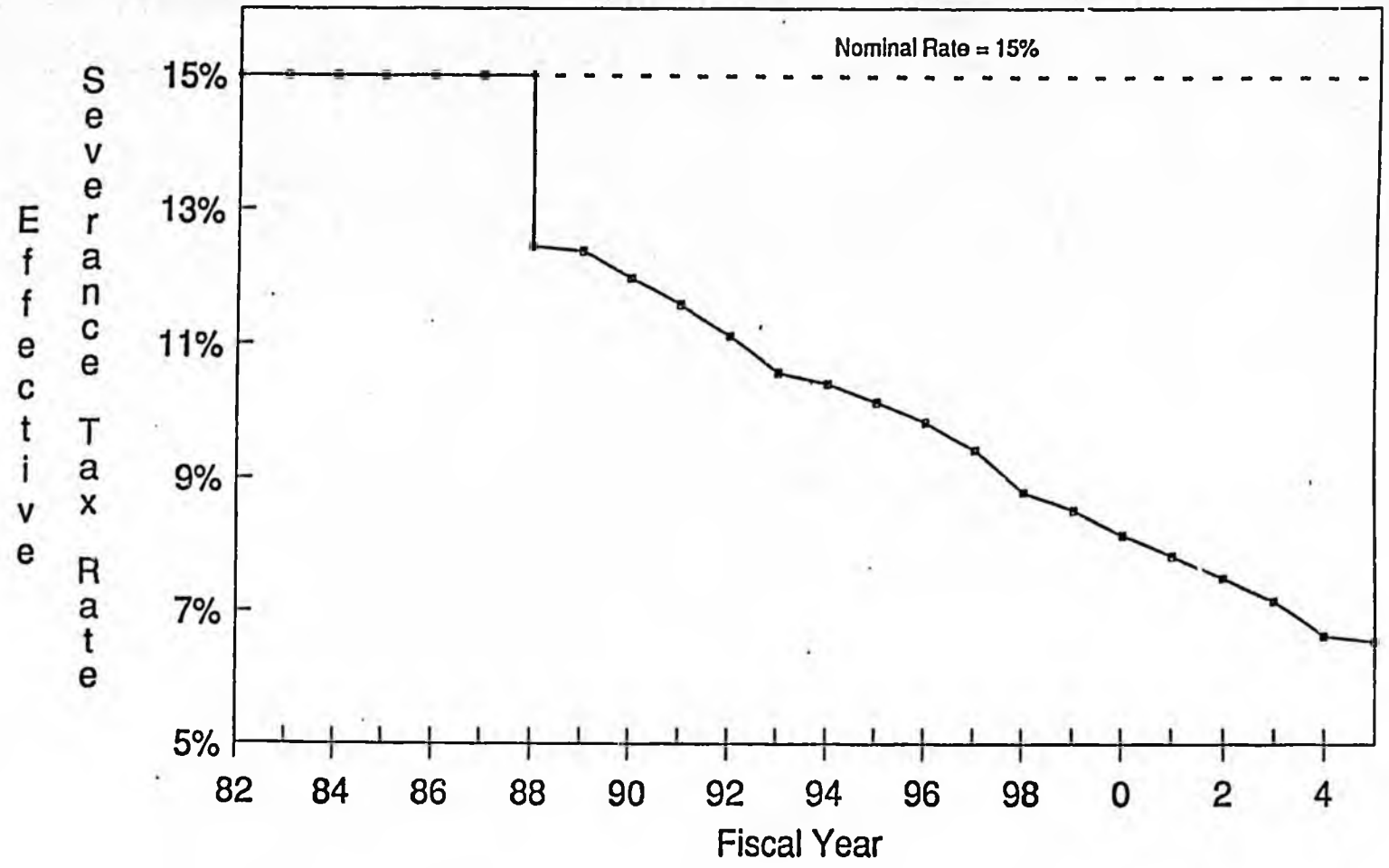
Date: February 7, 1989

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

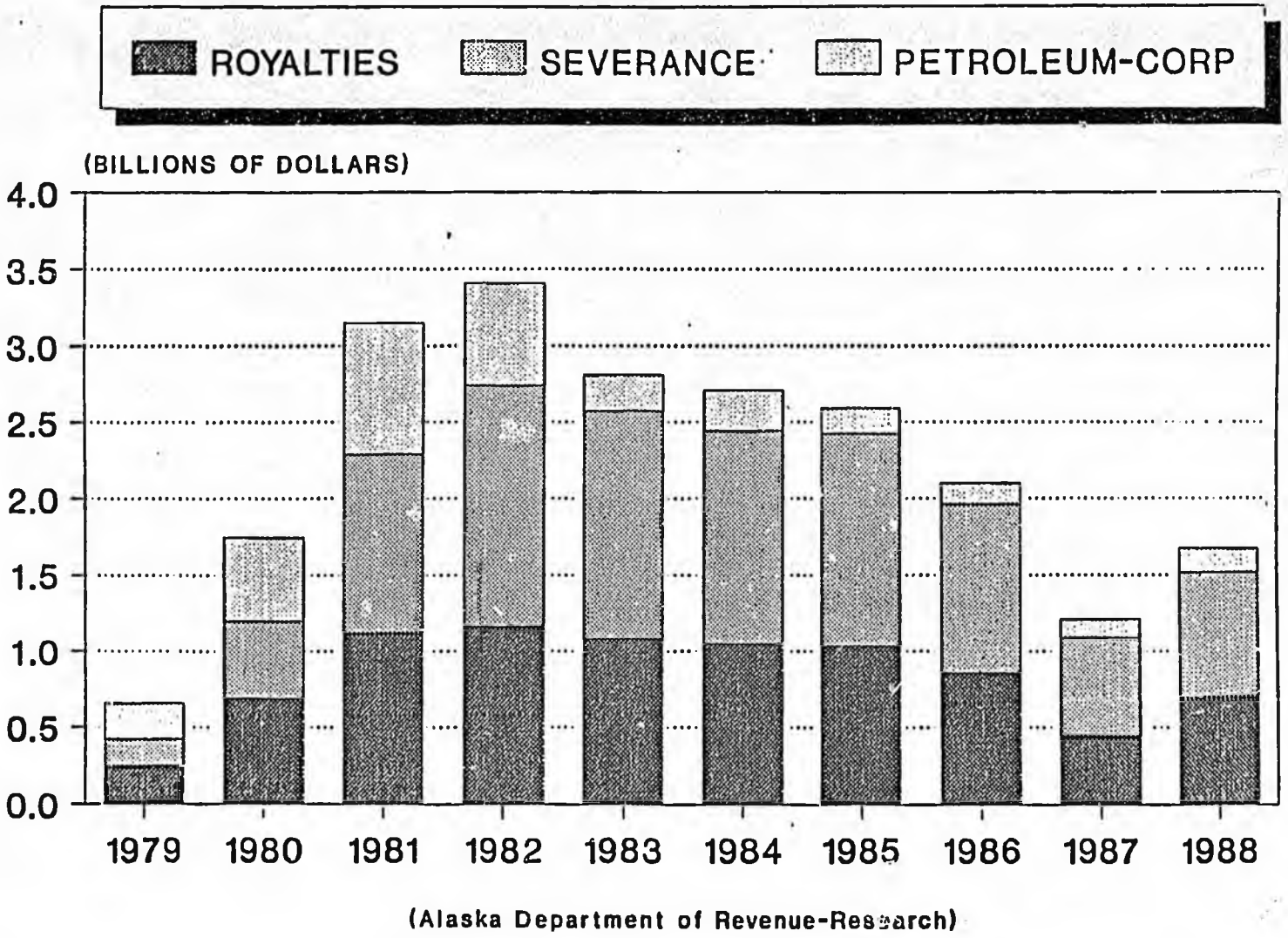


HOW REVENUE NEUTRAL WERE THE 1981 CHANGES?
($mm)

	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	1558	(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)*

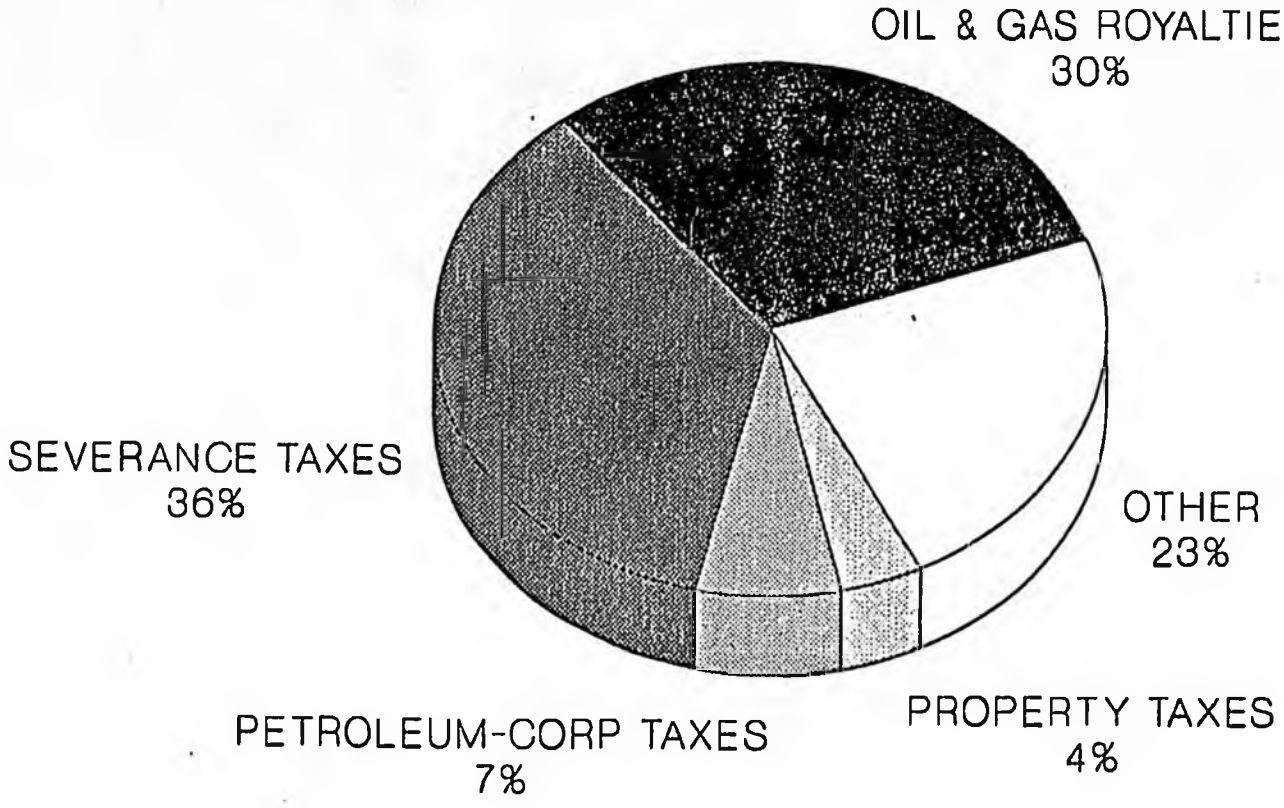
*Had the Legislature authorized deduction of the Federal Windfall Profits Tax the total loss over the period would have been $670 mm

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

Offered: 5/1/89
Referred: Finance

6-0652B

Original sponsor: Finance Committee

IN THE HOUSE BY THE RESOURCES COMMITTEE

SENATE CS FOR CS FOR HOUSE BILL NO. 118 (Resources)

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. AS 43.55.080 is amended by adding new subsections to read:

(b) The commissioner of administration shall separately account for all proceeds of the tax deposited into the general fund under (a) of this section.

(c) The legislature may annually appropriate to the oil and hazardous substance release response fund established in AS 46.08.010 the greater of:

(1) $30,000,000; or

(2) four percent of the amount estimated to be received

from the tax levied and collected under this chapter during the fiscal year.

* Sec. 3. Section 1 of this Act is retroactive to January 1, 1989, and applies to oil produced after December 31, 1988.

* Sec. 4. AUTHORIZATION FOR APPROPRIATION OF TAX REVENUE RECEIVED DURING FY 1989. The legislature may appropriate to the oil and hazardous substance release response fund 50 percent of the difference between the taxpayer's tax liability on oil production under AS 43.55 for the period between the retroactive application date of this Act and May 31, 1989, as determined under AS 43.55.013

(1) as that statute existed before the amendments to it made by sec. 1 of this Act; and

(2) as amended by sec. 1 of this Act.

* Sec. 5. PAYMENT OF TAX DUE. The oil production tax payable as a result of the retroactive application of this Act is due on the 20th day of the calendar month following the effective date of this Act. If the tax due and payable is not paid by the date specified in this section, the tax becomes delinquent and subject to payment of interest and the provisions of AS 43.10 relating to enforcement and collection of delinquent taxes.

* Sec. 6. OVERPAYMENT OF TAX UNDER REVISED FORMULA. The tax liability of a party that is reduced by the retroactive application of this Act shall be credited against the taxpayer's future tax liability. The provisions of AS 43.05.280(a) and 43.05.280(b)(1) do not apply to, and interest is not allowed on, the overpayment.

* Sec. 7. Section 2 of this Act takes effect July 1, 1989.

* Sec. 8. Except for sec. 2 of this Act, this Act takes effect immediately under AS 01.10.070(c).

STATE OF ALASKA
1989 LEGISLATIVE SESSION

Bill Version: SCS CSHB 118 (Res)
Publish Date: _____

FISCAL NOTE

REQUEST:

Revision Date: May 1, 1989
Title: Oil & gas properties production tax - ELF
Sponsor: House Finance Committee
Requestor: Senate Resources

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	64,000	171,000	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: May 2, 1989

Approved by Commissioner: Hugh Malone
Agency: Department of Revenue
Date: 5/2/89

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

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; (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; (3) authorizes the appropriation to the oil and hazardous substance release response fund of 50 percent of the revenues for the period between January 1, 1989 and May 31, 1989; and (4) authorizes the annual appropriation in future years of $30 million or 4 percent of the severance tax revenues, whichever is greater.

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:

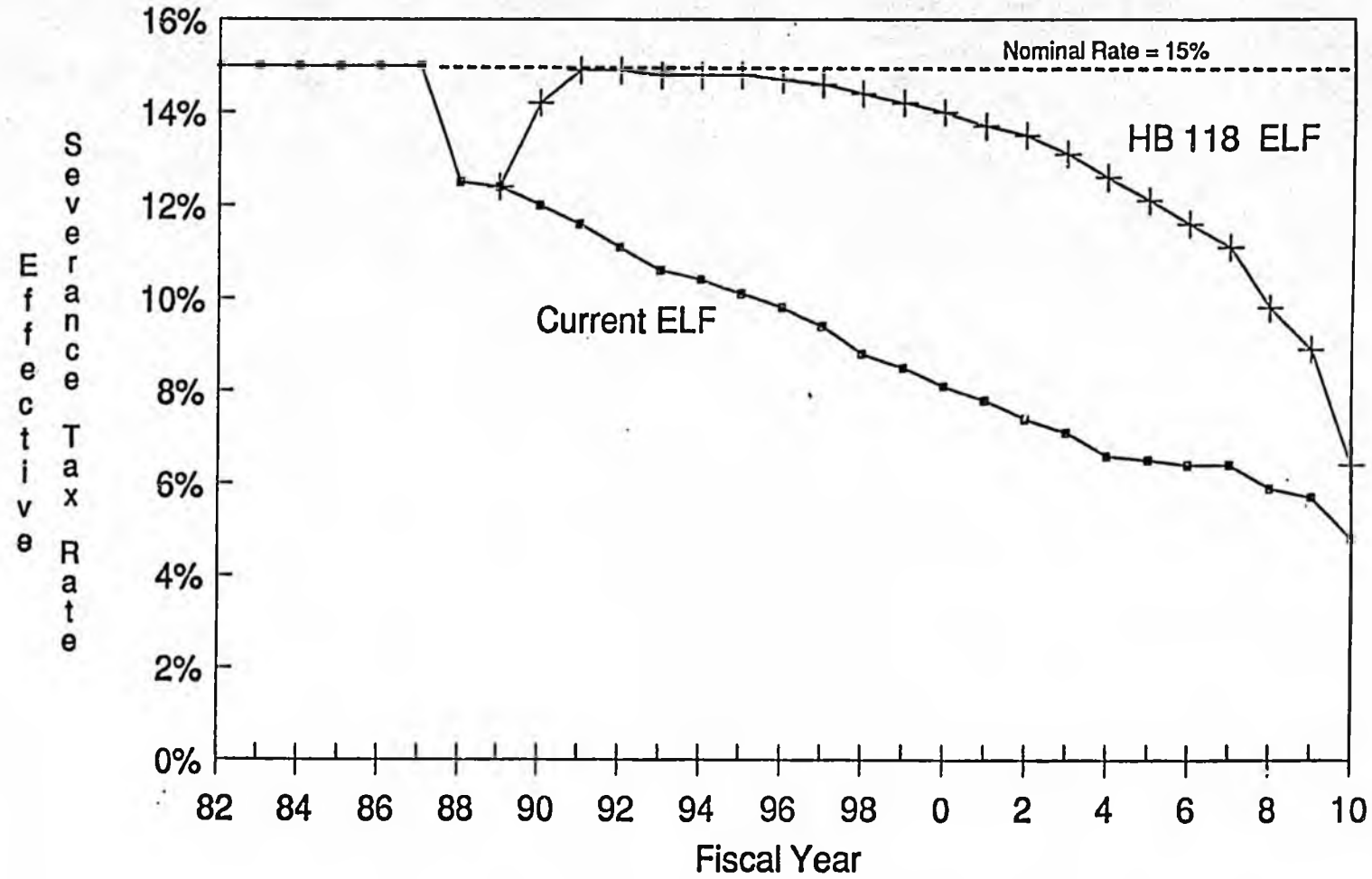
1995	194
1996	180
1997	165
1998	157
1999	148
2000	139
2001	129
2002	110
2003	86
2004	69
2005	45
2006	21
2007	4
2008	(3)
2009	0
2010	0

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

The Tax Rate on Prudhoe Bay Has Dropped Sharply



Date: February 16, 1989

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 <u>new</u> 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 <u>over the entire life of the field as measured by the weighted average severance tax rate over the life of the field</u>. 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:

.2 x 280,000	=	56,000
+ .8 x 115,000	=	92,000
		148,000

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

DEPARTMENT OF REVENUE
May 4, 1989

SECTIONAL ANALYSIS OF SCS CSHB 118 (RESOURCES): 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 150,000 barrels a day and reduce taxes on fields producing on average less than 150,000 barrels a day.

Section 2. This section provides that each year the legislature may appropriate $30 million or four percent of the estimated severance tax revenues -- whichever is greater - to the oil and hazardous substance release response fund.

Section 3. This section makes Section 1 of the Act retroactive to January 1, 1989, and applies it to oil produced after December 31, 1988.

Section 4. This section authorizes the Legislature to appropriate to the oil and hazardous substance release response fund 50 percent of the revenues generated by this Act for the period between January 1, 1989 and May 31, 1989.

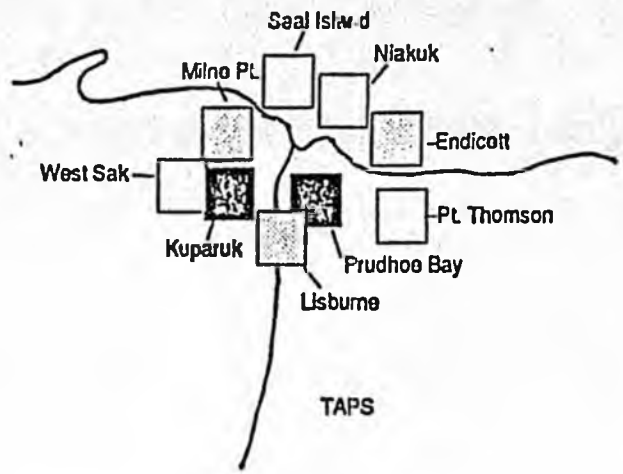
Section 5. This section makes the payments under the retroactive application of this Act due on the 20th day of the calendar month following the effective date of this Act.

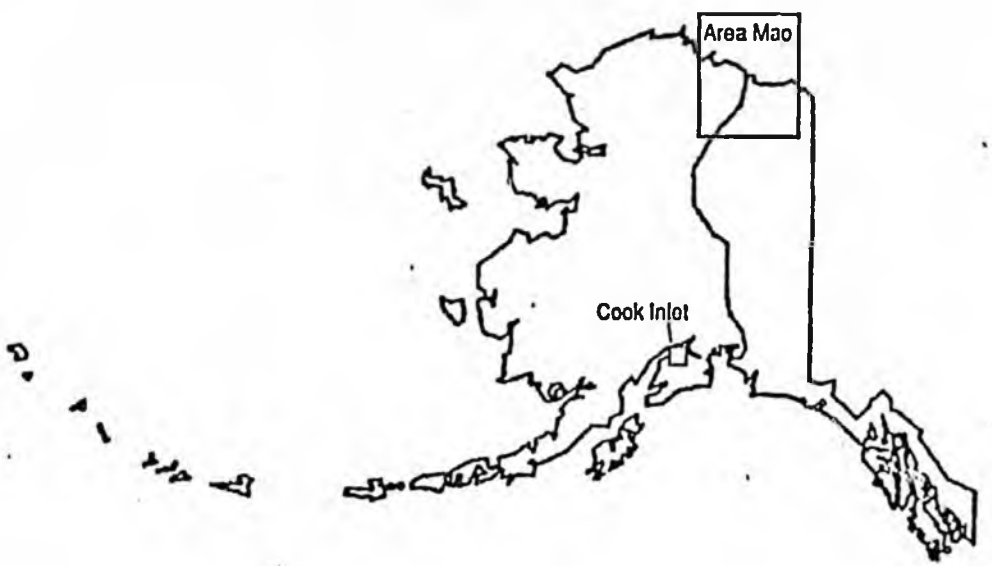
Section 6. This section provides that if a taxpayer's liability is reduced by the retroactive application of this Act, that reduced tax liability is credited against the taxpayer's future tax liability. Interest is not allowed on the overpayment.

Section 7. This section makes Section 2 of the Act effective on July 1, 1989.

Section 8. This section makes all sections except Section 2 effective immediately.

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





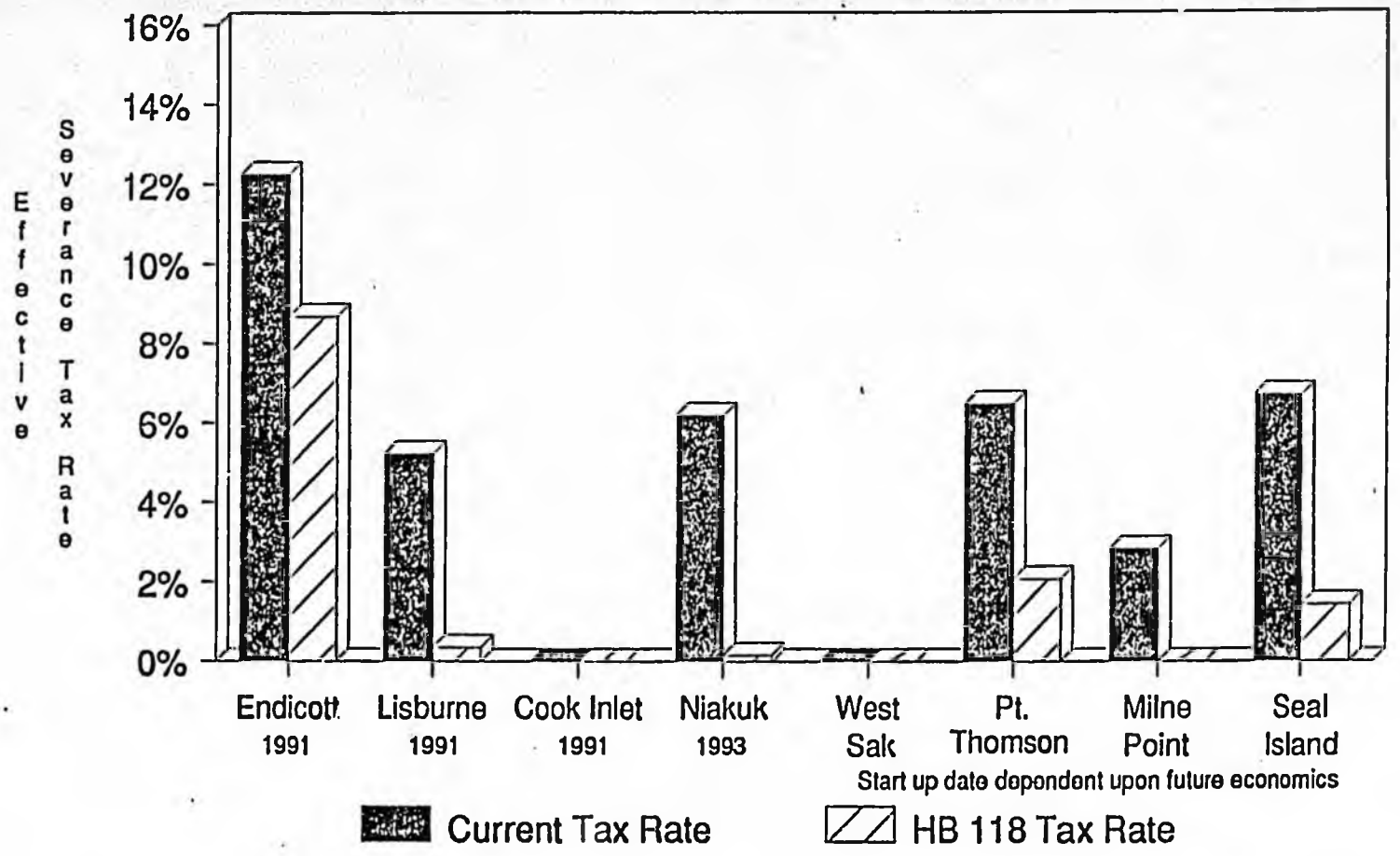
Legend

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

Date: April 20, 1989

Fields Where Taxes Would Decrease Under HB 118

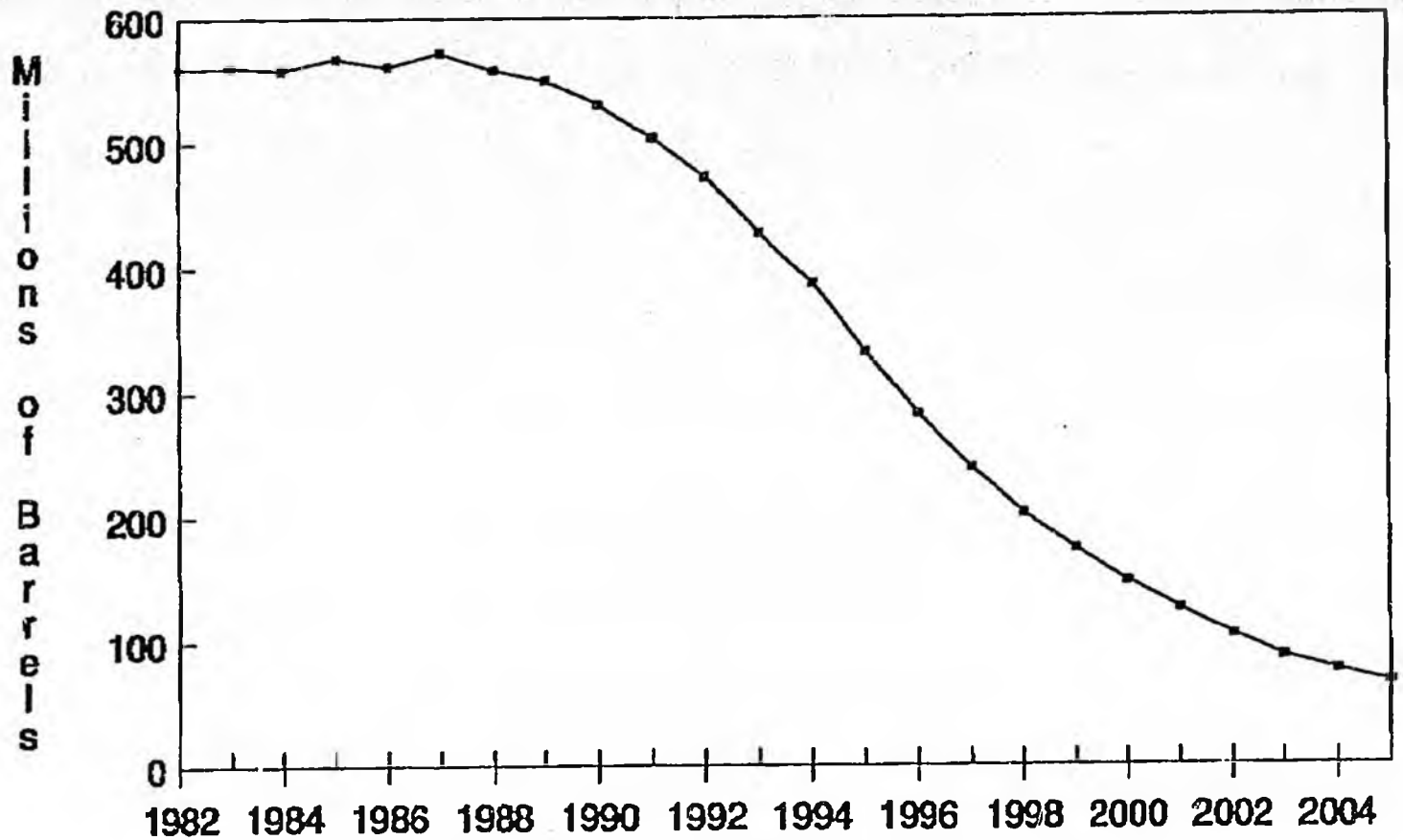
(For Representative Years)



Source: Department of Revenue

Date: February 7, 1989

Prudhoe Bay Production
Millions of Barrels/Year



May 1, 1989

Effective Severance Tax Rates Under Different ELF Formulas

Field	Volume (mmbbl/dav)	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

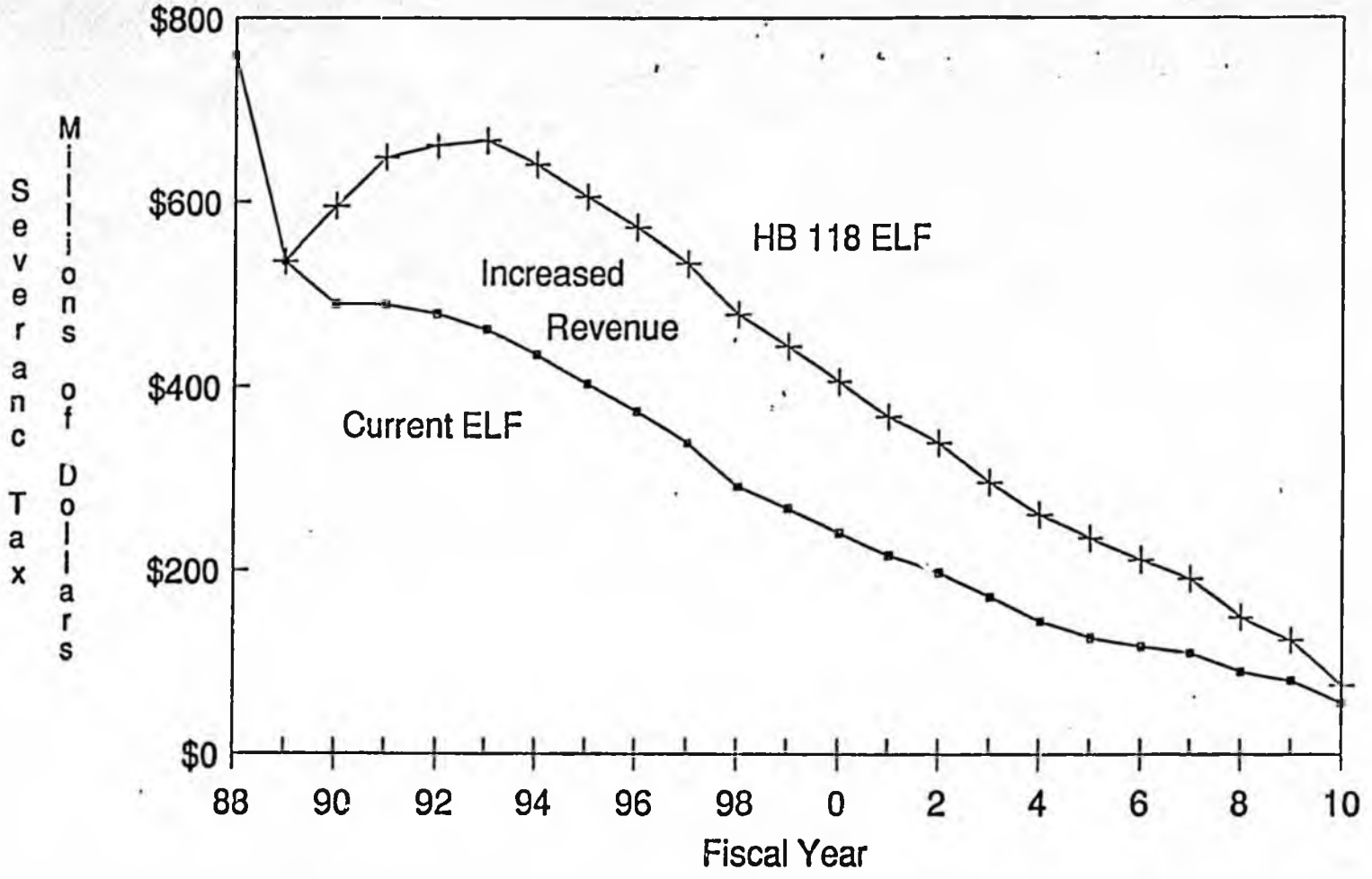
State / Field	Disc. date	1988 prod.	Cum. prod. 1-1-89	Est. rem. reserves	Est. No. wells
		1,000 bbl			
ALABAMA					
Citronelle	1955	1,827	147,861	7,000	435
ALASKA					
Endicott	1978	36,098	43,098	324,902	37
Granite Point	1965	2,787	109,535	16,213	29
Kuparuk River	1969	112,055	503,387	994,945	328
Lisburne	1957	14,600	35,600	175,689	49
McArthur River	1965	7,040	529,040	34,950	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
ARKANSAS					
Smackover	1922	2,654	556,307	9,097	2,100
CALIFORNIA					
San Joaquin Valley					
Belridge South	1911	60,583	677,063	435,295	6,000
Buena Vista	1909	1,574	647,274	38,271	895
Coalinga	1890	10,212	753,845	161,199	2,174
Coalinga Nose	1923	1,285	458,665	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	134,591	25,670	674
Elk Hills	1911	39,144	893,374	579,776	1,099
Fruitvale	1938	577	115,553	13,709	274
Greeley	1936	237	112,547	1,763	27
Kern Front	1912	1,500	173,056	55,220	950
Kern River	1899	46,699	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	1936	2,551	266,522	90,919	931
Midway-Sunset	1894	57,497	1,679,347	373,963	9,180
Mount Poso	1925	5,620	263,250	79,220	411
Rio Bravo	1937	151	115,051	1,319	15
Yowlumne	1974	6,570	81,368	27,015	65
Coastal Area					
Carpinteria	1955	2,690	88,101	29,299	114
Cat Canyon E. & W.	1908	2,735	288,235	46,930	512
Dos Cuadras	1959	4,371	212,804	54,140	140
Elwood	1928	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	145,994	12,025	352
Ventura	1919	7,072	834,742	97,026	570
Los Angeles Basin					
Beta	1976	6,013	40,423	173,825	60
Beverly Hills	1900	2,034	122,616	42,356	116
Brea Olinda	1880	2,143	383,594	54,787	720
Coyote East	1959	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	1,066,268	72,044	990
Inglewood	1924	2,750	345,453	54,149	366
Long Beach	1921	2,466	909,757	17,216	410
Montebello	1917	525	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	14,118	168
Torrance	1922	1,693	212,083	35,247	365
Wilmington	1932	29,921	2,292,229	495,633	2,050
COLORADO					
Rangely	1933	12,492	739,418	35,000	488
FLORIDA					
Jay	1970	4,676	360,612	55,944	121
ILLINOIS					
Clay City	1938	2,448	393,860	6,000	2,600
Lawrence	1906	2,919	394,521	5,800	2,700
Louden	1936	1,345	388,237	3,555	1,340
Main	1906	2,066	232,273	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	7,859	269,090	55,920	169
Grance Isle Blk. 16	1948	1,659	263,729	85,645	44
Grande Isle Blk. 43	1955	4,312	272,256	85,628	126
Mississippi Canyon Blk. 194	1980	4,929	118,958	76,311	44
Main Pass Blk. 41	1957	2,985	237,554	23,334	112
Main Pass Blk. 305	1969	1,776	201,869	78,335	94
South Pass Blk. 27	1954	1,659	125,317	75,198	118
South Pass Blk. 61	1968	9,140	152,151	45,000	156
South Pass Blk. 62	1965	3,331	106,364	91,594	73
South Pass Blk. 65	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	86,231	73
Onshore South					
Bay de Chene	1941	390	96,382	17,952	24
Bay St. Elaine	1928	321	164,508	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	804	135,439	4,290	176
Grand Bay	1938	454	170,514	3,750	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	20,051	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	37
Paradis	1939	725	126,650	8,600	31

*Includes about 30.56 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			
	Quarantine Bay, 1937		761	172,672	1,654	71
	Timbalier Bay, 1938					
	Venice, 1937		838	181,978	7,590	59
	Vinton, 1910		287	161,001	800	96
	Weeks Island, 1945		816	225,939	21,355	33
	West Bay, 1940		1,345	228,246	16,355	79
	North					
	Caddo-Pine Island 1905		3,310	360,899	12,898	10,689
	Delhi, 1944		673	211,707	34,651	58
	Haynesville, 1921		761	168,237	2,373	166
	Homer, 1919		434	98,375	1,908	193
	Rodessa, 1935		331	106,927	1,506	67
MISSISSIPPI						
	Bartenville, 1944		2,509	239,154	10,391	316
	Heidelberg, 1944		2,823	174,809	12,171	316
	Tinsley, 1939		834	29,677	3,197	173
MONTANA						
	Bell Creek, 1967		958	128,835	22,584	91
	Cut Bank, 1925		994	162,459	37,169	575
	Pine, 1951		1,302	105,145	5,657	96
NEW MEXICO						
	Denton, 1949		652	138,693	3,000	179
	Empire-Abo, 1957		1,424	219,883	80,017	405
	Eunice-Monument, 1929		2,500	125,414	10,854	879
	Hobbs, 1928		8,460	297,482	20,000	613
	Maljamar, 1925		1,865	144,961	5,070	851
	Vacuum, 1929		12,359	432,242	40,000	1,556
NORTH DAKOTA						
	Beaver Lodge, 1951		1,704	111,574	16,684	132
	Billings Nose, 1978		2,580	61,659	51,744	152
	Little Knife, 1977		3,392	51,437	57,324	131
	Mondak, 1976		439	13,165	82,837	56
OKLAHOMA						
	Burbank, 1920		1,135	536,746	8,377	1,105
	Eola-Robberson, 1920		746	103,124	8,210	603
	Fitts, 1934		2,963	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		3,182	266,371	13,615	923
	Oklahoma City, 1928		902	816,170	5,966	174
	Postle, 1955		1,216	106,393	14,921	226
	Sho-vel-Tum, 1905		18,328	1,167,379	60,000	7,616
	Sooner Trend, 1945		4,147	255,544	20,000	4,746
TEXAS						
	District 2					
	Greta, 1933		746	147,570	12,530	100
	Lake Pasture, 1953		2,196	87,784	12,544	143
	Tom O'Connor, 1934		10,350	747,849	55,000	646
	West Ranch, 1938		2,640	350,034	8,504	307
	District 3					
	Ananuac, 1935		1,068	264,835	15,112	105
	Conroe, 1931		3,864	727,215	35,728	278
	Giddings, 1971		8,866	278,570	148,032	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	9,358	85
	Webster, 1937		5,304	573,192	20,000	243
	District 4					
	Agua Dulce-Stratton, 1928		360	146,623	24,751	94
	Barregas, 1945		192	114,021	20,186	40
	Kelsey, 1938		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					
	Andector, 1946		1,500	181,988	6,500	28
	Block 31, 1945		3,556	220,065	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
	Dollarnice, 1945		2,568	193,780	11,448	202
	Dune, 1939		2,928	183,000	18,704	771
	Fullerton, 1942		7,452	548,200	22,000	870
	Goldsmith, 1934		7,248	755,516	33,752	2,026
	Howard Glasscock, 1925		5,844	404,508	26,000	2,208
	Iatan, E., 1925		3,372	142,955	12,000	1,304
	Jordan, 1937		480	129,975	2,520	135
	Keystone, 1930		1,872	313,050	9,374	812
	McElroy, 1926		7,894	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	21,600	1,312
	TXL, 1944		2,004	262,516	6,500	600
	Waddell, 1927		708	100,712	3,792	168
	Ward Estes, N., 1929		3,408	364,177	76,435	1,552
	Westbrook, 1923		2,000	88,000	16,000	718
	Yates, 1926		33,540	1,171,820	782,695	1,146
	District 8-A					
	Anton-Irish, 1944		3,564	175,910	24,150	239
	Cogdell Area, 1949		1,656	252,219	41,204	103
	Diamond M., 1948		1,908	239,415	16,053	474
	Kelly-Snyder, 1948		11,592	1,234,982	115,088	806
	Levelland, 1938		17,328	464,144	50,000	3,012
	Prentice, 1951		6,216	161,035	20,000	437
	Salt Creek, 1950		10,404	247,340	32,552	173
	Seminole, 1936		17,004	524,765	35,000	624
	Slaughter, 1936		20,364	1,029,800	50,000	3,001
	Strawberry Trend, 1951		22,212	653,388	50,000	7,321
	Wasson, 1936		28,656	1,711,898	60,000	2,152
	Welch, 1942		3,324	144,223	14,000	651
	District 10					
	Panhandle, 1921		7,812	1,425,286	41,240	11,643
UTAH						
	Altamont, 1958		3,047	89,493	231,216	227
	Anetn, 1955		5,340	354,004	30,000	461
	East Anschutz Ranch, 1979		12,755	80,355	727,799	28
	Red Wash, 1951		1,075	77,511	13,377	146
WYOMING						
	Brady, 1960		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	154,635	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, 1989		541	75,416	55,885	93
	Lance Creek, 1918		163	107,605	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	31,67-	80,674	3:
	Salt Creek, 1906		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

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.

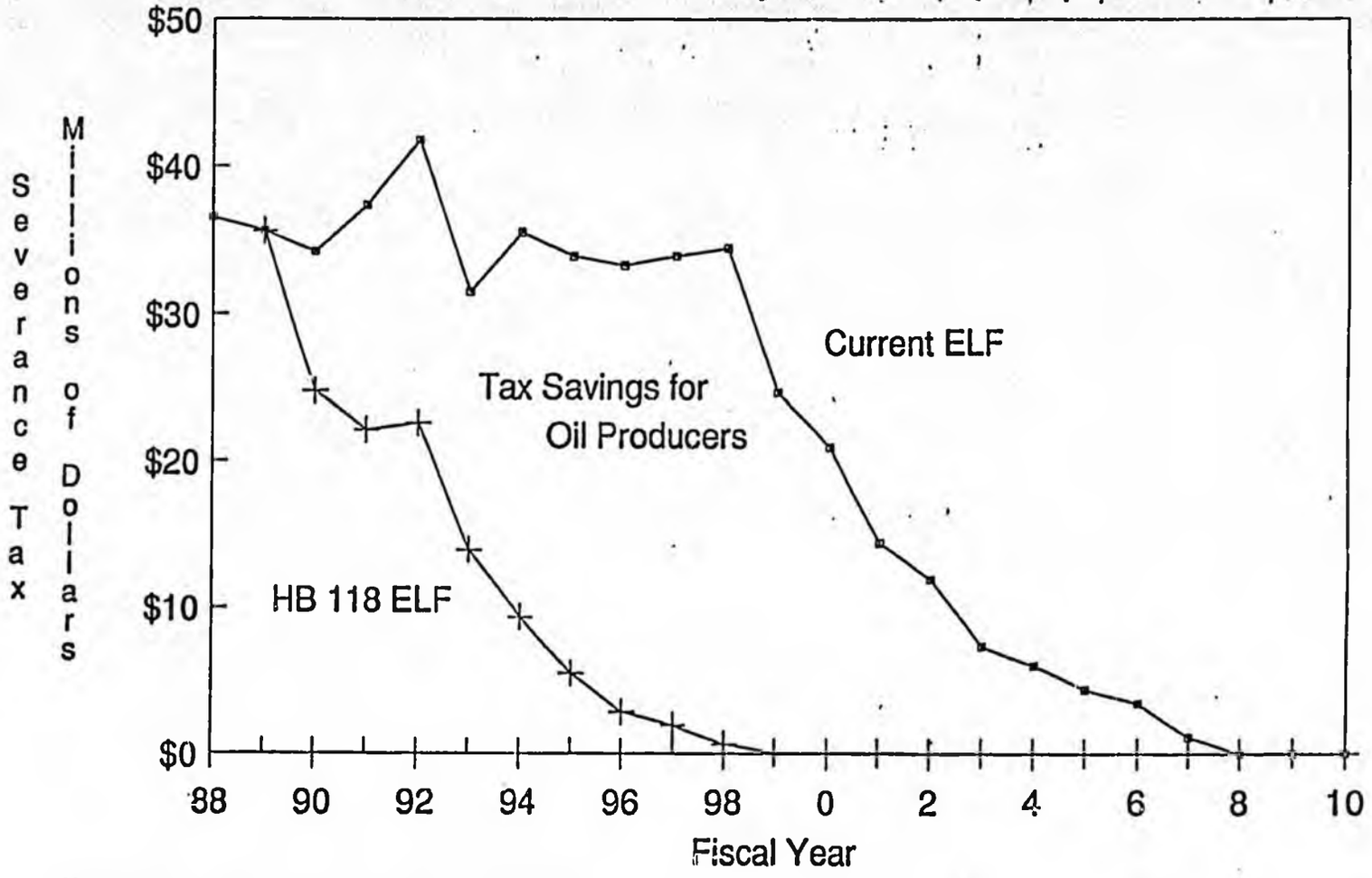
HB 118 Raises More Severance Tax Revenue from Prudhoe Bay and Kuparuk



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

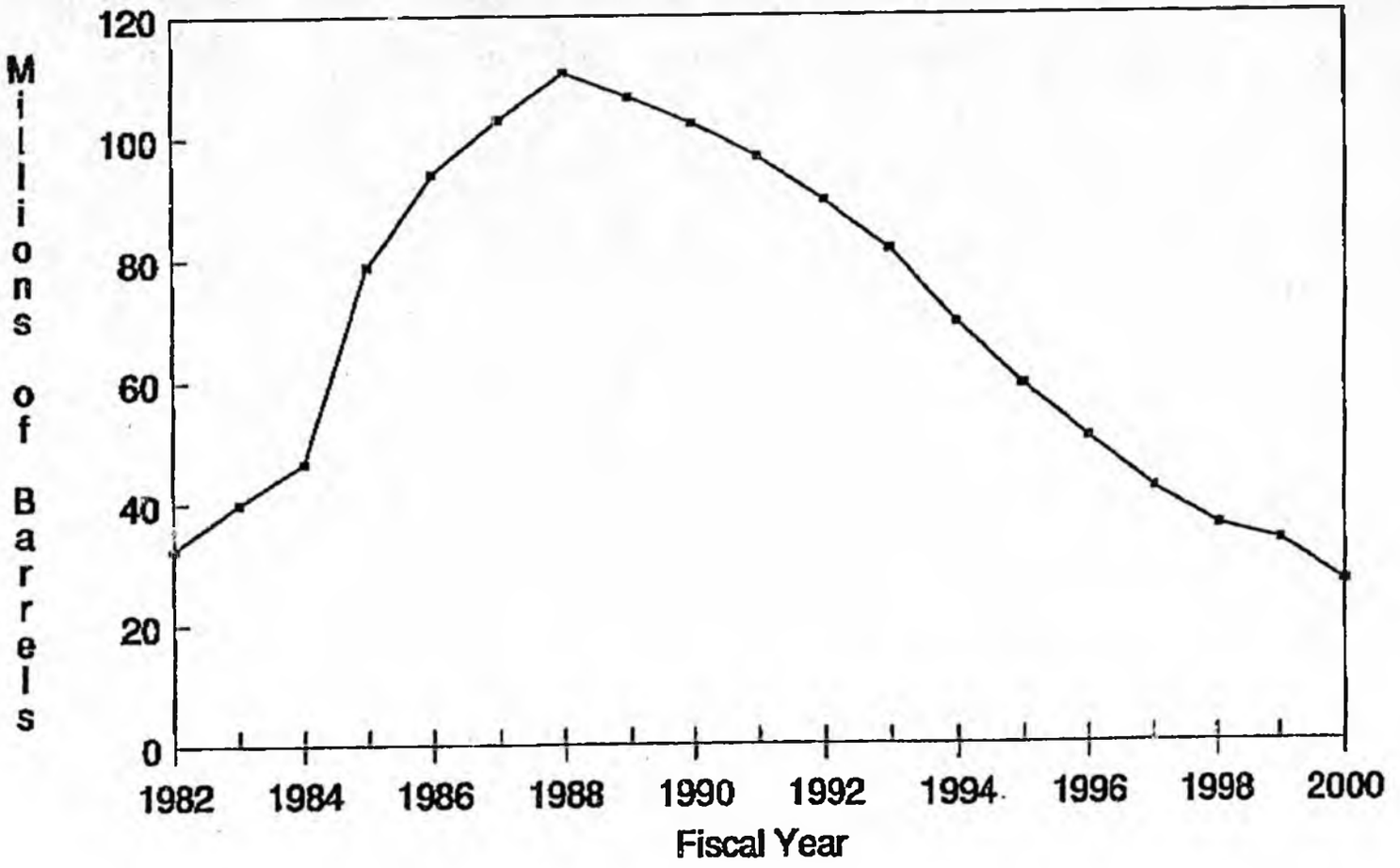
Comparative Severance Tax Payments
1987 Production and Collections
10 Top Oil Producing States

	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

Kuparuk Production
Millions of Barrels/Year



May 1, 1989

Department of Revenue
April 26, 1989

POINTS ON ELF

-- The Alaska Legislature has changed Alaska's oil taxes just once in the past 11 years. That change resulted in a net tax decrease for the oil industry.

-- No other taxing jurisdiction has anything like the ELF, which is an incentive intended to benefit truly marginal fields.

-- Prudhoe Bay and Kuparuk are the two most productive oil fields in the United States. They are also two of the country's most profitable. They are in no way marginal and should not qualify for the massive tax breaks afforded by the current ELF.

-- HB 118 provides an even greater tax break to the really marginal fields, but reduces this unnecessary incentive for Prudhoe and Kuparuk. It's the less productive fields that need the break.

-- Of the 11 fields immediately affected by any change in ELF, nine would see a tax decrease under HB 118. Only Prudhoe and Kuparuk would pay more.

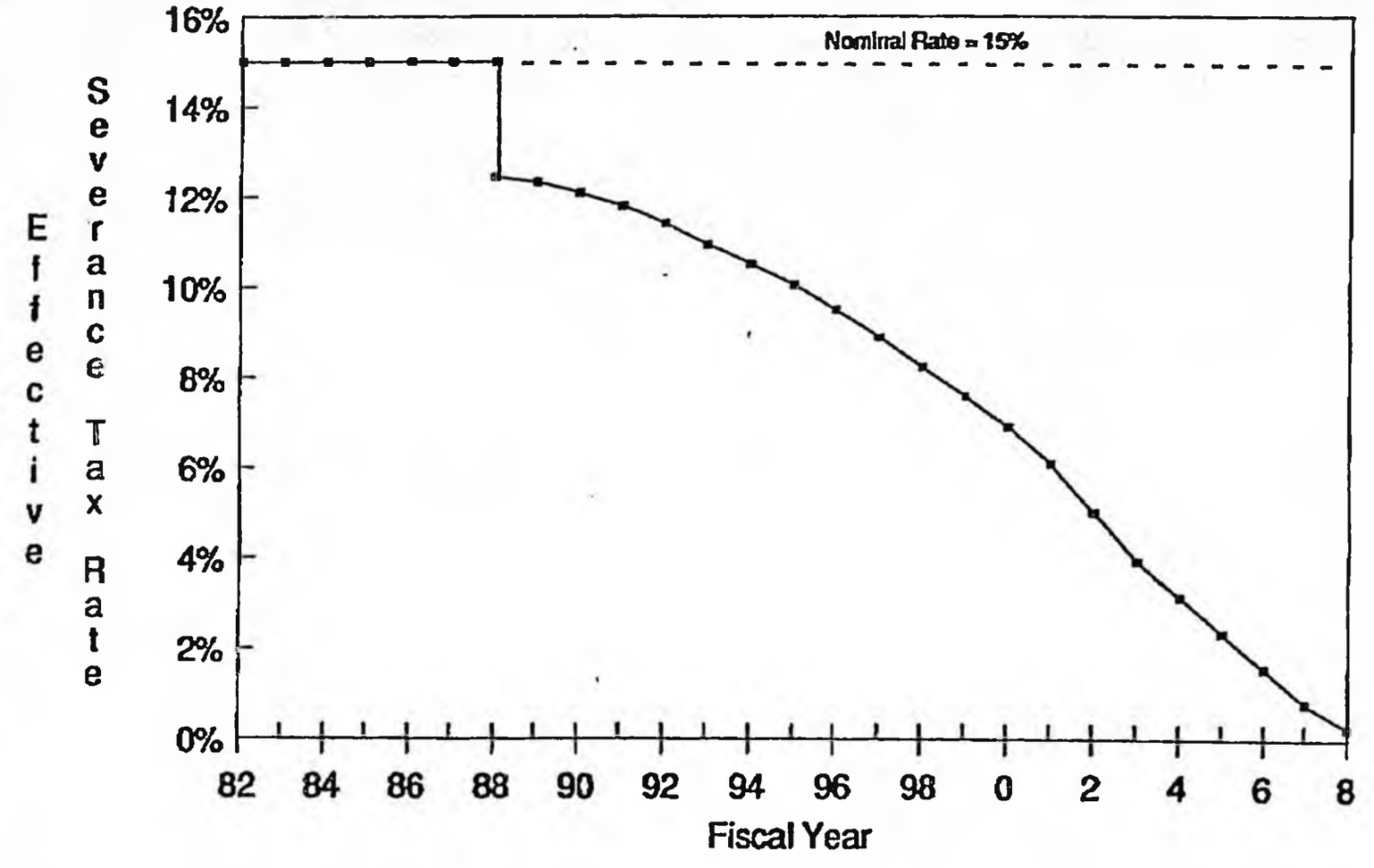
-- The first 300 barrels of oil from any well in Alaska is already free. If Alaska's tax structure were placed on all the oil wells in Texas, they would pay no severance taxes at all.

-- The current ELF looks only at average productivity per well. The proposed ELF would set the tax rate by looking at both the average productivity per well and total field size. This change will make the ELF more sensitive to profitability.

-- The oil industry ships most of its profit and other cash flow south, in fact about $6 of every $7. According to 1988 figures, the industry makes about $6 million in profit every day from the North Slope.

-- The proposed change in ELF would cost the industry about 15 to 25 cents a barrel. The price of oil can change by more than that in a single day.

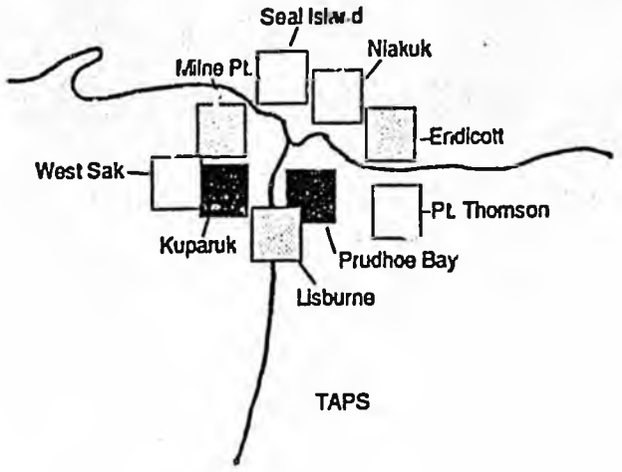
The Tax Rate at Prudhoe Bay Collapsed on July 1, 1987

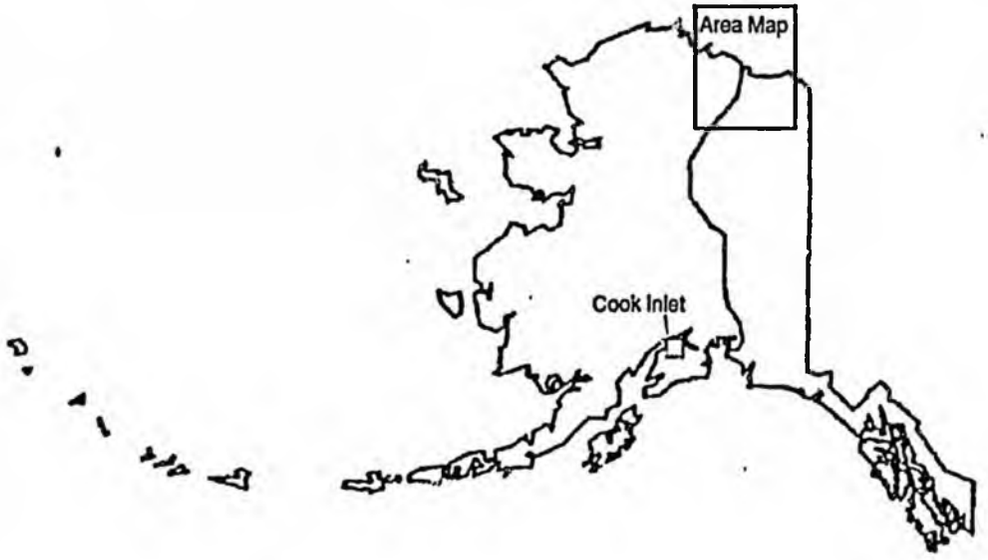


Source: Alaska Dept. of Revenue Spring 89 Forecast

Date: April 21, 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

INCREMENTAL SEVERANCE TAX EXAMPLE

KUPARUK EXAMPLE

THE ADDITION OF 1 WELL PRODUCING AT THE AVERAGE RATE

ACTUAL DEC'88 FIGURES

4-May-89

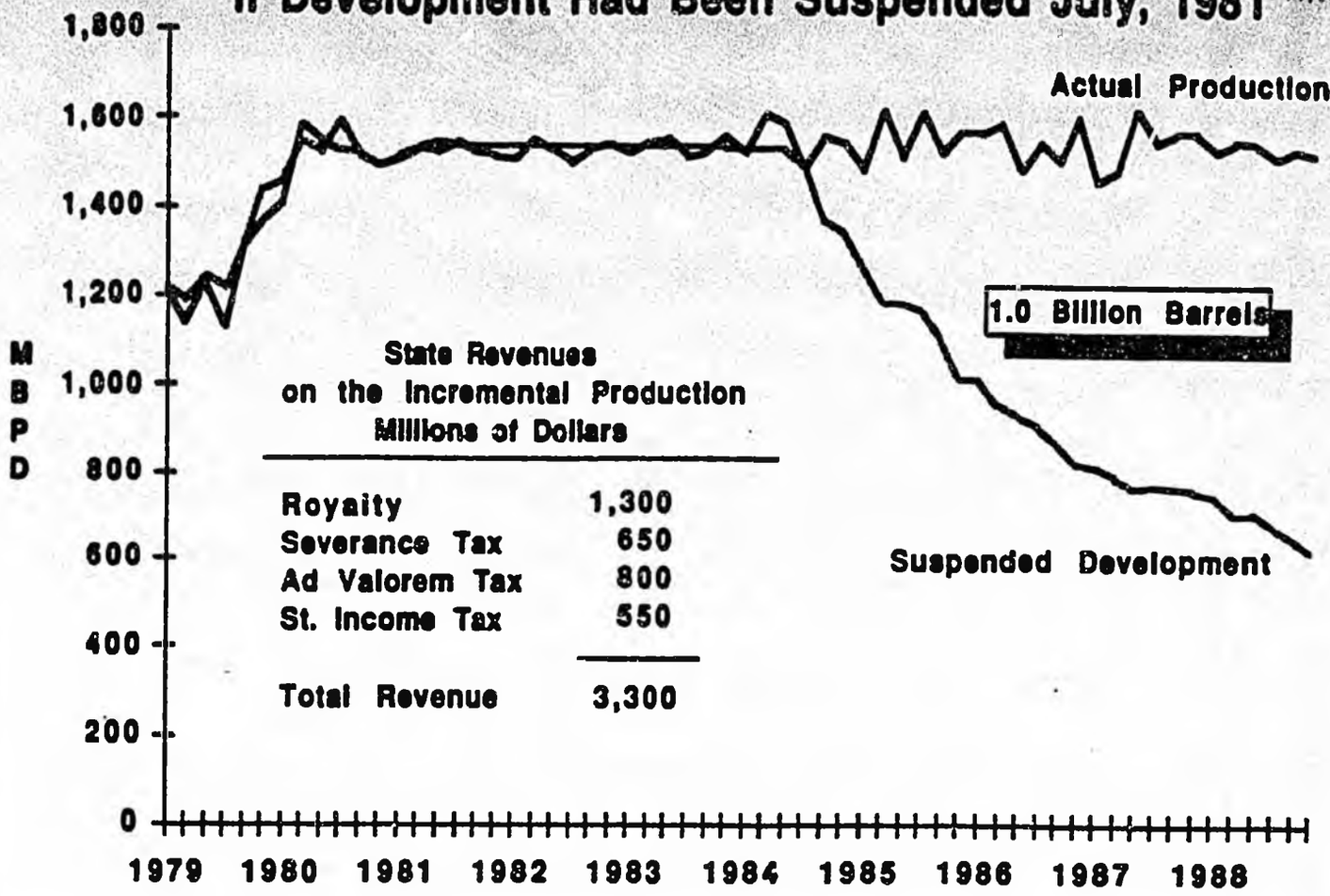
	CURRENT LAW		HB-118	
	BASE	+1 WELL	BASE	+1 WELL
PRODUCTION MBPD	307.2	308.1	307.2	308.1
TOTAL PRODUCTION MBL/MO	9,522.37	9,552.27	9,522.37	9,552.27
WELLS	318	319	318	319
BBL/DAY/WL	965	965	965	965
ELF	0.564894	0.564894	0.883291	0.883817
EFFECTIVE TAX RATE	8.4734%	8.4734%	13.2494%	13.2573%
TOTAL FIELD TAX M$	4,165.46	4,178.55	6,513.28	6,537.63
TOTAL FIELD TAX $/BBL	0.500	0.500	0.782	0.782
INCREASE IN TAX $M		13.08		24.35
INCREASE IN MBBLS		26.17		26.17
INCREMENTAL SEVERANCE TAX $/BBL		$0.500		$0.930

CURRENT ELF	0.564894
X	
STATUTORY RATE	27.90%
=	
EFFECTIVE RATE	15.7605%
X	
INCREMENTAL MBBLS	26.17
X	
W/H PRICE	5.90
=	
TOTAL TAX $M	$24.33
+	
INCREMENTAL MBBLS	26.17
=	
INCREMENTAL TAX $/BBLBBL	$0.930

SFC 5/4/89
Hugh Pratney
ARCO

SFC 5/4/89
Hugh Modley
ARCO

Prudhoe Bay Production
If Development Had Been Suspended July, 1981



State Revenues on the Incremental Production
Millions of Dollars

Royalty	1,300
Severance Tax	650
Ad Valorem Tax	800
St. Income Tax	550
Total Revenue	3,300

Prudhoe Bay
1981-1988 Industry Investment

	$ MM
Additional Wells	2,550
Producing Wells 450	
Injection Wells 123	
Other Wells 23	
Waterflood	2,099
Production Facilities	1,475
Gas Handling	470
Enhanced Oil Recovery	620
Other	820
Total	$8,040

SFC 5/4/89
Hugh Mottey
ARCO

Testimony, ELF

Juneau, AK

Good afternoon. My name is [redacted] I am Senior Vice President of Operations of ARCO Alaska, Inc. I appreciate the opportunity to offer testimony today concerning yet another proposed modification to the Economic Limit Factor of the Alaska Oil and Gas Properties Production Tax.

I feel certain that it will come as no surprise to you that ARCO Alaska opposes any changes to the Economic Limit Factor (ELF) which would have the effect of increasing the oil and gas industry's tax burden. We certainly identify with your problems concerning the potential budget deficit generated by the drop in crude oil prices. We have had to make a number of difficult decisions because of lower crude prices, including organizational restructuring and substantial reductions in costs, because our revenues, like yours, were and are, tied to the price of crude oil.

Our economics for making investment decisions contain two principal components. Estimated prices and estimated costs. We know we can't control prices, and we have learned we don't have the ability to predict them very well either. That leaves only cost. Other than the actual costs of transporting the crude oil, the largest single cost we have in Alaska is not the result of the remoteness of the fields or even the cold. The largest single item of cost we face in Alaska is taxes. Higher costs or lower prices result in exactly the same thing -- more oil left in the ground -- more oil that could be recovered becomes

uneconomic to recover. That oil which is left in the ground because it is uneconomic will not return any royalties to the State, and it's from these royalties that the contributions are made to the Permanent Fund. It will not result in the payment of any production tax nor generate any income tax. Oil left in the ground will not create jobs. It will not utilize the facilities already available for its production, therefore, those facilities will generate less ad valorem tax revenues. The ELF helps to reduce the regressive effect of a gross production tax and prevent the premature cessation of oil production. Short-term fixes resulting in higher costs today have the result of removing jobs today and revenue from the future.

High crude prices have meant more tax and more royalty for the state. Those high prices have also equated to more crude oil reserves and more jobs to produce those reserves. However, reserves are not the equivalent of the total amount of crude oil in a reservoir. There is also an economic consideration. Reserves are instead only equal to the amount of crude oil that can be economically produced. Added crude reserves come when prices have been high enough to provide the economic incentive to pay for the technology specific to each reservoir and to pay for workers and equipment to implement that technology in each reservoir. Low prices mean reduced crude reserves; high costs likewise mean reduced crude reserves.

I want to show you this afternoon some information about the Kuparuk River Unit which should give you cause to move carefully in considering changes to the ELF. It is my understanding that the administration has prepared the 1990 budget based on a $14 Gulf Coast North Slope crude price. I would like to call your attention to Exhibit I, which indicates the impact on the Kuparuk River Unit

of a $14.01 crude oil price. Kuparuk is the second largest oil field in North America with a current daily production rate of around 300,000 barrels. Our studies indicate nearly a billion barrels of oil can be produced with the existing wells and facilities. Half as much again is recoverable with additional capital spending. One might suppose that this field is an extremely profitable investment. But contrary to what you read in the papers or see on television, at $14 a barrel, Kuparuk is anything but profitable. As the exhibit so clearly shows, the State already, with the current ELF, receives more than 100% of the available net revenue on each incremental barrel of crude.

Even at its current peak production rate, only the State of Alaska, not the Kuparuk investors, receives a profit. These numbers paint a rather bleak picture at $14 a barrel. How can increasing the production tax burden by more than 100% over the next ten years, as HB-118 would do, be justified when you look at the economics? The State would certainly appear to be receiving a great deal more than a fair share of the available revenue.

The producer's return on each incremental barrel of oil will determine whether additional investments are made to produce more oil. Kuparuk has no natural gas cap to force the oil from the ground. From the day the first barrel was lifted, pressure has been decreasing, and production on a per-well basis would decline without extensive additional investment in enhanced recovery projects. These new investments are very costly and can only provide for a slower decline in production than would otherwise occur. The loss per barrel that you see is the amount that must support the economic decision of whether we continue to create additional crude oil reserves in the Kuparuk River Unit. Do we operate a drilling rig to do well workovers to produce more barrels when we

lose $.14 on each barrel? Does it look better to double the production tax and increase the loss to $.32? There is not a multiplier or an exponent which will convert this loss to an economic incentive to spend more money, to generate more barrels at a loss. What is at issue is the one half billion barrels in the ground that require additional wells and investment to produce.

We are currently looking at a long-range plan for Kuparuk involving what we hope to be a continuing development package. As attached Exhibit II shows, there are many development projects left to be done at Kuparuk, and they would require additional capital of almost $1.6 billion and would create additional Alaskan jobs amounting to nearly 4000 man years of construction. Many of those projects will stay on the drawing board unless we have higher crude oil prices or lower costs -- or both. We can't do it without your help. The industry can't live with low prices and higher taxes. Among these projects, for example, is a drill site on the periphery of the Kuparuk field. Our plans call for a project consisting of 12 wells to be drilled on the site, providing an additional 12 million barrels of new oil reserves. Under the State's price forecasts and the present tax laws, this project is only marginally economic. If HB-118 is enacted, this project won't happen. Twelve million barrels of oil and effectively $35 million in State revenue will be left in the ground. Of the $35 million, $7 million would go into the Permanent Fund.

The importance of tax burden in a project evaluation cannot be overstated. The ELF plays a pivotal role in mitigating the regressive nature of the Alaska production tax by taking into account the economic realities of oil field operations. Those realities are that it doesn't matter how large or small the field is, what does matter is that each new project must stand on its own by showing

a positive net present worth. Although prices are still very low, the current ELF provides a small but measurable incentive to help reduce some of the costs associated with producing more oil.

When I initially came to Alaska in 1968, the severance tax rate was 1%. A step production tax was introduced in 1974 to help mitigate the production tax burden on wells whose production was at certain low levels. This step methodology was modified in 1977 with the introduction of the ELF, and the maximum statutory rate was increased to 12.25%. Again in 1981 the statutory rate was increased to 15%, the highest production or severance tax rate in the nation. In addition, the application of the ELF was limited during the first ten years of production. As the curves in Exhibit III indicate for the Kuparuk Field, the burden on the production tax has not only changed by calculation method, but it has continually increased. Kuparuk would clearly be paying less production tax under prior laws than it would be paying under HB-118. As the top line of the graph plainly shows, HB-118 does not provide a slowly declining tax rate, or even a step decline, as production drops off. HB-118 is more on the nature of a cliff, where the production of the wells in the field must be so low before any reduction in tax is realized that under North Slope economic realities, the wells could not be operated at these production levels. This can be restated by saying that the Kuparuk Field will shut down before the ELF in HB-118 mitigates anything but an insignificant amount of the production tax.

An increase in taxes also has the direct effect of reducing the amount of capital available for exploration and production in the state. The modification of the ELF embodied in HB-118 is an increase in taxes. This bill provides only a short term revenue boost to cover excessive current government spending. it will not

solve the fiscal difficulties the state now faces, and if it is enacted, it will be at the expense of long-term stability and growth. Too much of the oil industry's resources are being drained out of resource development and into government. It is time for the Legislature to set the pace for Alaska by putting into place policies that attract new investment and provide incentives to increase current investments. The current ELF formula does help to provide incentives to increase production, while HB-118 severely limits those incentives and effectively reinstates the regressive inequities of the gross production tax.

In closing, I would like to state that ARCO Alaska believes that HB-118 will not be advantageous to the economy or the citizens of Alaska. Its enactment would place an onerous additional tax burden on the oil industry that would remove to other states or countries funds that could otherwise be spent on additional investment in Alaska. HB-118 would create a disincentive to future Alaska exploration and development and will not maximize the recovery of Alaska's oil resources. ARCO Alaska strongly opposes House Bill 118.

ANS Net Revenue
Kuparuk River Field

	Current Law $/bbl	HB-118 $/bbl
Assumed Crude Price	**14.01**	**14.01**
Tanker Freight	2.70	2.70
Quality Differential	0.40	0.40
TAPS Tariff	3.11	3.11
Kuparuk Pipeline	0.70	0.70
Pipeline Loss-	0.10	0.10
Wellhead Price	7.00	7.00
Production Cost and Capital Recovery	5.43	5.43
Total Net Revenue	1.58	1.58
State Royalty	0.82	0.82
Severance Tax	0.54	0.82
Property Tax	0.44	0.44
State Income Tax	-0.01	-0.02
Total State	1.79	2.06
Federal Income Tax	-0.07	-0.17
Producer Profit	-0.14	-0.32

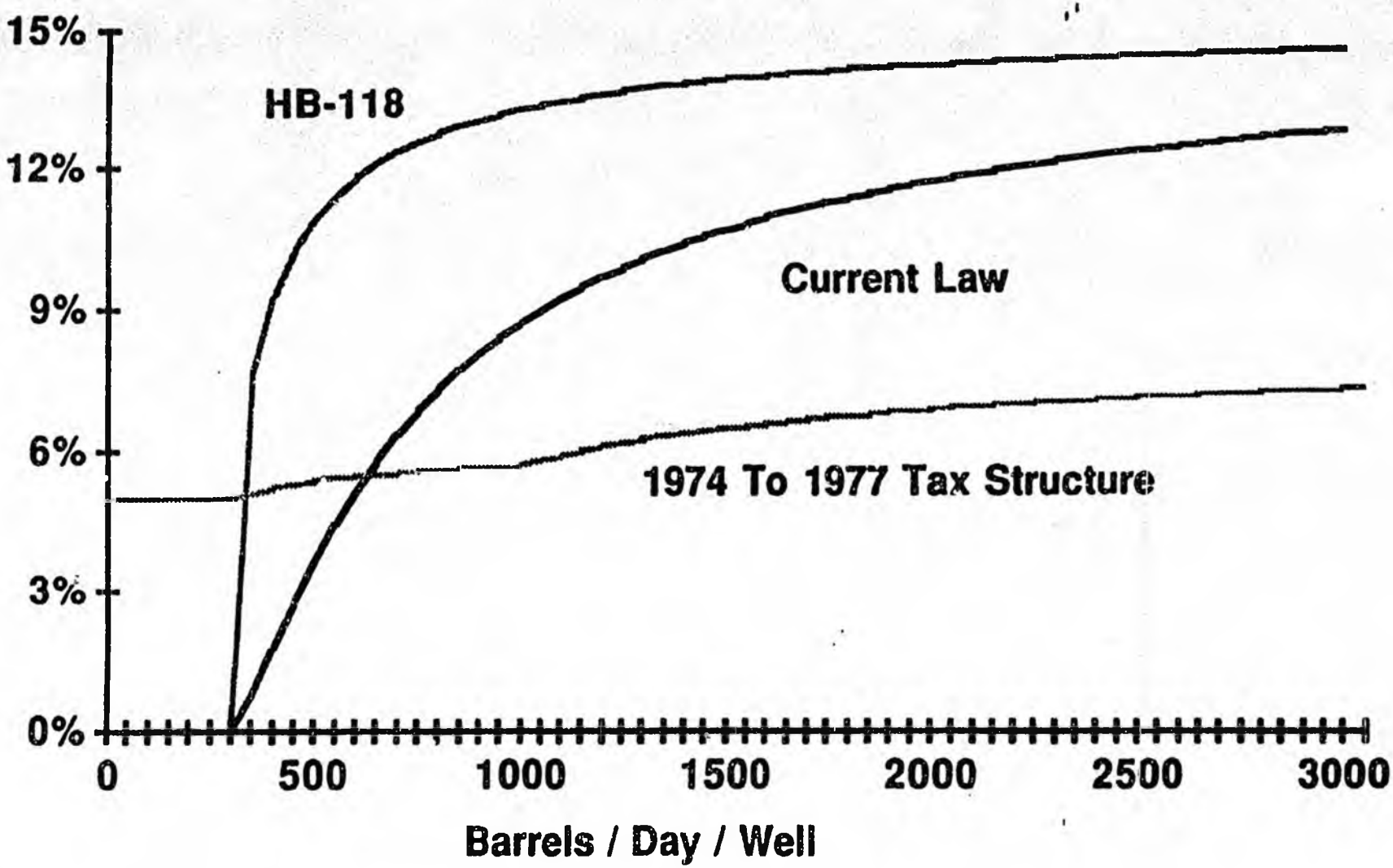
Source:
Barclays de Zoete Wedd, September 1988
Alaska Department of Revenue October 1988
State of Alaska Royalty and Severance Methodology

PROJECT PORTFOLIO

KUPARUK

Project	Description	Timing
Drilling		
• Peripheral Drillsite 2K	Selective peripheral DS development	1989 SU
• Peripheral Drillsite 3R	on 160 acre spacing. Total of 98	1989 SU
• Peripheral Drillsite 2M	additional wells	1990 SU
• Peripheral Drillsite 2L		1990 SU
• Peripheral Drillsite 3G		1990 SU
• Rem. Peripheral Dev.	14 drillsite expansions, 6 new drillsites, 180 additional wells 1 rig 1989, 2 rigs thereafter	1990===>
Waterflood/EOR		
• LIP-3 Expansion	Additional water handling capacity @ CPF-3	1990 SL
• Infill Drill @ DS 1Y/2Z	22 new wells. Improve EOR efficiency	1989===>
• Infill Drill @ DS 1A	16 wells. Seed for Phase I Infill	1989 SU
• Phase I Infill Drilling	160 + 80 acre accelerate reserves	1991 SU
• Fullfield EOR	19 drillsites staged over 4 years	1991 SU

Effective Severance Tax Rates For Kuparuk



SFC 5/4/89

BP EXPLORATION

BP Exploration (Alaska) Inc.
900 East Benson Boulevard
P.O. Box 196612
Anchorage, Alaska 99519-6612
(907) 561-5111

TESTIMONY
BY
BP EXPLORATION (ALASKA) INC.
TO THE
SENATE FINANCE COMMITTEE
REGARDING
SCS CSHB 118 (THE "ELF" BILL)
May 4, 1989

Good Morning. My name is Thomas J. Williams, and I am here to testify on behalf of BP Exploration (Alaska) Inc. about the changes to the Economic Limit Factor (ELF) under House Bill 118.

Before discussing the proposed new formula for the ELF, I would first like to address briefly the so-called "Duncan amendment" added to the bill, which would dedicate part of the additional revenue from the new ELF formula to the oil and hazardous substance release fund -- let me call it the "spill fund" for short. This change is unnecessary in light of the special tax of five cents a barrel that the Senate has already passed. It is also unnecessary because none of the money from changing the ELF could go into the spill fund without annual appropriations, and you do not need a special statute on the books in order to make such an appropriation. Therefore, we recommend deleting this amendment from the bill.

We also recommend deleting the retroactivity section from the Resources Committee Substitute, because it is unfair.

Let me now turn to the proposed change in the ELF formula itself. We oppose the new formula under consideration, for two different kinds of reasons. One kind relates to the inappropriateness of any kind of tinkering with the ELF to raise taxes now, when fields are entering their decline. The other relates to the special foolishness that this particular formula embodies.

The present ELF formula is working perfectly well and as intended. Without an ELF, the production tax is regressive. That is, it would tax profitable and unprofitable fields at the same rate. The ELF makes the tax progressive by setting the rate higher for more profitable fields, lower for less profitable ones. Every field during its life makes a transition from a profitable phase to an increasingly less profitable one, until at last the cash costs equal revenues and production ceases.

Alaska has the highest nominal production tax rate in the country -- over three times higher than Texas, for example. The justification for such a high rate was and remains the fact that the ELF will scale the rate down as profitability drops. This means production is not left in the ground because of the tax.

Our figures show that the profitability of Prudhoe Bay has dropped by more than 65% from 1981 to 1988, because of higher production costs and lower prices. Analysis advanced by the Administration confirms the fact of a major decrease in profitability since 1981. Yet, with HB 118's ELF formula, this drop in

profitability would be matched by a minuscule drop in rate from 15% to 14.9 percent. If all goes as the Administration predicts, the tax rate will drop again for Prudhoe By in 1994 -- from 14.9% to 14.8 percent. With such an ELF field size becomes the dominant factor in determining the tax rate, and the concept of profitability is simply thrown out the window. This is not how ELF is supposed to work.

Contrary to claims that the present ELF is unfair to Alaska, the State's current structure of royalty and taxes is working extremely well. In 1981, when I was Commissioner of Revenue, the State was receiving 30% of the production revenue "pie." Compared to 1981, the State's share has soared over the last three years to 72% in 1986, 39% in 1987 and 49% last year, according to BP's data. This time of soaring for the State coincides with a period of significantly lower profitability for oil producers in Alaska, also beginning in 1986. According to its audited financial statements, BP's return on its North Slope investment (10%) during the last three years has underperformed that achieved by the Alaska Permanent Fund (12%), which took far less risk than BP was taking. Surely such a split of the "pie" over the past three years cannot be called unfair to the State.

The present ELF has also worked perfectly fine for small marginal fields. This, again, is contrary to what advocates of changing the ELF have said. Milne Point is often cited by them as an example of the ELF's failure to work. But the fact is, the present ELF had reduced the tax rate to zero during the last half

of the time that field was in production. No ELF -- not the present one, not the one in HB 118 -- can do more than that to help a field. Milne Point's problems had nothing to do with the production tax.

Moreover, there are no new, small North Slope fields that would be developed any sooner if the ELF is changed. Niakuk is waiting for a causeway permit. Milne Point is already coming back into production, without any change in ELF. Point McIntyre is still being evaluated to see if it is commercial. Seal Island awaits further improvement in the mid- to long-range price outlook, as well as an economically feasible permit for linking it to shore.

Supporters of HB 118 are emphasizing small fields to the detriment of large ones. It seems as if, for them, big is bad and smaller is better. This is backwards. Bigger is better. The importance of large fields for Alaska, both in the past and for the future, can scarcely be overstated. Without Prudhoe Bay, there would have been no TAPS, no Kuparuk, no Endicott, no Lisburne, no Milne Point. Without a large commercial field in ANWR, there will be no pipeline from ANWR to TAPS. Big fields are the keys that open the doors to the development of any smaller satellite fields that might be in their vicinity.

But big fields are more than that. They are themselves some of the very best opportunities we have for adding new reserves and extending production. Adding just 1% to the recoverable reserves of Prudhoe Bay is more than all the production that has

ever come out of Cook Inlet. In Kuparuk, too, there are projects that together could add half a billion barrels to its recoverable reserves -- nearly nine Niakuks, more than four Milne Points.

Despite the opportunities that big fields represent and the spin-offs that they can generate, House Bill 118 harks back to a pygmy world where "small is better." Not only are big fields bad, not only do they need to be inflicted with onerous taxes for their largeness, regardless of their profitability -- but HB 118 actually creates a new tax incentive to make large fields small, while creating a disincentive against making small fields any larger.

In testimony to the previous committees considering this bill, we have demonstrated mathematically that HB 118 will increase tax rates for larger fields even though they can have exactly the same amount of profit as a smaller one. If the field is large enough, the tax actually becomes larger than the entire amount of the profit. We have also shown that fields with the same percentage of production going to cover the cash costs of getting that production out of the ground can be taxed at radically different rates, depending on how large they are. When Prudhoe Bay is down to 500 B/D per well as Lisburne is now, the rate for Prudhoe (11.95%) will be nearly a thousand times greater than the rate for Lisburne (0.016%), simply because Prudhoe will still be larger then than Lisburne is now. The proof for both of these effects is attached to my written testimony.

Similarly, with field size in the exponent, adding new production to a field will increase the tax rate on all of the existing production from that field. If a new project is added to slow the decline, the extra production from that project will bear the burden not only of a higher rate, but it will also have to support the additional burden of an increased rate on all of the other production from the field. For a project is to go forward despite these disincentives of HB 118, it would have to be sufficiently robust, economically, to overcome this handicap and still allow me to get my money back out of the project with a reasonable profit. Otherwise, I'll put the money in a bank or do something else with it, instead of putting it into this Alaskan project.

I think creating this type of reward for smallness is terrible public policy and very foolish. This is not Lilliput, where Gulliver was a giant and where smallness may have been worth pursuing for its own sake. This is Alaska, and here there is nothing to dictate that big is bad and small is beautiful.

Putting field size into the ELF formula exponent, as HB 118 does, divorces ELF from the central idea of the percentage of production that is going to cover cash lifting costs. Field size becomes paramount, and with it comes the pernicious incentive, demonstrated in our example, to keep fields small and to let them get smaller.

Is this to be the key for Alaska's future, to discourage fields from being fully and quickly developed? As an Alaskan, I

for one hope not. When it comes to oil fields, big is not bad, it's better. That's what we should be fostering with tax incentives -- growth and sound development. Smaller is not better, and we should not create tax incentives to foster smallness.

Thank you for this opportunity to speak.

Prudhoe Bay

Average Production Rate per Well = 500 B/D
Number of Wells (projected) = 745
Fieldwide Production = 372,500 B/D

"A" = (1 - [PEL/TP])
= (1 - [(300*745)/372,500]
= 0.400000

"B" = [150,000/(TP/Days)]
= [150,000/372,500]
= 0.402685

"C" = [(460*WD)/PEL]
= [(460*WD)/(300*WD)]
= [460/300]
= 1.533333

Tax Rate = ELF * 15%
= [A^(B^C)] * 15%
= [0.400000^(0.402685^1.533333)] * 15%
= [0.400000^0.247902] * 15%
= [0.796801] * 15%
= 11.95202%

Lisburne

Average Production Rate per Well = 500 B/D
Number of Wells (projected) = 81
Fieldwide Production = 40,500 B/D

"A" = (1 - [PEL/TP])
= (1 - [(300*81)/40,500]
= 0.400000

"B" = [150,000/(TP/Days)]
= [150,000/40,500]
= 3.703704

"C" = [(460*WD)/PEL]
= [(460*WD)/(300*WD)]
= [460/300]
= 1.533333

Tax Rate = ELF * 15%
= [A^(B^C)] * 15%
= [0.400000^(3.703704^1.533333)] * 15%
= [0.400000^7.445755] * 15%
= [0.001089] * 15%
= 0.01634%

EFFECTS OF CHANGING THE ELF ON DIFFERENT
SIZED FIELDS WITH THE SAME AMOUNT OF PROFIT

ASSUMPTIONS

Price per Barrel	$7.36
Production Needed to Cover Operating Cost	300 B/D per well
Profit ($ per day)	$7,360
Profit (B/D)	1,000
State Royalty Share	12.50%

Total Production	Wells	Profit ($/D)	SB 97 Tax ($/D)	HB 118 Tax ($/D)
31,000	100	$7,360	$0.0000453	$0.0000000000006
61,000	200	7,360	0.25	0.0047
91,000	300	7,360	9.94	5.35
121,000	400	7,360	81.66	148.71
151,000	500	7,360	329.91	1,016.40
181,000	600	7,360	903.38	3,548.36
211,000	700	7,360	1,948.68	8,547.76
241,000	800	7,360	3,588.79	16,431.79
271,000	900	7,360	5,915.97	27,265.75
301,000	1000	7,360	8,992.83	40,889.43
331,000	1100	7,360	12,856.71	57,030.21
361,000	1200	7,360	17,525.00	75,377.76
391,000	1300	7,360	22,999.89	95,626.09
421,000	1400	7,360	29,272.53	117,494.13
451,000	1500	7,360	36,326.21	140,733.53
481,000	1600	7,360	44,138.91	165,129.88
511,000	1700	7,360	52,685.12	190,500.56
541,000	1800	7,360	61,937.30	216,691.27
571,000	1900	7,360	71,866.86	243,572.18
601,000	2000	7,360	82,444.92	271,034.33
751,000	2500	7,360	144,085.03	414,328.17
901,000	3000	7,360	218,012.58	563,165.99
1,051,000	3500	7,360	301,647.96	714,329.07
1,201,000	4000	7,360	393,030.40	866,360.07
1,351,000	4500	7,360	490,677.84	1,018,575.70
1,501,000	5000	7,360	593,460.96	1,170,652.32

TESTIMONY OF
GERALD SERENA

FOR

EXXON COMPANY, U.S.A.

BEFORE THE

SENATE FINANCE COMMITTEE

SCS CSHB No. 118

MAY 4, 1989

SFC 5/4/89

My name is Gerald Serena and I am a tax lawyer for Exxon Company, U.S.A. We appreciate the opportunity to comment once again on legislation proposed to modify the Economic Limit Factor. In previous hearings before committees of the House and Senate, Exxon has made clear its opposition to any proposals that would effectively eliminate the benefit of ELF for the Prudhoe Bay and Kuparuk fields. Our message has not changed.

This bill would significantly increase production tax on 90% of Alaska's oil production. This increased cost of production would adversely affect investment in future Prudhoe Bay development projects. These projects are economically marginal in the same sense that the start-up of some smaller fields on the North Slope might be marginal. Such projects are necessary to optimize production from Prudhoe Bay, which is crucial to Alaska's economic future.

Alaska's production tax law is comprehensive, well-reasoned, and effective. It combines two essential elements -- the highest nominal tax rate in the United States, and an Economic Limit Factor which reduces this rate on a field-by-field basis as measured by production rate per well in the field.

IT HAS WORKED UP TO NOW AND IT WILL CONTINUE TO WORK AS DESIGNED AS PRUDHOE BAY PRODUCTION DECLINES.

THE PRODUCTION TAX ON OIL FROM PRUDHOE BAY IS HIGH ENOUGH BY ANY STANDARDS. WHEN COMBINED WITH THE OTHER STATE TAXES ON NORTH SLOPE PRODUCTION OPERATIONS, IT IS CLEAR THAT OUR INDUSTRY IS CONTRIBUTING ITS FAIR SHARE OF STATE TAX COLLECTIONS. WHEN YOU COMBINE TAXES AND ROYALTIES, OUR INDUSTRY ACCOUNTS FOR ABOUT 85% OF STATE REVENUES. FURTHERMORE, ROYALTIES AND OTHER LEASE PAYMENTS HAVE ESTABLISHED THE $10 BILLION ALASKA PERMANENT FUND.

IN 1988, AVERAGE DAILY OIL PRODUCTION AT PRUDHOE BAY DECLINED TO 1,450,000 BARRELS FROM THE 1,500,000 AVERAGE ACHIEVED IN PRIOR YEARS, AND WE ANTICIPATE THAT THIS DECLINE WILL CONTINUE. THIS WAS INEVITABLE. IT WAS DELAYED UNTIL NOW BY AN EFFICIENT AND OPTIMAL DEVELOPMENT PLAN THAT CONTINUES TO BE IMPLEMENTED. SINCE INITIAL DEVELOPMENT, EXXON HAS EVALUATED AND SUPPORTED SEVERAL PROJECTS TO INCREASE RECOVERY AT PRUDHOE BAY. THE COST PER BARREL FOR THESE PROJECTS TO INCREASE RECOVERY WAS TWICE THE COST OF THE INITIAL DEVELOPMENT.

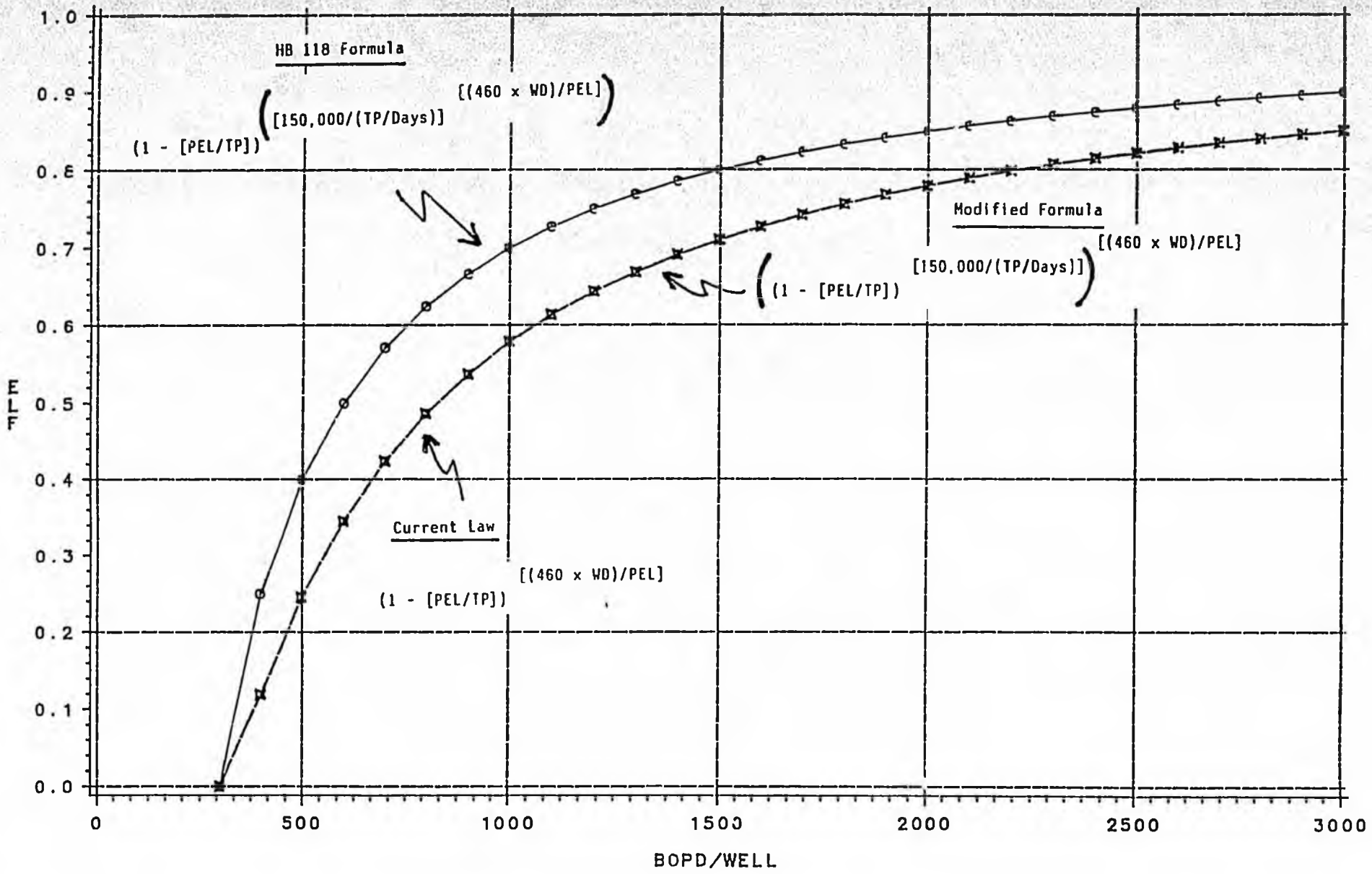
After current development is completed, it is estimated that 10 billion barrels of oil will be left in formation at Prudhoe Bay. H.B. 118 would increase the cost of producing those barrels and thereby reduce the incentive to undertake such projects. Future projects to maintain production and increase recoverable reserves at Prudhoe Bay will cost more than five times as much as the initial development. It is conceivable that undeveloped marginal reserves at Prudhoe Bay might exceed the potential reserves of all the smaller field prospects on the North Slope identified to date.

H.B. 118 is based on the assumption that larger oil fields should contribute production taxes at a higher rate than smaller fields. Tax policy makers should not confuse the production rate of a field with its profitability. The Prudhoe Bay field in decline is a perfect example.

Our recommendation today is the same as it has been at all the prior hearings on this legislation. We urge you not to support H.B. 118. It will adversely affect future development investment at Prudhoe Bay. Such investment is needed to maximize oil production, thereby increasing the state's royalty and production tax base.

HB 118 – ELF FORMULA SENSITIVITIES

150,000 BOPD FIELD

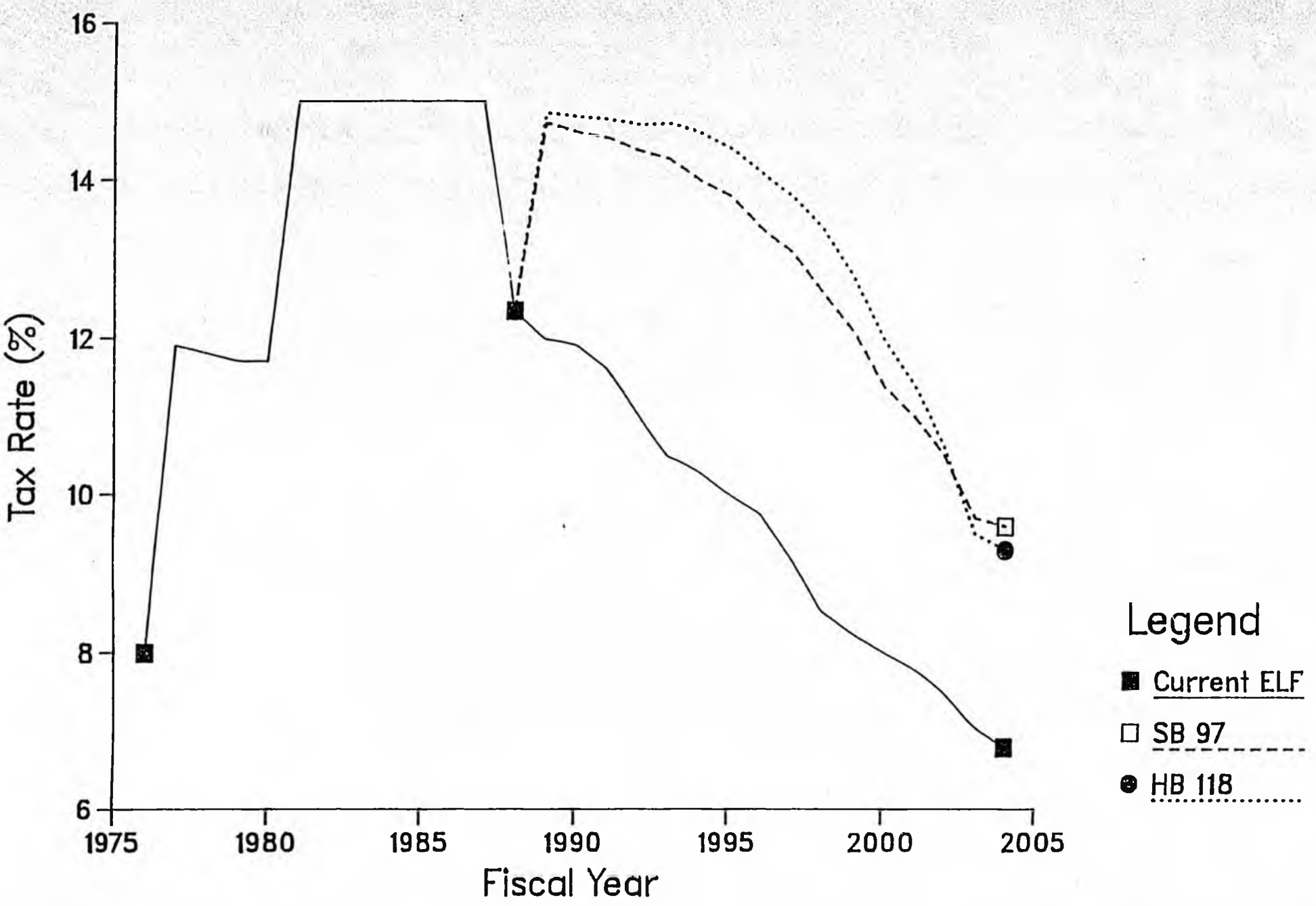


X X X X X CURRENT TAX
o o o o oH.3118 FORMULA
□ □ □ □ □MOD FORMULA

HOUSE FINANCE COMMITTEE
03-16-89
B.V. LIDDELL

PBU Historical and Projected Tax Rate

Includes SB 97 and HB 118 Impacts



B. V. Liddell
4-23-89

#1

Attachment 9

Jobs from a Small Offshore Oilfield

I. Exploration

Drilling	285
Island Construction	480
Transportation Support	150
Base Camp	150
Total	1065

II. Development

Drilling	300
Island Construction	480
Transportation Support	75
Base Camp	240
Total	1095

III. Production

Production	450
Island Maintenance	330
Transportation Support	75
Base Camp	240
Pipeline Maintenance	75
Total	1170

Assumes two twelve hour shifts with a two week on / one week off rotation.

Source: Abstracted from Han-Padron Associates, Beaufort Sea Petroleum Technology Assessment, Technical Report No. 112, prepared for Minerals Management Service, Alaska Outer Continental Shelf Region, Leasing and Environment Office, Social and Economic Studies Unit, March 1985.

Attachment A

Erickson
SFC: 5/6/89

Attachment B.

6-May-89

Shares of ANS Net Revenue

	Note	Kuparuk Ak DOR High Case 3/89 Weighted Average $/bbl		Gulf Coast $/bbl		West Coast $/bbl		CSHB-118 Kuparuk Ak DOR High Case 3/89 Weighted Average $/bbl		Gulf Coast $/bbl		West Coast $/bbl	
DOR Crude Oil Price	3	18.21		18.96		17.84		18.21		18.96		17.84	
DOR Tanker Freight	3	1.77		2.99		1.06		1.77		2.99		1.06	
Quality Differential	1	0.40		0.40		0.40		0.40		0.40		0.40	
DOR TAPS Tariff	3	3.02		3.02		3.02		3.02		3.02		3.02	
Kuparuk Pipeline	1	0.70		0.70		0.70		0.70		0.70		0.70	
Pipeline Loss	1	0.10		0.10		0.10		0.10		0.10		0.10	
Wellhead Price		12.22		11.75		12.56		12.22		11.75		12.56	
Production Cost	1	2.01		2.01		2.01		2.01		2.01		2.01	
Overhead&Interest	2	0.67		0.67		0.67		0.67		0.67		0.67	
Capital Recovery	1	3.41		3.41		3.41		3.41		3.41		3.41	
Total Net Revenue		6.12		5.65		6.46		6.12		5.65		6.46	
State Royalty	4	1.47		1.41		1.51		1.47		1.41		1.51	
Severance Tax	3	0.95		0.91		0.97		1.43		1.38		1.47	
Property Tax	1	0.44		0.44		0.44		0.44		0.44		0.44	
State Income Tax	5	0.10		0.09		0.11		0.08		0.07		0.09	
Total State		2.95	48%	2.85	50%	3.03	47%	3.42	56%	3.30	58%	3.51	54%
Federal Income Tax		1.08	18%	0.95	17%	1.17	18%	0.92	15%	0.80	14%	1.00	16%
Producer Profit		2.09	34%	1.85	33%	2.27	35%	1.78	29%	1.55	27%	1.95	30%

Note:

1 Barclays de Zoete Wedd, September 1988
2 ARCO Annual Report 1988
3 Alaska Department of Revenue March 1989
4 Royalty 1/8 less processing fee
5 St Income Tax Estimated 3%
State of Alaska Royalty and Severance Methodology

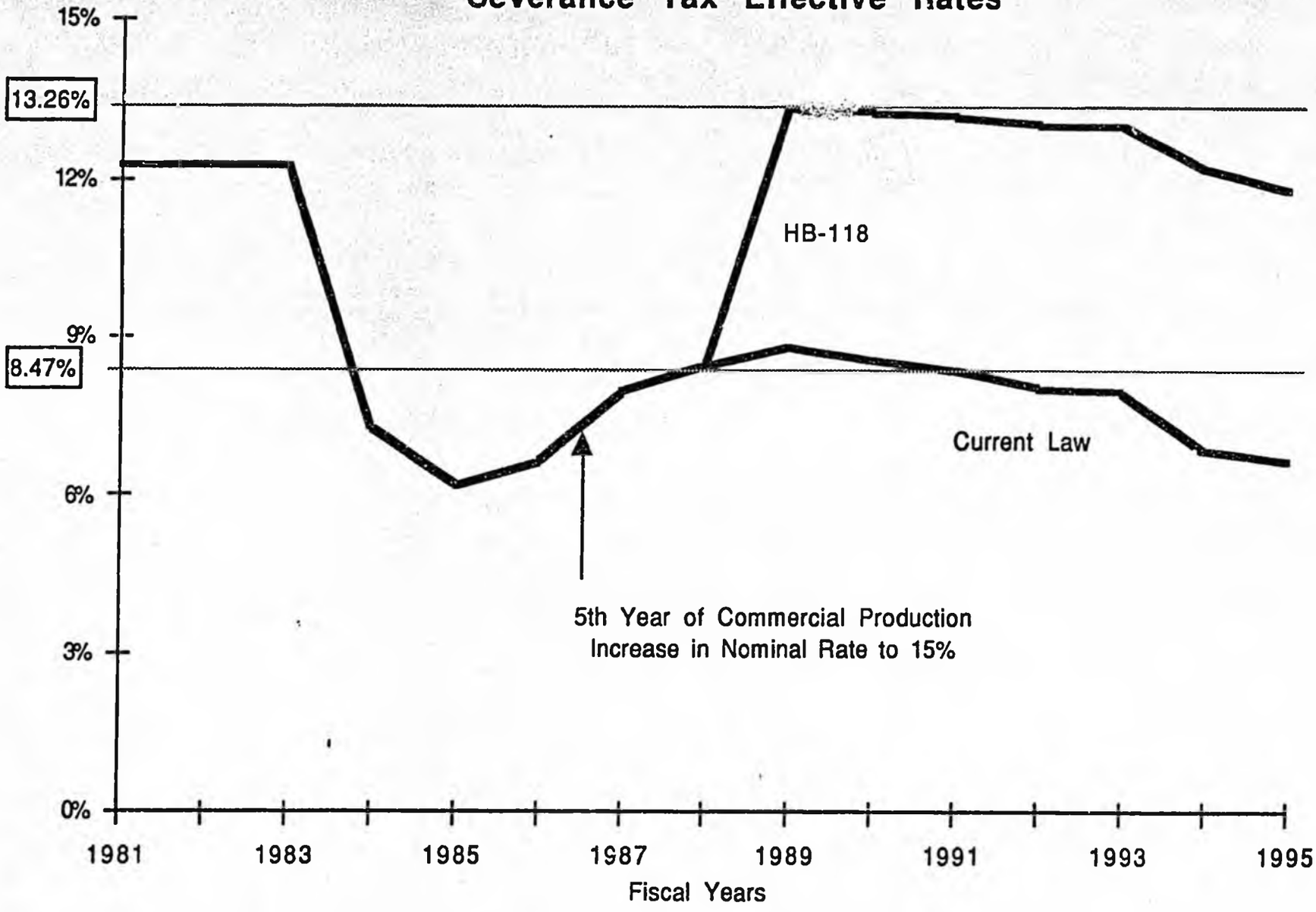
#4

5/6/89

5/6/89; SFC Mtg; ARCO

Attachment C

Kuparuk River Field
Severance Tax Effective Rates



#3

5/6/89

SFC: 5/6/89
Moctus, ARCO

#2

MEMORANDUM

State of Alaska
Office of the Governor
Division of Policy

TO: The Hon. Bill Hudson
Alaska State Representative

DATE: March 18, 1989

FROM: Gregg Erickson GKE
Senior Economist

SUBJECT: Would The ELF Change Cause Oil To Be Lost?

You asked us to address your concern that the proposed change in the economic limit factor might adversely affect development within the Prudhoe Bay or Kuparuk fields.

Factors Affecting Future Production

The industry claims that oil will be left in the ground at Prudhoe and Kuparuk, the two fields that will have their tax rates increased, if the ELF legislation is adopted.

The general economic principle underlying this concern is valid, but countervailing factors are also at play:

- The new ELF should increase drilling, production and employment in the truly marginal fields, like Niakuk, Endicott, Milne Point, probably Point McIntyre, and importantly, most if not all fields yet to be discovered.[1] In these fields the severance tax will either be sharply reduced or eliminated entirely. These smaller fields are likely to require more labor-intensive development, so focusing benefits on them is likely to maximize the number of jobs generated from oil development.[2] For example, it takes 30 percent more labor to produce a barrel at Endicott than in Alaska as a whole.[3]

- The new law encourages peripheral and in-fill drilling even at the big fields. Producers who add wells to maintain production or retard natural decline at Prudhoe or Kuparuk will be rewarded

[1] Fields with low per-well production, as will likely be the case at West Sak and as is the case in Cook Inlet, will pay no tax under either the current or proposed ELF.

[2] Jobs from marginal field development can be very significant. Endicott required in 1988 a workforce of approximately 560 persons. Frank Baker, "Oil activity increasing on North Slope," *Juneau Report* (Standard Alaska Production Company), April 1988, p. 1.

[3] Endicott labor productivity = (100,000 B/D)/560 jobs; Alaska oil industry labor productivity = (2,000,000 B/D)/8,600 jobs.

Attachment D

SFC: 5/6/89

with lower marginal and average tax rates, just as they are under the existing ELF. What is eliminated under the proposed ELF is the direct drilling subsidy documented by ARCO in their 1987 testimony to House Finance. The reduced rates under the field ELF (CSHB 164, from 1987) and the subsidy inherent in the current law are both demonstrated in the attached summary of the ARCO comparison.

- Even assuming jobs were foregone at Prudhoe and Kuparuk in the near term due to the tax increase, they would be more than recouped later, when taxes will be lower than under current law. As with small fields, the declining stages of production from large fields tend to require more labor-intensive production methods. Staging capital investments to shift production slightly into the future is likely to have no effect on lifetime production totals, but could boost the number of jobs created.

Engineering and Economic Evidence

But what will actually happen? The state's expert witness, Mr. Chatterton, an experienced petroleum engineer, noted the industry's concern with the production effects of HB 118. He expressed his opinion last month in testimony before House Resources:

> "[T]here is advertising in the papers and so forth that would tend to give the impression that if this House Bill 118 were passed into law as you now have it, why it would create all kinds of havoc in the oil and gas production end of the industry.... I just submit to you that it won't make one difference. [T]he industry will still continue at the level of activity that they now are carrying out, that that level of activity may even increase....
>
> I appreciate the opportunity to vent my ire that has developed over what I consider misleading advertising or disinformation, or misinformation, whatever you want to call it."[4]

The state's petroleum economists, examining this same issue from a quite different perspective, have produced economic evidence that tends to support Mr. Chatterton's engineering

[4] House Resources Committee Testimony of Chat Chatterton, Chairman, Alaska Oil and Gas Conservation Commission, 23 February 1989, H.R.C. tape 89-141.

Attachment D

5/6/89

judgment.

Over several years the economists have published the details of a set of computer models that simulate the complex economics of field development on the Alaska North Slope.[5] They have used these models to examine ANS oil development with and without the ELF change. The most significant result was that no statistically significant impact (positive or negative) could be detected from the tax change in HB 118.[6]

Obviously, this kind of model depends greatly on its assumptions. The computer model and documentation have been made available to the industry to review and critique. Industry sources say they disagree with the finding, but have provided only anecdotal evidence in support of their position. [7] Nevertheless, we believe that the the producers have also used sophisticated models to investigate the effects of proposed tax change on ANS development economics.

Historical Perspective

The ELF question became a public policy issue in 1985. That year oil producers ran an advertising and public information campaign which centered on the claim that marginal field development was one of industry's major objectives in Alaska.

"We must have stable tax policies in order to make the risks associated with marginal fields worth taking," stated Sohio's George Nelson in a March speech.[8] A typical advertisement said the state would lose jobs if it didn't

---

[5] Roger Marks, "Measuring the Incentive to Drill a Development Well Under Alaska's Severance Tax Structure," Alaska Department of Revenue Working Paper, Nov. 1987. Also, Roger Marks and J. William Moore, "A Model To Assess Economic Feasibility and Optimum Production Volume for North Slope Fields," *Journal of Petroleum Technology*, Aug. 1987, pp. 943-954.

[6] The state's analysis suggests that the *average expected result* from adopting HB 118 would be 2.5 million barrels of added production between now and 1993 (about one day of extra production over the entire period), then less production during the 1993 to 2014 period (equal to about one day of postponed production during each year of that period), and finally, additional intervals of added production in 2015 and beyond. The standard deviations are quite large in comparison with the small effects being shown. This forces a statistical conclusion that the impact of changing the law, if any, is too small to detect. The effect, if any, is lost in the noise of the many randomized variables, including oil prices, that the model takes into account in its calculations.

[7] Also see Stan Jones, "Of ELF, state and oil: Industry can't back up claims," *Anchorage Daily News*, March 15, 1989, p A1, A8.

[8] *Alaska Journal of Commerce and Pacific Rim Reporter*, Mar. 11, 1985.

Attachment D

5/6/89

> provide an investment climate that will encourage oil companies and other businesses to develop new ventures....[S]maller fields already have been discovered on the North Slope. But they are marginal fields....[9]

Responding to oil industry concerns, the Department of Revenue initiated studies to determine the economic effects of the suggested tax changes. These studies, particularly the computer simulations, suggested that adverse development impacts could indeed be expected at marginal fields under the tax proposals then being considered.[10]

Tax changes that would leave siginficant quantities of economically producable oil in the ground were clearly unacceptable on policy and political grounds. The author of this memorandum and others at OMB were asked to try to develop revenue-raising oil tax alternatives that would not cause any aggregate loss of production or jobs. OMB proposed the "field ELF" formula, specifically designed to improve the economics of smaller fields while collecting more from the distinctly non-marginal Prudhoe and Kuparuk.[11]

Modeling tests by the Department of Revenue suggested that the formula performed well. The "field ELF" was introduced in the House in 1987, as an element of a committee substitute for the administration's ELF suspension bill. Different versions have evolved in the House and Senate and are being considered this year in HB 118 and SB 97.

Conclusions

It is our judgement that the ELF change is unlikely to have any discernible impact, positive or negative, on overall Alaska oil investment or production. By tilting development incentives in favor of fields with lower daily production, the new ELF is likely to have a positive effect on employment.

---

[9] ARCO Alaska, Inc., advertisement, *Alaska Journal of Commerce and Pacific Rim Reporter*, Oct. 14, 1985.

[10] The studies were reported later by Charles Logsdon, "Analysis of ELF Alternatives," Alaska Department of Revenue for the Joint Special Committee on Tax Policy, Dec. 1986. The tax alternatives then under consideration included elimination of the ELF, elimination of the ELF's application to the floor price, and an upward revision of the floor price.

[11] In the "field ELF" formula, daily production and per-well productivity jointly determine the ELF value and percentage severance tax.

Attachment D

5/6/89

cc: Members, Senate Special Committee on Oil and Gas
Members, House Finance Committee
The Hon. H.A. "Red" Boucher

Attachment

Attachment D

5/6/89

Attachment D

Chart 8

ARCO Kuparuk Example

	Current Law	Proposed Law
Change in Annual Gross Revenue	$981,000	$981,000
Change in Annual Severance Tax	($37,846)	$58,611
Tax Rate on Incremental Production	-3.9%	6.0%
Average Tax Rate Before Drilling	7.820%	10.944%
Average Tax Rate After Drilling	7.806%	10.938%
Percent Change in Average Tax Rate Due to Drilling	-0.180%	-0.055%

Division of Policy, 9/9/88

5/6/89

#5

Kuparuk River Field
Actual March Production Rates
for the 2 most recently completed
Drillsites

WELL	March'89 Daily Production
3O-1	1904
3O-8	930
3O-10	878
3O-14	866
3O-5	802
3O-2	788
3O-6	619
3O-4	580
3O-7	507
3O-9	502
3O-16	452
3O-18	413
3O-11	322
3O-17	261
3O-3	253
3O-15	239
3O-12	215
3O-13	68
Average	589

WELL	March'89 Daily Production
3H-2	3960
3H-8	2194
3H-5	1984
3H-18	1293
3H-16	1127
3H-19	1054
3H-3	563
3H-21	536
3H-4	494
3H-20	346
3H-13	263
3H-1	180
3H-14	121
3H-10	119
3H-11	1
Average	949

Attachment E

SFC: 5/6/89
Mosley, ARCO

CHANGING THE ELF:
A REVIEW OF THE 1989 ISSUES

- The Central Issue: Whether the riches of Alaska's resources should go mostly to outsiders who provide the capital and technology, or whether a reasonable share should go to benefit Alaskans.

- Jobs and Future Production: Engineering testimony showed no loss of production from the ELF change. Econometric studies support that finding. The industry's contrary assertions don't hold up according to a *Daily News* article, "Of ELF, state and oil: Industry can't back up claims."

- Marginal Fields: Conoco, the working interest owner at the small Milne Point Field supports the proposed change in the ELF formula. The bill *reduces* taxes on fields that need the help.

- The Formula: Analysis prepared for Sen. Halford shows almost equal sensitivity to both field size and per-well production.

- The So-called "Deal": Alaska's constitution prohibits any "deal." Sohio's 1981 see-you-in-court letter shows there was no "deal."

- The ELF Subsidy: ARCO"s analysis from 1987 shows how the existing ELF results in a subsidy (a negative severance tax).

- Per Barrel Profits: At today's prices, production and transportation profits in Alaska come to $6.62 per barrel. Changing the ELF formula will reduce that by only 3 percent, to $6.41 per barrel.

- Overall Profits: The oil companies have made profits of $42 billion off their Alaska operations. At today's oil prices, the companies can expect to generate in Alaska $7.0 billion in cash -- including $4.9 billion profits -- this year alone.

- Reinvestment: In 1989, the companies only plan to reinvest $750 million. The industry is liquidating its Alaska operations.

- Shares: At today's oil prices the companies are collecting 46.5 percent of the available net income from Alaska operations. Alaska state and local governments are collecting only 28.6 percent.

SFC : 5/6/89

CHANGING THE ELF:
A REVIEW OF 1989 ISSUES

prepared for the Senate Finance Committee
May 5, 1989

by

Gregg Erickson
Division of Policy

The purpose of this submission is to review and summarize from our perspective the issues and arguments of the ELF debate as they unfolded in the five legislative committees that previously heard the ELF legislation.

The Administration's Perspective

In February, we offered the House Resources Committee the administration's overview of the ELF tax issue. We argued that the major question is to determine how much of the riches of Alaska's resources should go to benefit the outsiders who provide the capital and technology to exploit this resource, and how much should go to benefit the Alaskans who are its owners. We showed that this is the same basic issue that Alaska has faced throughout its history, with its furs, salmon, gold, the copper ore at Kennicott, and other resources, first under Russian and later American colonial rule, and unfortunately also as a state. However technical or heated the topic became, we tried to keep this historical perspective in view.

The oil industry's representatives didn't think the issue should be cast in these terms. They accused us of appealing to excessive emotionalism. But they never argued that dividing the benefits wasn't really at the heart of this question.

Jobs, Future Development, and Marginal Fields

In February, the main thrust of the industry's arguments to our first committee of referral, House Resources, was that the ELF change would actually hurt Alaska by reducing employment and

future production. ARCO in particular focused on the effects of the change on Kuparuk. We provided testimony from Mr. Chatterton, an engineer with over 40 years of experience in petroleum production, whose professional opinion was that the the ELF change would have no impact on the pace of development at Kuparuk or Prudhoe. The companies presented no engineering evidence to refute the testimony.

While the industry used advertising to imply that jobs would be lost, Anchorage Daily News reporter Stan Jones later took a hard look at their assertions and wrote an article that ran under the headline "Industry can't back up claims." The administration's numbers, on the other hand, showed that only about 70¢ of the value of every barrel shipped goes to pay wages in Alaska; we showed that more than 10 percent of that 70¢ goes to outsiders working in Alaska. The industry offered no contrary evidence.

In the House Finance Committee, ARCO presented an analysis designed to show how the ELF change would kill an incremental drilling project at the Kuparuk field. Careful inspection showed that the project was uneconomic even without the ELF change, but what we found interesting was that the net cost of the change to the oil companies that own Kuparuk was shown as only 18¢. The cost at Prudhoe is higher, and -- like all severance tax figures -- it is sensitive to oil prices. From our point of view, however, the 18¢ figure put the magnitude of the proposed change in its proper perspective. Hardly a day goes by that does not see oil prices changing by more than 18¢ per barrel. The companies, their development plans, and oil industry jobs survive those little changes quite well.

In testimony to House Finance and in a memorandum to Representative Hudson we described the state's econometric models of North Slope field development. The models supported the expert engineering evidence that the ELF change would have no significant effects on production. We made our computer model and documentation available to the industry to review and critique. They said they disagreed, but all they provided to support their position was anecdotes. They did not attempt to refute our econometric findings with evidence from their own more

sophisticated field models.[1]

We also talked about the positive effect that this bill would have on developments at the smaller fields. Conoco, the company that owns the working interest in the Milne Point field, agreed and testified in favor of the new ELF formula.

All of this worked to refute the industry's arguments the ELF legislation would threaten Alaska jobs, now or in the future. We knew from the outset that this refutation was absolutely essential if the bill was to pass -- job losses would be unacceptable on both policy and political grounds. We think we successfully made our case in this regard.

The ELF Formula

In each committee of referral we described the philosophy behind the the new ELF formula, but it wasn't until the bill reached the Senate Special Oil and Gas Committee that we were forced to go deeply into the mechanics and mathematics of the formula. From the beginning of this debate the complexity of the ELF formula has demanded special efforts to explain how the new formula would work. We didn't always succeed, but Roger Marks, the petroleum economist who originally developed the version of the formula in HB 118, made it reasonably understandable in his presentation to the Senate Oil and Gas Committee.

For their part, industry representatives claimed in each committee that the administration had made a mistake in where the parenthesis were placed in the formula. We explained why the formula was written as it was. No doubt the industry representatives understand our explanation; they certainly heard it more than once. But for members of this committee, here it is again.

HB 118 enacts two changes, both of which affect the dividing line between fields that pay more under the HB 118 and those that pay less. One of these changes is of course the new formula. Were this the only change, the dividing line would fall at about 115,000 barrels per day total field production. The other factor that affects

[1] ARCO's representative did present a graph of an hypothetical Prudhoe decline that would have resulted if investment in the field had ceased in 1981. He said the analysis was a product of that corporation's CRAY supercomputer. [Hugh Motley, Testimony to Senate Finance, 4 May 1989.]

the dividing line is the elimination of the so-called "rounding rule." Depending on whether their ELFs are above or below .7, that may make HB 118 a good deal for future fields producing as much as 300,000 barrels per day. Taking both factors into account, the administration estimates that fields below an average of 150,000 barrels per day will probably benefit from the bill.

Exxon's representative continues to argue that we really meant for the formula (by itself) to benefit fields below 150,000 barrels per day, and except for our having gotten the parenthesis in the wrong place, that would have been the result.

We think Exxon's point is a red herring, designed to confuse and divert attention from the real issues. Nevertheless, Mr. Marks, who developed both this version of the formula and the 150,000 estimate, is ready to respond to further questions.

Another "formula" issue that was repeatedly raised by the companies representatives has to do with field size. The existing ELF formula is based on per-well production. The new formula adds total field production. In House Finance we offered evidence that big fields tend to have lower costs per barrel -- that there are economies of scale -- and that this is a major factor in profitability.[2]

The oil spokesmen allege that the formula gives overwhelming weight to changes in field size, and effectively ignores changes in per-well production. Where wells are producing more than 500 B/D, field size is indeed given more weight in the formula than the per-well average, but as we showed in a memorandum and spreadsheet provided to Senator Halford, in no case is the formula's sensitivity to per-well production less than 70 percent of its sensitivity to total production. It is simply inaccurate to say that the formula "ignores" changes in per-well productivity.

"The Revenue Neutral Deal" & Other Problems

Industry supporters (but not the industry representatives themselves) often asked committee members to recall the so-called

[2] ARCO's Lee Nunn provided the best example of the scale economies in oil production: "The Lisburne flow station will cost about the same as a similar flow station at Prudhoe Bay, but will process only 300 million barrels of oil over its lifetime compared with the stations at Prudhoe Bay, which process more than 1.5 billion." ["Marginal Fields: Minimizing the Risks," *Alaska Construction and Oil*, July 1985.]

"deal" the industry was supposed to have made with the state in 1981. There was no shortage of evidence to refute this. We presented the constitutional provisions prohibiting such deals. We presented the 1981 "see-you-in-court" letter from Sohio's Richard Donaldson disavowing any "settlement." We presented the March 1981 joint statement of Gov. Hammond and legislative leaders in which they agreed that "any changes which would give large sums of money to the oil industry at the expense of the people of Alaska are unacceptable." And finally, we showed that the 1981 legislation cost the state more than a billion dollars in lost tax revenue.

The BP representative conceded the loss, but argued that it wasn't very significant. So what if we lost a few more percentage points? Anyway, he asserted, the re-application of the ELF to Prudhoe in 1987 caused significant growth in jobs.

In the House Resources Committee we showed only 600 oil industry jobs had been gained since the ELF reapplied at Prudhoe, and that the increase in oil prices, not tax changes, was responsible for that modest growth.

In contrast, the administration provided evidence of the problems with the existing ELF. Using an example provided by ARCO, we showed that the existing ELF can produce a negative severance tax: instead of collecting a tax for the right to sever the resource, under the conditions assumed by ARCO, Alaska pays the corporation a direct subsidy for drilling an incremental well.

Neither BP or ARCO disputed that a subsidy exists under the current law. BP said the subsidy is too small to matter much, given the cost of new wells. ARCO took a different tack, suggesting that the tax subsidy induces so many additional wells to be drilled that it actually makes the state money from additional royalty. That reasoning leads to the preposterous conclusion that the state would get the greatest revenue if it repeals the severance tax outright.

<u>Profits, Reinvestment, and Shares</u>

Profits have been a good issue for our side. Virtually every other jurisdiction with publicly owned oil resources gets more for its oil than Alaska. We heard lots of explanations of why this is so, but

not a single oil company witness or document denied that it is the case.

In March, in House Finance, we provided Professor Deakin's analysis. For the 1969-87 period it showed that the oil industry in Alaska earned extraordinary profits on its Alaska operations -- $46 billion, and an after-tax 30 percent annual return on investment. The industry sniped at the study, but declined to provide their own calculations of overall industry profits. We think the study stands unrefuted.

Of course the industry has provided some profit figures to the committees, but they are always *production* profits. Their representatives argue that the issue here is a production tax, so the pipeline isn't relevant.

We don't think the argument has worked very well for them. People recognize that the pipeline is integral to North Slope oil production, and everyone knows the production and pipeline ownerships are nearly the same. The TAPS settlement has allowed access to indisputable information showing that pipeline profits have lately been accounting for over one-third of tariff charges (two-thirds if we look at pre-tax profits). The pipeline isn't your ordinary public utility.

Even some of the industry's figures on production profits have been remarkably misleading. ARCO's representative persists in presenting calculations that show his company paying a $2.70 per-barrel tanker charge to ship its oil to the Gulf Coast, notwithstanding the fact that all of ARCO's oil goes to the West Coast, a tanker trip that only costs 98¢ per barrel. The persistence was puzzling in view of the damage we think it did to the company's credibility.

Company representatives argued that severance taxes in Alaska are the highest in the nation. Our response showed that Texas and most other states don't allow any transportation charges as deductions against their severance tax, and that states like Texas also have reserves taxes, which Alaska doesn't have. We showed that seven states had an average 1987 severance tax per barrel higher than Alaska. Finally, we showed that if Texas or any other U.S. state adopted Alaska's severance law, not a single field in that state would pay a penny of tax.

Early in this debate we noted the great disparity between the $750 million the industry says it plans to reinvest in Alaska in 1989, and the $2.7 billion in profits they would earn in our state (not to mention the additional $2.1 billion in other cash that would leave Alaska). To our chagrin, few seemed very concerned with this disparity. At today's oil prices the companies can expect to remove $7.0 billion from Alaska in 1989. So far they have not announced any change in the planned $750 million reinvestment. We still think that the disparity in these numbers deserves more attention than it has received. It reflects an industry liquidating its Alaska assets. We regret that we didn't find a better way to present this issue.

Two weeks ago in the Senate Oil & Gas Committee we used the companies' own cost figures to show how the net income from Alaska oil is being shared. Apart from the companies' wish to disregard the pipeline earnings, they have not disputed this analysis. At current oil prices, and assuming 1988 costs, it shows that the state is collecting 28.6 percent of the net income from Alaska oil operations, compared to the 46.5 percent going to the industry. For those who think there is something magic about a 30 percent share, it was another reason to support the ELF change.

6-May-89

Shares of ANS Net Revenue

	Note	Kuparuk Ak DOR Low Case 3/89 Weighted Average $/bbl		Gulf Coast $/bbl		West Coast $/bbl		CSHB-118 Kuparuk Ak DOR Low Case 3/89 Weighted Average $/bbl		Gulf Coast $/bbl		West Coast $/bbl	
DOR Crude Oil Price	3	12.67		13.42		12.33		12.67		13.42		12.33	
DOR Tanker Freight	3	1.56		2.79		0.98		1.56		2.79		0.98	
Quality Differential	1	0.40		0.40		0.40		0.40		0.40		0.40	
DOR TAPS Tariff	3	3.11		3.11		3.11		3.11		3.11		3.11	
Kuparuk Pipeline	1	0.70		0.70		0.70		0.70		0.70		0.70	
Pipeline Loss	1	0.10		0.10		0.10		0.10		0.10		0.10	
Wellhead Price		6.80		6.32		7.04		6.80		6.32		7.04	
Production Cost	1	2.01		2.01		2.01		2.01		2.01		2.01	
Overhead&Interest	2	0.67		0.67		0.67		0.67		0.67		0.67	
Capital Recovery	1	3.41		3.41		3.41		3.41		3.41		3.41	
Total Net Revenue		0.70		0.22		0.94		0.70		0.22		0.94	
State Royalty	4	0.79		0.73		0.82		0.79		0.73		0.82	
Severance Tax	3	0.53		0.49		0.55		0.80		0.74		0.83	
Property Tax	1	0.44		0.44		0.44		0.44		0.44		0.44	
State Income Tax	5	-0.03		-0.04		-0.03		-0.04		-0.05		-0.03	
Total State		1.73	246%	1.62	732%	1.78	189%	1.99	284%	1.86	842%	2.05	218%
Federal Income Tax		-0.35	-50%	-0.48	-215%	-0.29	-30%	-0.44	-63%	-0.56	-252%	-0.38	-40%
Producer Profit		-0.68	-97%	-0.92	-417%	-0.55	-59%	-0.85	-121%	-1.08	-490%	-0.73	-78%

Note:

1 Barclays de Zoete Wedd, September 1988
2 ARCO Annual Report 1988
3 Alaska Department of Revenue March 1989
4 Royalty 1/8 less processing fee
5 St Income Tax Estimated 3%
State of Alaska Royalty and Severance Methodology

SFC. 5/6/89

STATE OF ALASKA
THE LEGISLATURE

LEGISLATIVE AFFAIRS AGENCY

POUCH Y · STATE CAPITOL
JUNEAU, ALASKA 99811
907 465 3800

M E M O R A N D U M May 2, 1989

SUBJECT: SCS CSHB 118 (Resources)

TO: Senator Johne Binkley
Senator Rick Uehling,
Co-Chairs
Senate Finance Committee

FROM: Jack Chenoweth
Legislative Counsel

If you do nothing else to the Senate Resources Committee Substitute to House Bill 118, now in your committee, before reporting the bill you should make the following technical corrections (as an amendment to SCS CSHB 118 (Res) or as a new committee substitute):

Page 2, line 9, after "date"
Insert: "of sec. 1"

Page 2, line 16
Delete "Act"
Insert "section"

Page 2, line 21
Delete "Act"
Insert "section"

Taken altogether, the changes became necessary because there is no longer a single effective date applicable to all parts of the bill.

Thank you.

JC:gc
WKG10/036

Introduced: 1/10/89
Referred: Oil & Gas, Resources and Finance

6-0454A

IN THE SENATE BY ADAMS

SENATE BILL NO. 97

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 ([55,000,000 X WD]/[PEL X TP/Days])

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

where "exp" indicates that the expression following it is an exponent.

* Sec. 2. AS 43.55.013(d) is amended to read:

(d) The monthly production rate at the economic limit for a lease or property 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. [THE TAXPAYER MAY REBUT THIS PRESUMPTION AT A FORMAL HEARING UNDER AS 43.05.240 BY PROVIDING CLEAR AND CONVINCING EVIDENCE OF A DIFFERENT MONTHLY PRODUCTION RATE AT THE ECONOMIC LIMIT FOR THE LEASE OR PROPERTY. THE HEARING SHALL BE HELD BEFORE FEBRUARY 15 OF THE YEAR OR WITHIN SIX MONTHS AFTER COMMENCEMENT OF OIL PRODUCTION FOR

A LEASE OR PROPERTY. THE MONTHLY PRODUCTION RATE AT THE ECONOMIC LIMIT FOR THE LEASE OR PROPERTY BASED UPON THE CLEAR AND CONVINCING EVIDENCE OF THE TAXPAYER SHALL BE CALCULATED BY DIVIDING THE VALUE DETERMINED UNDER (f) OF THIS SECTION INTO THE AVERAGE MONTHLY DIRECT OPERATING COST DETERMINED UNDER (e) OF THIS SECTION AND SHALL BE USED FOR PURPOSES OF THIS SECTION FOR ALL OIL PRODUCTION DURING THAT CALENDAR YEAR FROM THE LEASE OR PROPERTY.]

* Sec. 3. AS 43.55.013(e) and (f) are repealed.

* Sec. 4. This Act is retroactive to January 1, 1989, and applies to oil produced after December 31, 1988.

* Sec. 5. This Act takes effect immediately under AS 01.10.070(c).

No. 2

STATE OF ALASKA
1989 LEGISLATIVE SESSION

Bill Version: CSHB 118 (RES)
Publish Date: HOUSE 3/20/89

FISCAL NOTE

REQUEST:

Revision Date: March 7, 1989
Title: Oil & gas properties production tax - ELF; providing an effective date
Sponsor: House Finance Committee
Requestor: House Resources

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	49,000	126,000	144,000	163,000	187,000	180,000

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: March 7, 1989

Approved by Commissioner: Hugh Malone by LWW for
Agency: Department of Revenue
Date: 3/8/89

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

Fiscal Analysis

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; (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; and (3) fixes the production at the economic limit (PEL) at 300 barrels times the number of well days in the month.

This bill is retroactive to January 1, 1989, and applies to oil produced after December 31, 1988. Because the severance tax on oil for a given month is due during the following month, a tax change which takes effect on January 1 would not affect revenues until February. Depending on the actual passage date of the bill, the FY 89 amounts may not be actually collected until FY 90.

This fiscal note was calculated using the oil price and production assumptions of the Department of Revenue's Fall 1988 Petroleum Production Revenue Forecast mid-case scenario updated for actual data through November of 1988. That forecast was predicated on Alaska North Slope crude prices at the U.S. Gulf of $13.25 a barrel in FY 89 and $12.89 a barrel in FY 90. 1/

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

1995	174
1996	169
1997	163
1998	153
1999	152
2000	144
2001	136
2002	129
2003	117
2004	110
2005	104
2006	91
2007	80
2008	60
2009	45
2010	19

1/ Had the fiscal note used the oil price and volume assumptions of the "Consensus Revenue Analysis" of January 24, 1989, the FY 89 fiscal impact would be $56 million, and the FY 90 fiscal impact would be $132 million. That analysis was predicated on Gulf ANS prices of $14.07/bbl in FY 89 and $14.30/bbl in FY 90.

Date: March 1, 1989

Price/Revenue Sensitivity Matrix for HB 118

(Millions of $)

ANS @ US Gulf ($/bbl)	Fiscal Year 1989	1990	1991	1992	1993	1994
10.35	28	89	89	97	100	96
12.70	42	113	114	123	135	129
15.00	56	149	149	159	170	160
17.35	70	185	186	196	208	196
19.70	84	216	218	230	243	216
22.00	98	251	254	278	273	239

Assumptions:

1. Production and well assumptions from Department of Revenue mid scenario Fall 1988 forecast.
2. HB 118 effective date January 1, 1989.
3. The variation in revenue between years is a function of a number of factors, including:
   A. The changing relative tax rates under the current ELF and HB 118.
   B. The effect of price on production levels. (e.g. West Sak economic at $18/bbl.)
   C. The effect of changing production and wells on ELF under either formula.