

ALASKA LEGISLATURE

1375

HOUSE and SENATE FINANCE COMMITTEE FILES, 1995-1996

Sec. 39.25.110. Exempt service. Unless otherwise provided by law, the following positions in the state service constitute the exempt service and are exempt from the provisions of this chapter and the rules adopted under it:

(1) persons elected to public office by popular vote or appointed to fill vacancies in elected offices;

(2) justices, judges, magistrates, and employees of the judicial branch including employees of the judicial council;

(3) employees of the state legislature and its agencies;

(4) the head of each principal department in the executive branch;

(5) officers and employees of the University of Alaska;

(6) certificated teachers and noncertificated employees employed by a regional educational attendance area established and organized under AS 14.08.031 — 14.08.041 to teach in, administer, or operate schools under the control of a regional educational attendance area school board;

(7) certificated teachers employed by the Department of Education as correspondence teachers, teachers in skill centers operated by the Department of Education, or in Mt. Edgecumbe School;

(8) patients and inmates employed in state institutions;

(9) persons employed in a professional capacity to make a temporary or special inquiry, study or examination as authorized by the governor;

(10) members of boards, commissions, or authorities;

(11) the officers and employees of the following boards, commissions, and authorities:

(A) Alaska Gas Pipeline Financing Authority;

(B) Alaska Permanent Fund Corporation;

(C) Alaska Industrial Development and Export Authority;

(D) Alaska Commercial Fisheries Entry Commission;

(E) Alaska Commission on Postsecondary Education;

(F) Alaska Aerospace Development Corporation;

(12) the executive secretary and legal counsel of the Alaska Municipal Bond Bank Authority;

(13) the state medical examiner appointed under AS 12.65.015 and physicians licensed to practice in this state and employed by the division of mental health and developmental disabilities in the Department of Health and Social Services or by the Department of Corrections;

(14) petroleum engineers and petroleum geologists employed in a professional capacity by the Department of Natural Resources and by the Oil and Gas Conservation Commission, except for those employed in the division of geological and geophysical surveys in the Department of Natural Resources;

(15) officers, agents, and employees of the Alcoholic Beverage Con-

control Board granted limited peace officer powers by the Alcoholic Beverage Control Board under AS 04.06.110;

(16) persons employed by the division of marine transportation as masters and members of the crews of vessels who operate the state ferry system and who are covered by a collective bargaining agreement provided in AS 23.40.040;

(17) officers and employees of the state who reside in foreign countries;

(18) employees of the Alaska Seafood Marketing Institute;

(19) fire fighters employed by the Department of Natural Resources for a fire emergency;

(20) employees of the Office of the Governor and the office of the lieutenant governor, including the staff of the governor's mansion;

(21) employees of the Citizens' Advisory Commission on Federal Areas in Alaska (AS 41.37.010);

(22) youth employed by the Department of Natural Resources under the Youth Employment and Student Intern programs;

(23) the executive director of the Medicaid Rate Advisory Commission;

(24) students employed by the state institutions in which the students are enrolled;

(25) the executive director and staff of the Alaska Science and Technology Foundation (AS 37.17.010);

(26) investment officers in the Department of Revenue;

(27) the executive director and other staff of the Alaska Tourism Marketing Council;

(28) persons engaged in employment or pre-employment training programs operated by the Department of Military and Veterans' Affairs;

(29) [Repealed. § 9 ch 115 SLA 1989.] (§ 5 ch 144 SLA 1960; am § 1 ch 48 SLA 1961; am § 1 ch 133 SLA 1961; am § 3 ch 93 SLA 1962; am § 3 ch 24 SLA 1966; am § 31 ch 46 SLA 1970; am § 65 ch 69 SLA 1970; am § 13 ch 113 SLA 1970; am § 3 ch 78 SLA 1971; am § 13 ch 78 SLA 1974; am § 42 ch 127 SLA 1974; am § 2 ch 32 SLA 1975; am § 2 ch 79 SLA 1975; am § 37 ch 124 SLA 1975; am § 1 ch 157 SLA 1976; am § 3 ch 90 SLA 1978; am § 7 ch 18 SLA 1980; am § 43 ch 106 SLA 1980; am § 10 ch 131 SLA 1980; am § 4 ch 148 SLA 1980; am § 4 ch 106 SLA 1981; am §§ 2, 3 ch 37 SLA 1982; am § 7 ch 112 SLA 1982; am § 1 ch 11 SLA 1983; am § 1 ch 103 SLA 1984; am § 58 ch 2 SLA 1985; am § 1 ch 50 SLA 1985; am § 69 ch 14 SLA 1987; am § 1 ch 61 SLA 1987; am § 2 ch 37 SLA 1988; am § 2 ch 78 SLA 1988; am § 26 ch 141 SLA 1988; am E.O. No. 72 § 2 (1989); am § 11 ch 95 SLA 1989; am §§ 7, 9 ch 115 SLA 1989; am § 10 ch 88 SLA 1991; am § 1 ch 17 SLA 1992; am § 4 ch 47 SLA 1993)

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HB

322

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FILE

FISCAL NOTE

No. 2
 Bill Version: CSHB 322(FIN)
 (H) Publish Date: 2/9/96

STATE OF ALASKA
1996 LEGISLATIVE SESSION

Revision Date: 12-Jan-96 Dept Affected Military & Veterans Affairs
 Title: An Act authorizing grants for temporary housing assistance during emergencies and disasters. BRU: Alaska National Guard
 Sponsor: House Sp Cmte Military & Veterans Affairs Component: Commissioner's Office
 Requestor: House So Cmte Military & Veterans Affairs Component Serial No. 414

Expenditures/Revenues	(Thousands of Dollars)					
	FY97	FY98	FY99	FY00	FY01	FY02
OPERATING EXPENDITURES						
PERSONAL SERVICES						
TRAVEL						
CONTRACTUAL						
SUPPLIES						
EQUIPMENT						
LAND & STRUCTURES						
GRANTS, CLAIMS						
MISCELLANEOUS						
TOTAL OPERATING	0.0	0.0	0.0	0.0	0.0	0.0
CAPITAL EXPENDITURES	0.0	0.0	0.0	0.0	0.0	0.0
CHANGE IN REVENUES ()	0.0	0.0	0.0	0.0	0.0	0.0

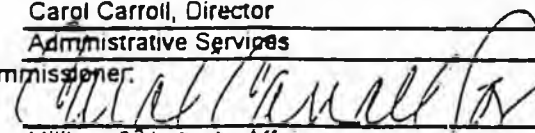
FUND SOURCE	(Thousands of Dollars)					
	FY97	FY98	FY99	FY00	FY01	FY02
1002 Federal Receipts						
1003 GF Match						
1004 GF						
1005 GF/Program Receipts						
1006 GF/MHTIA						
Other						
TOTAL	0.0	0.0	0.0	0.0	0.0	0.0

Estimate of any current year (FY96) cost: \$ none

POSITIONS	FY97	FY98	FY99	FY00	FY01	FY02
FULL-TIME	0	0	0	0	0	0
PART-TIME	0	0	0	0	0	0
TEMPORARY	0	0	0	0	0	0

ANALYSIS: (Attach a separate page if necessary)

Zero fiscal impact. This bill gives the Division of Emergency Services a more efficient way of providing temporary housing during disasters. The cost of temporary housing would continue to be charged to the disaster itself.

Prepared by: Cargl Carroll, Director Phone: 465-4730
 Division: Administrative Services Date: 12-Jan-96
 Approved by Commissioner:  Date: 12-Jan-96
 Agency: Military & Veterans Affairs

SENATE COMMITTEE REPORT
First Committee of Referral

DATE: 3/6/96

FURTHER: Finance

DATE TURNED INTO OFFICE: 4/22/96

The C&RA Committee considered CS FOR HOUSE BILL NO. 322(FIN)

"An Act authorizing grants for temporary housing assistance during emergencies and disasters."

and recommends:

- be replaced with _____ CS _____ (_____)
- adopt previous _____ CS _____ (_____)
- attached amendment(s)
- adopt Letter of Intent by _____ Committee
- further referral to the _____ Committee

- Senate Bill:**
- same title
 - new title
- House Bill:**
- same title
 - technical title
 - new: SCR# _____

SIGNING DO PASS	DP	OTHER RECOMMENDATIONS	NR	DNP	AM
		<i>Roll 2 (1990)</i>	✓		
		<i>Tim Kedge</i>	✓		
CHAIR: <i>[Signature]</i>	✓	CHAIR:			

NEW FISCAL NOTE(S):

Department	Date	Zero	Fiscal

PREVIOUS FISCAL NOTE(S):*

Department	Date	Zero	Fiscal
<i>DMVA</i>	<i>1/12/96</i>	✓	

APPROPRIATION -- no fiscal note

*include fiscal notes accompanying Governor's bill

HB

325

HFIN

FILE

TONY KNOWLES, GOVERNOR

DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

February 13, 1996

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ANCHORAGE, ALASKA 99505-5948
PHONE: (907) 269-8784

The Honorable Mark Hanley
Co-Chair, Finance Committee
Alaska State Legislature
State Capitol, Room 507
Juneau, AK 99801-1182
MAIL STOP 3100

Dear Representative Hanley:

Several statements have been made recently regarding the merits of HB 325 and the Department of Natural Resources' position on HB 325. In particular, I refer to Jon Tillinghast's letter on behalf of OXY USA Inc. ("OXY") to Rep. Green dated February 2, 1996, the white paper dated January 22, 1996, by BP Exploration (Alaska) Inc. ("BP") and OXY, and testimony presented to the House Finance Committee on February 8, 1996. Some of the statements that have been made are inaccurate and, in some instances, are in error. I would like to address these statements and assumptions and point out some issues that should also be considered in evaluating HB 325.

A Little Background on 'Heavy Oil. 'Heavy oil,' as defined in HB 325 and in federal regulations, focuses on crude oil with a weighted average gravity of 20 degrees API or less, corrected to 60 degrees F. Heavy oil on the North Slope comprises one of the State's largest known, undeveloped hydrocarbon resources. The volume of North Slope heavy oil in the ground is enormous; it compares in volume to the oil originally in place in the Prudhoe Bay Unit ("PBU") Sadlerochit reservoir. It is, however, found in shallower, thinner deposits and it is much more viscous (less able to flow) than other North Slope oil. The State owns at least one eighth royalty in this resource (some of the leases have a one fifth royalty), and the resource and its infrastructure are subject to all the applicable taxing authorities of the state and local governments.

The known accumulations/areas on the North Slope of 'heavy oil' that would appear to qualify for this proposed royalty exemption include (1) a large continuous accumulation in the Schrader Bluff formation that stretches across and into three different units and is called by the different operators the West Sak sands in the Kuparuk River Unit ("KRU"), the Schrader Bluff formation in the Milne Point Unit ("MPU"), and the West Sak sands in the western part of the PBU; (2) the Heavy Oil/Tar Zone of the Sadlerochit formation within the PBU; and (3) portions of the Badami Unit and the Point Thomson Unit. No heavy oil accumulations are known in the Cook Inlet area.

2/13/96
ATT ①

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The Schrader Bluff in the MPU and the Heavy Oil/Tar Zone of the Sadlerochit formation within the PBU would be able to take advantage of the HB 325 exemption immediately. Any production from Badami and Point Thomson is uncertain. The KRU and PBU do not have facility sharing agreements in place to permit production of oil from the West Sak sands through the existing KRU (Kuparuk formation) facilities and PBU (Sadlerochit formation) facilities.

The Division does not know if the heavy oil in the Schrader Bluff formation in the MPU or KRU will ever be produced on a large commercial scale. ARCO has indicated that it may begin development of the West Sak in the near future. BP, the largest working interest owner in the MPU, has stated that it plans to continue to work on heavy oil development even if there are no incentives granted. Although oil price will always be the primary driver in the development decision, the drilling, well completion and well production technology will influence any large-scale development decision. Heavy oil production projects undertaken so far have been small demonstration projects. Knowledge gained from heavy oil projects in more temperate climates is of some use, but on the North Slope cold temperatures decrease the ability of the heavy oil to flow or be produced to the surface.

Even when production space becomes available in the KRU, West Sak development will presumably compete with higher producing projects. Using today's proven technology, a very good West Sak or Schrader Bluff well produces 300-400 BOPD. In contrast, a new marginal well in the KRU (Kuparuk formation) produces 800 BOPD. A new well in the marginal parts of PBU (Sadlerochit) produces 1000 BOPD.

Specific comments regarding the proposed HB 325 legislation.

1. A heavy oil royalty exemption pursuant to HB 325 may avoid the HB 207 process, but it may expose the state to revenue losses it might not have to incur. The currently proposed royalty exemption is inflexible. There is no discretion in this legislation and no requirement to justify the economic necessity for the royalty exemption. There is no provision that would condition the royalty exemption to require the lessees to reinvest the foregone royalty dollars in "heavy oil" projects in Alaska. This inflexibility may also mean that when the five (5) years are over, the royalty will return to its original rate causing the operator to cease production (shut-in the well).

2. Further, the first 500 bpd of heavy oil production would be exempt from royalty payment with this legislation. Under the current oil and gas production tax statutes, AS 43.55, the first 300 BOPD are exempted from production tax. If this legislation passes, the state would receive no economic return (no taxes and royalties) from the first 300 bpd per well of "heavy oil". This may raise a constitutional issue about the legislature giving away the state's resources in violation of Article VIII, section 2 of the Alaska Constitution. The mandate against such 'giveaways' is embodied in AS 38.05.180(a)(1)(A).

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3. The legislation would apparently circumvent any negotiated agreements (unit agreements or litigation settlement agreements or HIB 207 royalty reduction agreements) between the state and lessee(s) regarding the obligation to pay royalty. For example, effective December 30, 1993, the State and OXY (one of the MPU owners) entered into an agreement to settle to certain litigation between the parties. As part of this settlement agreement, the parties negotiated limits on future royalty reductions in the MPU. With respect to Schrader Bluff production from the MPU, this legislation, if passed, would circumvent the Article 5 provisions of the State/OXY settlement agreement.

4. The legislation should define 'daily production from a well' to prevent an operator from producing a well less than 24 hours in a day to qualify for the exemption. In other words, in order to qualify for the royalty exemption, 'daily production from a well' should mean continuous production from a well over a 24 hour period.

5. The definition of the term "well" needs to be addressed in the legislation. Is a sidetrack of an existing well a new well that qualifies for the royalty exemption? Do multi-lateral wellbores count as two or more separate wells? Would a dual completion count as two separate wells? Would a sidetrack drilled in 1999 from a well drilled in 1997 restart the five year clock?

6. The current wording of IIB 325 uses the phrase "value at the wellhead, net of eligible field cost deductions." It is difficult to determine what value is being referenced. For State royalty purposes, the value is determined at the appropriate LACT meter for all current North Slope royalty payors pursuant to the royalty settlement agreements. Field cost deductions are allowed only in certain circumstances under the State's leases and royalty settlement agreements. Therefore, no wellhead value is ever calculated. The proposed legislation does not detail what field cost deductions are eligible but for logic and conformity sake, the value should be measured at the LACT meter before any field cost deductions.

7. Further, there is no obvious reason nor is any evidence presented as to why a "wellhead value" of \$15.00 should be the trigger for returning the royalty to its original rate. Such a value seems quite high compared to the LACT meter values seen over the past few years. A Department of Revenue economist has testified that this \$15.00 value would be approximately \$21.50 (money of the day; ANS West Coast) and the only time this price has been reached since 1987 was during the Kuwait War. Given that the legislation also includes an inflation factor, it appears unlikely that the \$15.00 threshold will ever be invoked.

8. The possibility exists that structural locations within the Kuparuk Formation in the KRU and the Sadlerochit formation in the PBU produce 'heavy oil,' that is, these reservoirs produce oil with a gravity of 20 degree API or less. Is it the intent of the legislation to exempt portions of these reservoirs from the payment of royalty?

9. As described above, where reservoir fluid properties vary across the structure, the legislation creates a situation where wells are drilled in locations to take advantage of the royalty

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exemption and not in locations for more efficient reservoir management/recovery. Incentives should not be put in place that distort the efficient use of resources. This was definitely a consideration when the federal government proposed its heavy oil incentive. The BLM recently promulgated a rule (effective March 11, 1996) to reduce royalty rates for properties that produced "heavy oil" with a gravity of 20 degree API or less. The royalty reduction applies to producing properties (such as leases, units, etc.) rather than to individual wells, and is based on the weighted average gravity of the oil produced by all wells on the property. Weighted average gravity was used to prevent gravity manipulation by selective production of wells with heavier crude on a property. The use of weighted average gravity also encourages maximum recovery from all wells within a property by removing the economic advantage of selective production.

10. Thought should be given to the administrative burden created by the above situation. Incentives should not be put into place that allow "gaming the system" by selective production of wells on a lease with "heavy oil". Increased oversight would be required to monitor individual well production tests, fluid sampling from the individual wells, laboratory fluid analysis procedures, etc.

11. The heavy oil royalty exemption offers a cash incentive to the lessees on a single well basis. If the state's royalty is eliminated, an individual "heavy oil" well producing 500 bpd would not pay the following royalty, assuming a \$10.00/bbl LACT meter oil value:

$500 \text{ BOPD} \times 0.125 \text{ royalty rate} \times \$10/\text{BO} \times 365 \text{ days/yr} = \$228,125/\text{yr}$
[If the royalty = 20 percent, the royalty amount - \$365,000/yr]

12. What motivation do the lessees have to increase production higher than 500 BOPD if by doing so they are "penalized" by a royalty?

13. If the heavy oil wells are so marginally economic that, under an HB 207 application, plus or minus 3% (the minimum royalty under HB 207) is significant, how can those wells ever be competitive against other projects in large companies such as BP?

14. What message would this incentive send to the public and to other marginal resource producers if the heavy oil producers are given blanket relief without any requirement to show economic need? This is especially important in light of the fact that BP has stated that it does not need royalty relief and it plans to continue forward with Schrader Bluff development even if it receives no royalty incentive. Regarding BP's pending application for royalty reduction, BP was quoted as saying that

But BP says it isn't serious about the application and doesn't expect the state to approve it. It was submitted only to comply with the terms of a contract between BP and OXY USA Inc., ...OXY pays BP about \$100,000 a year under the contract, said BP

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spokesman Paul Laird, but BP has to apply for a royalty reduction to keep the money coming. ...

BP pays the state a 20 percent royalty - one out of every five barrels of oil produced - on the eight leases involved in the application; it wants that rate cut to 12.5 percent, or one in every eight barrels. ...

"We are not going in for royalty relief or restructuring for Milne," Palmer said in an interview last week. "It's not needed." ...

"BP calls request for cut a formality," Anchorage Daily News (Stan Jones) pages D-6,7, April 21, 1995.

On state incentives in general, BP has stated that incentives affect only the pace of development:

What we have said is that fiscal terms will influence the pace of development. However, we plan to continue with our work on heavy oil even if there are no new incentives. If there are incentives, then we believe that the pace of development could be accelerated.

"BP says state incentives will set the pace for North Slope oil development," Letter by James A. Palmer, Director, External Affairs, BP, Anchorage Daily News, February 7, 1996.

BP's position contradicts Mr. Tillinghast's statement that there is "something of a consensus" that "ANS heavy oil is unlikely to be developed without an effective incentive." Tillinghast, page 9. Another industry player, new to Alaska, Anadarko Petroleum Corporation ("Anadarko"), also contradicts Mr. Tillinghast's statement of consensus. This past fall, John Seitz, Vice President, Exploration at Anadarko told the Oil and Gas Policy Council that:

I hope the State resists the temptation to create a myriad of targeted incentives to prop up uneconomic production or attract ephemeral or inconsequential investment. Whatever ends up being adopted or enacted should be substantive and apply uniformly to the entire industry. We are not now, and have never been advocates of legislation or regulation that tends to provide economic "incentives" to a special class of operator or to one type of production. We are, in fact, uncomfortable when the playing field is anything but level. We are willing to compete with anybody as long as the ground rules are reasonable and universal.

[emphasis in original] Presentation to the Governor's Oil and Gas Policy Council, September 7, 1995.

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15. If indeed, development will probably take place regardless of the incentive, how can HB 325 possibly be a fiscally efficient measure and why should the State commit to giving up a right to receive income from its property if the lessees involved are unwilling to commit also at this time? HB 325 is fiscally inefficient, if measured by the conclusions reached in a recent study for the Department of Revenue on behalf of the Oil and Gas Policy Council, because it is not profit based, and because it allows a royalty reduction where none is needed. See Arthur D. Little/John Gault, "Review of International Competitiveness of Alaska's Fiscal System," Preliminary Report for the State of Alaska, Department of Revenue, September, 1995. The evidence to date, discussed above, suggests that BP does not need a royalty reduction and BP has testified that BP may go forward with the project even without the incentive. Testimony of Bruce Policky, BP, February 8, 1996, House Finance Committee. The BP/OXY white paper suggest that a 15 percent rate of return will make a project "competitive." OXY has stated that if the proposed incentive is granted, it will achieve a rate of return of 15.9 percent and will likely go forward with the project. Its rate of return without the incentive is 12.8 percent. BP testified that its rate of return is 2 to 3 percent higher than OXY's rate of return, which would put it at 14.8-15.8 without the incentive: competitive already under OXY's standards.

16. If the true motivation of this incentive is to more quickly recover development costs, the Legislature might consider a net profit share structure or other profit-based system. Profit-based systems are progressive, rather than regressive, and fiscally efficient. See Arthur D. Little/John Gault, "Review of International Competitiveness of Alaska's Fiscal System," Preliminary Report for the State of Alaska, Department of Revenue, September, 1995.

Comments on Mr. Tillinghast's letter:

17. While it is true as Mr. Tillinghast states in his February 2, 1996 letter, that the Department of Natural Resources supported HB 207 as the "first step" in implementing incentives for marginal oil fields, it does not logically follow that HB 325 is required to be the second step or is the correct second step.

18. The Governor's Oil and Gas Policy Council, which is charged with investigating and proposing such incentives, has not proposed any incentives yet. Although heavy oil was one issue discussed by the Oil and Gas Policy Council, the Council did not propose HB 325.

19. The discussions and debate leading to the enactment of HB 207 last year did not specifically exclude heavy oil, as Mr. Tillinghast's letter would imply. In fact, the very reason why the language "or pool" was added to HB 207 was to allow separate "pools" within a "field" to be granted royalty relief. The specific example used on a number of occasions was the West Sak, a heavy oil pool which is otherwise known as the Schrader Bluff pool. Commissioner Shively testified that under the new provisions of HB 207, the West Sak could qualify for

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royalty reduction while the Kuparuk pool, which underlies West Sak, might not qualify.¹ Although Mr. Tillinghast's letter on behalf of OXY suggests that the Schrader Bluff pool within the MPU cannot qualify for royalty reduction under AS 38.05.180(j) (the HB 207 reduction provisions), his statements contradict the actions of BP. BP submitted a royalty reduction application (currently suspended) for the MPU, including production from Schrader Bluff.

It is not the fact that Schrader Bluff field contains heavy oil that appears to cause OXY difficulty in approaching relief under HB 207. By prior agreement with the State, OXY is barred from applying for royalty reduction at Milne Point field for five years from July 1994 on some leases and for the life of the unit for eight specified leases. See Section 5.3 of the OXY/State Settlement Agreement. The fact that the timing of the pool's life does not, to OXY apparently, neatly fit into any of the three categories of HB 207 may be a symptom but not the root cause of OXY's problem.

Other marginal fields without heavy oil production undoubtedly fall within such a 'gray' area also. If indeed necessary, the most efficient "fix" is an amendment to the HB 207 provisions. The Division proposes that this could be accomplished by amending the language in AS 38.05.180(j)(1)(B) to read as follows:

(B) to prolong the economic life of an oil or gas field or pool as costs per barrel or barrel equivalent increase or to allow for production of a heavy oil pool, which is defined as an oil pool that produces crude oil of a weighted average gravity of 20 degrees (American Petroleum Institute) or less, corrected to 60 degrees Fahrenheit; or

20. No application for royalty relief in the Schrader Bluff pool under the HB 207 provisions has been rejected as improper under the HB 207 provisions. If the lessees truly will not go forward with any further development or operations in the Schrader Bluff pool, then any relief applied for and granted would be to "prolong the life of the pool." OXY provides no information on how or if the costs per barrel for Schrader Bluff oil are expected to increase. Therefore, opinions by some that Schrader Bluff oil cannot be granted relief under the existing statute appear premature.

21. Mr. Tillinghast's discussion of the Conoco royalty relief application is incomplete. The Conoco and OXY applications for royalty relief were initiated under the pre-HB 207 statutes. When the department denied the applications, Conoco and OXY appealed the agency decisions and initiated an independent action in the superior court. This independent superior court action slowed the agency appeal and when Conoco and OXY's independent action reached the Alaska

¹ For example: "On leases that have been developed, such as the Kuparuk-West Sak situation, DNR wants the latitude to consider royalty reductions for the West Sak reservoir, while retaining the original royalty rate for the deeper Kuparuk reservoir." Page 4, DNR's Briefing Paper for Senate Resources Committee (April 1995).

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Supreme Court, it was rejected. Litigation takes time, no question about it, and the tale of the prior Conoco/OXY royalty reduction application would have been much shorter had the agency appeal been allowed to proceed and the premature action in superior court not been initiated and litigated. The current HB 207 provisions do not allow such litigation. Moreover, time has vindicated the agency's decision. BP purchased Conoco's interest in Milne Point Unit and has since then invested over \$200 million and increased production by 25% without any royalty relief. Further, according to the current operator, BP, production is expected to triple within the next few years, again without royalty relief. Any claims that Conoco left Alaska because it needed royalty relief and could not get it are clearly disproved. Conoco made its own decisions about investing and managing Milne Point and about leaving the state.

22. Mr. Tillinghast assumes that a T-bill interest rate would be imposed on a new royalty relief application. That was the rate determined by the department under the pre-HB 207 statute to be representative of a return that might be expected for a field where the major capital investments have already been made, not a field at the beginning of its development and production life. Not only does the department now have different statutory authority, but nothing would constrain it to apply that rate of return to different scenarios.

23. Mr. Tillinghast's statement that this proposal does not give any incentive to "production from other oil-bearing formations in the unit" (Tillinghast, page 6, part III) is inaccurate. Production from the Schrader Bluff pool will, to a certain degree, lower the per barrel cost of production within the unit by spreading the gross costs over a larger volume, which would increase the economic life of the other pools involved. It will also lower the TAPS tariff for all of BP's other North Slope production. An incentive therefore results.

The BP/OXY white paper dated January 22, 1996.

24. The paper discusses a pool life of 41 years for Schrader Bluff but proposes royalty suspension for individual wells. Mixing well economics and field economics results in an inaccurate analysis. Most of the wells will not have a productive life of anywhere near 41 years; therefore, the up front five year royalty suspension comprises a much larger percentage of the individual well life than it does of the total pool life.

25. Well by well economics do not reflect the integrated field economics. Any field undoubtedly has at least a few marginally economic wells; that does not necessarily put the entire field in need of royalty relief.

26. The white paper's authors assume that the State would choose a flat 5 percent royalty as the relief alternative offered. The State is not constrained to that particular figure; indeed, flexibility is one of the advantages of the HB 207 provisions. In any case, the current royalty reduction floor is 3 percent.

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27. The analysis assumes that the well costs equal the average costs of Tract 14 wells through 1991. This cost does not then take into account significant savings touted by North Slope operators like BP from advances in drilling since 1991 (when drilling on Tract 14 by Conoco ceased) such as using coiled tubing units and multi-lateral completions. The analysis does not address the cost for BP as the new operator and a party with significantly more North Slope drilling and operating experience than OXY or Conoco. The analysis does not project that the operator will most certainly be attempting to reduce costs through increased experience levels in the future. The white paper touts significant cost reduction achievements so far: from \$135MM for 13 wells and associated facilities at West Sak to \$126MM for 22 wells and associated facilities at Tract 14. BP/OXY's White Paper, page 14. Unless the lessees have abandoned all efforts at cost reduction, further increases have most likely been achieved since 1991 and should continue into the future. Under IIB 325, even if current and future cost reduction efforts decrease the costs to where Schrader Bluff is much more economically competitive, the State will not receive any royalty for the first five years of any well's production.

28. The analysis assumes that operating costs remain the same as those in 1995. This presumes that 1995 was an "average" year in spite of the fact that operatorship had just changed. It also does not account for any efficiencies or economies of scale gained by increasing the size of the project and by gaining more experience or technology.

29. The analysis assumes that OXY is the appropriate corporate model to use to determine what rate of return may be expected from this project. In fact, it is likely quite the opposite. OXY has not only the minority share of the working interest (8.81%) but it also does not own downstream interests which would benefit from additional production. It would appear to be inappropriate to concentrate on royalty relief for that small interest owner when the majority interest owner (91.19%) would at the same time receive additional unaccounted for benefits for additional production (its downstream benefits and a royalty holiday on leases that have a 20 percent royalty rate).

30. The white paper refers several times to the DNR production forecast that includes Schrader Bluff production. It must be noted that the DNR forecast is a very general forecast based on minimal information about future Schrader Bluff production and little if any about the operator's internal long range plans. The white paper authors have incomparably more knowledge and data on Schrader Bluff than the DNR personnel and DNR's forecast is based on announced or existing development plans, not on speculative development.

The white paper refers to the new federal heavy oil incentive program and other state marginal well incentive programs. Several points need to be clarified here:

31. As discussed above in paragraph 9, the federal program is applied on a property by property basis, not on an individual well basis.

The Honorable Mark Hanley
Alaska State Legislature
February 13, 1996

32. The federal program has not yet started. It will be effective on March 11, 1996. See 81 FR 4748 (Feb. 8, 1996).

33. The federal program does not eliminate all royalty because "that would jeopardize the [Department of Interior's] efforts in securing a fair return for public land resources." 81 FR 4748. Moreover, achieving the maximum economic return is not the primary focus of the federal program. 81 FR 4750.

34. The other state programs are almost all tax incentives. There is no mention of what the corresponding royalty owners gave as incentives, if anything. A taxing authority imposes taxes pursuant to the government's sovereign powers, to raise revenue based on the existence of a property or activity within a certain area at a certain time. A royalty owner, on the other hand, is essentially receiving payment in return for allowing the lessee to take the minerals pursuant to a contract (the lease). In essence, under HB 325, the State would be giving away property with no showing of economic need to do so, and furthermore, with the knowledge that the lessees have no obligation to do anything in return.

35. Analysis of the federal heavy oil incentive program suggests that application of federal royalty policies to state royalty policies does not necessarily benefit the state and that increased production will never offset the foregone royalties. The federal revenues are only increased as a result of increased income and other taxes. Further, in the federal program, the waived royalties that the federal government is predicted to recoup as federal taxes will not necessarily 'flow through' to the affected state. There is no assurance that relief afforded under the federal program will be used to benefit lands within the borders of the state that foregoes the royalties and under HB 325, there is no assurance that the 'benefit' of the relief afforded will be reinvested in Alaska.

HB 325 does not guarantee the State anything in exchange for the incentive. There is no guarantee the companies will go forward with heavy oil production if the incentive is granted. There is also no showing that they will not go forward without it; in fact, as discussed below, quite the contrary. There is no commitment by industry that if the relief is granted, they will continue producing heavy oil once the incentive ceases. There is no requirement of reinvestment of any of the earnings in further heavy oil production or research in Alaska. Moreover, there is no commitment by industry that Alaskans will be hired for the jobs they say will be created. Nor is there any commitment to build modules for the MPU in Alaska. Under HB 207, the commissioner could insist on these types of commitments before granting royalty relief. HB 325 grants relief without any commitment.

The white paper authors also refer to Scott Goldsmith's study of the impact on the Alaskan economy in general if royalty relief were granted.

36. Contrary to what the white paper authors would imply, Mr. Goldsmith's study did not assume a royalty suspension; it assumed a flat 6 percent royalty.

The Honorable Mark Hanley
Alaska State Legislature
February 13, 1996

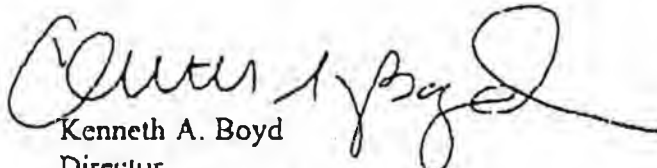
37. The Goldsmith study predicted numerous jobs being created by such royalty relief. According to the white paper, the Goldsmith study predicts that the State will add 27 additional State government jobs during the development phase and 10 additional State government jobs during the field life. It is unclear that the additional state government jobs are a real 'benefit' to society; they might be a cost instead. These jobs arise as a response to a predicted increase in demand for government services imposed by the population impact of a marginal development. What is the nature of these jobs? Without royalty on the additional production, how will these demands be met? What revenue will pay for the additional state government jobs?

Moreover, even if these industry jobs were created, there is no guarantee that the Alaskans would be hired for them and there is no guarantee that fabrication of equipment and facilities needed would be done in Alaska.

Summary. To briefly sum up a lengthy discussion, the Division of Oil and Gas maintains that any royalty reduction or royalty exemption for the production of "heavy oil" should be based on need. In the long run, a heavy oil incentive like that proposed in HB 325 should result in greater state revenues through the increased production and development of the resource. HB 325 does not meet these goals. By imposing mandatory blanket reductions, there may be insufficient relief to leases in true jeopardy, windfalls to those without need of the relief, and an inability to insure that any cost savings will be used to develop and operate the leases eligible for the relief. The process required to award a royalty reduction under the existing HB 207 provisions assures that the royalty reduction is necessary to stimulate development. Furthermore, a HB 207 royalty reduction may be conditioned to respond to changing market conditions (price), and changes in capital and operating costs as technology improves, and may include other provisions tailored to relief applied for. The Division maintains its recommendation that, if any legislative change is necessary to encompass pools such as Schrader Bluff, the easiest, most effective change should be through a simple amendment to the existing AS 38.05.180(j) provisions.

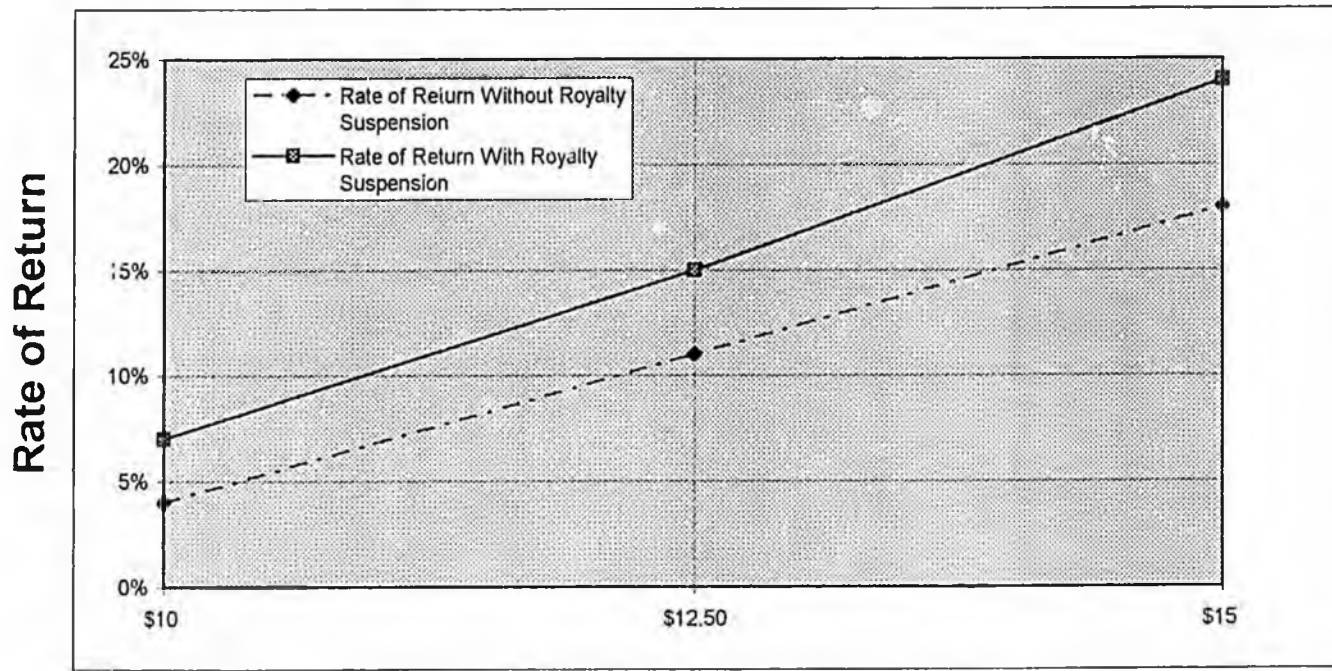
This letter covers numerous issues; nevertheless, if you have further questions (or answers), please don't hesitate to contact me.

Very truly yours,


Kenneth A. Boyd
Director
Division of Oil and Gas

2/12/94
JF
AT

Rate of Return at Various Life of the Field Average Oil Prices OXY Per-Well Economics

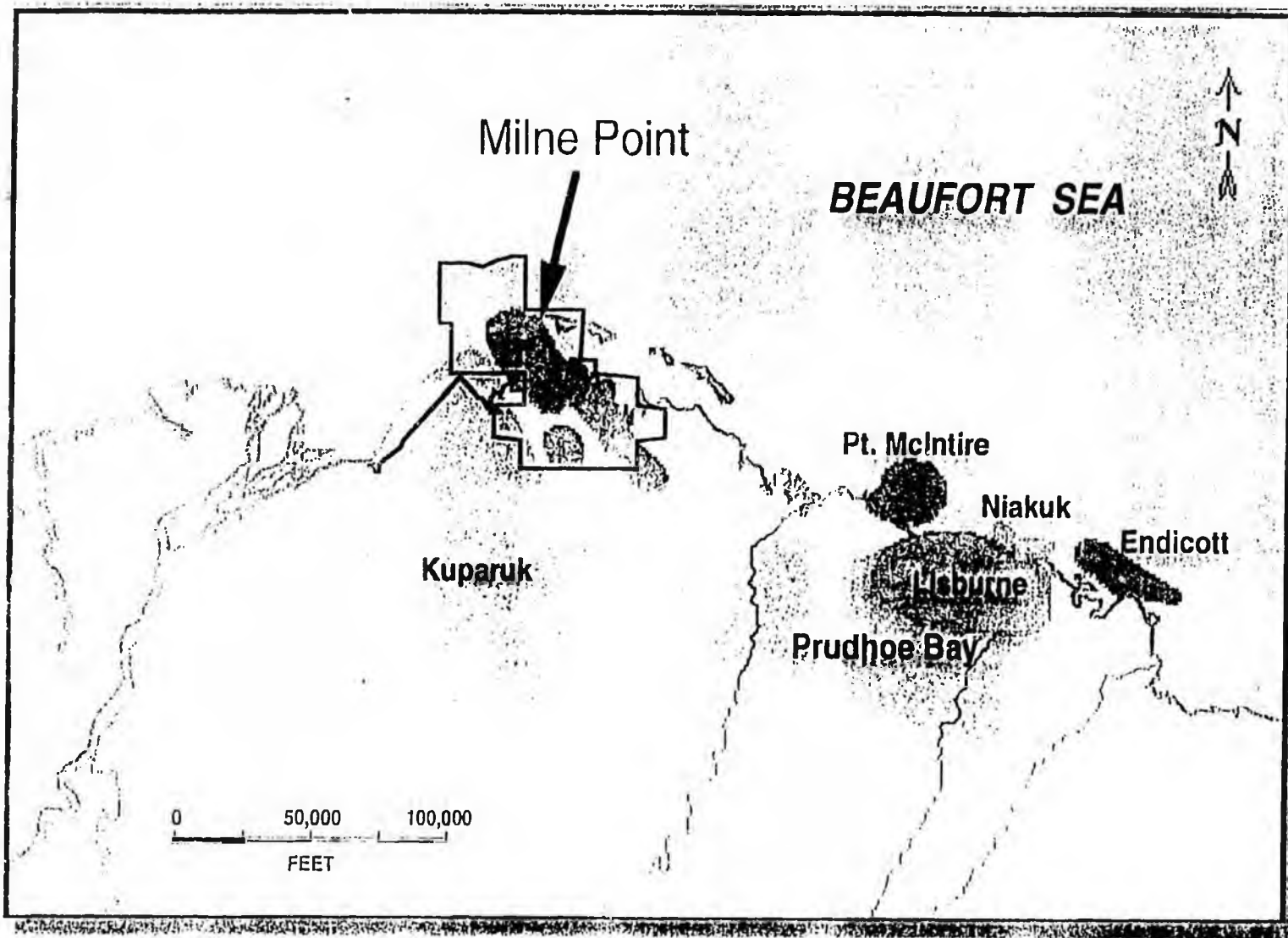


Life of the Field Average Milne Pt. Wellhead Oil Price, \$/BBL

WHO IS OCCIDENTAL OIL AND GAS CORPORATION?

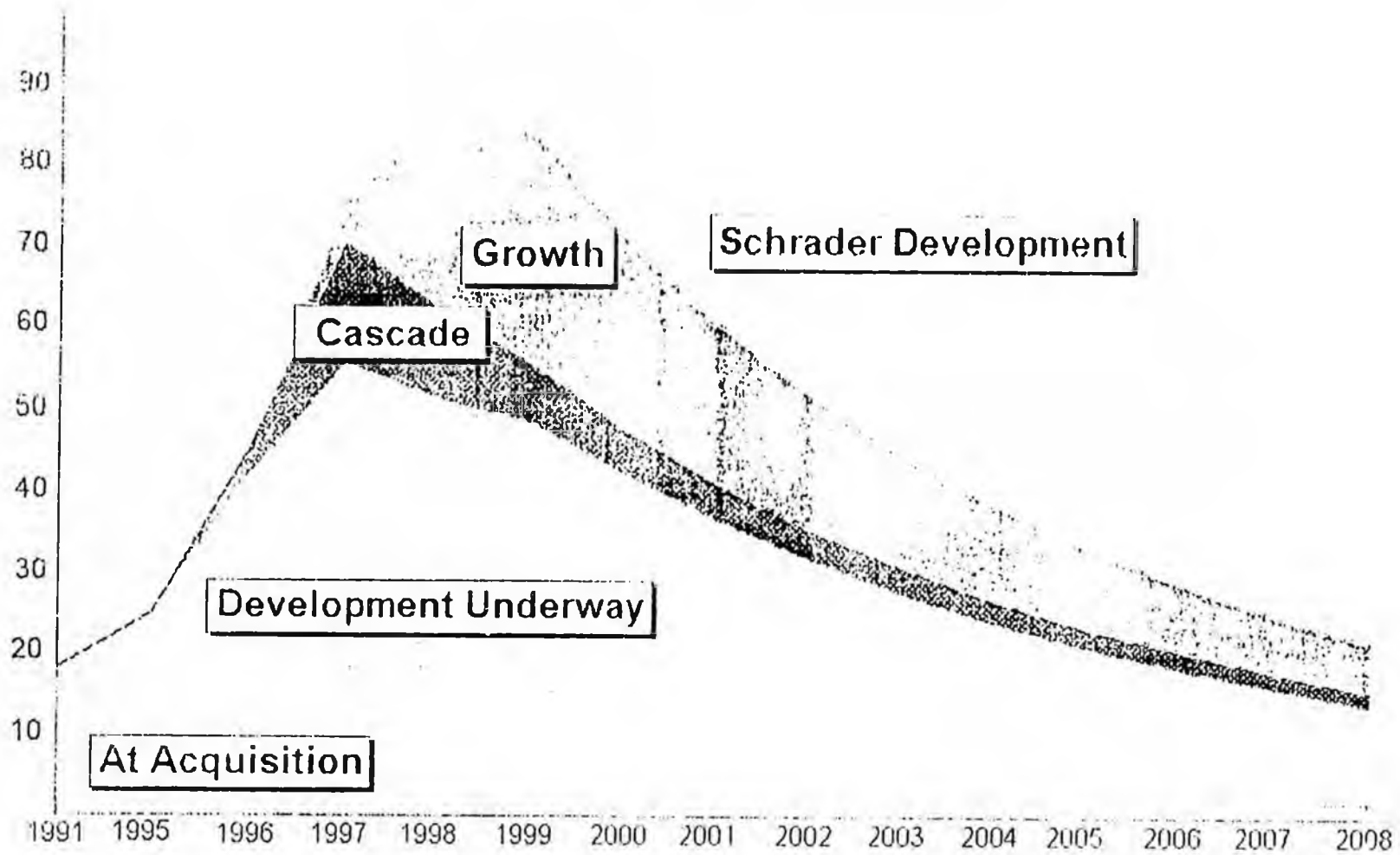
- *Oil & gas part of Occidental Petroleum Corporation*
- *Large independent in the US, no refining or marketing operations*
- *No financial interest in TAPS*
- *Operator of Heavy Oil properties in California*
- *The last original owner in Milne Point Unit with around 9% WI*

ATTACHMENT-1
2/8/96

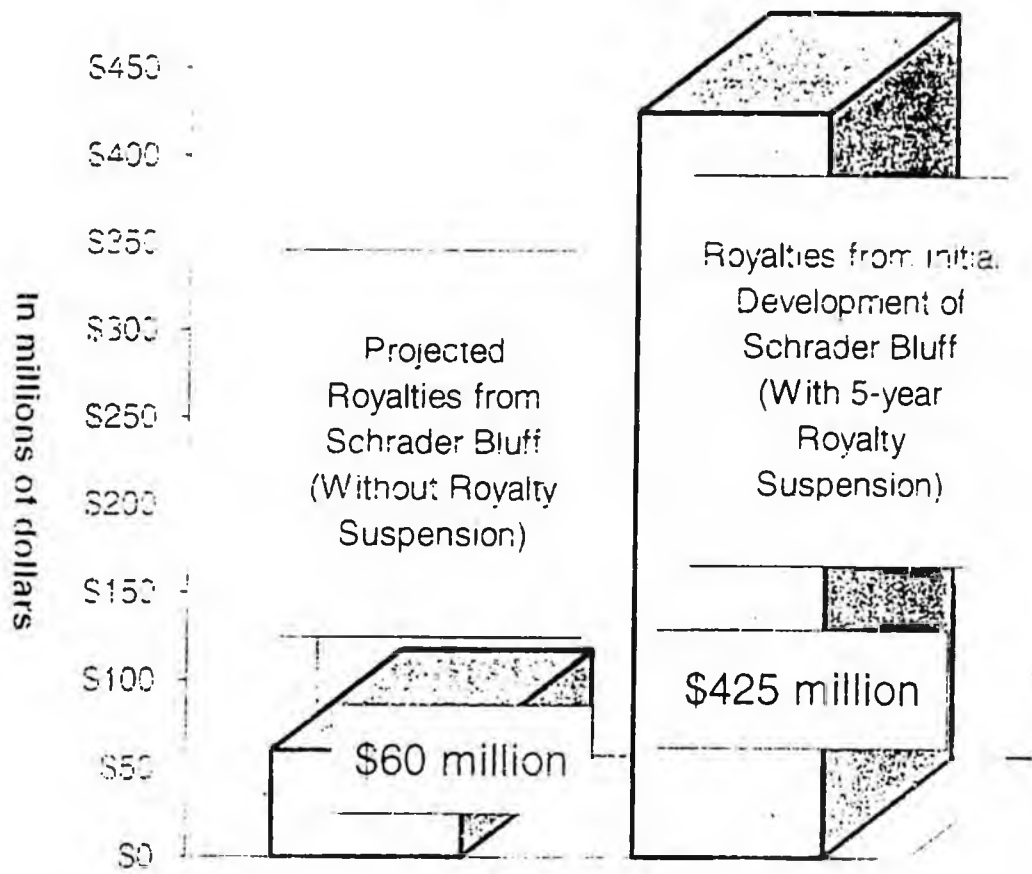


North Slope Fields and Milne Unit Outline

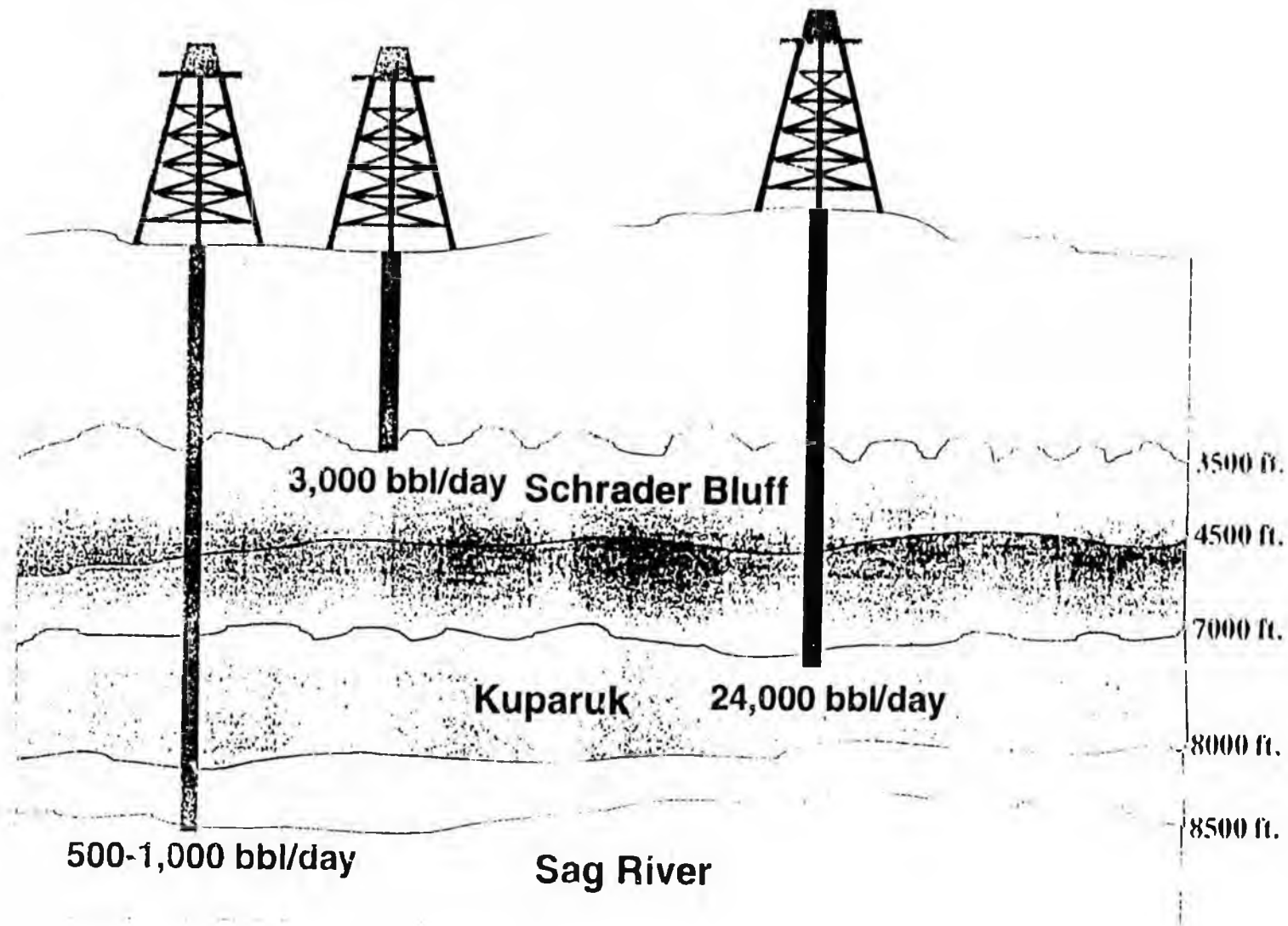
Milne Point Production Profile



Two Paths for Schrader Bluff

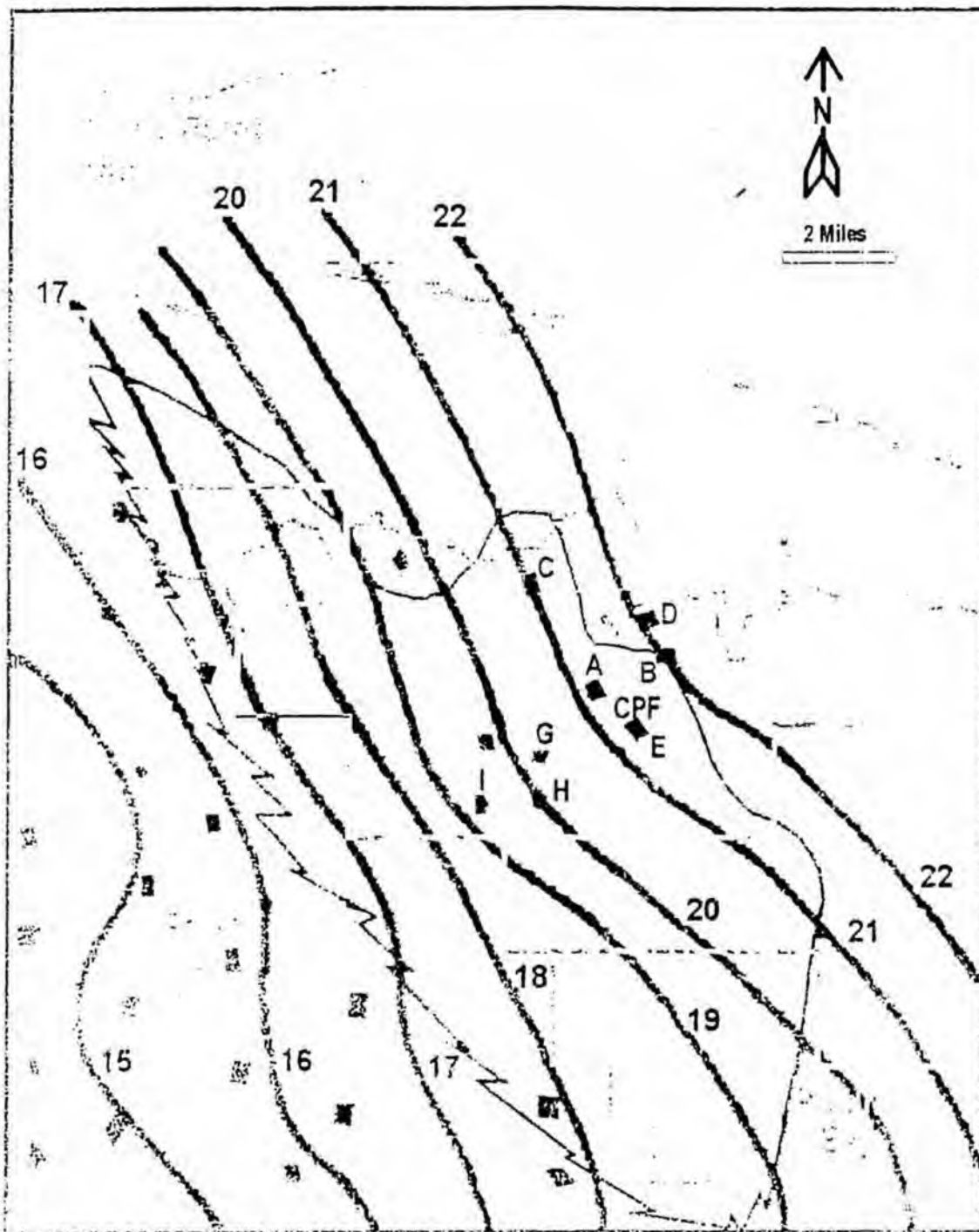


Production Formations at Milne Point



What is "heavy oil"?

- Low gravity
- Thick
- Produces slowly over a long period of time
- Disadvantaged in market place
- Capital intensive
- A focus of current debate on oil and gas incentives

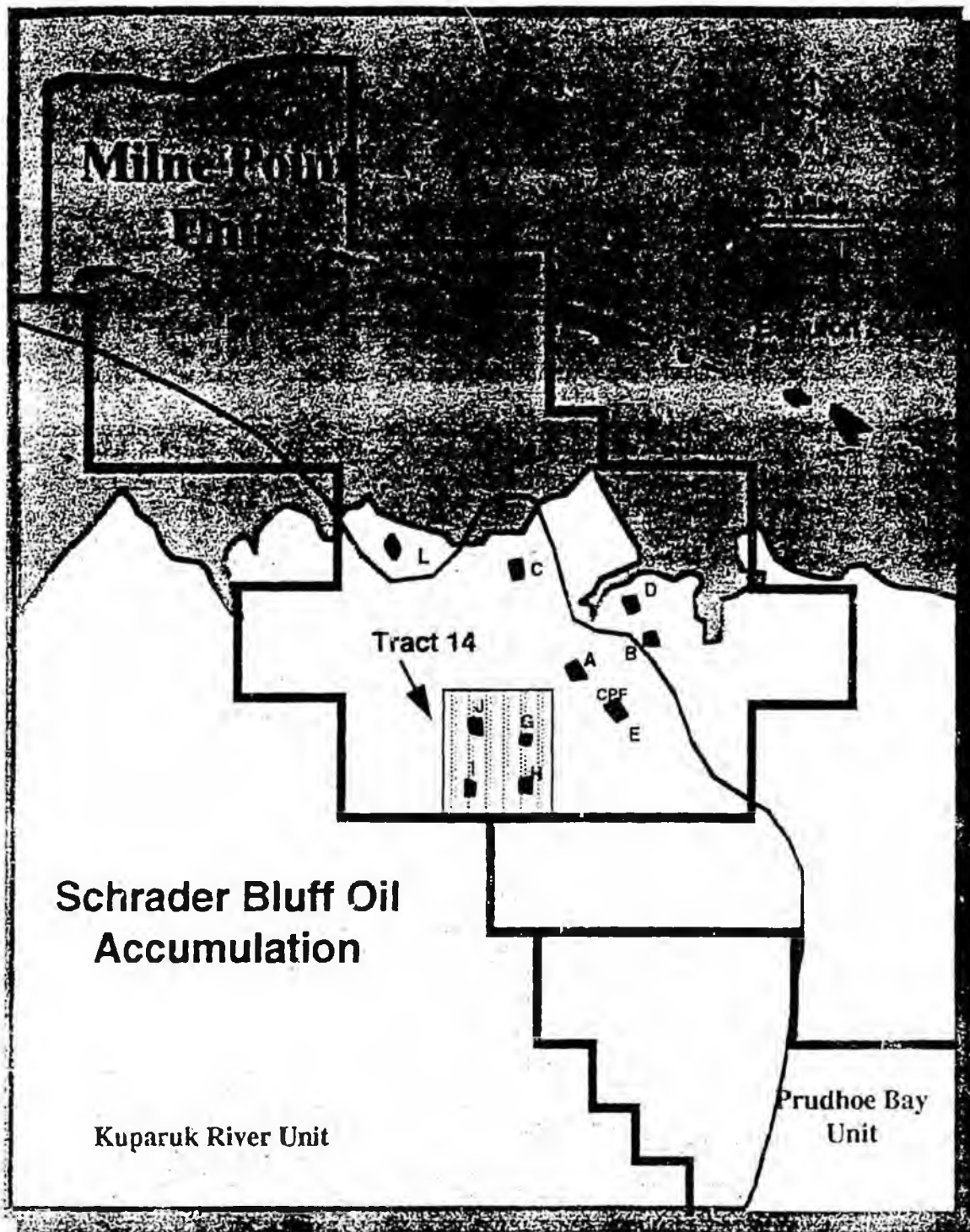


SCHRADER BLUFF

O Sand
API Gravities

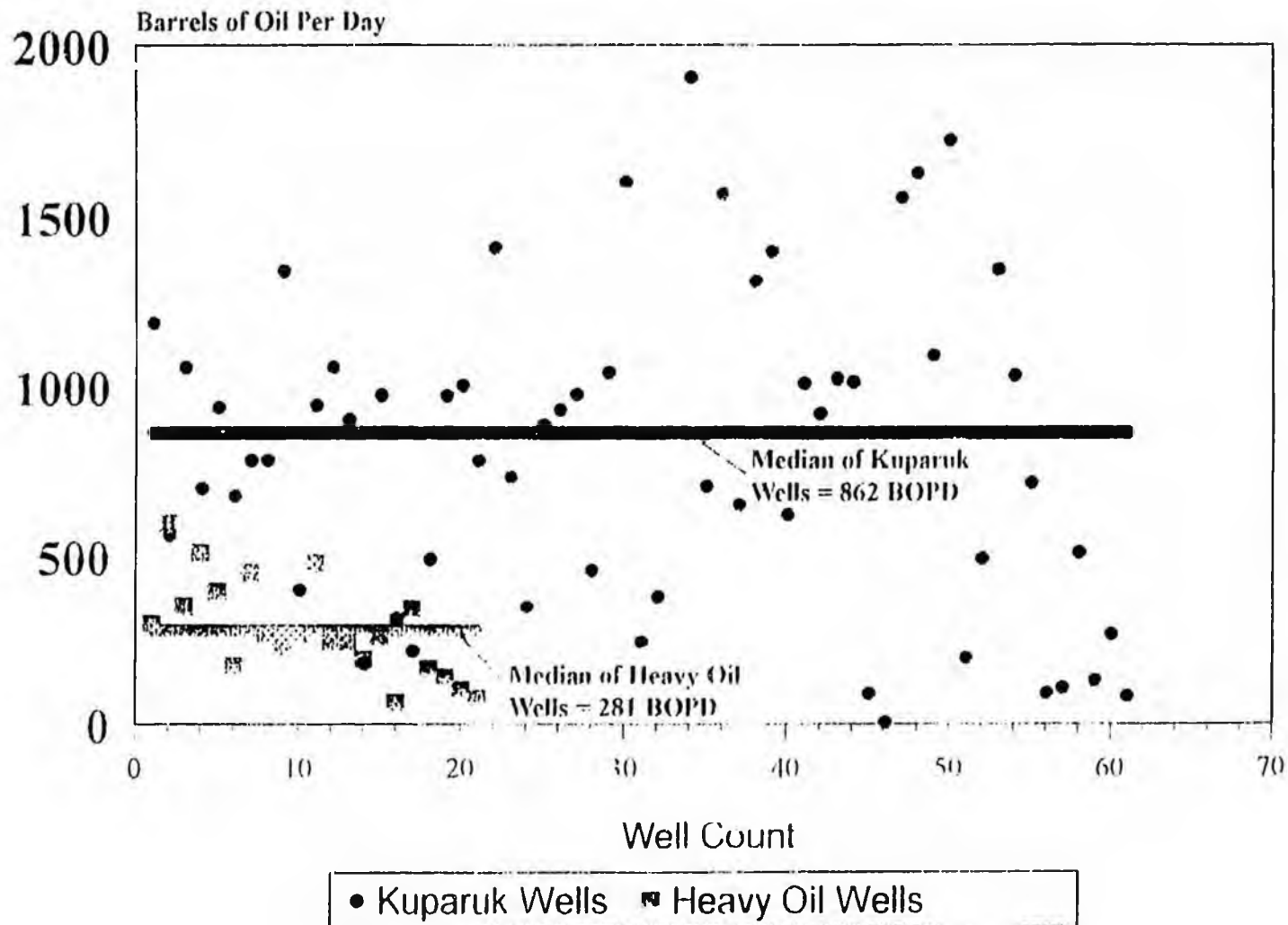
Previous Heavy Oil Development

- *Spent \$135 Million on 13 wells and related facilities*
- *Average producing rate = 250 BOPD per well*
- *Recovery = 0.8 million barrels before abandonment in 1986*
- *Total Capital Investment = \$169/Barrel*
- *Uneconomical*

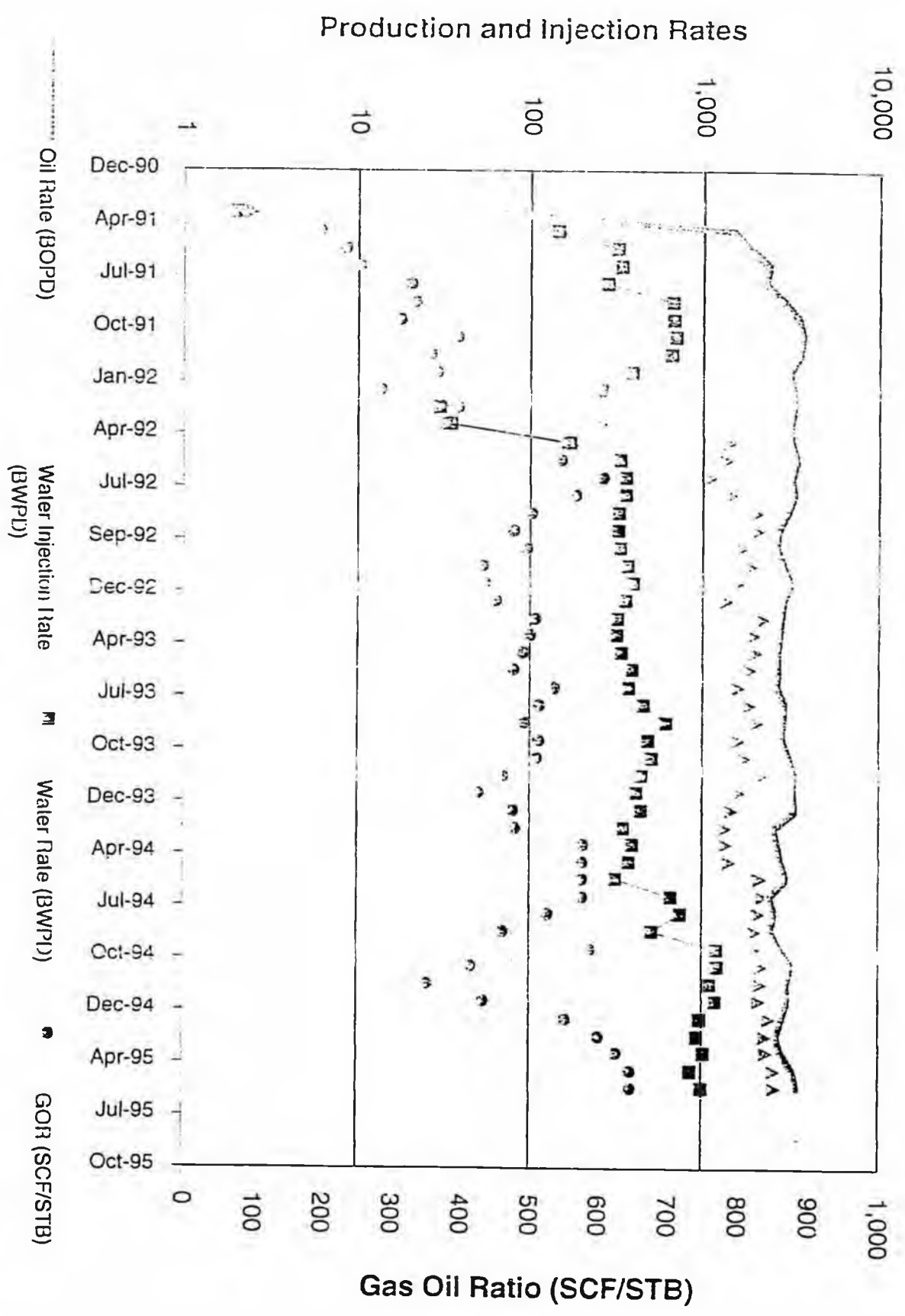


Schrader Bluff Oil Accumulation

Heavy Oil Wells Have Much Lower Initial Flowrates



Schrader Bluff Tract 14 Monthly Average Production and Injection History



Previous Heavy Oil Experience

Spent a minimum of \$126 Million on 22 wells, pads, etc.

• Average producing rate = 275 BOPD per well

• Expected Recovery = 13.5 Million Barrels

• Total Investment = \$9.30/BBL

• Uneconomical

Source: SPE 30239, "Milne Point Schrader Bluff: Finding the Keys to Two Billion Barrels" (2001). Reserves determined from decline curve analysis.

SCHIRADER BLUFF TECHNOLOGY

HEAVY OIL TEST BED
HIGH ANGLE FRAC PACKING
ELECTRIC SUBMERSIBLE PUMP
HEAT TRACE TECHNOLOGY

OIL TO
PROCESSING

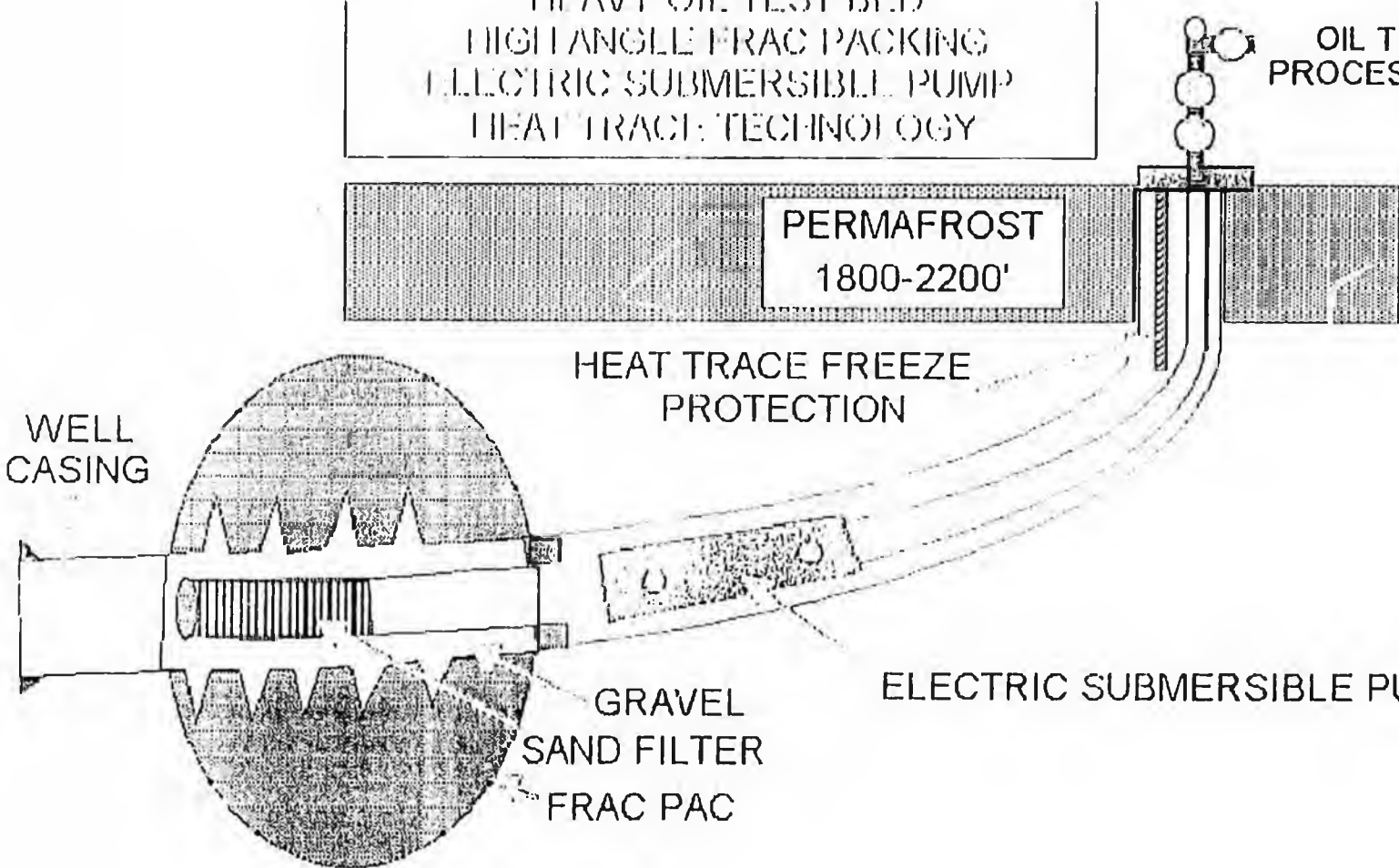
PERMAFROST
1800-2200'

HEAT TRACE FREEZE
PROTECTION

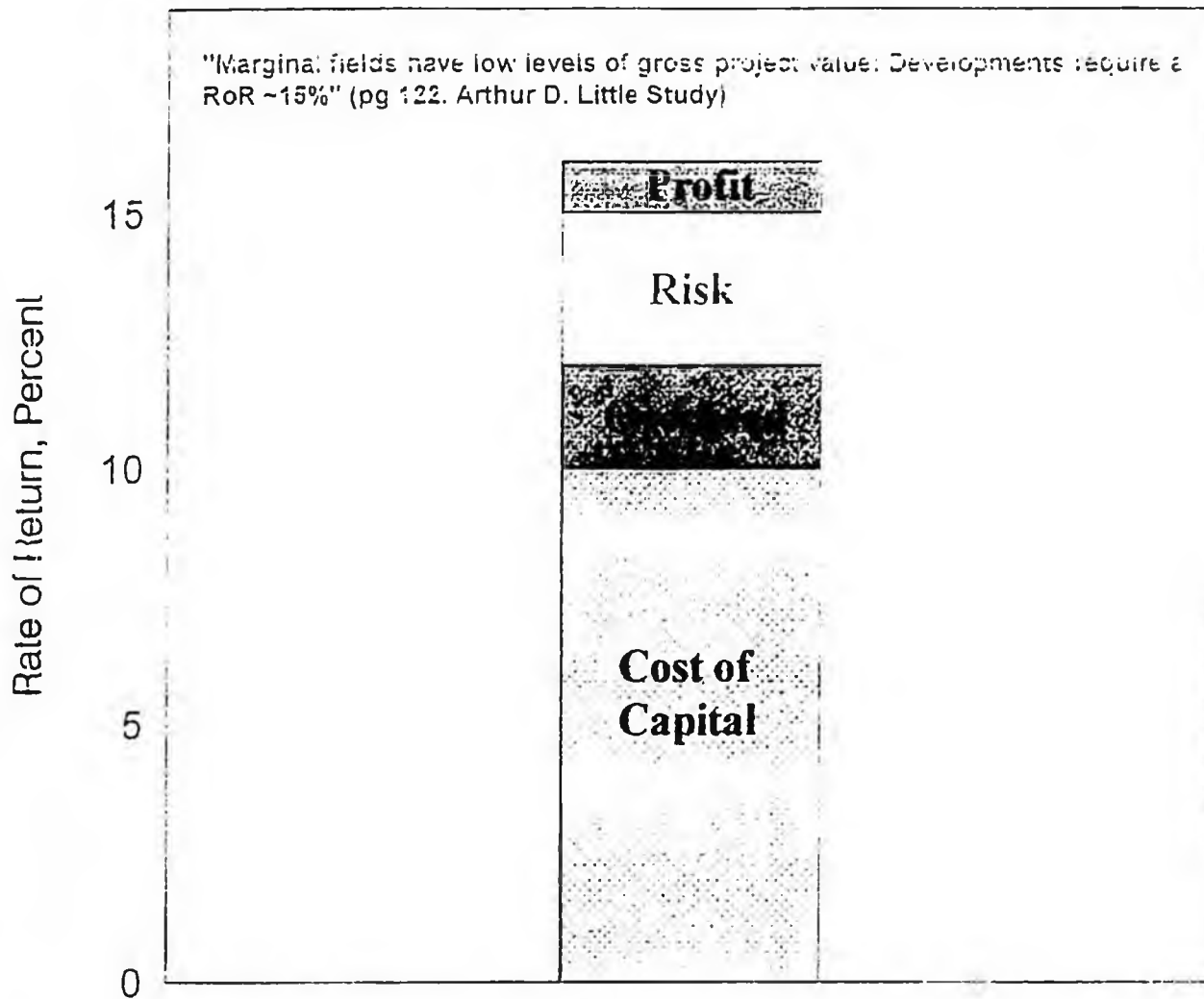
WELL
CASING

ELECTRIC SUBMERSIBLE PUMP

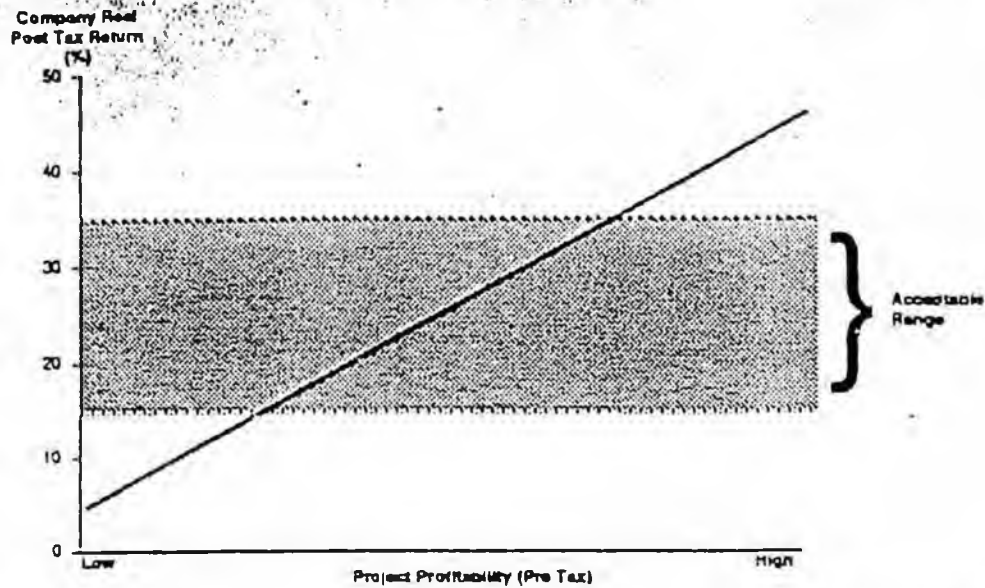
GRAVEL
SAND FILTER
FRAC PAC



"Hurdle Rate" -- The Minimum Rate of Return Necessary to Justify Capital Investment



Conventional fiscal systems are fiscally inefficient



Arthur D Little

HE 471/1986

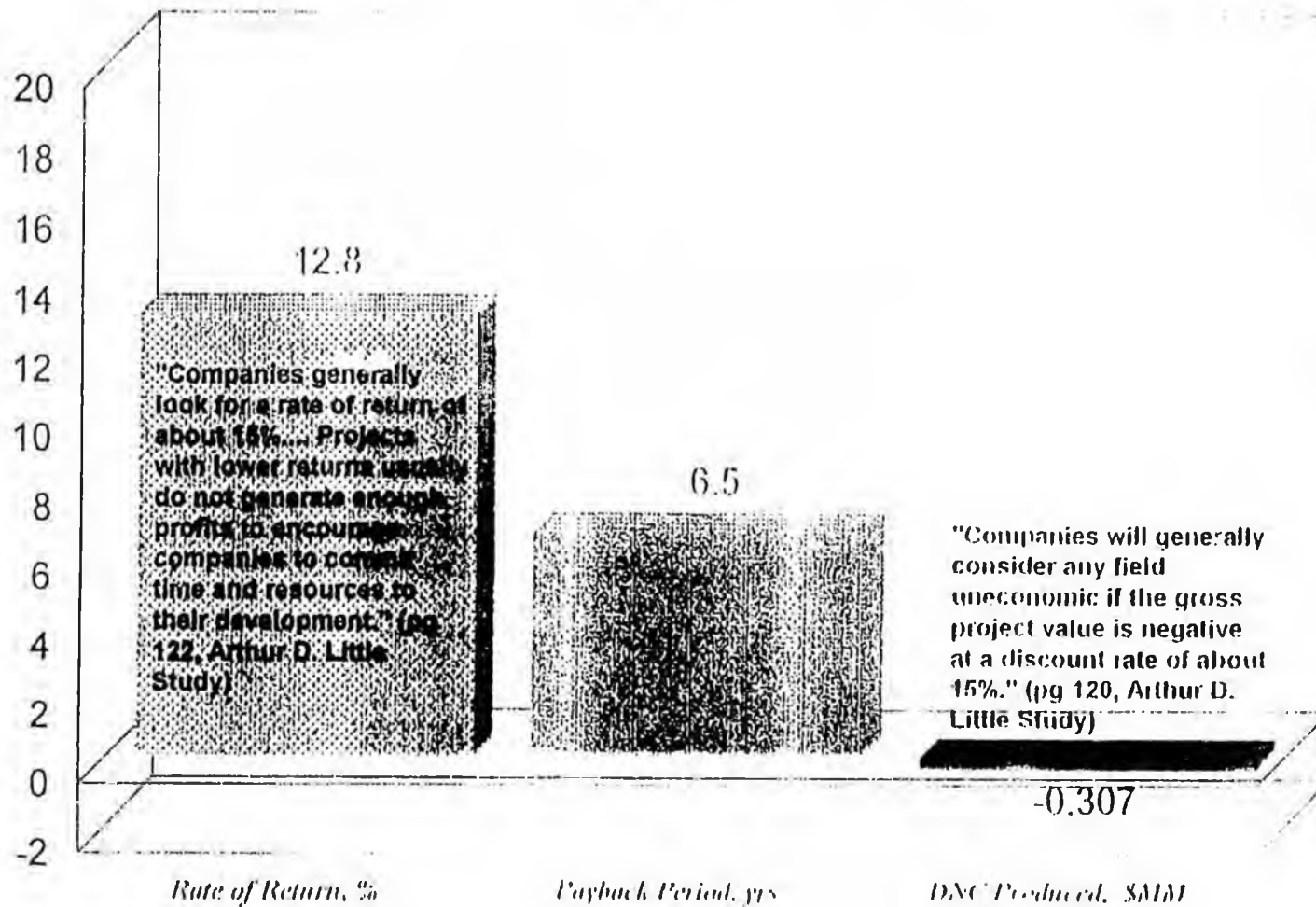
11

Conventional fiscal systems are fiscally inefficient:

- Under a traditional petroleum agreement (with fixed royalty and income tax rates under a licence agreement or fixed cost and profit sharing under a production sharing contract) the total government take and the oil company profitability change considerably with the characteristics of the discovery (size and development cost) and with oil prices.
- This type of system is "fiscally inefficient" and has fallen into disfavour following the oil price fall in 1986 and a worldwide trend towards smaller field discovery sizes.
- In a fiscally inefficient system:
 - Smaller and higher cost fields will not be developed as the profitability is too low to attract oil companies.
 - Larger and least expensive fields will generate excessive profits for the companies: the government take will be lower than it has the potential to be.
 - Similar effects will be experienced if oil prices are unexpectedly high or low.
- Thus, uniform fixed rate fiscal systems produce non-uniform results which are economically discriminatory:
 - It is important to "tailor" the contractual terms so that the conditions offered are attractive both for significant and for small discoveries and so that the long term interests of host country and the investors are protected, for example, in the case of wide variations in crude oil prices.

Typical Heavy Oil Well Economics

Based on the 5 best wells to date in Tract 14



What are we proposing?

HB 325 by Representative Green

- Applicable to heavy oil production as defined by 26 U.S.C. 613A(c)(6)(F)
- Applicable only to the Alaska North Slope
- Suspension of royalty payments for each new well for the:
 - first five years
 - first 500 barrels of oil per day
- A simple, automatic process

Suspension Incentives in Other Jurisdictions

- Texas
 - high-cost gas (10 year exemption)
- Utah
 - wildcat wells (first 12 months)
 - development wells (first 6 months)
- Oklahoma
 - horizontal wells (until payout)
 - enhanced oil recovery projects (until payout)
- Montana
 - horizontal wells (first 18 months)
- Mississippi
 - discovery wells (first 5 years)
 - re-activated wells (first 3 years)
- Kansas
 - tertiary projects (for life of project)
 - shallow wells (for life of project)
 - discovery wells (first 12 years)
- Arkansas
 - discovery wells (first 5 years)

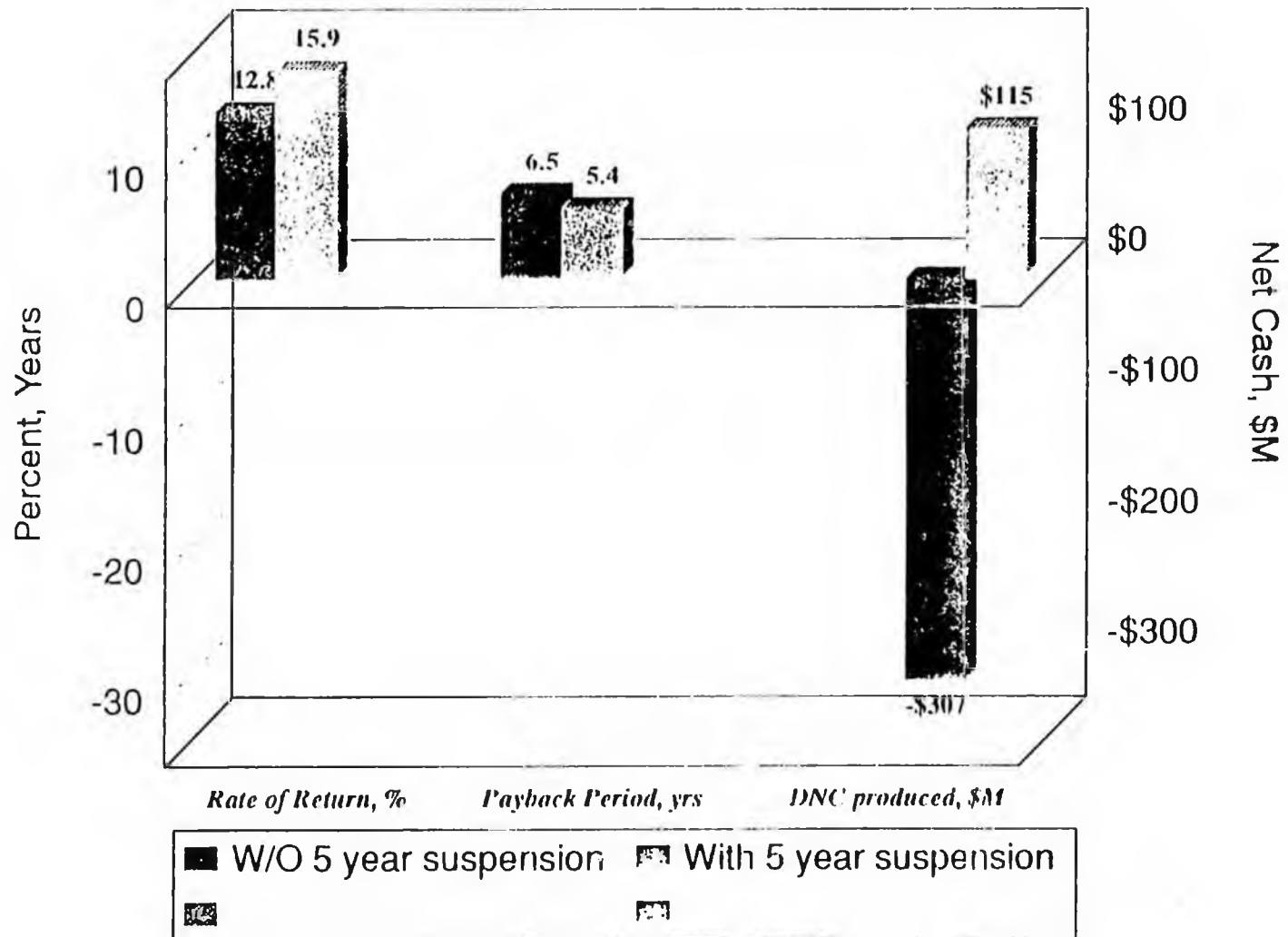
Texas "High - Cost Gas" Incentive

Benefits Identified

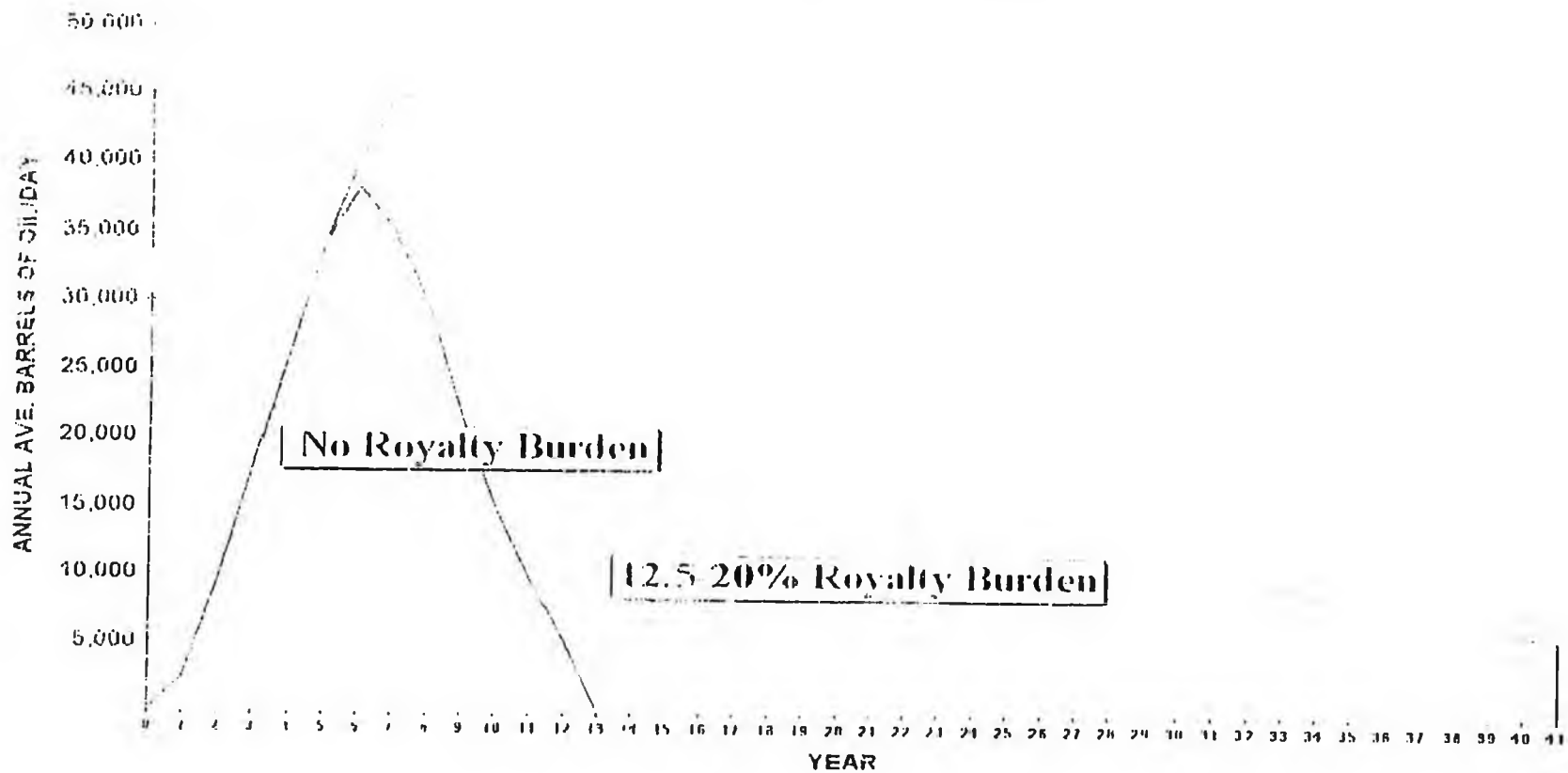
- 400% increase in the number of wells
- \$4.122 Billion more in gas produced
- \$240 Million in sales tax revenues generated
- 104,000 employment years created
- \$12 Billion in additional economic value generated for Texas

Source: Texas Railroad Commission

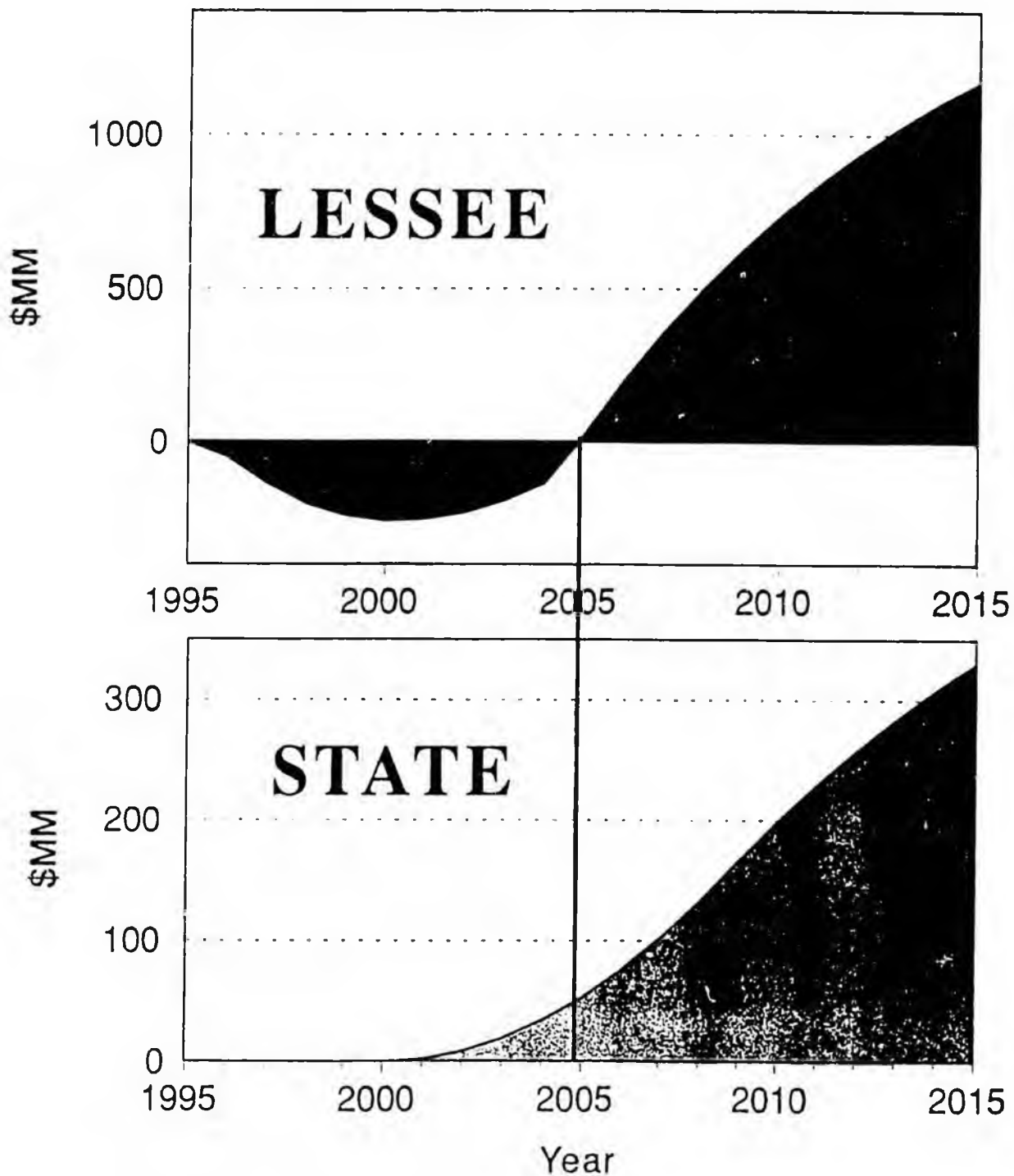
The Effect of Royalty Suspension on Schrader Bluff Economics



ADDITIONAL PRODUCTION FROM HEAVY OIL,
BY
DEVELOPMENT YEAR



Cumulative Cash Flows From Full Development



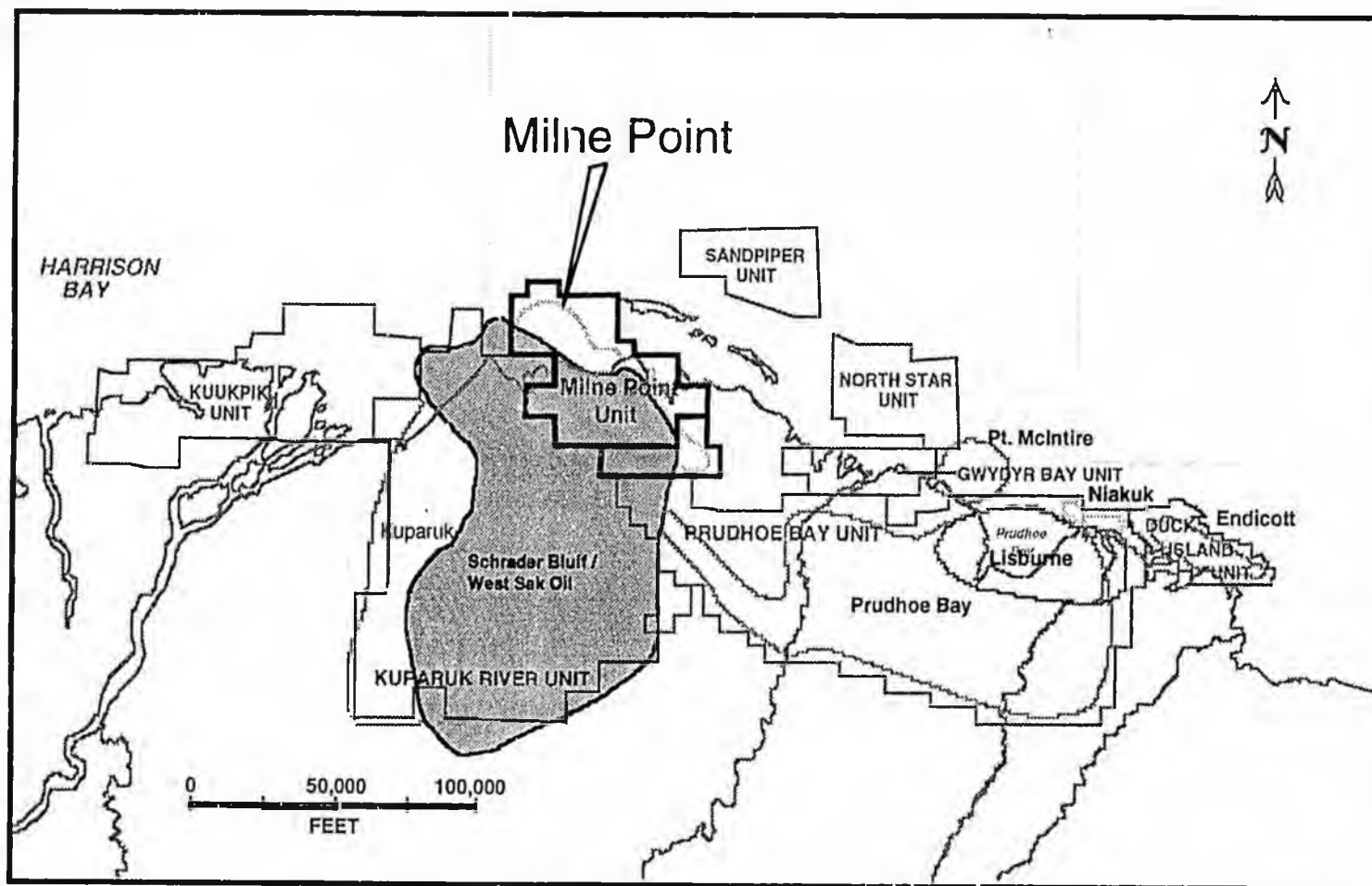
Heavy Oil Potential at Milne Point

Presentation by BP Exploration (Alaska) Inc
before the House Finance Committee

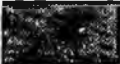
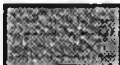



February 8, 1996

Attachment 2
2/8/96

North Slope Fields



Schrader Bluff Heavy Oil Development

-
- The map illustrates the Schrader Bluff Heavy Oil Development, divided into three main sections: KRU (Krug), CFP (Central Field Pad), and PBU (Pebble Bay Unit). The development is categorized into three stages: 'Development at Acquisition' (darkest shading), 'Development in Progress' (medium shading), and 'Future Development' (white). Existing pads are marked with solid black squares, while future pads are marked with squares containing a small black square. The map also shows a coastline to the west and a large shaded area to the north.
-  Development at Acquisition
 -  Development in Progress
 -  Future Development
 -  Existing Pad
 -  Future Pads

KRU

CFP

PBU

Schrader Bluff Development History

- First production from pilot project in 1991.
- 16 producers and 5 injectors drilled.
- Low average initial well rate ~275 bpd.
- Completion technology advanced.
- Not commercially competitive.
- Development stopped '91.

Significant technical and commercial hurdles remain to be overcome

MPU Schrader Bluff - Potential Program

1994

Drill Test Well

1995

Drill six "Test Wells"

?? - 1998 - ??

Potential Development

230 Wells

45,000 bpd Production

Key

Decisions

Determine viability and scope for '95 wells.

Demonstrate increased rate and reduce costs.

Establish viability of larger scale initial development.

1995 Schrader Bluff Development

- Objectives

- Reduce capital requirements and operating costs
- Increased production rates from new wells
- Reduce development uncertainty

- Progress - 1995 spend \$15,000,000

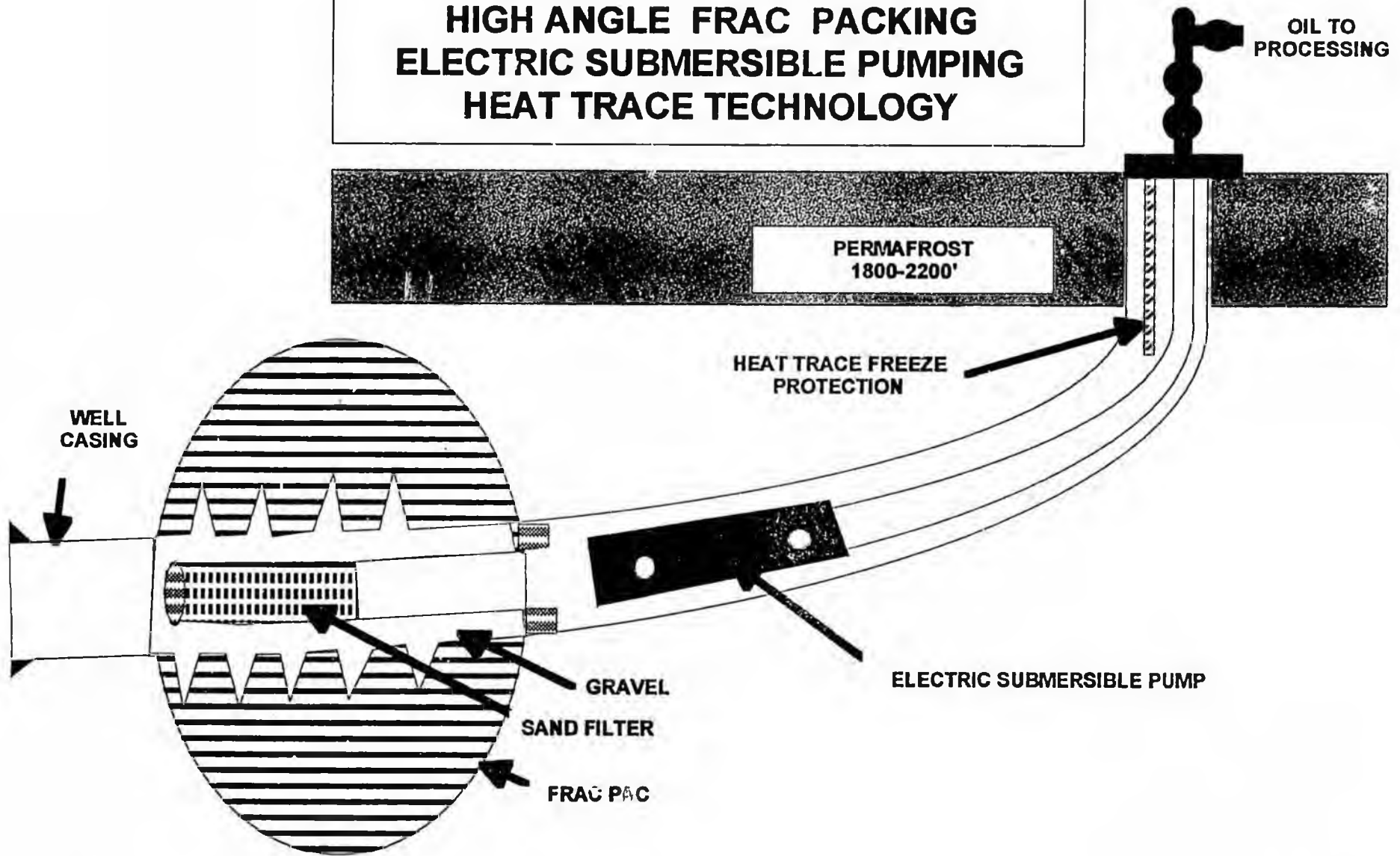
- Six wells drilled; completions in progress; not on production
- Three wells recompleted and on production
- Reservoir and facility technical studies initiated

- Results

- Drilling cost reduction demonstrated
- Completion cost remains problematic
- Improved submersible pump life realized
- Well performance and technical study results not yet available

SCHRADER BLUFF TECHNOLOGY:

**HEAVY OIL TEST BED
HIGH ANGLE FRAC PACKING
ELECTRIC SUBMERSIBLE PUMPING
HEAT TRACE TECHNOLOGY**

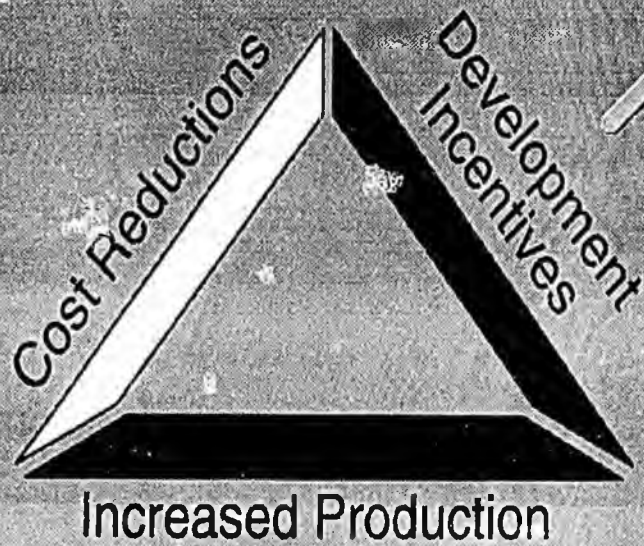


Schrader Bluff Challenges

**Field
Development**



**Compete
Internationally
for Funds**



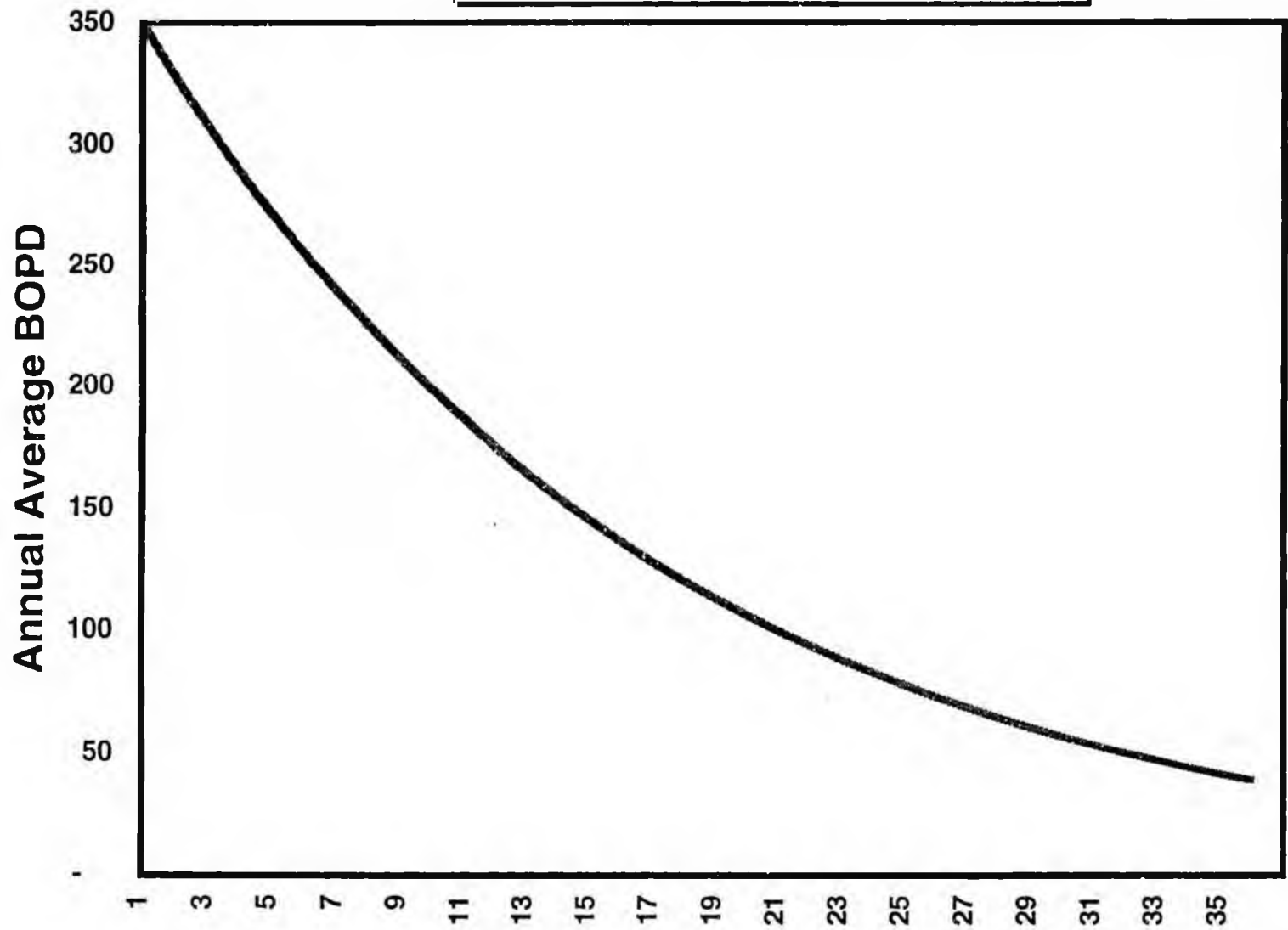
The "Prize" at Schrader Bluff

- **2+ Billion barrels of oil in place**
- **Potential ultimate recovery - 200 to 800 million barrels**
- **Expansion to adjacent fields**

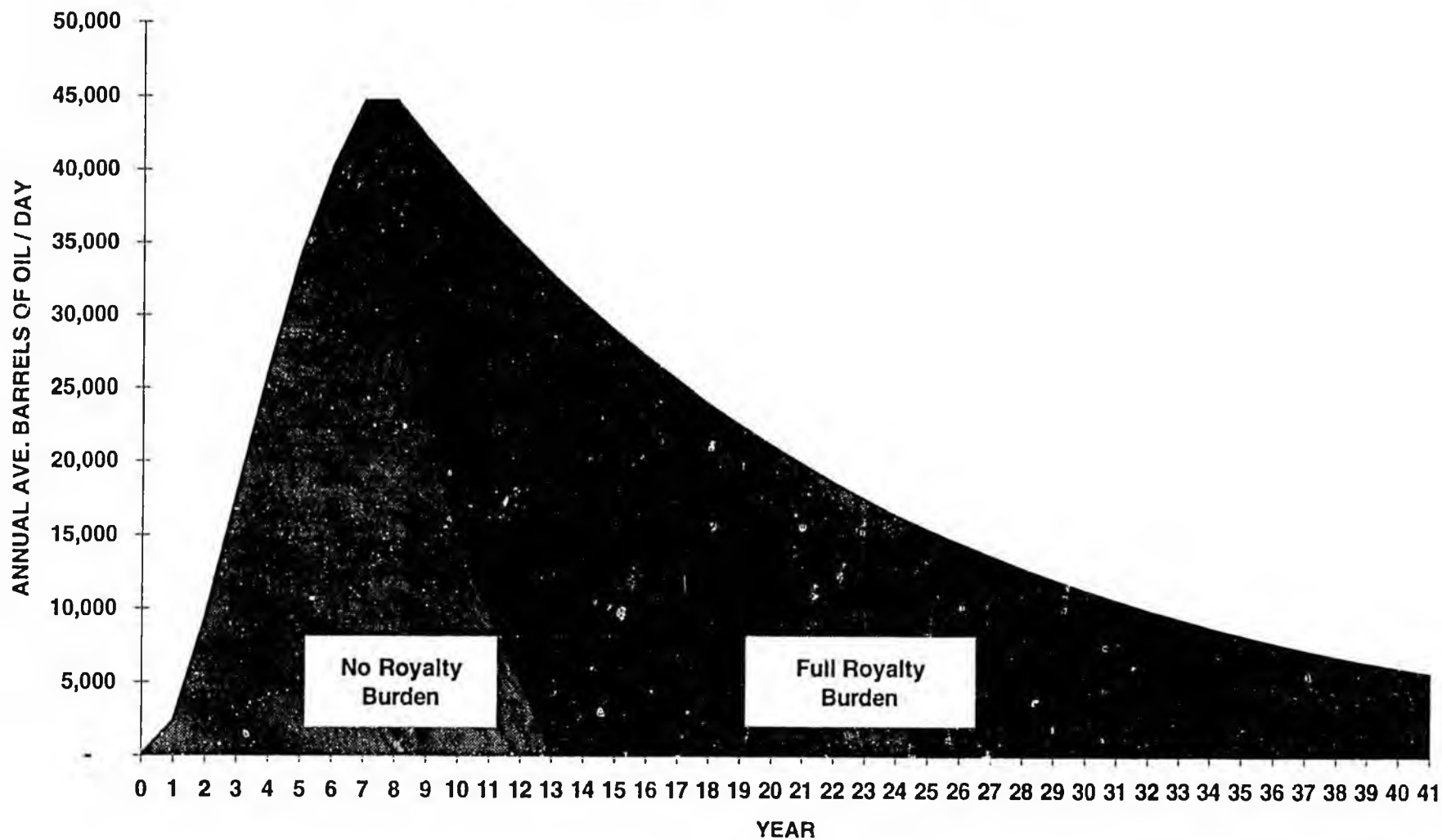
Heavy Oil Royalty Holiday (HB-325) Impact on Schrader Bluff Project

- **Royalty holiday will:**
 - **Reduce investment uncertainty**
 - **Encourage investment**
 - **Send positive signal**
 - **Accelerate pace and increase development scope**
- **Time lag from incentive to start of investment is short**
- **Ultimate project scope remains uncertain**

**Schrader Bluff Typical Well
Production Rate vs Time (years)**



**ADDITIONAL PRODUCTION FROM HEAVY OIL
BY DEVELOPMENT YEAR**
(300 million bbls recovered; 230 wells drilled over seven years)



The Risk of Project Development Delay

- **Current development momentum is lost**
- **Economic benefits deferred / value lost**
- **Ultimate recovery placed at risk**
- **Project economics placed at risk**

DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

3601 "C" STREET, SUITE 1380
ANCHORAGE, ALASKA 99503-5948
PHONE: (907) 269-8784

January 30, 1996

The Honorable Bill Williams
Alaska State Representative
State Capitol, Room 128
Juneau, Alaska 99801-1182

Dear Representative Williams:

You asked whether HB 207, passed last session, could be used to grant royalty relief for the production of "heavy oil." The division's short answer is yes. Nevertheless, because of the concerns expressed in the hearing on January 24 about the applicability of HB 207 to heavy oil production, the administration would support an amendment to HB 207 to provide explicitly that it applies to heavy oil production.

Subject to several provisions designed to protect the state's interests, HB 207 grants authority to the commissioner of the Department of Natural Resources to modify the existing royalty rate "to allow for production that would not otherwise be economically feasible" for any one of three types of oil or gas pools. In essence, the three are:

1. To allow production from an oil or gas pool that has been delineated, but has not previously produced ("New Pool").
2. To prolong the economic life of an oil or gas pool as costs per barrel or barrel equivalent increase ("Declining Pool").
3. To reestablish production from a shut-in oil or gas pool ("Shut-in Pool").

For purposes of HB 207, heavy oil production is no different from any other type of oil production. In other words, HB 207 would apply whether the oil production consisted of heavy, medium, or light production. If a company wished to produce heavy oil from a Shut-in Pool, it could be granted royalty relief under HB 207. For example, heavy oil production from ARCO's portion of the Schrader Bluff pool (which ARCO calls West Sak) that has been shut-in could be granted royalty relief. The same would be true for heavy oil production from a Declining Field or New Field.

Oxy and BP have a specific concern about whether heavy oil production from the Schrader Bluff pool within the Milne Point Unit could qualify under HB 207. Again the issue is not whether heavy oil production could qualify; rather it is whether the Schrader Bluff pool fits within one of the three types of pools listed in HB 207.

In the division's opinion, the Schrader Bluff pool does not meet the definition of a New Pool because the Schrader Bluff production has been sold. Arguably, the Schrader Bluff pool meets the definition of a Shut-in Pool. The Arco portion of the Schrader Bluff pool is currently shut-in. The Tract 14 pilot project for production from the Oxy and BP portion was shut-in from 1992 to 1994. If the production remains uneconomic, as the companies asserted in their testimony and the pilot project was stopped, the Schrader Bluff pool would clearly qualify as a Shut-in Pool.

Attachment 3

218196

The Honorable Bill Williams
January 30, 1996
Page 2

The most applicable definition to the Schrader Bluff pool is the Declining Pool definition, number 2 above. First, granting royalty relief could "prolong the economic life of" the Schrader Bluff pool production. Second, the costs per barrel increase with heavy oil production. Most importantly, granting relief, assuming it was justified, would be consistent with HB 207's primary purpose "to allow for production that would not be otherwise be economically feasible." It appears that HB 207 could be applied to heavy oil production from the Milne Point Unit.

Nevertheless, some of the companies and representatives have expressed concern about the applicability of HB 207 to heavy oil production from the Milne Point Unit. To alleviate any concern about HB 207's applicability to the Milne Point Unit, the administration would support an amendment to HB 207 to make heavy oil explicitly included within the purview of HB 207. This could be accomplished by amending the language in AS 38.05.180(j)(1)(B) to read as follows:

(B) to prolong the economic life of an oil or gas field or pool as costs per barrel or barrel equivalent increase or to allow for the production from an oil pool containing heavy oil, defined as production with American Petroleum Institute weighted average gravity of 20 degrees or less; or

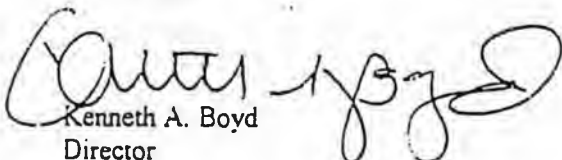
Such an amendment is preferable to HB 325 because it would subject any relief to the protection of the state's interests afforded by HB 207. Specifically, it would require a complete and thorough economic analysis of heavy oil royalty relief, which is lacking in HB 325. Indeed, no state agency has been given the detailed backup data that presumably supports the economic assertions contained in the white paper prepared by BP and Oxy. HB 207 would also provide for public and legislative comment before any relief is granted. Finally, it would allow any relief granted to be conditioned to change if the bases upon which the relief is granted change.

By passing HB 207, the legislature adopted a consistent policy that would treat all players fairly and equally. HB 207 allows for "fiscally efficient" royalty terms. HB 325 is not fiscally efficient because it is not sensitive to profitability. It reduces the state's royalty without a showing of necessity by the companies or a guarantee of anything in return to the state for granting relief. Despite the companies' contrary protestations, they can have certainty of relief under HB 207 before making any investment.

Undeniably, HB 207 is not as administratively simple as HB 325 because it requires a complete review. The long debate over HB 207 last session convinced me that although both the legislature and the governor want expedited development of Alaska's oil and gas resources, they want this done with proper scrutiny. This scrutiny, clearly present in HB 207, is lacking in HB 325.

I hope this information is helpful to you. If you have any further questions, please feel free to call me.

Sincerely,


Kenneth A. Boyd
Director

Adopted
Amendment 3

Page 2, after line 30

insert "(F) for purposes of defining field costs in this subparagraph, field costs include ~~the~~
lease or ~~costs~~ outlined in AS 38.05.180(f)."
unit expenses

Hose

LEGAL SERVICES

DIVISION OF LEGAL AND RESEARCH SERVICES
LEGISLATIVE AFFAIRS AGENCY
STATE OF ALASKA

(907) 465-3867 or 465-2450
FAX (907) 465-2029
Mail Stop 3101

130 Seward Street, Suite 409
Juneau, Alaska 99801-2105

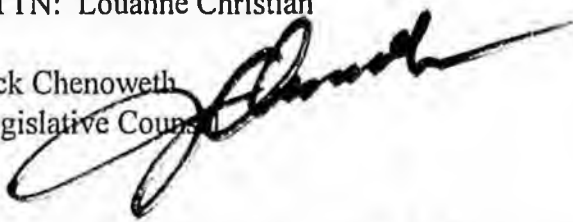
MEMORANDUM

March 25, 1996

SUBJECT: CSHB 325(FIN) (Work Order No. 9-LS1122\U)

TO: Representative Mark Hanley, Co-Chair
House Finance Committee
ATTN: Louanne Christian

FROM: Jack Chenoweth
Legislative Council



Inserting amendment R.7 threw off the places of insertion of all other material. Here's a road map through the bill addressing how the other provisions were treated.

Amendment R.5 appears on page 3, as paragraph (dd)(3).

Ken Boyd's suggested treatment of the measure of the 500 barrels per day appears on page 3, as paragraph (dd)(4).

His "for purposes of defining field costs" amendment is set out as (dd)(5)(A), part of the paragraph setting out relevant definitions.

Substitution of reference to "industrial commodities" for "finished goods" is made at the place designated, near the conclusion of (dd)(1)(A)(ii) near the middle of page 2.

The conceptual amendment to require monthly testing and reporting of heavy oil having a 19+ API gravity appears at the conclusion of (dd)(1)(D)(i), at the top of page 3.

I sought to include materials at logical places. If my treatment of these materials is at variance with instructions, please advise.

JBC:glc
96-180.glc

Enclosure

Amendment 2
Adopted

Page 2, after line 30

insert "(E) for purposes of calculating the first 500 barrels per day of production from a well, production from dual completions and other forms of multiple completions in a well is to be added together and counted as production from a single well."

AMENDMENT 1 Adopted

OFFERED IN THE HOUSE

TO: CSHB 325(O&G)

- 1 Page 1, line 10:
- 2 Delete "."
- 3 Insert ", as follows:"

- 4 Page 1, lines 11 - 12:
- 5 Delete all material.

- 6 Page 1, line 13:
- 7 Delete "AS 43.55.900. Under"
- 8 Insert "(1) under"

- 9 Page 1, line 14:
- 10 Delete "(1)"
- 11 Insert "(A)"

- 12 Page 1, line 14, through page 2, line 1:
- 13 Delete "value at the wellhead, net of eligible field cost deductions,"
"AS may be adjusted ~~periodically~~" ^{← Le}
- 14 Insert "lessee's reported royalty before any field cost deduction,"

- 15 Page 2, line 3:
- 16 Delete "(A)"
- 17 Insert "(i)"

- 18 Page 2, line 5:
- 19 Delete "(B)"

1 Insert "(ii)"

2 Page 2, lines 6 - 7:

3 Delete "(A) of this paragraph"

4 Insert "(i) of this subparagraph"

5 Page 2, line 9:

6 Delete "(A) of this paragraph"

7 Insert "(i) of this subparagraph"

8 Page 2, line 13:

9 Delete "(2)"

10 Insert "(B)"

11 After "actual":

12 Insert "initial"

13 Page 2, line 14, after "2006;":

14 Insert "for purposes of this subparagraph, "actual initial drilling" does not include
15 plug-backs of existing wells, sidetracks from existing wells, multi-lateral or dual completions
16 of existing wells, or sidetracks of redrilled wells;"

17 Page 2, line 15:

18 Delete "(3)"

19 Insert "(C)"

20 Page 2, line 16, after "start of":

21 Insert "initial"

22 Page 2, line 17, after "Commission;":

23 Insert "for purposes of this subparagraph, "initial production" means production
24 following initial drilling;"

1 Page 2, line 18:

2 Delete "(4)"

3 Insert "(D)"

4 Page 2, line 19:

5 Delete "(A)"

6 Insert "(i)"

7 Page 2, line 20:

8 Delete "(1) - (3) of this subsection"

9 Insert "(A) - (C) of this paragraph"

10 Page 2, line 26:

11 Delete "(F)"

12 Insert "(ii)"

13 Page 2, line 30, after "hours":

14 Insert ";

15 (2) by taking an exemption from the payment of royalty under this
16 subsection, the lessee waives any right that the lessee might otherwise have under its
17 lease, unit agreement, or other agreement with the state to deduct, against royalty due
18 the state, any field costs associated with the production of the heavy oil for which the
19 exemption is taken; and

20 (3) in this subsection, "heavy oil" means oil having a weighted average
21 equal to or less than 20 degrees API gravity as the term "API gravity" is defined in
22 AS 43.55.900"

CS FOR HOUSE BILL NO. 325(O&G)

IN THE LEGISLATURE OF THE STATE OF ALASKA

NINETEENTH LEGISLATURE - SECOND SESSION

BY THE HOUSE SPECIAL COMMITTEE ON OIL AND GAS

Offered: 1/24/96

Referred: Resources, Finance

Sponsor(s): REPRESENTATIVE GREEN

A BILL

FOR AN ACT ENTITLED

1 "An Act authorizing exemption from payment of royalty for initial production of
2 a portion of the heavy oil produced from wells on the Arctic Slope; and
3 providing for an effective date."

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

5 * Section 1. AS 38.05.180 is amended by adding a new subsection to read:

6 (dd) Notwithstanding any other provision of this section or any provision in
7 a lease, unit agreement, or other agreement between a lessee and the state that
8 establishes an obligation to pay royalty on production, royalty is not payable, under the
9 conditions and to the extent described in this subsection, for the production of heavy
10 oil that is removed or sold from a lease or leases located north of the Umiat baseline.
11 For purposes of this subsection, "heavy oil" means oil having a weighted average equal
12 to or less than 20 degrees API gravity as the term "API gravity" is defined in
13 AS 43.55.900. Under this subsection, the exemption from payment of royalty applies

14 (1) only to the portion of the value at the wellhead, net of eligible field

to the Lessee's Reported Royalty Value
-1- CSHB 325(O&G)

1 cost deductions, as calculated for the month of production, for the first 500 barrels of
2 daily production of heavy oil from the well, that, for the period beginning on

3 (A) the effective date of this section and until December 31,
4 1996, does not exceed \$15 per barrel; and

5 (B) the first day of the calendar year during each calendar year
6 beginning January 1, 1997, does not exceed the amount specified under (A) of
7 this paragraph as adjusted for inflation or deflation; in making the adjustment, the
8 department shall, not later than February 15 of each calendar year, calculate and
9 apply to the amount set out in (A) of this paragraph a change in the dollar
10 amount to the extent of the change in the producer price index for finished goods
11 compiled by the United States Department of Labor; the index for January 1996
12 is the reference base index;

13 (2) only if the actual drilling of the well from which the heavy oil is
14 produced began on or after July 1, 1996, and before July 1, 2006;

15 (3) only to heavy oil produced during the first 1,825 days of well
16 operation after the start of production of oil from the well, as reported to the Alaska Oil
17 and Gas Conservation Commission; and

18 (4) for a well only if the lessee

19 (A) submits with its royalty report for the first month for which
20 the exemption from royalty payment under (1) - (3) of this subsection is claimed
21 and with subsequent royalty reports at quarterly intervals for so long as the
22 exemption continues, oil gravity test results performed during the period for
23 which the royalty report is filed demonstrating that the oil tested is heavy oil; the
24 report must be in accordance with the standards for measurement and testing set
25 out in the regulations of the Alaska Oil and Gas Conservation Commission; and

26 (B) maintains, for a period of at least two years after the last day
27 of the royalty payment exemption authorized by this subsection, records of
28 production that show the actual date that drilling of the well started, the daily
29 production from the well, and the API degree gravity data, and allows the
30 department to inspect the records during regular business hours.

31 * Sec. 2. This Act takes effect immediately under AS 01.10.070(c).

*An Opportunity to Develop
Alaska's Heavy Oil Resources...*

**BP Exploration (Alaska) Inc.
OXY USA Inc.**

January 22, 1996

An Opportunity to Develop Alaska's Heavy Oil Resources...

I. Summary

Underlying the Milne Point and Kuparuk River units on Alaska's North Slope is a series of shallow, heavy oil sands that form the largest proven, undeveloped oil field in the United States. If development of those sands were economic, a billion or more barrels of oil could be recovered.

Beneath the Milne Point Unit alone, in the Schrader Bluff Formation, there are about 300 million barrels of recoverable heavy oil.^{1/} Initial development of that resource would entail drilling some 230 wells over a nine-year, labor-intensive development period, with peak production reaching at least 45,000 barrels per day. According to the University of Alaska, that activity would spawn:

- ◊ Capital development expenditures of \$550 million, of which 61%, or about \$333 million, would be spent in Alaska;

Shallow Oil Sands Nomenclature

AGE	TYPE LOG		TERMINOLOGY		
	MILNE POINT UNIT	MILNE POINT UNIT	Informal Milne Point Unit	Informal Kuparuk Unit	Formal North Slope GPT FORMATION
	Gamma Ray	Resistivity			
TERTIARY			K Sands	UPPER	SAGAVAN-IRKTOK
			L Sands	UGNU	
			M Sands	SANDS	PRINCE CREEK
			N Sands	LOWER	
			O Sands	WEST SAK SANDS	
CRETACEOUS				SCHRADER BLUFF	

Chart 1

^{1/} See Bidinger and Dillon, *Milne Point Schrader Bluff: Finding the Keys to Two Billion Barrels*, SPE 30289 (available through BP Exploration (Alaska) Inc.). The Schrader Bluff sands, in relation both to other heavy oil sands at Milne Point and the West Sak Sands at the Kuparuk River Unit, are depicted in Chart 1.

- ◇ *Production expenditures of \$601 million spread over a 41-year field life, of which 85%, or about \$511 million, would be spent in Alaska;*
- ◇ *Around 360 new high-paying jobs during the development phase, and 134 new high-paying jobs during the 41-year production phase. 75-80% of those jobs would be filled by Alaska residents, resulting in additional Alaska resident payroll of \$171 million throughout the development phase, and \$7.4 million annually during the production phase; and*
- ◇ *65 new public sector jobs created during the development stage as a result of this increased economic activity, and 25 new public sector jobs created during the 41-year production phase.^{2/}*

And that, UAA projects, would flow solely from initial development of Schrader Bluff alone. All tolled, there are nearly 26 billion barrels of heavy oil underlying existing North Slope units--making ANS heavy oil a resource comparable to Prudhoe Bay. Successful initial development of Schrader Bluff could well result in technology transfers to other heavy oil lessees, and development of additional heavy oil deposits on the North Slope.

For the time being, however, and save for some minimal production from a Schrader Bluff pilot project, Alaska's heavy oil resources aren't being developed. Heavy oil is a thick and uncooperative substance, and it's production poses a challenge to industry and governments worldwide.^{3/} For its part, Alaska's oil industry has

^{2/} University of Alaska Anchorage, School of Public Affairs and Institute of Social and Economic Research, *"Heavy Oil Development: The Economic Impact,"* December, 1995.

^{3/} Because heavy oil fields are "less attractive," Arthur D. Little recently told the Governor's Oil & Gas Policy Council, "changes in [government] fiscal terms may be necessary." Arthur D. Little/John Gault, *"Review of International Competitiveness of Alaska's Fiscal System,"* Preliminary Report for the State of Alaska, Department of Revenue, September, 1995 (*"Little Report"*) at 138. Guatemala, for example, imposes a lower royalty on heavier oil, according to a sliding scale based on the oil's viscosity. Ecuador does the same thing. *Id.* at 139-40. The U.S.

invested nearly \$270 million in the past decade tackling the technical barriers to lifting heavy oil from the cold, unconsolidated sands of the North Slope.

From an engineer's viewpoint, that pioneer effort succeeded. Complex and innovative completion technology was developed that can pull heavy oil from those sands at a sustained rate. But from an investor's eye, the pilot projects remain unconvincing. Initial flow rates from Schrader Bluff heavy oil wells have averaged only 275 barrels per day--far below the economic margin in this hostile working environment. ^{4/}

As a result, additional Schrader Bluff development is not expected to yield the minimal rate of return necessary to justify the requisite capital investment. Indeed, over the past several years, and through the Spring of 1995, the state itself has largely written the resource off--at least for the foreseeable future. The Alaska Department of Natural Resources' March, 1995 oil production forecasts, for example, concluded that Milne Point would produce no more heavy oil over the next 20 years than that currently lifted from the unit's small pilot project. ^{5/}

Department of Interior, Bureau of Land Management, has also proposed reduced royalties for heavy oil production, again on a sliding scale basis. 60 *Federal Register* 18081 (April 10, 1995).

^{4/} By comparison, initial production rates from individual Prudhoe Bay wells reached 25,000 bbls./day. Even initial production of lighter oil from Milne Point's Kuparuk formation--which observers uniformly acknowledge to be at the ANS margin--averaged 862 bbl./day.

^{5/} DNR, *Historical and Projected Oil and Gas Consumption*, March, 1995 at 6-7. The same conclusion was reached in the Spring, 1995 Department of Revenue ("DOR") forecasts. DOR, *Revenue Sources Book*, Spring, 1995 at Table 24 (base case).

The Fall, 1995 DOR forecasts use a different approach for predicting future revenues from undeveloped ANS resources. Those Fall, 1995 forecasts include considerably more near-term production from a variety of speculative projects such as North Star, Schrader Bluff, Mikkelson Bay and Colville River Delta than did the Spring, 1995 DOR projections, although even here Schrader Bluff production isn't projected to peak, at 45,000 bbls./day, until 2005. *Revenue Sources*, Fall, 1995, Table 22. The forecasts' Schrader Bluff figures begin with the unit's business plan projections for Schrader Bluff development discussed in Section III(A), *post*, then risk-discount those projections by about 25%. (cont'd)

That discouraging forecast, however, needn't necessarily be, and this paper proposes a special royalty structure for new ANS heavy oil development that may materially change project economics. The proposal was developed in response to the invitation extended to Alaska's private sector by Governor Knowles and his Oil & Gas Policy Council to explore new partnerships to guide Alaska's economy into the 21st century.

The proposal, embodied in HB 325, would suspend royalties for the first five years of production from any new ANS heavy oil well drilled after June 30, 1996. When the suspension ended, royalties would return to the full lease rate.^{6/} The suspension would apply only to the first 500 bbls./day of production from each well.

The Fall forecasts' methodology reflects the assumption that some development from various problematic ANS resources will likely occur, and that by spreading that *regional* prognosis over several prospects on a risk-discounted basis, the forecasts can paint a rough picture of plausible future production from the region as a whole without staking that projection on the fate of any one particular field. *Id.*, see p. 19. Indeed, the forecasts do not purport to conclude that development of any single marginal prospect will or will not be economic.

Inclusion of Schrader Bluff in that mix of regional possibilities is encouraging, since it seemingly reflects a growing recognition that, with an improved economic environment, ANS heavy oil is a potentially developable resource. That recognition, in part, may be attributable to the considerable attention that heavy oil received in the Summer of 1995, both before the Oil & Gas Policy Council and the legislature.

On the other hand, nothing occurred between the Spring and Fall of 1995 to warrant an about-face in the state's longstanding belief that, *under the fiscal status quo*, ANS heavy oil development will likely not happen in the foreseeable future. No technological or production breakthroughs occurred between the Spring and Fall forecasts, and the Fall, 1995 DOR projections' "long range price forecast is almost identical to last spring's." *Revenue Sources*, Fall, 1995, cover letter at 1.

For all these reasons, the Fall, 1995 DOR forecasts shouldn't be viewed as heralding any reversal in the state's outlook for Schrader Bluff development in the absence of some change in the fiscal environment.

^{6/} At Milne Point, for example, BP Exploration (Alaska) Inc., which owns 91.19% of Milne Point, would pay 12.5% on production assigned to some leases, and 20% on production assigned to others. OXY USA Inc., which owns the remaining 8.81% of the unit, would pay 12.5% on its share of production.

Any partnership should benefit each partner equally, and this proposal was tailored to accomplish that goal. For example:

From the state's perspective:

- ◇ *Given the unusually long life of heavy oil fields--in Schrader Bluff's case, an estimated 41 years--the state benefits more from incentives granted only for a finite period at the outset of production, rather than from more gradual incentives granted over the life of the field;*
- ◇ *The cost of administering the incentive is negligible;*
- ◇ *Suspensions have proven to be an effective tool in other oil producing jurisdictions to spur development of marginal fields. The state would be treading on proven ground;*
- ◇ *Only new heavy oil wells would benefit from the incentive, and for years now the state has assumed that no new heavy oil development will occur in the foreseeable future. As a result, the revenues contemplated by the state's various royalty agreements would be unimpaired;*
- ◇ *The short period of the incentive minimizes the state's exposure to unanticipated oil price increases or technological breakthroughs that might make heavy oil development more profitable. The state's window of exposure would be five years for each well, rather than over a 41-year field life; and*
- ◇ *By fashioning a specific incentive targeted to a single important resource, the state needn't re-invent overall state royalty policy or risk unintended consequences elsewhere.*

Conversely, from the investor's perspective:

- ◇ *The incentive is targeted at the initial years of production, and is therefore especially effective in allowing recovery of the lessee's capital investment in a reasonable period of time;*
- ◇ *The incentive would be available immediately;*
- ◇ *Because the incentive is granted by operation of law, its availability is certain, and serious investment decisions can be made in reliance on it; and*

- ◇ *Available economic and technical information suggests that this incentive will, in fact, materially improve the attractiveness of investing in ANS heavy oil development.*

Alaska's heavy oil reserves are an important public asset, and there are no risk-free options for managing it. One possibility, of course, is to wait things out, hoping for some unexpected, sustained oil price increase, or some technological advance, that would make heavy oil development attractive without any incentives. However:

- ◇ *As Arthur D. Little recently warned the Oil & Gas Policy Council, a "wait and see" strategy runs its own risks, since at some point the Trans Alaska Pipeline will no longer be available at a reasonable per-barrel tariff, if at all;*
- ◇ *In the case of ANS heavy oil, that risk is compounded by the fact that, even with incentives, heavy oil development may be economic only because it can share an existing infrastructure at Milne Point and Kuparuk River. In this respect, DNR's February, 1994 production forecasts predicted that Milne Point would be abandoned in 2006, while that agency's 1995 projections pegged the unit's abandonment date at 2011; ^{7/} and*
- ◇ *History has proven that progress in tackling the challenge of ANS heavy oil development is very much a child of momentum. Discouraging results have, time and again, led to years of inactivity as interest inevitably turns to more cooperative resources. See Section II(D), post. Putting ANS heavy oil on the public back burner may leave it there far longer than decision-makers intended.*

////////////////////

^{7/} DNR, *Historical and Projected Oil and Gas Consumption*, February, 1994 at 6-7; March, 1995 at 6-7.

It's time to make a decision about Alaska's heavy oil. Even if the ultimate choice is to wait and see, the debate initiated by Governor Knowles will at least assure that the decision is purposeful.

The issue raised by this paper is how to optimize the public's return on a significant asset. It is not about trading jobs for royalties. As this paper will explain, and as Chart 2 illustrates, the underlying

premise of this proposal is that the state will receive more royalties from heavy oil development by adopting the incentive than by maintaining the *status quo*. Indeed, if the state's policy-makers conclude otherwise, there is little sense doing what this paper proposes.

Two Paths for Schrader Bluff

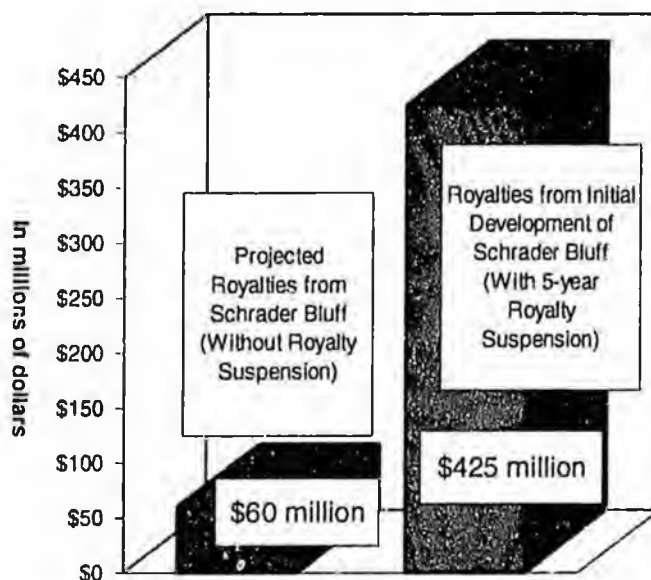


Chart 2. ^{6/}

^{6/} Source: Applicable royalty rates were applied to: (1) DNR's Spring, 1995 production forecasts for Schrader Bluff, discussed *ante*; then to (2) lessee projections of likely future production from initial Schrader Bluff development. Projected oil prices were taken from the Alaska Department of Revenue's Spring, 1995 *Revenue Sources Book's* base case. Dollars expressed are nominal.

Every management option available to the state carries its own mix of risk and potential reward. We believe that a careful balancing of those options will lead decision-makers to look carefully at the kind of tailored incentive contained in HB 325.

////////////////////

II. Background: Milne Point and Heavy Oil

A. An Overview of the Milne Point Unit.

The Milne Point Unit lies 12 miles west of Prudhoe Bay. *Chart 3.*

The unit was developed in the 1980's by Conoco Inc., Chevron and OXY USA Inc. ("OXY"). In late

1993, Conoco and Chevron sold their interest in the unit to BP Exploration (Alaska) Inc. ("BP"), and today 91.19% of the unit is owned by BP, and the remaining 8.81% by

Production Formations at Milne Point

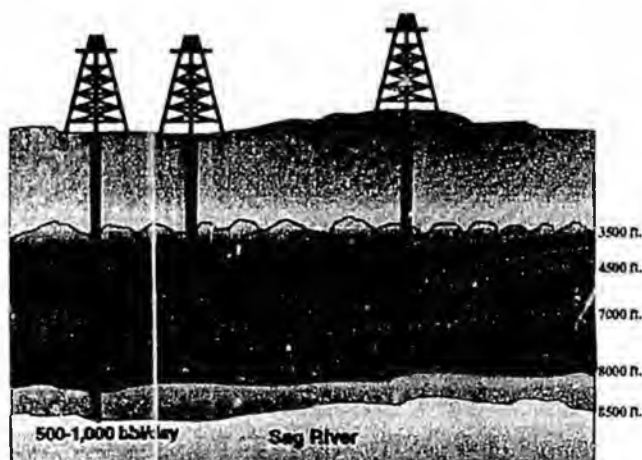
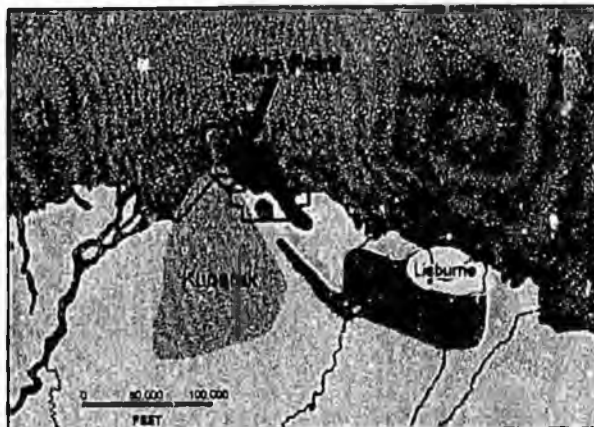


Chart 4

With an American Petroleum Institute ("API") gravity of 22-24 degrees, Kuparuk oil's quality is slightly heavier than other principal ANS crudes;



North Slope Fields and Milne Unit Outline

Chart 3

OXY.

Milne Point produces 28,000 barrels of oil daily from three formations (*Chart 4*):

Kuparuk (24,000 bbl./day).

Kuparuk production has been the unit's mainstay since production commenced in November, 1985.

Sag River (500-1000 bbls./day). In 1995, an initial long, horizontal well was drilled into this deepest of Milne Point formations. The well has produced only 500-1000 bbl./day because of the extraordinary amount of water produced from the formation. The API gravity of Sag River oil is about 35 degrees; and

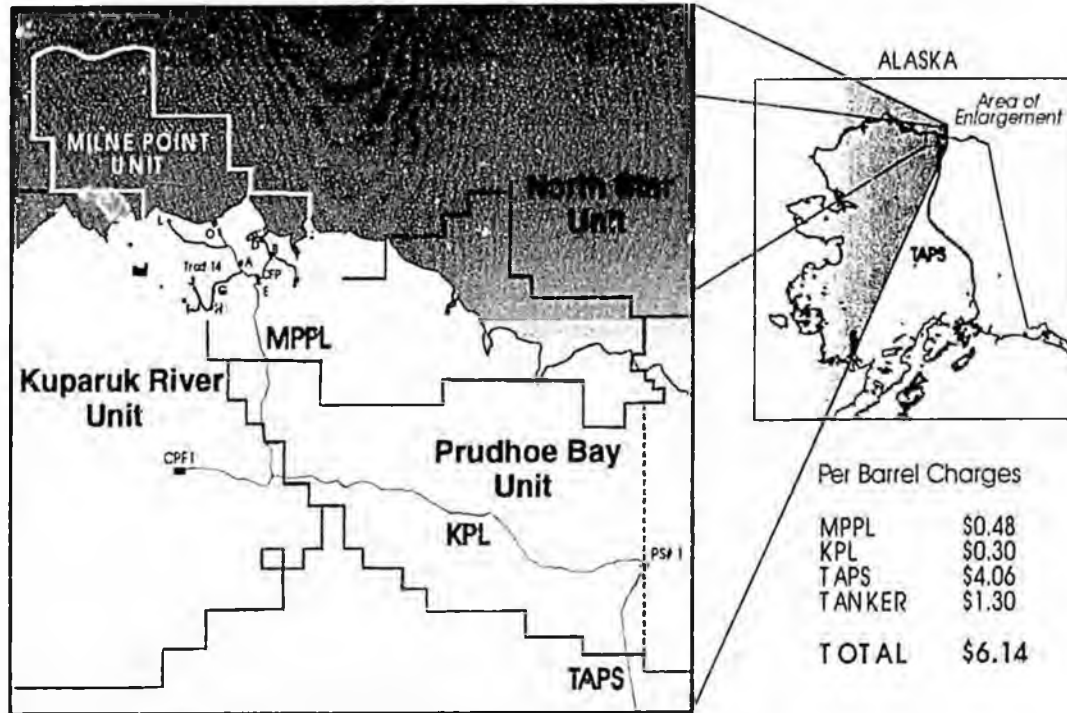
Schrader Bluff (3,000 bbl./day). Current production from this formation's heavy oil reserves comes from a pilot project initiated in 1990. The API gravity of Schrader Bluff oil ranges from 14-20 degrees. The companies' efforts to overcome the roadblocks to development of this resource are discussed in subsection (D), *post*.

B. The Unit's Economic Setting.

In-and-of itself, development of Schrader Bluff's heavy oil is a marginal proposition. Compounding the challenge is the fact that the unit from which that oil would be produced has been plagued by economic difficulties since its inception, including:

- ∅ *Low Production Rates.* When Prudhoe Bay began production, its wells yielded up to 25,000 bbls./day. Initial rates from Milne Point's most productive formation--the Kuparuk--averaged only 862 bbl./day, and daily well production has declined at an annual rate of 15-20% ever since. Milne Point, in fact, has the lowest per well production rates of any major unit on the North Slope;
- ∅ *High Royalties.* Because of a special royalty surcharge imposed on eight Milne Point leases at the time of unit formation (see Appendix A), BP pays a 20% royalty on its 91.19% interest in those eight leases. Virtually all other ANS production, including OXY's share of Milne Point production, is subject to a 12.5% royalty;
- ∅ *High Transportation Costs.* As Chart 5 illustrates, Milne Point oil must travel through three pipelines to reach tidewater at Valdez, and resultantly pays the highest

Getting Heavy Oil to Market is Expensive



A-96
Chart 5

transportation costs on the North Slope. BP shares in those pipelines revenues; however, and except for an 8.81% interest in the Milne Point pipeline, OXY does not. Any income that OXY earns from its North Slope endeavors must come from Milne Point wellhead revenues; and

Ø Production Challenges. Even Kuparuk Formation production has required costly waterflooding from the outset of production.

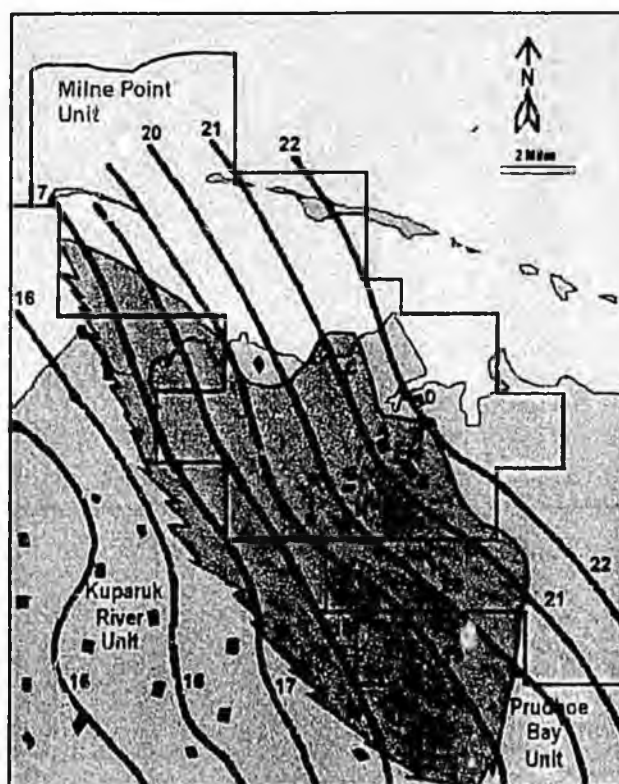
It is within this economic environment that BP and OXY have faced the challenge of developing the unit's heavy oil resources.

C. The Difficulties of Producing Heavy Oil.

The thickness, or viscosity, of crude oil is related to its gravity--the lower the gravity number, the heavier and thicker the oil. Outside of Milne Point, Alaska's currently-produced crudes range from 22-30 degrees at Prudhoe Bay to 25-35 degrees at Cook Inlet.

"Heavy oil" is generally defined as crude oil with an API gravity of 20 degrees or less.^{9/} As Chart 6 shows, the North Slope's heavy oil resources range from less than 14 degrees in the Kuparuk River Unit to 20 degrees in the southeast corner of the Milne Point Unit.

Thick as it is, heavy oil stubbornly resists lifting, and both downhole stimulation and mechanical lifting techniques are invariably needed to bring the oil to the surface. Compounding the problem on the North Slope is



SCHRADER BLUFF
O Sand
API Gravities

Chart 6

^{9/} For example, the Internal Revenue Code allows companies to claim a favorable percentage depletion allowance for "heavy oil" production, which the code defines to include oil with an API gravity of 20 degrees or less. 26 U.S.C. §613A(c)(6)(F). And, the U.S. Department of Interior, Bureau of Land Management, employs a 20-degree threshold for its pending heavy oil royalty relief proposal. 60 *Federal Register* 31663 (June 16, 1995).