HB

61

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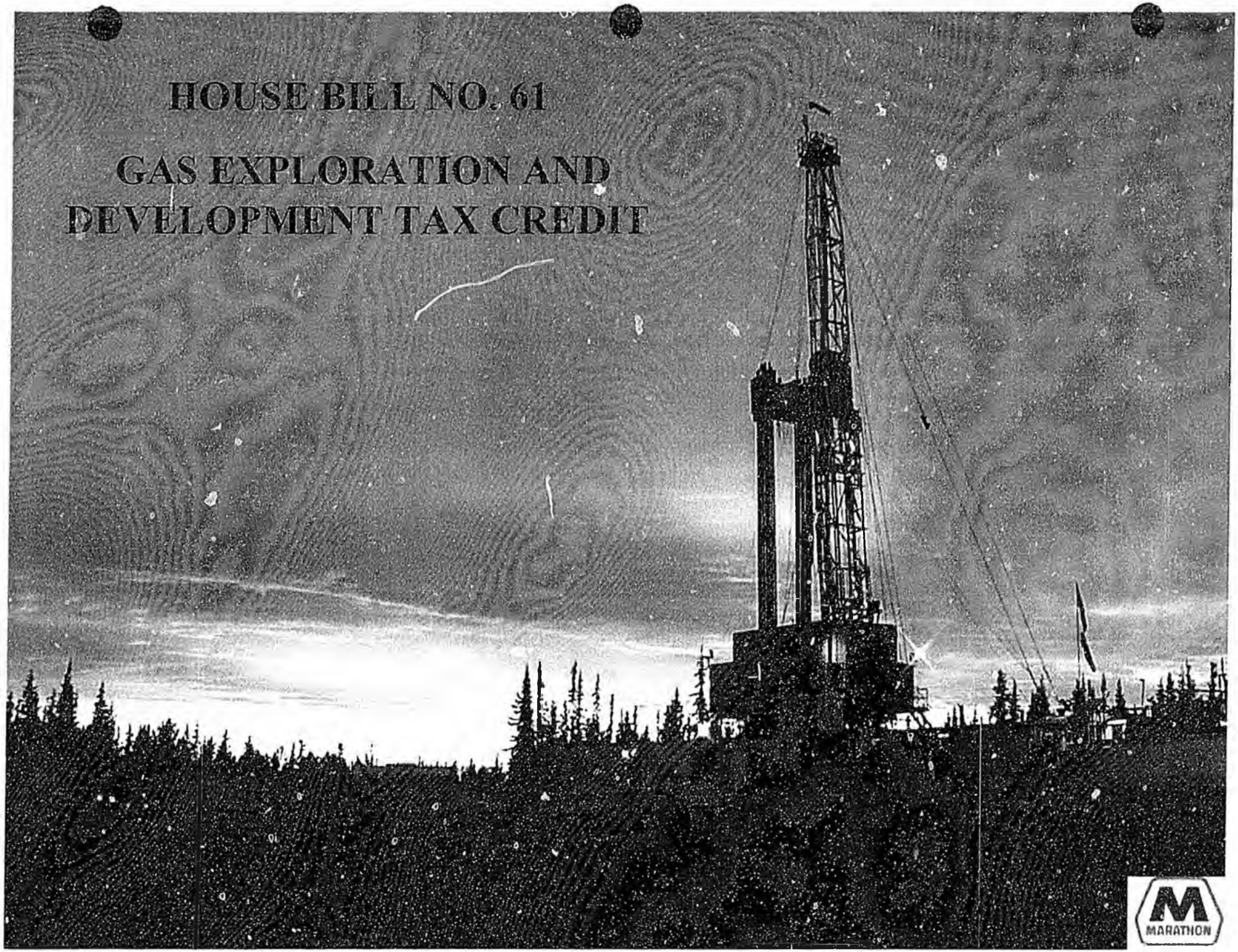
HOUSE BILL NO. 61

GAS EXPLORATION AND DEVELOPMENT TAX CREDIT



HB 61 – What Does it Do

- Creates income tax credit to encourage exploration and development of gas reserves south of Brooks Range
- Primary focus is on Cook Inlet, but applies to other basins
- Focus is on natural gas.
- Levels the playing field somewhat with other exploration opportunities around the world.
- Draws more E&P Capital to Cook Inlet

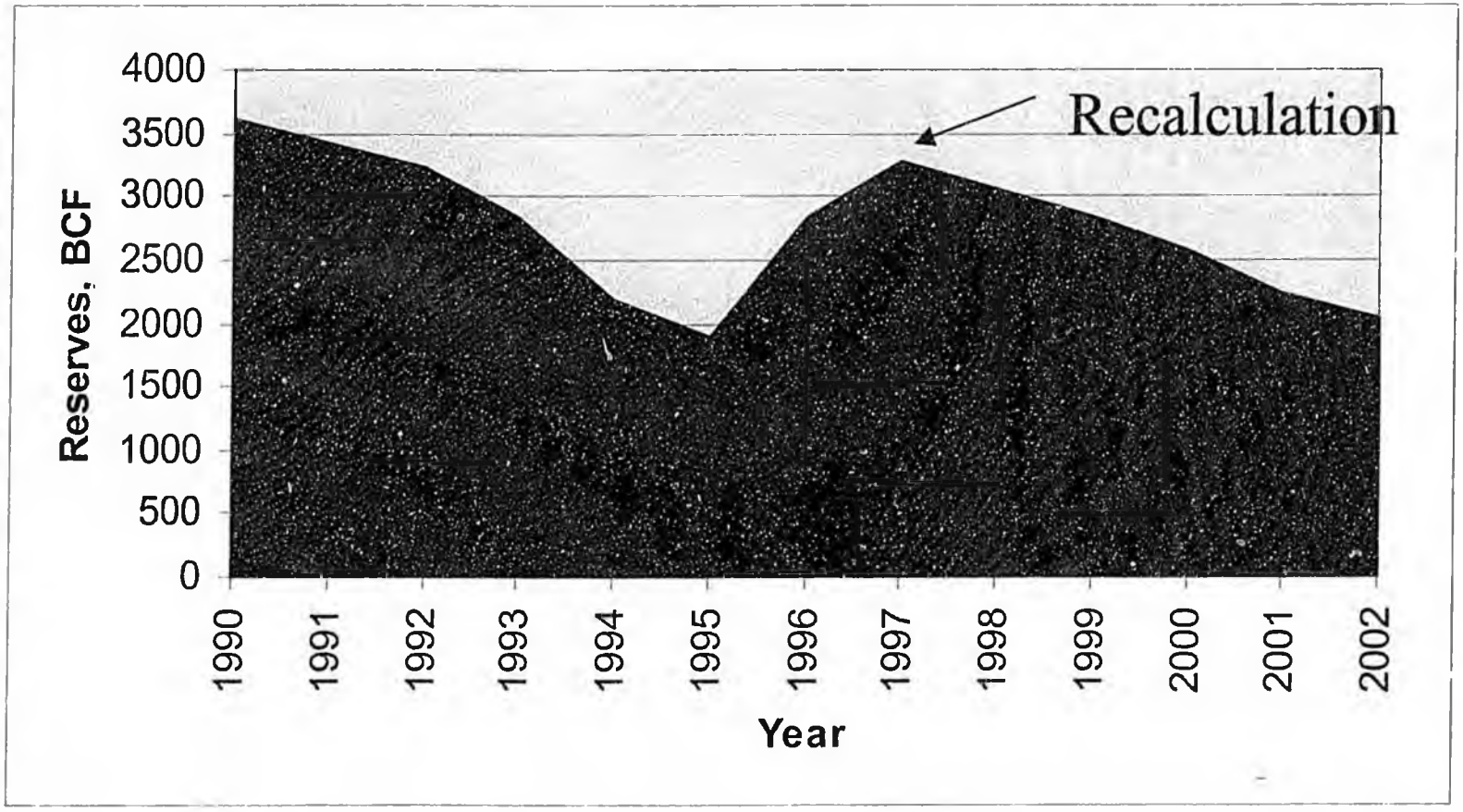
HB 61 – How Does it Work?

- Applies to 10% of Qualified Capital Investment
- Applies to 10% of Qualified Expense
- May offset no more than 50% of corporate income tax in any one year (up to five additional years)
- Only applies to successful efforts.
- Incentive can be factored into project economics.

HB 61 – Why is it needed?

- Natural Gas Reserves have been and are continuing to decline in the Cook Inlet.
  - Current Cook Inlet proven natural gas reserves are estimated at 2 TCF
    - (Based on DNR DOG 2002 report, less 2002 production)
- Despite recent increase in Cook Inlet exploration activity, reserves are not being replaced on an annual basis

Cook Inlet Proven Gas Reserves

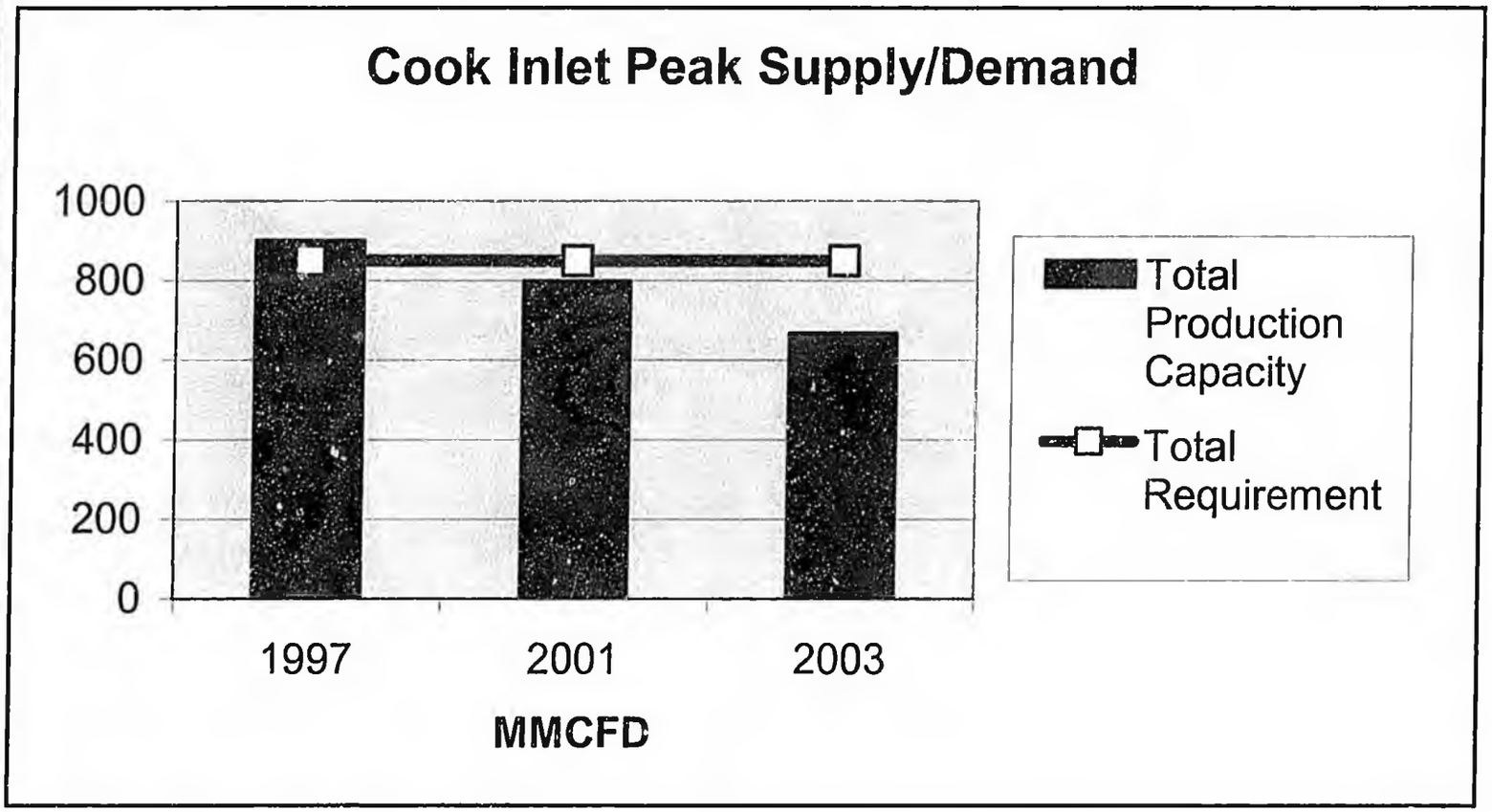


Source: Alaska DNR

HB 61 – Why is it needed?

- Cook Inlet deliverability has declined over last several years.

HB 61 – Why is it needed?



HB 61 – Why is it needed?

- Supply and demand rationalization is occurring.
  - Not enough gas to feed low price consumer.
  - Gas price increasing
    - Enstar average gas cost (WACOG) $2.55/mcf
    - Most recent Enstar contract gas price $2.75 to Henry Hub
    - Henry Hub recently over $9.00/mcf

Cook Inlet Reserves & Resources

- Current proven reserves – 2000 BCF
  - Approximately 10 year production life, assuming no decline.
- Potential Gas Committee Resource Estimates
  - Probable Reserves – 1050 BCF
  - Possible Reserves – 2100 BCF

Impacts to State of Alaska

- Stimulates Cook Inlet, and potentially other basin exploration.
- Aids in maintaining Cook Inlet 200+ BCF/year production.
  - Equivalent to a 13th month of North Slope Production.
- Provides gas for Cook Inlet utilities, industrials, jobs, royalties, taxes.

Fiscal Impact to State of Alaska

- Incentive will be clearly positive to State of Alaska, factors are...
  - How many developments will be incentivized?
  - How much gas will be discovered?
  - What will be the gas sales price (royalty value)?
  - How much will be spent for exploration and development?
  - Successful efforts driven – no incentives for dry holes

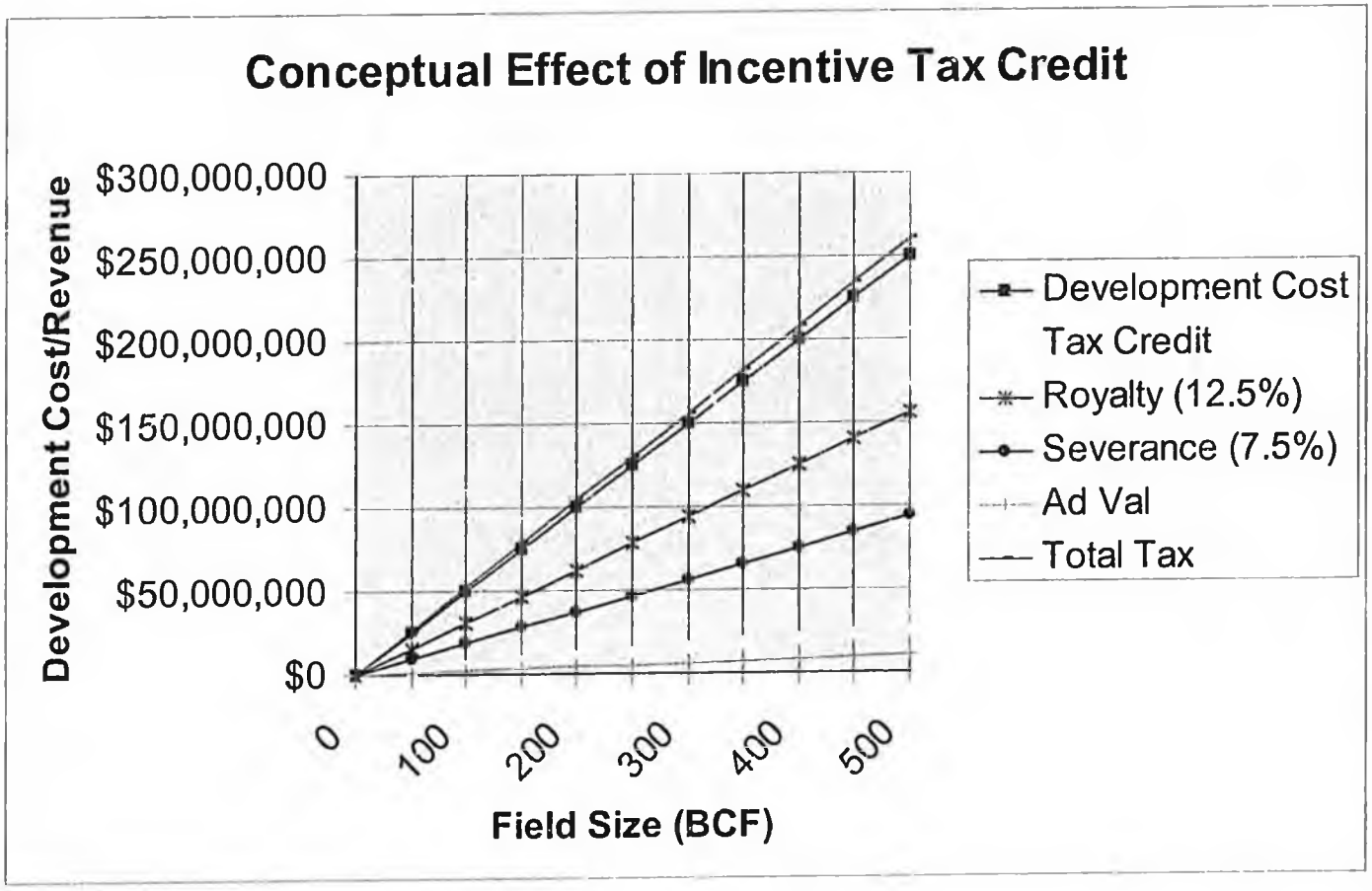
Fiscal Impact to State of Alaska

- Conceptual Estimate of Impact, assumptions:
  - Varied field size from 0 to 500 BCF
  - Development Cost $0.50/mcf
  - Royalty – 12.5%
  - Severance Tax – 7.5%
  - Ad valorem – 2.7%
  - Gas sales price - $2.50/mcf

Fiscal Impact to State of Alaska

Field Size (BCF)	Development Cost	Tax Credit	Gross Revenue	Royalty (12.5%)	Severance (7.5%)	Ad Val	Total Tax
0	0	0	0	0	0	0	0
50	$25,000,000	$2,500,000	$125,000,000.0	$15,625,000	$9,375,000	$1,050,000	$26,050,000
100	$50,000,000	$5,000,000	$250,000,000.0	$31,250,000	$18,750,000	$2,100,000	$52,100,000
150	$75,000,000	$7,500,000	$375,000,000.0	$46,875,000	$28,125,000	$3,150,000	$78,150,000
200	$100,000,000	$10,000,000	$500,000,000.0	$62,500,000	$37,500,000	$4,200,000	$104,200,000
250	$125,000,000	$12,500,000	$625,000,000.0	$78,125,000	$46,875,000	$5,250,000	$130,250,000
300	$150,000,000	$15,000,000	$750,000,000.0	$93,750,000	$56,250,000	$6,300,000	$156,300,000
350	$175,000,000	$17,500,000	$875,000,000.0	$109,375,000	$65,625,000	$7,350,000	$182,350,000
400	$200,000,000	$20,000,000	$1,000,000,000.0	$125,000,000	$75,000,000	$8,400,000	$208,400,000
450	$225,000,000	$22,500,000	$1,125,000,000.0	$140,625,000	$84,375,000	$9,450,000	$234,450,000
500	$250,000,000	$25,000,000	$1,250,000,000.0	$156,250,000	$93,750,000	$10,500,000	$260,500,000

Fiscal Impact to State of Alaska



HB 61 – Conclusions

- Based on conceptual model, total tax take from one (incentivized) development covers tax credit for about 10 equivalent fields.
- Credit is needed now!
  - Not enough exploration in Cook Inlet to meet demand.
  - New discoveries will take a minimum of 3 years to bring to first gas

HB 61 – Success Measures

- Increased Lease Activity
- Increased Drilling Rig Activity
- Increased Construction Activity
- Increased Production and Deliverability
- Credits Applied to Income Tax
  - For every dollar of credit approximately **TEN DOLLARS** were spent successfully developing new reserves, and ultimately paying new taxes!

Dewey L. Olson
HC-30 box 5138
Wasilla, AK 99654

28 MAR 2003

To House Resources
AND AK Legislature.

HB 61 AND "Notice"

The proposed Bill HB 61 is not AK constitution
Addressing the people Article 1 § sec 2
Source of Government AND violated it.
" AND IS instituted Solely
For the good of the people
AS A whole"

AS 43.20 IS the ALASKA Net Income
TAX Act.

I claim . . .
This bill is not Address graduated - - -
"income taxes, involving as they do
the concept of Ability to pay, are
based upon intelligible grounds of
policy
ALASKA S.S. Co. v Mullaney,
12 ALASKA 594, 180
F 2d 805 (9th Cir 1950).

Where the topic IS Addressed AS A
Whole, Sunsets / repeals may
be legitimate. But this bill is not
Addressing the topic AS A whole.
Nor Addressing Article 1 § sec 1

I ~~cite~~ state A State policy ACMP Standard....
"reasonably AND Foreseeably"
I claim the AK legislature has knowledge to predict/assume/rationalize that this bill addresses known beneficiaries to this bill. And that this bill Address them only.
I claim its too narrow of construction And outside ~~Constitution Area~~ ~~Par~~ constitutionality parameters of Article I Sec 15 prohibited State Action.

If Article I; sec 15 is not violated then it can be Argued that best interest finding/determination can be revoked; where changes or new knowledge have negated/the premises it was based on. I cite AK Survival V DNR 1986 AND SB 196 (1987) Sec 19 As a legal basis.

The decision makers have not considered social impacts of their rule making or indirect affects.

I cite VIII Sec 8 (Leases)
"Subject to reasonable
(Concurrent uses)
This would imply A lessee
knew or had reason to believe
probably costs when they
requested the Leasr. And it WAS
prior considered in best interest
Finding / determination. Otherwise
Why doesn't the State develop
it own resources?

AK constitution
VIII Sec 10 Public notice (best interest finding)
nor provided if the lease did not or determination,
provide or considered this information -
"(due process' nor afforded) Violates
VIII sec 16. Ak Constitution

Please attach this with this bill

Sincerely
Dana Olson
28 Mar 2003

Amendments for HB 61(O&G)

Amendment 1

Page 2, Line 6

[December 31, 2002] **June 30, 2003**

Amendment 2

Page 3, Line 11

exploration and development of **[oil or]** gas....

Amendment 3

Page 3, Line 19

The expenditures **[that support claims for investment tax credits]** authorized under....

Amendment 4

Page 4, Line 31 and Page 5, Line 1

Eliminate the entire Retroactivity clause

LEGAL SERVICES

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

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FAX (907) 465-2029
Mail Stop 3101

State Capitol
Juneau, Alaska 99801-1182
Deliveries to: 129 6th St., Rm. 329

MEMORANDUM March 15, 2003

SUBJECT: CSHB 61 (O&G), establishing an exploration and development incentive tax credit for persons engaged in the exploration for and development of gas for sale and delivery without reference to volume from a lease or property in the state -- sectional analysis (Work Order No. 23-LS0270\H)

TO: Representative Mike Chenault

FROM: Jack Chenoweth
Assistant Revisor of Statutes

The bill proposes to add, for the period before its repeal, provision for an oil and gas exploration and development incentive tax credit against the taxpayer's tax liability under the Alaska Net Income Tax Act (AS 43.20).

Bill section 1: This bill provision adds a new codified section, AS 43.20.043, that authorizes the credit and establishes its limitations:

-- subsection (a) authorizes the tax credit, applicable to any tax year beginning after 2002, against tax liability due under the Alaska Net Income Tax Act; the amount of the allowable credit is based on 10 percent of the taxpayer's "qualified capital investment" (later defined) and 10 percent of the "qualified services" (also later defined) incurred by the taxpayer relating to a qualified capital investment;

-- subsection (b) sets parameters on what may qualify as a "qualified capital investment": those include cash expenditures or binding payment agreements made after December 31, 2002, for assets first placed in service during the tax year, as that phrase is defined in paragraph (2) of this subsection;

-- subsection (c) sets a maximum limit that may be claimed as a credit against the taxpayer's Net Income Tax liability: that limit is set at 50 percent of liability; expenditures that qualify for the credit in excess of the limit may be carried forward and applied in later tax years until exhausted or for not more than five years;

-- subsection (d) sets out the procedural requirements for claiming the credit and assigns the burden of proof for entitlement to the credit;

-- subsection (e) sets out conditions on what may be done with a credit to which the taxpayer becomes entitled, under threat of forfeiture of any portion of an unused credit carry-forward;

-- subsection (f) imposes a geographic limitation on activity that may qualify for the credit: the credit is not available if an otherwise satisfactory "qualified capital investment" or "qualified services" associated with that investment occur north of 68 degree North latitude (generally, Alaska's Arctic Slope);

-- subsection (g) bars a taxpayer obtaining the credit under this section from claiming a tax credit or royalty modification under any other provision of state law;

-- subsection (h) directs the Department of Revenue, in conjunction with determining an allowable credit, to "allow only expenditures and payments . . . not inconsistent with . . . expenditures that support claims for investment credits under [the federal tax code] for exploration and development of natural resources";

-- subsection (i) defines applicable key terms: it is within the definition that the substantive limitation of "property used . . . in the exploration and development of gas reserves" is set without limitation as to amount.

Bill section 2 repeals the oil and gas exploration and development incentive tax credit.

Bill section 3: This transitional provision is included so that a taxpayer, entitled by AS 43.20.043 to a full five-year period in which to claim as a carry-forward any unused portion of the tax credit, may make the claim on or after January 1, 2013 (the date set in ***bill section 5*** for repeal of the authority to claim the credit), until the earlier of the date on which any unused portion of the carry-over is exhausted or until December 31, 2017 (the day before the fifth anniversary of the credit's repeal). In other words, a taxpayer basing a claim of credit on qualifying improvements or services made as late as December 31, 2012, may have the full five years to exhaust its use.

Bill section 4 is included so that claims of the credit may apply to qualified investment made on or after January 1, 2003, the start of the current tax year.

Bill section 5 sets the effective date of the repeal of the credit at January 1, 2013.

Bill section 6, an effective date provision for the bill, gives the substantive provisions of the measure an immediate effective date.

JBC:lmb
03-082.lmb

RESOURCE DEVELOPMENT COUNCIL
Growing Alaska Through Responsible Resource Development

Tadd Owens, Executive Director
Resource Development Council
HB61 Testimony
House Oil & Gas Committee
February 27, 2003

Thank you, Mr. Chairman. For the record my name is Tadd Owens, I am the executive director of the Resource Development Council. RDC is a private, non-profit, business association representing individuals and companies from Alaska's oil and gas, mining, timber, tourism and fisheries industries. Our mission is to help grow Alaska's economy through the responsible development of the state's natural resources.

RDC supports House Bill 61 and we ask the House Oil & Gas Committee to move the legislation forward. HB61 provides a tax credit for exploration and development of natural gas reserves and small oil deposits south of the Brooks Range. The legislation will have a major impact on natural gas exploration and development in Cook Inlet.

As the Committee has already heard, this legislation is needed to help offset the continuing decline in Cook Inlet's proven natural gas reserves. At this time,

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reserves in Cook Inlet are not being replaced annually. In addition, as this committee has heard from Agrium Corp. in testimony regarding House Bill 57, there is not enough gas currently available to feed low-price consumers in the region. In fact, rising natural gas prices in Cook Inlet threaten to greatly increase both the cost of living and the cost of doing business in southcentral Alaska.

As with all of Alaska's resource industries, Cook Inlet oil and gas projects compete for capital investment with other projects around the globe. HB61 would stimulate additional exploration and development activity in Cook Inlet by leveling the playing field with other worldwide business opportunities. Attracting additional private-sector investment capital to Alaska is exactly what the state needs to encourage a market sustainable economy – one that relies primarily on growing our exports and replacing our imports as opposed to one that depends on state and federal transfer payments and low-paying, low-skill jobs.

The tax credit defined by HB61 would apply to 10% of a company's qualified capital investment and 100% of qualified expenses. In any given year, the credit is

capped at 50% of a company's corporate income tax liability. Perhaps most importantly, the credit will only apply to successful exploration and development projects. No reward will be granted to dry holes.

By providing incentives for successful exploration and development, Cook Inlet natural gas reserves should increase, meaning additional royalty, severance and ad valorem income to the state of Alaska. Increased natural gas reserves in Cook Inlet will also ensure an adequate supply for southcentral communities, utilities and industrial operations, meaning stable jobs and tax revenues for the region.

The bottom line is this – current exploration activity in Cook Inlet is not sufficient to meet future demand for low priced natural gas. HB61 will help provide an attractive business environment for companies looking to increase leasing, drilling and construction activities in Cook Inlet. It is timely and well-conceived legislation and we believe it deserves the committee's support.

Thank you, Mr. Chairman for the opportunity to testify this afternoon.

HOUSE COMMITTEE REPORT

(7)

Date Referred to Committee: January 24, 2003

FURTHER REFERRALS: Resources
Finance

Date of Committee Action: Mar 6 03

The HOUSE SPECIAL COMMITTEE ON OIL AND GAS Committee considered: HB 61

HOUSE BILL NO. 61

OIL & GAS TAX CREDIT FOR EXPLORATION/DEV

"An Act establishing an exploration and development incentive tax credit for persons engaged in the exploration for and development of less than 150 barrels of oil or of gas for sale and delivery without reference to volume from a lease or property in the state; and providing for an effective date."

Recommends it be replaced with [ ] HCS *or* [✓] CS for HB 61 (Ofs)

For Senate Bills with new title: [ ] Technical Title [ ] New Title: HCR_____ [ ] Same Title [✓] New Title

[ ] attach amendments
[ ] add new referral to _____Committee
[ ] Letter of Intent _____Committee

List of Abbrev for Depts.:
ADM
CED
COR
CRT
EED
DEC
DFG
GOV
HSS
LAA
LAW
LWF
MVA
DNR
DPS
REV
DOT
UA

NEW FISCAL NOTES
*Assigned by Chief Clerk's Office

List by Dept(s):	*FN#	Fiscal	Indet.	Zero
REV				✓
DNR				✓

PREVIOUS FISCAL NOTES

List by Dept(s):	FN#	Fiscal	Indet.	Zero

Signing with recommendations	Printed Last Name	DP	DNP	NR	AM
	Foster	✓			
	Rokeberg	✓			
	McGuire	✓			
	Chenault	✓			
	Kertula				X
Chair:	Kohring	X			
Chair:					

O&G Committee Report

STATE OF ALASKA

REPRESENTATIVE
MIKE CHENAULT

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Sponsor Statement HB 61

HB 61 creates a new income tax credit to encourage increased exploration and development of natural gas reserves south of the Brook Range. While focused primarily on natural gas reserve development, the bill also provides an incentive for the development of marginal oil reserves should they be discovered. For the purpose of this bill, marginal oil production is defined as that which initially produces 150 barrels of oil per day or less. To qualify for the credit, operators must successfully drill and develop hydrocarbon reserves that produce natural gas for sale and delivery. The credit may offset no more than 50% of an operators annual income tax liability and remains in effect for a period of ten years.

The tax credit would amount to 10% of qualified investments (and 100% of services associated with said investment) for each year. For example, an operator who spends $20 million in a given year successfully developing natural gas reserves would receive an income tax credit of $2 million – applicable to up to one-half of it's income tax liability for that year. Credits in excess of 50% of the operator's income tax liability can be carried over to future years. This is a successful efforts bill which means that no credits will be given for dry holes.

The Cook Inlet continues to have great potential for additional natural gas development. Other Alaska basins outside of the North Slope have similar potential. However, the combination of exploration risk, high development costs and historic low natural gas prices has created a disincentive to drill for new reserves as compared to other areas of the world. By providing a credit for successful efforts, more exploration will occur in Southern Alaska leading to much needed new natural gas reserves. This will benefit all residents and businesses at no direct cost to the state.

In addition to the benefit of developing new gas reserves, increased Cook Inlet drilling will also aid the general economic status on the Kenai Peninsula and in Anchorage as well as other areas of Alaska. Moreover, increased tax revenue from additional hydrocarbon production will more than offset any fiscal impact from the proposed credit.

Representative_Mike_Chenault@legis.state.ak.us

FISCAL NOTE

STATE OF ALASKA
2003 LEGISLATIVE SESSION

Fiscal Note Number: 1
Bill Version: CSHB 61(O&G)
(H) Publish Date: 3/14/03

Revision Date/Time (Note if correction):
Dept. Affected: Natural Resources

Title: Oil and Gas Tax Credit for Exploration
BRU: Oil and Gas Development
Component: Oil and Gas Development

Sponsor: Chenault, Kohring, Wolf
Requester: House Oil and Gas
Component No.: 439

Expenditures/Revenues (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

OPERATING EXPENDITURES	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
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						
CHANGE IN REVENUES ( )						

FUND SOURCE (Thousands of Dollars)

1002 Federal Receipts						
1003 GF Match						
1004 GF						
1005 GF/Program Receipts						
1037 GF/Mental Health						
Other (Specify Type--Do not abbreviate)						
TOTAL	0.0	0.0	0.0	0.0	0.0	0.0

Estimate of any current year (FY2003) cost: 0.0
Mark this box (X) if funding for this bill is included in the Governor's FY 2004 budget proposal:

POSITIONS

Full-time						
Part-time						
Temporary						

ANALYSIS: *(Attach a separate page if necessary)*

HB 61 would authorize the Dept. of Revenue to grant credits against a taxpayer's state corporate income tax liability for certain oil or gas exploration and development investments made in the state.

Prepared by: Mark D. Myers
Phone 269-8800
Division: Oil and Gas
Date/Time 2/4/03 7:46 AM
Approved by: Tom Irwin, Commissioner
Date 2/4/2003
Agency: Natural Resources

(Revised 9/2002 OMB)

DNR Fiscal

FISCAL NOTE

STATE OF ALASKA
2003 LEGISLATIVE SESSION

Fiscal Note Number: 2
Bill Version: CSHB 61(O&G)
(H) Publish Date: 3/14/03

Revision Date/Time (Note if correction):
Dept. Affected: Revenue
Title: Oil and Gas Tax Credit for Exploration / Development
BRU: Revenue Operations
Component: Tax Division
Sponsor: Representative Chenault
Requester: House Committee on Oil and Gas
Component No.: 2476

Expenditures/Revenues (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

OPERATING EXPENDITURES	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
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						
CHANGE IN REVENUES ( )	*See Analysis*----------					

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POSITIONS

Full-time						
Part-time						
Temporary						

ANALYSIS: *(Attach a separate page if necessary)*

This bill is intended to promote the exploration and development of natural gas south of the Brooks Range, particularly in Cook Inlet. This bill allows a tax credit equal to 10 percent of qualified capital investment -- as well as annual labor, seismic and associated costs -- related to gas exploration and development work to be applied against corporate income tax (AS 43.20) for up to 50% of a corporation's total tax liability. The credit applies only to gas exploration and development of reserves south of the Brooks Range. The credit can only be taken if the reserves produce gas for sale and delivery.

Corporations could use their tax credits under this legislation to reduce taxes paid to the state for North Slope production or production from elsewhere in the state.

Oil and gas corporate income tax collections in FY 2003 and FY 2004 are currently projected at $160 million and $200 million per year, respectively.

Prepared by: Chuck Logsdon, Chief Petroleum Economist
Phone
Division: Tax Division
Date/Time: 3/11/03 9:46 AM
Approved by: Larry Persily, Deputy Commissioner
Date: 3/11/2003
Agency: Department of Revenue

DOR Fiscal

STATE OF ALASKA
2003 LEGISLATIVE SESSION

BILL NO. CSHB 61(O&G)

ANALYSIS CONTINUATION

It is not easy to evaluate the overall revenue effect of a tax credit. On the plus side, if exploration activity discovers developable reserves, the state could receive royalty and production taxes that more than offset the revenue loss due to the tax credit. And the availability of the credit could enhance the attractiveness of exploring for new oil and gas resources, which may or may not result in creditable expenditures depending on whether discovery and development occurs.

The credit is targeted to natural gas exploration and development activity south of the Brooks Range, while the bulk of current oil and gas corporate income tax against which this credit could potentially be taken is from production and transportation of high-value oil on the North Slope. As a result, an oil and gas corporation that has profitable operations on the North Slope could, by investing in development outside of the Slope, reduce its total oil and gas corporate income tax liability through this new credit provision.

The key state revenue issue with regard to this tax credit is the extent to which the additional incentive is needed to encourage exploration and development. Natural gas price levels are critical in determining the commercial incentive to explore and develop. Natural gas prices probably will be a bigger factor in a commercial venture than the tax credits in this legislation, but this tax credit provision could also play a factor in a corporate decision to invest in exploration and development. A risk to the state is if high gas prices spur development on their own, regardless of the tax credit, the state could be in the position of providing a tax credit that is no longer necessary to promote development.

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MEMORANDUM March 15, 2003

SUBJECT: CSHB 61 (O&G), establishing an exploration and development incentive tax credit for persons engaged in the exploration for and development of gas for sale and delivery without reference to volume from a lease or property in the state -- sectional analysis (Work Order No. 23-LS0270\H)

TO: Representative Mike Chenault

FROM: Jack Chenoweth
Assistant Revisor of Statutes

The bill proposes to add, for the period before its repeal, provision for an oil and gas exploration and development incentive tax credit against the taxpayer's tax liability under the Alaska Net Income Tax Act (AS 43.20).

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-- subsection (a) authorizes the tax credit, applicable to any tax year beginning after 2002, against tax liability due under the Alaska Net Income Tax Act; the amount of the allowable credit is based on 10 percent of the taxpayer's "qualified capital investment" (later defined) and 10 percent of the "qualified services" (also later defined) incurred by the taxpayer relating to a qualified capital investment;

-- subsection (b) sets parameters on what may qualify as a "qualified capital investment": those include cash expenditures or binding payment agreements made after December 31, 2002, for assets first placed in service during the tax year, as that phrase is defined in paragraph (2) of this subsection;

-- subsection (c) sets a maximum limit that may be claimed as a credit against the taxpayer's Net Income Tax liability: that limit is set at 50 percent of liability; expenditures that qualify for the credit in excess of the limit may be carried forward and applied in later tax years until exhausted or for not more than five years;

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-- subsection (f) imposes a geographic limitation on activity that may qualify for the credit: the credit is not available if an otherwise satisfactory "qualified capital investment" or "qualified services" associated with that investment occur north of 68 degree North latitude (generally, Alaska's Arctic Slope);

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-- subsection (h) directs the Department of Revenue, in conjunction with determining an allowable credit, to "allow only expenditures and payments . . . not inconsistent with . . . expenditures that support claims for investment credits under [the federal tax code] for exploration and development of natural resources";

-- subsection (i) defines applicable key terms: it is within the definition that the substantive limitation of "property used . . . in the exploration and development of gas reserves" is set without limitation as to amount.

Bill section 2 repeals the oil and gas exploration and development incentive tax credit.

Bill section 3: This transitional provision is included so that a taxpayer, entitled by AS 43.20.043 to a full five-year period in which to claim as a carry-forward any unused portion of the tax credit, may make the claim on or after January 1, 2013 (the date set in ***bill section 5*** for repeal of the authority to claim the credit), until the earlier of the date on which any unused portion of the carry-over is exhausted or until December 31, 2017 (the day before the fifth anniversary of the credit's repeal). In other words, a taxpayer basing a claim of credit on qualifying improvements or services made as late as December 31, 2012, may have the full five years to exhaust its use.

Bill section 4 is included so that claims of the credit may apply to qualified investment made on or after January 1, 2003, the start of the current tax year.

Bill section 5 sets the effective date of the repeal of the credit at January 1, 2013.

Bill section 6, an effective date provision for the bill, gives the substantive provisions of the measure an immediate effective date.

JBC:lmb
03-082.lmb

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J. Scott Jepsen
Cook Inlet Asset Manager

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Anchorage, AK 99510-0360
Phone 907-263-4348

ConocoPhillips

Feb. 27, 2003

Representative Vic Kohring
Chairman, House Oil and Gas Committee
Alaska State Capitol, Room 24
Juneau, Alaska 99801

Re: House Bill 61

Dear Rep. Kohring:

ConocoPhillips Alaska would like to express our support for HB 61 – An Act Establishing Oil and Gas Tax Credits for Certain Exploration and Development Projects. We believe that passage of this bill has the potential to spur additional efforts to explore for oil, and in particular gas, in places like Cook Inlet and the surrounding area that have not seen much exploration in recent years.

Thank you for your continued support for our efforts in Alaska. If you have any questions, please call me at (907) 263-4348.

Sincerely,

Scott Jepsen
Cook Inlet Asset Manager
ConocoPhillips Alaska, Inc.

Cc: Rep. Chenault
Rep. Kelly Wolf

Comments ConocoPhillips

Alaska State Legislature

Interim
145 Main Street Loop, Suite 223
Kenai, Alaska 99611
Phone: (907) 283-7223
Fax: (907) 283-7184

Session
Capitol Room 502
Juneau, Alaska 99801-1182
Phone: (907) 465-6890 or 465-3779
Fax: (907) 465-2833

House Finance Committee

Representative Mike Chenault

Memorandum

Date: March 14, 2003

To: Representative Bud Fate, Chair
House Resources Committee

From: Representative Mike Chenault

Re: Hearing Request for HB 61

Please schedule CS HB 61 for a hearing in House Resources as soon as possible.

If you have any questions, please contact my staff, Leona Oberts at #6890.

Marathon Oil Company

Fax

To: Joe & Wendy Company: Lg Consultants

Fax: 907-586-8977 Pages: 7, including this cover sheet

Phone: 907-586-2585 Date: 3/17/03

Re: From: DOUG THIERWECHTER

☐ Urgent ☐ For Review ☐ Please Comment ☐ Please Reply

If transmission is not complete, please call: 713-296-4191

Attached is the HB 61 work draft with the changes noted

A. To delete retro activity
Page 2, line 6
Page 4 line 31 & page 5 line 1

B. Clarify the language added to make consistent with federal law.
Page 3 line 19.

Doug

From....

Marathon Oil Company
5555 San Felipe Road
Houston, Texas 77056
Mail Address: P.O. Box 3128
Houston, Texas 77253
Phone: 713-629-6600
Fax: 713-296-3994

23-LS0270\H

CS FOR HOUSE BILL NO. 61(O&G)

IN THE LEGISLATURE OF THE STATE OF ALASKA

TWENTY-THIRD LEGISLATURE - FIRST SESSION

BY THE HOUSE SPECIAL COMMITTEE ON OIL AND GAS

Offered:
Referred:

Sponsor(s): REPRESENTATIVES CHENAULT, Kohring, Wolf

A BILL

FOR AN ACT ENTITLED

"An Act establishing an exploration and development incentive tax credit for persons engaged in the exploration for and development of gas for sale and delivery without reference to volume from a lease or property in the state; and providing for an effective date."

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

*** Section 1.** AS 43.20 is amended by adding a new section to read:

Sec. 43.20.043. Gas exploration and development tax credit. (a) Subject to the terms and conditions of this section, and in addition to any other credit authorized to the taxpayer by this chapter, a taxpayer engaging in the exploration for and development of gas may apply as a credit against the state tax liability that may be imposed on the taxpayer under this chapter, for a tax year beginning after December 31, 2002,

(1) 10 percent of the taxpayer's qualified capital investment; and

(2) 10 percent of the annual cost incurred by the taxpayer for qualified

services in the state during each tax year for which a credit is allowable for a qualified capital investment under (1) of this subsection.

(b) Expenditures qualifying for the taxpayer's qualified investment credit under (a)(1) of this section must be

(1) cash expenditures or binding payment agreements entered into after ~~December 31, 2002~~ JUNE 30, 2003; and

(2) made for assets first placed in service in the state during the tax year in which the credit is claimed; for purposes of this paragraph, "placed in service in the state" means that the first use of the qualified investment is in this state; if the property on which the claim of the credit is based has been used elsewhere in the tax year of acquisition and is brought to this state during that year or a subsequent year, the property does not qualify for the investment credit.

(c) The credit per tax year allowed by (a) of this section may not exceed 50 percent of the taxpayer's total tax liability, including all taxes, but shall be calculated before the application of any other credits allowed under this chapter. An unused portion of the credit for the tax year

(1) may be carried forward into one or more of the following tax years, except that the unused credit from one tax year may not be carried forward for more than five following tax years;

(2) shall be applied to the taxpayer's tax liability under this chapter during the following tax year before allowance of a credit allowed by (a) of this section for that following tax year.

(d) To obtain the credit allowed by this section, the taxpayer shall, with the taxpayer's tax return, submit, on a form prescribed by the department, information that demonstrates that the taxpayer is eligible for the credit and evidence of the expenses that are the basis of the claim of the credit. The taxpayer has the burden of demonstrating compliance with the requirements of this section to entitle the taxpayer to the claim of and the amount of the credit.

(e) A taxpayer entitled to a credit under this section

(1) may not convey, assign, or transfer the credit to another taxpayer or business entity unless the conveyance, assignment, or transfer of the credit is part of

the conveyance, assignment, or transfer of the taxpayer's business;

(2) forfeits the credit to which the taxpayer is entitled during the tax year and any carryover of it under (c) of this section, but does not forfeit the portion of the credit that accrued in a previous taxable year that may be carried over under (c) of this section, if the taxpayer

(A) disposes of the qualified capital investment;

(B) takes the qualified investment out of service; or

(C) transfers the qualified investment out of this state.

(f) A taxpayer is not entitled to a credit under this section for expenditures made or incurred for the qualified capital investment or for qualified services made for exploration and development of oil or gas that occur in the area of Alaska lying north of 68 degrees North latitude.

(g) A taxpayer who obtains a credit under this section may not claim a tax credit or royalty modification provided for under any other title. However, a taxpayer may, at the taxpayer's election, forgo a credit under this section in order to continue to qualify for a credit provided for in another title.

(h) For purposes of determining allowable credits under this section, the department shall allow only expenditures and payments that are not inconsistent with the expenditures that support claiming for investment tax credits authorized under 26 U.S.C. (Internal Revenue Code) for exploration and development of natural resources.

(i) In this section,

(1) "qualified capital investment" means a cash expenditure or binding payment agreement, as described in (b)(1) of this section, for real property or tangible personal property used in this state in the exploration and development of gas reserves in a gas reservoir for which there has not been commercial production if the reserves produce gas for sale and delivery; in this paragraph, "property" includes

(A) property used in the operation or maintenance of facilities for exploration or development of gas;

(B) property that is placed in use under a capitalized lease or an operating lease; and

(C) the following property used for the exploration and

development of gas:

(i) machinery, appliances, supplies, and equipment;

(ii) drilling rigs, wells, gathering lines and transmission lines, pumping stations, compressor stations, power plants, topping plants, and processing units;

(iii) roads, docks and other port facilities, and helicopter pads;

(iv) maintenance equipment and facilities, and maintenance camps and other related facilities; and

(v) communications facilities owned by a person whose principal business in the state is the exploration for or development of gas and whose operation of the communications facilities directly relates to the conduct of that business;

(2) "qualified services"

(A) means expenditures for labor, seismic, and other services that are directly applicable to a qualified capital investment;

(B) does not include lease operating expenses.

* Sec. 2. AS 43.20.043 is repealed.

* Sec. 3. The uncodified law of the State of Alaska is amended by adding a new section to read:

CLAIM OF GAS EXPLORATION AND DEVELOPMENT TAX CREDIT CONTINUED. A taxpayer who, on the effective date of repeal of AS 43.20.043 by sec. 2 of this Act, claims the balance of any unused portion of the gas exploration and development tax credit as a carry-forward under AS 43.20.043(c), may, notwithstanding the repeal of that subsection, continue to claim the balance of the credit until the claim of the credit is exhausted or until the tax year ending December 31, 2017, whichever occurs earlier. The provisions of AS 43.20.043 as they read on the day immediately preceding the effective date of the repeal of that section apply to the claim of the credit if carried forward under this section.

* Sec. 4. The uncodified law of the State of Alaska is amended by adding a new section to read:

~~RETROACTIVITY. AS 43.20.043, added by sec. 1 of this Act, is retroactive to~~

~~January 1, 2003.~~

* **Sec. 5.** Section 2 of this Act takes effect January 1, 2013.

* **Sec. 6.** Except as provided in sec. 5 of this Act, this Act takes effect immediately under AS 01.10.070(c).

AMENDMENT TO HB 61
Deleting Retroactivity

Page 2, line 6; delete "December 31, 2002" and insert "June 30, 2003"

Page 4, line 31 through page 5, line 1; delete "RETROACTIVITY. AS 43.20.043, added by sec. 1 of this ACT, is retroactive to January 1, 2003".

Economic Assessment Executive Summary

PHASE 1 OF THE SOUTHEAST ALASKA AND GULF OF ALASKA UTILITY GAS DISTRIBUTION PROJECT

Prepared for

Alaska Intrastate Gas Company

February 2002

CH2MHILL

Executive Summary

This economic assessment examines the cost competitiveness of an Alaska Intrastate Gas Company (AIGC) proposal to provide a utility gas system in the communities of Ketchikan, Sitka, and Juneau, Alaska. AIGC is proposing to supply, distribute, and sell utility gas[1] to these communities in a system whose components would be developed, owned, and operated by AIGC and others. At a future date, the system might be converted to natural gas. The success of the proposed project depends on the following factors:

- The AIGC cost of providing the service and how this cost compares to that of the readily available alternatives: fuel oil, bottled propane, and electricity
- AIGC marketing, consumer acceptance, conversion costs, and meeting market projections

This study focuses on the cost of providing utility gas service and the associated revenue requirements.

Project Components

The analysis included a review of the major project elements as discussed below.

Customer Base

The system as analyzed was assumed to serve residential and small commercial customers and all of the seafood processors that are located in the three communities. Residential and small commercial customers primarily represent a space-heating and hot water heating load. As a result, their sales are the greatest in the winter and relatively low in the summer. Seafood processors, on the other hand, represent a summer load, and therefore would even out the year-round load by filling in the summer sales trough with relatively little additional investment required to serve them.

Utility Gas Delivery Chain

This study analyzes the utility gas delivery chain from propane procurement through customer billing and collection. The major elements in this delivery chain are as follows:

- Procure propane in Alberta and British Columbia.
- Ship the propane in railroad tanker cars to Prince Rupert, British Columbia. The tanker cars would be owned or leased by AIGC. CN Rail would haul the railcars to and from the propane sources to its existing facilities at Prince Rupert and load them on a barge(s) for shipment to the communities.

[1] For this utility gas system, utility gas is defined as vaporized propane that is mixed with dry air prior to delivery to customers.

- The barge would make a trip to one community, off-load full tanker cars, on-load empty tanker cars, and return to Prince Rupert for the next round trip. At each community, a third party, Prairielands Energy Marketing, Inc. (PEMI), would off-load the cars for use as in-community storage (Ketchikan and Sitka) or pump the propane from the barge to fixed storage tanks (Juneau).
- PEMI would construct the needed infrastructure in each community from the dock to the "city gate," the point at which AIGC would take delivery of utility gas. This infrastructure would include any land-based storage and the vaporization ("send-out") facilities. Within each community, there might be multiple send-out facilities at multiple locations.
- PEMI would operate the process from the docks to the city gate.
- AIGC would construct and operate an underground pipeline distribution system to deliver utility gas to end-users.
- AIGC would contract with a local electric or water utility system for customer billing and collection.

Community Infrastructure

Each community has different infrastructure requirements. The infrastructure used for this analysis is as follows.

In Ketchikan, there is existing rail car infrastructure at the Saxman Seaport that can physically accommodate the projected number of rail cars required for this new project. In Sitka and Juneau, infrastructure would need to be developed to accommodate off-loading and on-loading rail tanker cars and to meet storage requirements. At Sitka, Sawmill Cove Industrial Park facilities could be upgraded to provide the needed docking, rail siding, and rail tanker car storage. In Juneau, the area between the Little Rock Dump and the Big Rock Dump would be developed to provide a docking facility and an area for fixed storage tanks (no rail tanker car storage is anticipated for Juneau).

In each community there is a need for fuel storage, which would be provided either by rail tanker car storage or permanent land-based storage tanks.

There would be two send-out facilities in Ketchikan, one in Sitka, and three in Juneau. Propane would be trucked from the docking area to each send-out facility, where the propane would be vaporized and mixed with air to create utility gas.

Project Schedule

A preliminary project development schedule indicates that gas utility service could begin in July 2004 in Ketchikan, April 2005 in Sitka, and April 2006 in Juneau. This phased schedule provides time for dock facility development in Sitka and Juneau.

Cost of Service and Revenue Requirements

Projected Sales

The number of residential utility gas customers was estimated by obtaining data on the number of occupied households in each community. Adjustments were then made for the number that would be located within the AIGC service area and the number that would take utility gas service over time. It was assumed that AIGC would, in year 7, serve 60 percent of the occupied households in the identified service areas of all three communities. Greater market penetration is favorable to the project.

Annual sales to residential and small commercial customers were estimated by applying the above customer estimates to per-customer sales data obtained from Pacific Northern Gas Company, which serves the Prince Rupert area. Annual seafood processor sales estimates were obtained from AIGC.

The data on annual sales were used to determine the transportation logistics for supplying the required fuel quantities. Peak-hour demands were estimated by PEMI to determine send-out facility capacity requirements. Heavy-demand-period usage was estimated for establishing in-community storage requirements.

Project Capital Costs

The estimated infrastructure costs in each community are listed in Table ES-1.

TABLE ES-1
Estimated Capital Costs for Infrastructure in Ketchikan, Sitka, and Juneau

Community	Dock Through Send-Out Facilities	Local Distribution System	Total
Ketchikan	$3,479,535	$16,600,777	$20,080,312
Sitka	$ 4,168,313	$9,268,769	$13,437,082
Juneau	$13,992,260	$23,229,988	$37,222,248
Total	$21,640,108	$49,099,534	$70,739,642

Note: Costs in 2001 dollars.

Estimated capital costs for the Dock through Send-Out Facilities in the table were developed by PEMI. PEMI's cost estimates include the following contingencies and markups:

- Contingencies 10%
- Engineering/Legal/Administration 2%
- Construction Management 1%
- Permitting 2%

The utility gas local distribution system layouts were assumed to be similar to previous layouts done by others for a natural gas distribution system. Although the previous layouts were not available for this analysis, the construction quantities were available for this analysis and were used in developing the cost estimates for the local distribution system

(Table ES-1). The unit costs for construction were developed by CH2M HILL and were used to estimate the distribution system cost. Appropriate contingencies and markups were added for engineering, project management, legal considerations, permitting, and construction supervision. The following contingencies and markups were included in the cost estimates for the local distribution system:

- Contingencies 25%
- Engineering/Legal/Administration 10%
- Construction Management 3%
- Permitting 2%

The higher contingencies included in the local distribution system reflect a higher level of uncertainty in the construction quantities and system design at this stage of the project.

Additional capital costs would be as follows:

- AIGC Startup $7,180,000
- Fuel Inventory (as of year 7) $1,130,000
- Purchase of Railcars $2,460,000

The AIGC startup costs would fund the marketing program of $3 million, provide working capital of $3.1 million, and provide $1 million for project management.

Project Operating Costs

The annual costs to operate and maintain the in-community utility gas systems and AIGC's operations were estimated at approximately $920,000 in the first year of operation in Ketchikan and $7,100,000 in year 7 when there is service in all three communities. These costs were developed based on assumed staffing levels and individual expense items developed in discussions with AIGC and PEMI.

Capital Structure

For this analysis, it was assumed that AIGC would have the following debt equity structure and cost of money:

- Debt 80 percent at 5.5 percent interest rate for 30 years
- Equity 20 percent at 8 percent

This structure results in a rate of return on rate base of 6.0 percent. Discussions with one party indicated that, for a project of this nature, the investor would be willing to invest for an 8 percent return on equity.

The analysis was done in 2001 dollars. The above interest rates, for a project of this nature and risk, are close to real (without consideration for inflation) interest rates. If a 2 percent inflation rate were taken into account, the nominal (with inflation included) interest rate and return to equity would most likely be closer to 8.0 percent and 10 percent, respectively.

Revenue Requirement Based Commodity Price

Approach

The required utility gas commodity price was computed based on the projected revenue requirements, fuel and fuel transportation costs, operation and maintenance costs, depreciation, taxes, and return to rate base.

The calculated commodity price is the average price over the first 7 years of operation that would, in conjunction with a monthly service charge to each customer, allow AIGC to earn a 6 percent rate of return on rate base over the 7 years. This provides for a minimum of 5 years of service in a community, at which point it was assumed that AIGC has achieved 60 percent penetration of the residential and small commercial customer base. Because service to Juneau would not begin until the second quarter of the third year of AIGC operations, a 7-year period was necessary to have 5 years of service in each community. Use of a shorter period, for example 5 years, would require a higher commodity price for AIGC to achieve its rate of return in the first 5 years.

Results

Table ES-2 shows the 7-year revenue requirement calculated in dollars per million Btu (MMBtu).

TABLE ES-2
Seven-Year Revenue Requirement

Cost Element	$/MMBtu	% of Total
Cost of Propane	$ 3.30	29.2
Cost of Propane Transportation	$ 2.20	19.5
Operation and Maintenance	$ 2.94	26.0
Depreciation	$ 0.76	6.7
Income Taxes	$ 0.23	2.0
Return on Rate Base	$ 1.87	16.6
Total	$11.30	100.0
Less: Nonrate Revenue [a]	-$ 0.43	
Total Commodity Price	$10.87	

[a] Nonrate revenues include interest earnings ($0.03/MMBtu) and monthly service charge ($0.40/MMBtu).

Note: $/MMBtu = dollars per million British thermal units, a standard unit of measure

Interest earnings and a monthly service charge of $7.95 to each customer was included in the analysis. This charge would provide revenues equivalent to $0.43 per MMBtu and would reduce the effective commodity price.

The total of $10.87 per MMBtu is the average commodity price AIGC would have to charge over the first 7 years of operations, based on the assumed utility gas sales, investments, and

operating costs, to obtain its rate of return of 6 percent over the first 7 years of operation. This is the average rate to be charged to all customers. If, for competitive reasons, certain customers were charged a lower rate, the remaining customers would need to be charged a higher rate to maintain the same overall revenues.

In year 7, the revenue requirement per MMBtu would be $9.83, one dollar and four cents less than the 7-year price. At that point, AIGC would be able to reduce its commodity price to its customers and still achieve its revenue requirements.

Certain AIGC costs would be unavoidable, largely fixed, or beyond AIGC's ability to control. These costs are for propane, propane transportation, depreciation, and taxes. Therefore, any cost reductions would have to come from operations and return to rate base or from increased sales. AIGC should be aggressive in controlling its costs, whether in capital investment or operations.

Key Assumptions and Sensitivity

The most important assumptions leading to this commodity rate are as follows:

- AIGC will be able to serve all of the estimated seafood processor load in each community, the annual seafood processor sales will be at the levels projected by AIGC, and the capital cost to serve these loads will be relatively small. Without any seafood processor loads, the first 7 year commodity price would be increased to $12.88 per MMBtu.
- AGIC will achieve the assumed market penetrations for residential and small commercial customers, and sales will be at projected levels.
- AIGC can attract the assumed 20 percent equity investment at 8 percent a year and can sell long-term debt at 5.5 percent a year.

Another significant assumption is that the historic price relationship between fuel oil and propane will continue in the future. Historically, the prices of fuel oil and propane have generally moved in the same direction at the same time.

The price is particularly sensitive to projected sales. The larger the volumes of utility gas that can be sold without increasing the capital investment, the lower would be the commodity price to consumers. At Ketchikan, for example, reducing the residential load by 25 percent and shifting that load to large commercial and industrial users would reduce the cost of utility gas by about $0.15 to $0.20 per MMBtu, with the deferred residential customers added in later years. The assumed sales to residential and small commercial customers are also important in determining the commodity price. A 10 percent sales increase to these customers would lower the commodity price by $0.36 per MMBtu; a 10 percent decrease would increase the price by $0.42 per MMBtu.

Competitive Price Comparison

The combined AIGC commodity price and service charge need to be competitive with the cost of fuel oil for space heating and hot water, or else AIGC will not achieve the market penetrations that were assumed. Generally, the AIGC cost needs to be 20 percent lower than

the equivalent cost of fuel oil and electricity to attract a significant number of customers. This margin is necessary for potential consumers to be willing take action and incur a modest level of conversion costs.

The price comparison assumes that the total cost of utility gas service will be at least 20 percent below the cost of fuel oil and electricity. If conversion costs are significant, the marginal savings from the utility gas service will need to be greater. For fuel oil users, the conversion cost might be modest; for electric hot water and space heat customers, the cost to convert can be significant. Without a savings margin of 20 percent, the assumed penetration rates and sales are unlikely.

The cost of electricity that was used in the comparison is the incremental cost of electricity from the applicable electric utility tariffs for residential, small commercial, and seafood processors (the utility's industrial rate was used). The comparative fuel oil prices used for each community are the 5-year average cost per gallon from data collected by University of Alaska Fairbanks, Cooperative Extension Service, Food Cost Survey, September 1996 through September 2001.

These costs were weighted to reflect the projected AIGC sales mix (residential/small commercial and seafood processor), which determines the weighted cost of both electricity and fuel oil against which AIGC will be competing. The costs were then adjusted to reflect the conversion efficiencies for space heat and hot water heating. If the efficiency rate for a particular appliance for a particular fuel type is less than 100 percent, the effective commodity price for the consumer will increase. The adjusted price of utility gas was compared to the adjusted price of electricity and fuel oil in each community. The information is summarized in Table ES-3. For utility gas fuel, a 90 percent efficiency was used for gas furnaces and 86 percent for hot water heaters.

Assuming a new gas appliance for space heat, the commodity price for utility gas would be about 11 percent less than fuel oil in Ketchikan. In Sitka it would be 19 percent less than fuel oil, and in Juneau, 24 percent less. This is within the competitive range in Sitka and Juneau. In Ketchikan, attracting customers might be more difficult.

If, instead of new appliances, existing fuel oil furnaces and boilers were to be converted to utility gas at an efficiency of 70 percent, the effective price of utility gas would be more expensive than fuel oil in Ketchikan and Sitka. Consumers in Juneau would realize savings of approximately 3 percent if they elected to convert to utility gas. However, it is uncertain whether a savings of 3 percent would entice customers to convert to utility gas.

The commodity price needs to meet various competitive thresholds in each community for the space heat market. AIGC must capture the space heat market in order to have sufficient sales volumes. For a given competitiveness threshold, 20 percent, the required commodity price is indicated. This analysis assumed that industrial fuel oil costs are 90 percent of residential and small commercial fuel oil costs.

The larger the fuel oil price discount given to industrial users relative to residential users, the more competitive the market will be. This is especially true in Ketchikan and Sitka where the industrial users have a more significant share of the expected load. A greater price discount for industrial users in Juneau would not have as large an impact because the expected load in Juneau is dominated by the residential sector.

TABLE ES-3
Comparative Cost of Competitive Energy Sources

	AIGC Utility Gas ($/MMBtu)	Electricity Cost ($/kWh)			Fuel Oil Cost ($/gallon)		
		Ketchikan	Sitka	Juneau	Ketchikan	Sitka	Juneau
Cost of Electricity/Fuel Oil							
Residential/Small Commercial		$0.088	$0.095	$0.088	$1.35	$1.49	$1.55
Seafood Processors		$0.076	$0.085	$0.045	$1.22	$1.34	$1.40
Weighted Cost	$11.27	$0.083	$0.090	$0.083	$1.30	$1.42	$1.53
Conversion Efficiency							
Space Heat (New Appliance)	90%	100%	100%	100%	70%	70%	70%
Space Heat (Burner Conversion)	70%	NA	NA	NA	70%	70%	70%
Hot Water Heater	86%	95%	95%	95%	70%	70%	70%
Adjusted Cost per MMBtu							
Space Heat (New Appliance)	$12.52	$24.27	$26.49	$24.19	$14.07	$15.37	$16.56
Space Heat (Burner Conversion)	$16.10	NA	NA	NA	$14.07	$15.37	$16.56
Hot Water Heater	$13.11	$25.54	$27.88	$25.46	$14.07	$15.37	$16.56
Percent Savings							
Space Heat (New Appliance)		48%	53%	48%	11%	19%	24%
Space Heat (Burner Conversion)		NA	NA	NA	-14%	-5%	3%
Hot Water Heater		49%	53%	49%	7%	15%	21%

Figure ES-1 shows the estimated annual cost for space heat and hot water in Ketchikan, Sitka, and Juneau for five comparable residences that have the following energy uses: all electric heat and hot water appliances, all bottled propane appliances, fuel oil heat, and electric hot water appliances; combined fuel oil space heat/hot water with electric hot water appliances; and all utility gas appliances. These figures are for comparative purposes only.

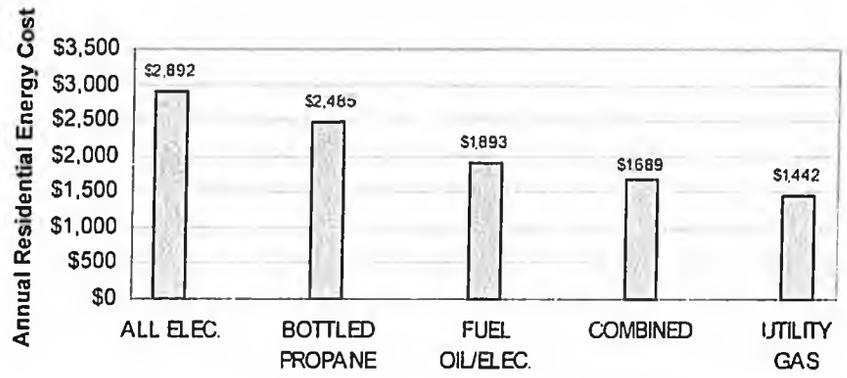
The following data were used to calculate the estimated annual residential energy cost:

- Utility gas price of $10.87/MMBtu (see Table ES-2) plus a monthly service charge of $7.50 per month.
- Residential rates for electricity and fuel oil as presented in Table ES-3.
- Prices for bottled propane in each community obtained from the University of Alaska Fairbanks, Cooperative Extension Service, Food Cost Survey, September 1996 to September 2001.

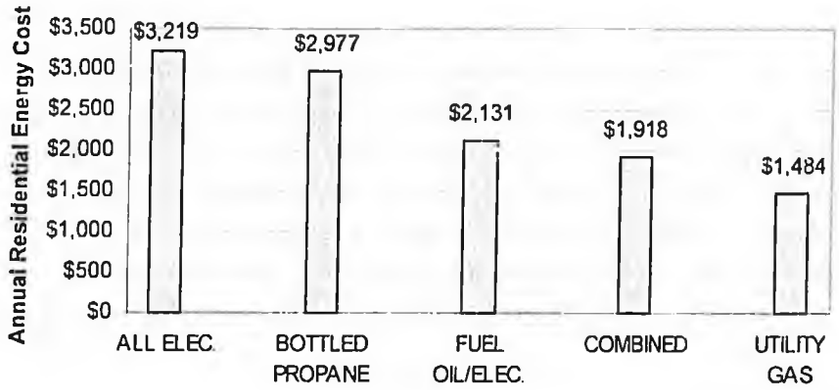
FIGURE ES-1

Comparative Cost of Competing Energy Sources for Residential Customers

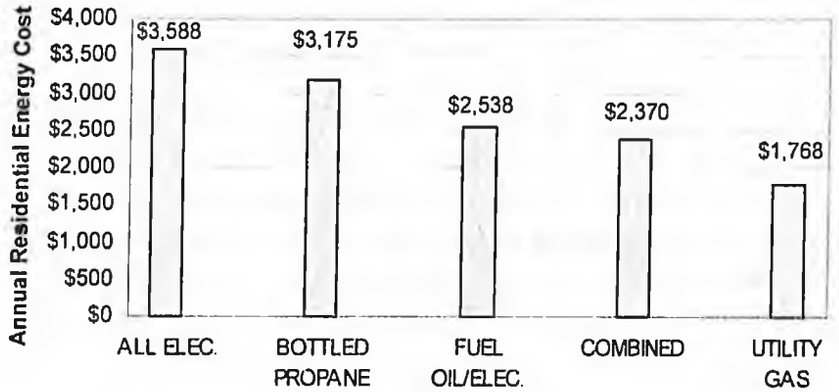
Ketchikan



Sitka



Juneau



ALL ELEC. = Electric Space Heat and Hot Water Appliances

BOTTLED PROPANE = Bottled Propane for Space Heat and Hot Water Appliances

FUEL OIL/ELEC. = Fuel Oil for Space Heat and Electric Hot Water Appliances

COMBINED = Fuel Oil for Space/Water Heating and Electric Hot Water Appliances

UTILITY GAS = Utility Gas Space Heat and Hot Water Appliances (New)

- Efficiency rates for space heat (new appliance), space heat (burner conversion), and hot water heaters as presented in Table ES-3.
- Average annual energy consumption by a residential user in each community for space heating and hot water heating: Ketchikan = 111.20 MMBtu, Sitka = 114.50 MMBtu , and Juneau = 138.10 MMBtu.
- Assumed hot water heater energy use of approximately 21.60 MMBtu/year.

Conclusion

This project will provide a competitive and clean alternative fuel source to Ketchikan, Sitka, and Juneau and is feasible provided that the assumptions, conditions, and projected annual sales volumes are met as presented in this economic assessment. Deviations from any assumptions, conditions, and projected sales volumes might increase or decrease the commodity price and affect both the revenue requirements and the feasibility for the proposed utility gas system.

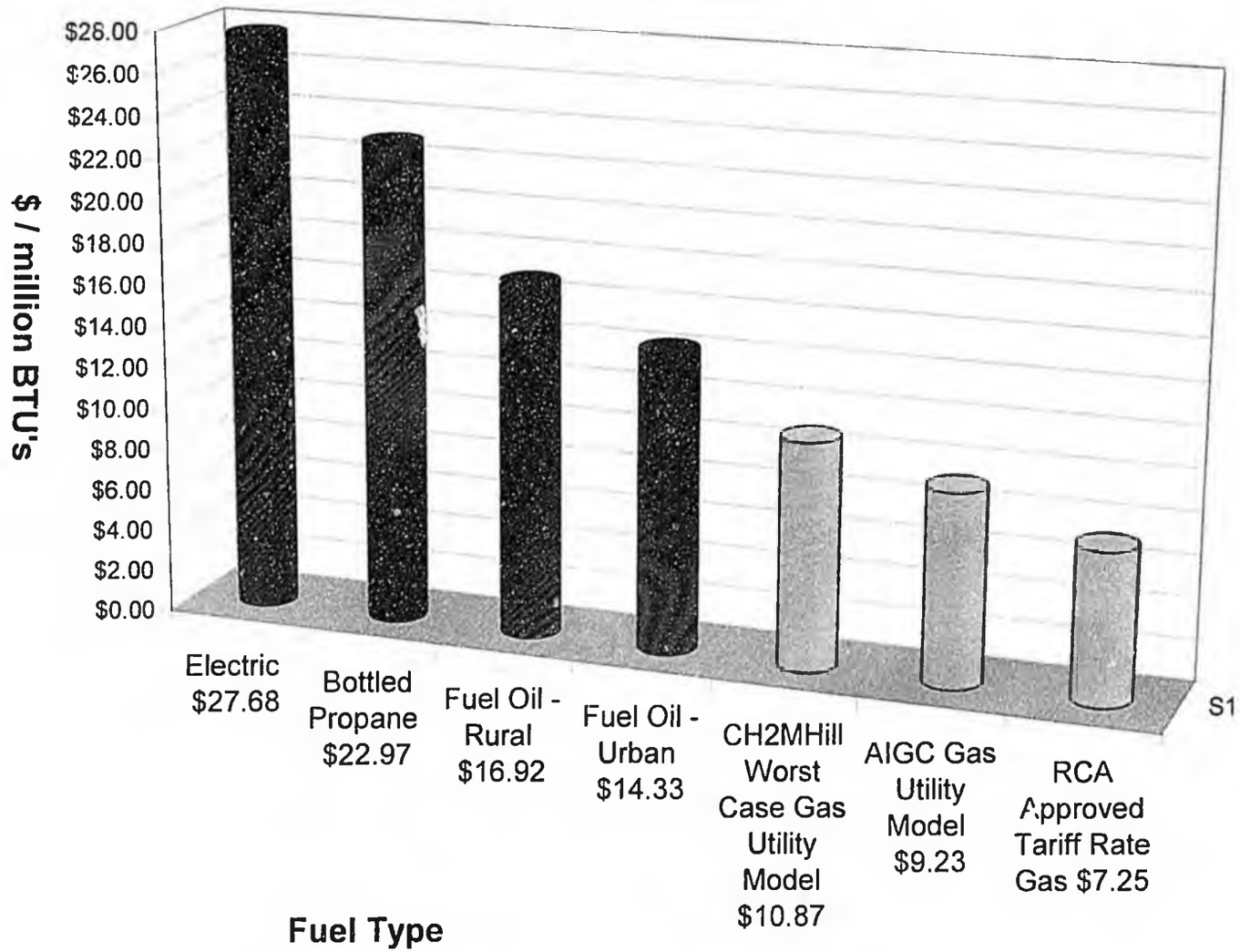
The cost estimates and sensitivity analysis for the proposed utility gas system indicate that AIGC will have to aggressively manage the required infrastructure and associated costs in order to meet the competitive price targets over its first 7 years of operation. Once AIGC is established, its ability to offer a competitive price will improve. In year 7, the revenue-requirement-based commodity price is $9.83, which is $1.04 less than the 7-year commodity price.

The lower sales levels in the first 3 years, when service is started in Ketchikan, Sitka, and Juneau, would require a higher commodity price in order to meet revenue requirements. This is the challenge faced by all capital-intensive undertakings. The analysis assumed that AIGC will serve all of the available estimated seafood processor loads. If the served loads are less than those assumed, the 7-year commodity price would have to be higher. If there are other summer peaking loads than can be served with minimal additional capital investment, they can substitute for seafood processor load. Adding additional large winter peaking loads would not be nearly as beneficial to the commodity price as summer peaking loads.

To the extent AIGC can increase sales without increasing capital costs, it could reduce the commodity price. Conversely, to the extent sales do not materialize as projected, the commodity price would need to be higher and less competitive.

If the long-term price of propane can be reduced below the assumed $0.30 a gallon, the commodity price can be reduced about $0.11 per MMBtu for each $0.01 per gallon reduction in the price of propane.

Today's Comparative Costs of Fuels within the AIGC Service Area



ALASKA INTRASTATE GAS COMPANY

615 East 82nd Avenue, Suite 300 • Anchorage, Alaska 99518
(907) 272-0555 • Fax (907) 272-0556
aigco@worldnet.att.net

April 7, 2003

APR 14 2003

Hugh Fate
Alaska State Legislature
State Capitol (MS 3100)
Juneau, Alaska 99801-1182

Subject: Update on the Southeast and Gulf of Alaska (SEAGA) Gas Project

Dear Mr. Fate,

As you know, Alaska Intrastate Gas Company (AIGC) is a certificated gas utility holding certificates of public necessity and convenience issued by the Alaska Public Utilities Commission, now the Regulatory Commission of Alaska. AIGC is charged with bringing the benefits of gas utility service to seventeen Southeast and Gulf of Alaska communities. To that end, AIGC has assembled a team of companies to design, build, construct and operate a gas utility that will lower energy costs in excess of twenty-five percent conservatively. After numerous meetings with and the support of the Alaska Industrial Development and Export Authority (AIDEA), AIGC sought legislative authority for increased bonding limits.

In 2001 the House unanimously passed House Bill 236. The title of this Bill was **"An Act relating to the contracting and financing authority of the Alaska Industrial Development and Export Authority; authorizing the authority to issue bonds in a principal amount not to exceed $76,000,000 to finance the acquisition, design, construction, inventory, and operation of natural gas, propane air, or manufactured gas public utility facilities; and providing for an effective date."** The Bill then moved to the Senate where it was assigned to the Resources and Finance Committees. During hearings in the Senate Resources Committee, the Committee wanted to see an independent feasibility study completed prior to passing the Bill. A Committee Substitute Bill was passed out of the Resources Committee to require this action.

In order to move back to the form of the Bill passed by the House, AIGC met with AIDEA to implement the requested study in the summer and fall of 2001. Timely completion of the feasibility study would have allowed passage of the original HB 236 in the second session of the 22nd Legislature in 2002. The independent contractor CH2MHill was selected with the concurrence of AIDEA. They completed a worst case feasibility study of the SEAGA Project in February 2002 that showed that the project was feasible to build. Copies of this Executive Summary were provided to AIDEA and the Senate Finance Committee in preparation for moving the Bill through the Senate.

However, HB 236 did not make it though the Senate prior to adjournment of the session. A copy of the Executive Summary of that feasibility study is included for your review.

House Bill 236 did not provide any funding for the project; it only removed a $10,000,000 cap on AIDEA investment in economically feasible projects that meet AIDEA's investment criteria and that are approved by their Board of Directors. More importantly the Bill demonstrated the support of the Legislature and State for this project, and made a funding source through AIDEA available to the project if it subsequently met their investment criteria and such funding was actually sought by the project proponents. In fact AIGC was already engaged in meetings with AIDEA on a conduit bond financing plan that would be pursued in Lieu of direct investment by AIDEA. We are currently pursuing bonding discussions with the Alaska Railroad Corporation since it may be possible to acquire tax-free bonds through them, something that cannot be done directly through AIDEA conduit bonding. Legislative approval of conduit bonds issued by the Alaska Railroad Corporation is required regardless of amount.

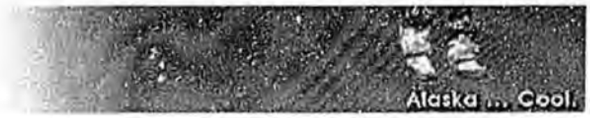
We greatly appreciate the action you took last session in passing House Bill 236. Your vision and expression of support for bringing gas utility service to Southeast Alaska is highly commendable. AIGC remains poised to complete a complex financial package to bring the project into reality in the immediate future. However, we still need your support to bring all parties to the table. Investors and financiers must know that the people, communities, Legislature and Governor fully back and support this undertaking.

It will be 5-10 years before all of these communities reap the full benefits of gas utility service. Private investment in this infrastructure will have immense positive impacts on the economies of these communities. It is equally important to demonstrate policy level support for this endeavor to both the communities and those putting the resources together to make it happen.

The future holds much promise that we will put together a successful financing package this year. We are very close. We hope the 23rd Session of the Legislature will show the same support as we received in the last session. AIGC will be seeking your support for House Bill 235 that was introduced April 2, 2003 by Representative Weyhrauch. We hope you will move this Bill through the 23rd Legislative Session and demonstrate that the State fully supports the efforts of the project proponents to bring gas utility resources to the communities of Southeast Alaska.

Very truly yours,

Francis L. Avezac
President



In the News

Governor Declares Disaster for Southcentral Windstorm

March 31, 2003
No. 03-073

(Juneau) - Governor Frank H. Murkowski on Friday declared a disaster for the damage caused by the windstorm that struck Southcentral Alaska March 7-14. Damage from the windstorm is estimated in excess of $8.5 million. Murkowski will ask for a federal disaster declaration that would allow impacted communities from Kenai to the Mat-Su Borough to apply for federal assistance.

"The Mat-Su Valley, Anchorage and the Kenai Peninsula experienced a significant range of damage from the windstorm," Murkowski said. "Our preliminary damage estimates indicate that more than $8.5 million in losses were sustained by homes, businesses, and public facilities and infrastructure.

"I will be asking President George W. Bush for a federal declaration of disaster for parts of Southcentral Alaska, as well.

If the request is approved by the Bush administration, the Federal Emergency Management Agency will send a Joint Preliminary Damage Assessment Team to Alaska, likely by Tuesday. The team will include FEMA, state and local emergency management members who will visit communities and other areas impacted by the storm. So far, the damage includes:

Matanuska-Susitna Borough $4,456,624.

Municipality of Anchorage $3,561,260.

Kenai Peninsula Borough $ 713,771.

In addition, the Alaska Railroad Corporation estimates that it experienced more than $350,000 in damages. Officials expect the totals to go up as additional damage claims are made over the next week.

###

Contact: John Manly, Press Secretary, 465-3995

August 2002

World Energy "Areas To Watch"

The countries/regions listed in this report are: a) important from an oil and gas perspective; and b) currently (or potentially in the short-term) confronting significant economic, political, or other issues that could affect domestic or world oil and gas markets. Click on the name listed above for a brief discussion/analysis of the main concerns regarding that particular country/region's energy industry. Information contained in this report is the best available as of August 2002 and can change.

Algeria

As many as 150,000 rebels, soldiers and civilians have died in Algeria's civil war, which began in 1992 following the military's nullification of a national election won by the Islamic Salvation Front (FIS). Evidence that unrest continues in Algeria was provided on July 28, 2002, with the reported killing of the leader of the Armed Islamic Group (GIA), Rachid Abou Tourab, along with 15 other group members.

Algeria produces around 1.4 million barrels per day (bbl/d) of oil, and has net exports of about 1.2 million bbl/d. Besides oil, Algeria is a major natural gas producer, mainly to Europe. more...

Angola

Angola, sub-Saharan Africa's second largest oil producer (behind Nigeria), has been in a state of nearly constant civil war since it achieved independence from Portugal in 1975. On February 22, 2002, Angolan rebel leader Jonas Savimbi was killed by government troops. On April 4, 2002, the Angolan army signed a ceasefire accord with UNITA, raising hopes that the country's long-running civil war might be at an end.

Angolan oil production, which has more than quadrupled since 1980, averaged 742,000 bbl/d during 2001. Angola's oil exports to the United States were 328,000 bbl/d in 2001 (44% of Angola's total average production), and 323,000 bbl/d for the first 5 months of 2002.more...

Caspian/Caucasus

The Caspian Sea is developing into a significant oil and natural gas producing area, and the Caucasus is a potentially major world oil and gas transit center. Getting Caspian oil and gas out of the region to world markets, however, is complicated by several factors, including geography and geopolitics. Besides the ongoing war in Chechnya, another flashpoint in the Caspian/Caucasus region is Georgia's remote Pankisi Gorge region, which Chechen rebels reportedly use as a base and refuge. On August 14, 2002, Russia accused Georgia of directly assisting Chechen rebels and allowing them to use the Pankisi Gorge as a base for attacks on Russia.

On August 8, 2002, Russia held large-scale military exercises on the Caspian Sea, involving a reported 10,000 soldiers and 60 warships. The exercises were first announced immediately after the failed Caspian summit in April 2002, and has been seen by analysts as a possible signal to Iran regarding division of the Caspian Sea. more...

Colombia/Ecuador

Colombia, a significant oil producer and exporter, faces serious problems, including left-wing guerrilla groups; right-wing paramilitary groups; a major illicit drug trade; large fiscal deficits; a high violent crime rate (including kidnappings of oil workers) and high unemployment. On August 7, 2002, Alvaro Uribe Velez, was sworn in as the new president of Colombia. Velez promptly declared a 90-day state of emergency, which can be extended another 90 days if necessary.

Colombia's oil production in 2001, at 616,000 bbl/d was down about 203,000 bbl/d from its all-time high of 819,000 bbl/d reached in 1999. Production has fallen in part due to attacks against the Cano Limón pipeline. Colombia exported 296,000 bbl/d of oil to the United States in 2001, down from 342,000 bbl/d in 2000 and 468,000 bbl/d in 1999. For the first five months of 2002, Colombia's oil exports to the United States fell even further, to 265,000 bbl/d.

Besides affecting Colombia directly, instability there has spilled over the border into several neighboring countries, including Ecuador, which is a significant oil producer (around 412,000 bbl/d in 2001) as well.more...

Indonesia

Indonesia has experienced significant economic and political turbulence over the past few years, which has impacted the country's energy sector. In August 1999, for instance, violence erupted in East Timor, which had voted for independence. East Timorese independence called into question the Timor Gap Treaty, under which Indonesia and Australia had agreed to split revenues from oil and gas development in the Timor Gap. Besides East Timor, Indonesia faces separatist movements in all four of the country's most resource-rich provinces (Aceh, East Kalimantan, Irian Jaya, Riau).more...

Iran

Iran remains under U.S. sanctions (the Iran and Libya Sanctions Act of 1996) due to Iran's opposition to the Middle East peace process; US alleged Iranian support for various terrorist groups; and other issues. On January 29, 2002, only four months after the September 11, 2001 terrorist attacks on America, President George W. Bush declared in his State of the Union address that Iran, along with Iraq and North Korea, constituted an "axis of evil" that supported terrorism.

Iran produced around 3.8 million bbl/d of oil in 2001, with net exports of 2.7 million bbl/d. It is possible that, with sufficient investment, Iran could increase its oil production capacity significantly. Iran produced 6 million bbl/d in 1974, but has not surpassed 3.8 million bbl/d on an annual basis since the 1978/79 Iranian revolution. more...

Iraq

Iraq, which contains huge oil and gas reserves and is a major oil producer and exporter, has been subject to international sanctions since its 1990 invasion of Kuwait. The United States has hinted that actions may be taken against the Iraqi government if UN arms inspectors are not allowed to return. On August 26, 2002, Vice President Dick Cheney stated that, in regards to US intentions toward Iraq, there is an "imperative for preemptive action" and that "the risk of inaction is far greater than the risk of action."

Prior to August 1990, Iraq was producing over 3 million bbl/d and exporting 2.8 million bbl/d (1.6 million bbl/d via pipeline to the Turkish port of Ceyhan; 800,000 bbl/d via the IPSA2 pipeline across Saudi Arabia, which is currently closed; 300,000 bbl/d via the Persian Gulf port of Mina al-Bakr; and somewhat less than 100,000 bbl/d by truck through Turkey). During the first half of 2002, Iraq averaged net oil exports of about 1.5 million bbl/d, of which 611,000 bbl/d went to the United States. more...

Libya

On April 5, 1999, more than 10 years after the 1988 bombing of Pan Am flight 103 over Lockerbie, Scotland that killed 270 people, Libya, which exports around 1.25 million bbl/d of oil, extradited two men suspected in the attack. In response, the United Nations suspended economic and other sanctions against Libya which had been in place since April 1992. US sanctions, including the Iran-Libya Sanctions Act (ILSA) of 1996, remain in effect (in July 2001, Congress extended ILSA for 5 more years).

On May 28, 2002, a law firm representing the government of Libya announced that Libya would pay $2.7 billion to the families Pan Am 103 bombing victims if U.S. and U.N. sanctions were first lifted. Some Libyan government officials denied that any deal has been proposed, but the lawyers employed by the Libyan government continued to affirm that a deal was possible. more...

Nigeria

In general, the security situation in Nigeria is poor, with high rates of violent crime, including kidnapping, ethnic and religious strife. Over 10,000 Nigerians have died in communal or religious violence over the past three years.

On July 31, 2002, ChevronTexaco announced the resumption of crude oil exports from southern Nigeria's Escravos Port after protests and a fire caused the company to declare force majeure on its exports for a ten-day period. As much as 500,000 bbl/d were temporarily halted. Before the fire, about 110,000 bbl/d were interrupted at times by protesters, mainly women, demanding employment opportunities and investment in the local community. Nigeria's army moved in to prevent protesters from damaging equipment, but declined to remove the protesters from the facilities.

Nigeria is one of the world's leading oil exporters, with production of around 2.3 million bbl/d of oil during 2001, and with net oil exports of around 2.0 million bbl/d, including around 885,000 bbl/d to the United States.more...

Sudan

Sudan, a growing oil producer and exporter, remains under a State of Emergency, originally declared on December 12, 1999. Despite this, security risks remain high, particularly in southern Sudan, center of a military rebellion by the Sudan People's Liberation Army. As of January 2002, Sudan's estimated proven reserves of crude oil stood at 563.3 million barrels. Current crude oil production averages about 210,000 bbl/d, and exports about 180,000 barrels per day. more...

Venezuela

Venezuela, which has the largest oil reserves in the Western Hemisphere and is a major oil exporter, especially to the United States, currently is experiencing considerable social, economic, and political difficulties. On April 12, 2002, President Hugo Chávez was ousted by the country's military after three consecutive days of general strikes during which oil production, refining, and exports were seriously affected. Chávez returned to power two days later, but unrest has continued,

including protests by various opposition forces.

Venezuela is home to the Western Hemisphere's largest oil reserves, producing around 2.6 million bbl/d of crude oil in the second quarter of 2002. (Overall, in 2001, Venezuela produced 3.1 million bbl/d of total oil, and exported around 2.6 million bbl/d, including around 1.5 million bbl/d to the United States).more...

Sources for this report include: Associated Press; CIA World Factbook; Dow Jones; DRI/WEFA; Economist Intelligence Unit ViewsWire; Oil and Gas Journal; US Commerce Department, International Trade Administration -- Country Commercial Guides; New York Times; Oil Daily; Petroleum Intelligence Weekly; Reuters; Russian Petroleum Investor; US Energy Information Administration; Wall Street Journal; Washington Post; World Markets Online.

For more information on recent developments in the countries discussed above, click here to view our energy chronologies on the EIA web site:

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Return to Country Analysis Briefs home page

File last modified: August 29, 2002

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Fax: (202)586-9753

URL: http://www.eia.doe.gov/cabs/hot.html

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PETROLEUM NEWS
ALASKA

NEWS BULLETIN

March 26, 2003 Vol. 9, No. 32

NPR-A, Foothills on par with Prudhoe, Kuparuk, Anadarko says

Anadarko Petroleum Corp., based on United States Geological Survey estimates of 17 billion barrels of oil and 60 trillion cubic feet of natural gas, believes the National Petroleum Reserve-Alaska and Foothills regions of the North Slope hold reserve potential equal to the Prudhoe Bay and Kuparuk fields.

"We did some of our own number crunching and we are very comfortable with the USGS numbers," said Diane Kerr, Anadarko's frontier exploration manager for Alaska and Canada.

USGS has put the oil resource potential in the Jurassic formation at 7 billion barrels and in the Brookian at 10 billion barrels, compared to an initial 13 billion barrels of recoverable oil at Prudhoe Bay and 3 billion barrels at Kuparuk.

Additionally, the natural gas potential in the southern portion of the NPR-A and Foothills combined was placed at 60 trillion cubic feet, compared to roughly 25 trillion cubic feet of proven reserves in Prudhoe.

"We believe as much in the NPR-A area as we do in the Prudhoe Bay-Kuparuk area," Kerr said. "We are looking at the oil potential in the near term and gas potential in the long term."

Anadarko sets reserve goal of 1 billion barrels at Alpine

Anadarko Petroleum Corp., on the strength of current and future satellite discoveries, has set a goal of increasing oil reserves passing through the Alpine production facilities from 430 million barrels to 1 billion barrels.

The company told analysts in a March 20 meeting that 160 million barrels of the 570 million barrels of additional reserves would come from three proven satellites and the remainder hopefully from future discoveries near the Alpine field.

The additional reserves would help sustain Alpine production at roughly 100,000 barrels a day for the next 10 years, Anadarko said. The company said Alpine is expected to produce its first 100 million barrels by the end of the year. Alpine launched production in November 2000.

For information on Petroleum News • Alaska's news bulletin service, call 907-522-9469.
PO Box 231651, Anchorage, AK 99523 - 1651

10: Interior Delegation
Fr: Cliff Burglin

FAX TRANSMITTAL

STATE OF ALASKA
OFFICE OF THE GOVERNOR

FRANK H. MURKOWSKI
GOVERNOR

LOREN LEMAN
LIEUTENANT GOVERNOR

OFFICE OF THE GOVERNOR
675 7TH AVE STA H5
FAIRBANKS, AK 99701-4526

Telephone: (907) 451-2920
Fax: (907) 451-2858

MEMORANDUM

TO: Interior Legislators **DATE:** March 27, 2003

FROM: Cherie Solie **PHONE:** (907) 451-2920
E-MAIL: cherie_solie@gov.state.ak.us **FAX:** (907) 451-2858

SUBJECT: Budget Presentations

Following, for your reference, is a list of scheduled budget presentations being made by the Governor's staff in our area. Additional meetings may be added and the presenters' list is tentative depending on schedules.

Let us know if you have questions.

Cherie

OFFICE OF THE GOVERNOR - FAIRBANKS BUDGET PRESENTATION SCHEDULE				
Date	**Time**	**Group/Organization**	**Place**	**Presenter***
Thursday, March 27	12:00	Healy Chamber of Commerce	TriValley Comm. Ctr.	Commissioner Mike Miller
Thursday, March 27	7:00	Nenana Chamber of Commerce	Senior Center	Commissioner Mike Miller
Tuesday, April 1	3:00	Alaska Travel Industry Association	Princess Hotel	DCED, Margy Johnson
Wednesday, April 2	Noon	Alliance	Princess Hotel	
Thursday, April 3	Noon	Downtown Rotary	Westmark	
Tuesday, April 8	Noon	Fairbanks Chamber of Commerce	Westmark	Cheryl Frasca, OMB Director
Tuesday, April 8	2:00	Senior Citizens	Noel Wien Library	
Wednesday, April 9	10:00	Native Leaders	Governor's Office	Commissioner Edgar Blatchford
Wednesday, April 9	3:30	Fairbanks Downtown Association	FDA Offices	
Thursday, April 10	Noon	Delta Jct. Chamber of Commerce	Alaskan Steakhouse	Commissioner Craig Campbell
Friday, April 11	Noon	Interior Republican Lunch	River's Edge	
Saturday, April 12	9:30	Fbks. Republican Women's Club	Zach's Restaurant	Commissioner Edgar Blatchford
Monday, April 14	7:00	Council of PTA's	Ryan Middle School	
*Presenters may change depending on schedules				

HOUSE TRANSPORTATION COMMITTEE

STATE CAPITOL, ROOM 17
465-4858

3881200

COMMITTEE MEMBERS

Rep. Jim Holm
Co-Chair
Room 110
465-3466

Rep. Beverly Masek
Co-Chair
Room 403
465-2679

Rep. Hugh Fate
Room 128
465-4976

Rep. Cheryll Heinze
Room 416
465-4930

Rep. Mary Kapsner
Room 424
465-4942

Rep. Vic Kohring
Room 24
465-2186

Rep. Albert Kookesh
Room 114
465-3473

COMMITTEE SCHEDULE

* means bill's first hearing
= means bill was previously scheduled
\+ means bill will be on teleconference

Tuesday March 11, 2003

1:30-2:00 p.m. Terry Miller Building , Room 104
Port of Bellingham, Joint with Senate Transportation
2:00-3:00 p.m. Transportation Room, Capitol 17
* HB 147, William R Wood Centennial Bridge
* HB 156, Increase Motor Fuel Tax
* HB 170, Motor Vehicle Registration Fees
* HB 173, Fee for Studded Tires
Bills Previously Scheduled/Heard

Thursday March 13, 2003: 1:15-3:15 p.m.
Terry Miller Building , Room 104

Ted Stevens International Airport Presentation
Joint with Senate Transportation

Bills Previously Scheduled/Heard

Subject: Next week's transportation meetings
Date: Fri, 07 Mar 2003 11:08:28 -0900
From: Barbara Cotting <Barbara_Cotting@Legis.state.ak.us>
Organization: Alaska State Legislature
To: Mike Pawlowski <mike_pawlowski@legis.state.ak.us>,
Representative Beverly Masek <Representative_Beverly_Masek@legis.state.ak.us>,
Representative Jim Holm <Representative_Jim_Holm@legis.state.ak.us>,
Representative Hugh Fate <Representative_Hugh_Fate@legis.state.ak.us>,
Representative Cheryl Heinze <Representative_Cheryll_Heinze@legis.state.ak.us>,
Representative Mary Kapsner <Representative_Mary_Kapsner@legis.state.ak.us>,
Representative Vic Kohring <Representative_Vic_Kohring@legis.state.ak.us>,
Representative Albert Kookesh <Representative_Albert_Kookesh@legis.state.ak.us>,
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Paul Brohard <Paul_Brohard@legis.state.ak.us>,
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Dewey Skan <Dewey_Skan@legis.state.ak.us>,
Shosh Seligman <Shosh_Seligman@legis.state.ak.us>,
Sue Gullufsen <Sue_Gullufsen@legis.state.ak.us>,
Barbara Cotting <Barbara_Cotting@legis.state.ak.us>,
Nancy Barnes <Nancy_Barnes@legis.state.ak.us>

Attached is our committee schedule for next week. Note the variation in times and meeting places!

On Tuesday we'll start at 1:30 in the Terry Miller Building and then at 2:00 we'll go back "home" to room 17 in the Capitol building to hear our bills.

Thursday's entire meeting will be in the Terry Miller building with the Senate Transportation Committee.

(By the way, the Clerk's office advised me to always include "bills previously scheduled/heard" just in case. If we ARE actually going to bring up a previous bill again, I'll let you know in advance so you can include those packets.)

Call me if you have any questions. Thanks for all your help!!

Barbara

TRA meeting notice.doc	**Name:** TRA meeting notice.doc **Type:** WINWORD File (application/msword) **Encoding:** base64 **Download Status:** Not downloaded with message

ALASKA STATE LEGISLATURE
House of Representatives

COMMITTEE ASSIGNMENTS:

RULES COMMITTEE, CHAIRMAN
LABOR & COMMERCE COMMITTEE, MEMBER
LEGISLATIVE COUNCIL, MEMBER
SPECIAL COMMITTEE ON OIL & GAS, MEMBER
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FAX: (907) 269-0119

SESSION:
ALASKA STATE CAPITOL
JUNEAU, AK 99801-1182
PHONE: (907) 465-4958
FAX: (907) 465-2040

Representative Norman Rokeberg

e-mail: Representative_Norman_Rokeberg@legis.state.ak.us

March 6, 2003

Dear Colleague:

HB 11 returns the percentage of all mineral lease royalties and bonuses deposited into the Permanent Fund to the constitutionally mandated 25 percent (please see the attached bill packet).

HB 11 would provide Alaska with a source of General Fund revenue while staying true to the purposes of the Permanent Fund and the intent of our constitution. As the table in your bill packet indicates, passing this bill would generate an extra $43 million average per year, plus bonus revenues, over the next seven years.

Governor Murkowski had emphasized resource development as way to solve Alaska's fiscal future. The deposits received from passage of HB 11 would be the equivalent of finding another Northstar-sized field producing approximately 60,000 barrels per day.

This plan will not only help our present economic situation, it will also allow for prudent management of potential future mineral royalties. As the wealth of older fields such as Prudhoe and Kuparuk diminish, we must look at replacing them with newer fields such as Alpine to ensure continued return to the corpus of the Permanent Fund.

- This plan is only a first step of any plan to fill the fiscal gap.
- Alaska cannot save its way to prosperity.
- Repealing the 1980 legislative action is a TAX avoidance measure.

It is time for the legislature to begin taking steps to help solve our budget problem, and to plan for the potential future development of Alaska's resources. HB 11 can help us succeed on both fronts and I would appreciate your support on this legislation. However, I do not want to move this legislation without sufficient votes for passage.

Some members have voiced concerns that this bill could be construed as a raid on the Permanent Fund. It Is Not! It is a statutory change that recognizes the fiscal reality of our state without raising taxes. Therefore, please get back to me if you need additional information or if I have your support.

Thank you for your consideration,

Norman Rokeberg
State Representative
House District 27

PS: Look at the attached revenue impacts.

Attachments

Subject: Re: HB 11-Deposits to the Permanent Fund
Date: Thu, 23 Jan 2003 10:38:20 -0900
From: Charles Logsdon <charles_logsdon@revenue.state.ak.us>
Organization: State of Alaska - Department of Revenue
To: Heather Nobrega <Heather_Nobrega@legis.state.ak.us>
CC: Larry Persily <larry_persily@revenue.state.ak.us>

Heather,

I have updated the spreadsheet that contains the tables and charts for HB 3 using the Departments Fall 2002 production and price assumptions. The tables also include estimates for what the revenue effect would have been for FY 2002 and FY 2003. The higher prices in our latest forecast increase the revenue effect to the general fund from this legislation to over $50 million next year with an average increase through FY 2010 of over $40 million per year.

Chuck Logsdon

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hb 11 updated tables & charts-Jan22.2002.xls	**Name:** hb 11 updated tables & charts-Jan22,2002.xls **Type:** EXCEL File (application/msexcel) **Encoding:** base64 **Download Status:** Not downloaded with message

To: Representative Norm Rokeberg
From: Chuck Logsdon 269 1019
Date: January 22, 2003
Subject: HB 11

I have updated the charts that were prepared last April for HB 3 based on our Fall 2002 forecast
The higher current and projected oil prices have increased the estimate of the gain from HB 11 to over $40 million per year through FY 2010

Basically I would summarize the information in the tables and charts in the different worksheets as follows:
1. Over the next 7 years, new leases will account for an average of over 22% of total production.
2. Over the next 7 years HB 11 will contribute on average just over $40 million per year to the general fund under our current forecast assumptions.
3. Over time as the smaller new fields deplete relative to our old fields like Prudhoe, the gain from HB11 will diminish.
4. Although production from new leases has grown with Alpine and Northstar coming on line
a good chunk of other new production will come from satellite fields that are mostly old leases within existing unitized production.
5. Alpine and Northstar are now approaching peak production. Northstar is all new leases and Alpine is over half new leases. This is a period
where the gain from HB 11 is very attractive since in a few years these fields will begin to deplete. Any other major new lease oil is probably 5 to 10 years off or longer.
6. Finally, with respect to ANWR, the federal royalty passthrough may be watered down from 90% to 50%. Assuming leasing in 2004
and a modestly rapid development schedule we would not expect production to commence until after 2010.

General Fund Gain to HB 11 Millions $

2004	54.1
2005	45.8
2006	45.3
2007	43.1
2008	37.6
2009	38.5
2010	38.8
Average	43.3

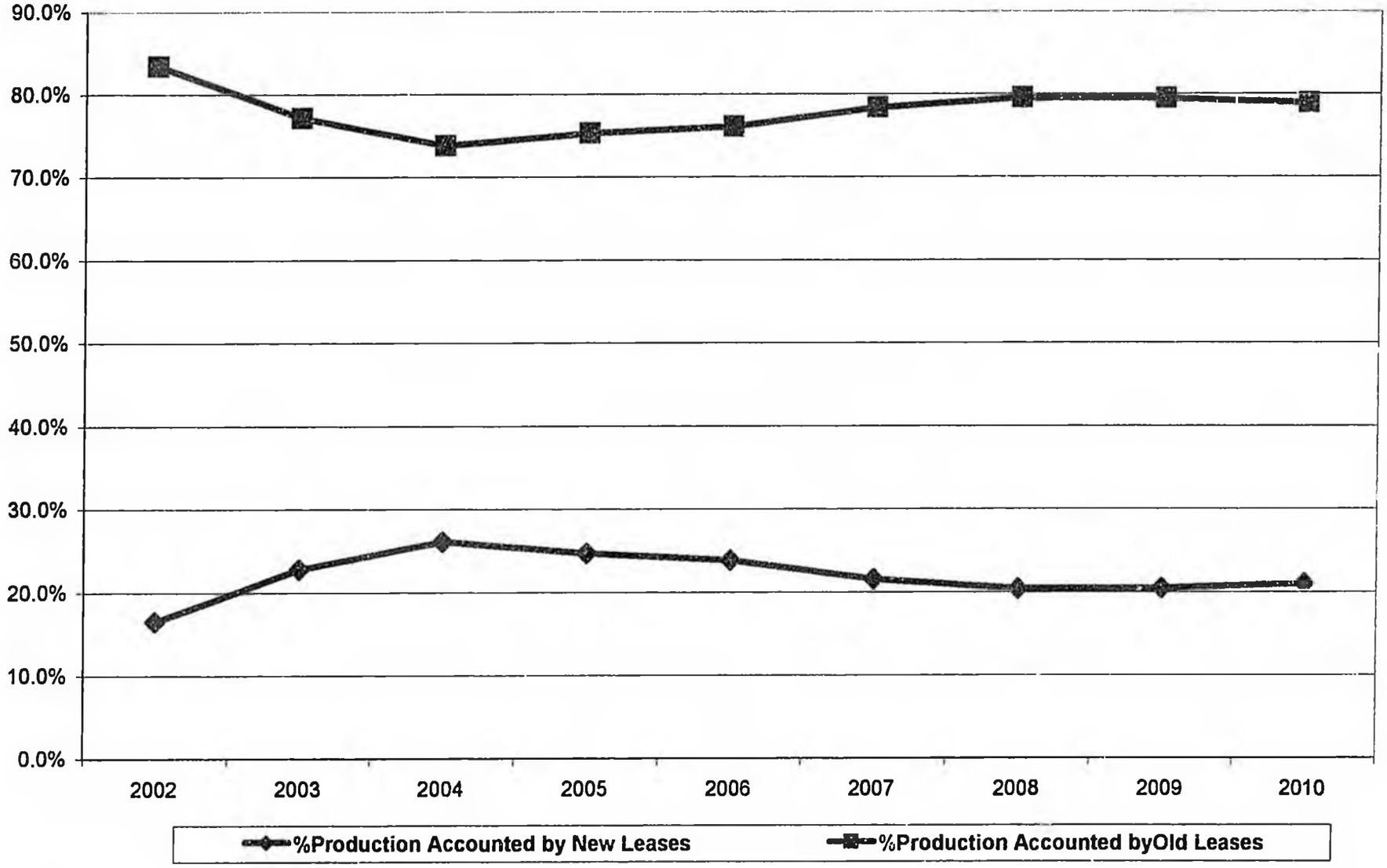
CURRENT PERMANENT FUND CONTRIBUTION RATES FOR NORTH SLOPE OIL FIELDS
ALASKA DEPT. OF REVENUE FALL 2002 FORECAST

25% Contributing Oil Fields	FY 2002 Prod. Millions Bbl/Day	Permanent Fund Average Contribution
PRUDHOE	0.4873	0.25
TABASCO	0.0028	0.25
PBU SATELLITES	0.0260	0.25
EIDER	0.0017	0.25
WEST SAK	0.0060	0.25
LISBURNE	0.0102	0.25
NIAKUK	0.0191	0.25
WEST BEACH/NORTH PRUDHOE	0.0000	0.25

Greater than 25% Contributing Oil Fields	FY 2002 Prod. Millions Bbl/Day	Permanent Fund Average Contribution	25%*vol	Other*vol	
KUPARUK	0.1754	0.2524	0.121824	0.044275	
TARN	0.0273	0.4587	0.00071	0.012526	
MELTWATER	0.00321	0.5000	0.006512	0.001605	
MILNE POINT	0.0397	0.3696	0.000428	0.014689	
SCHRADER BLUFF	0.0117	0.2901	0.001493	0.003407	
SAG RIVER	0.0007	0.5000	0.00255	0.000362	
ENDICOTT	0.0296	0.3169	0.004784	0.00938	
BADAMI	0.0017	0.5000	5.19E-06	0.000866	
PT MCINTYRE	0.0454	0.3308		0.015002	
ALPINE	0.0956	0.3950		0.037782	
NORTH STAR	0.0200	0.5000		0.009986	
NPRA	0.0000	0.5000		0	
ANWR	0.0000	0.5000		0	
		sum	0.138305	0.149879	0.287124
					0.707876 =wt avg contribution pf & sf

Total FY 2002 Production	0.5532	0.4505	1.0037
Estimated Total Production (Million Bbl/day)	0.5532	0.4505	1.0037

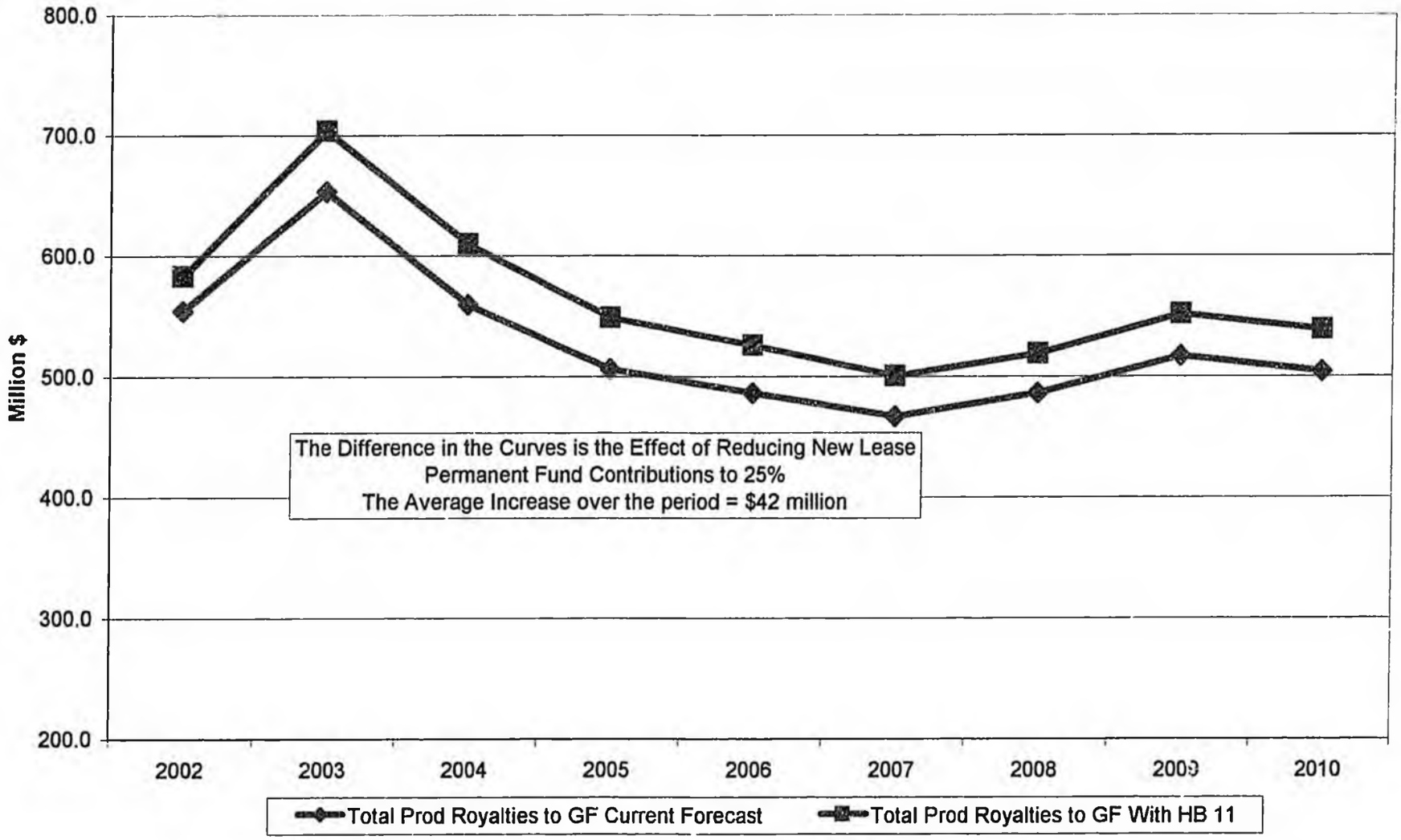
Alaska North Slope Oil Production from Old (25% to PF) and New (50% to PF) Leases



hb 11 updated tables & charts-Jan22,2002.xls

Percentages

Royalties to the General Fund with and without HB11 Based on the Department of Revenue Fall 2000 Forecast Assumptions



hb 11 updated tables & charts-Jan22,2002.xls togeneralfundwith&without

Illustration of the Impact of HB 11 on General Fund Cash Flow--Old Fields and New Fields

Fiscal Year	Perm Fund Factor = Fall 2002- cut)	New Field Extra % to PF	Old Lease Field %	Production	%Production Accounted by New Leases	%Production Accounted byOld Leases	NPRA	Forecast Market Price
2002	0.7079	0.0371	0.25	1.011	16.5%	83.5%		21.78
2003	0.6918	0.0532	0.25	0.994	22.8%	77.2%		25.94
2004	0.6833	0.0617	0.25	0.997	26.1%	73.9%		23.25
2005	0.6870	0.0580	0.25	0.992	24.7%	75.3%		22.00
2006	0.6892	0.0558	0.25	0.971	23.8%	76.2%		22.00
2007	0.6950	0.0500	0.25	0.956	21.6%	78.4%		22.00
2008	0.6980	0.0470	0.25	1.010	20.4%	79.6%	0.030	22.00
2009	0.6978	0.0472	0.25	1.091	20.5%	79.5%	0.065	22.00
2010	0.6964	0.0486	0.25	1.074	21.0%	79.0%	0.090	22.00
2011	0.6972	0.0478	0.25	1.036	20.7%	79.3%	0.095	22.00
2012	0.6996	0.0454	0.25	0.970	19.8%	80.2%	0.088	22.00
2013	0.7017	0.0433	0.25	0.904	18.9%	81.1%	0.079	22.00
2014	0.7036	0.0414	0.25	0.846	18.2%	81.8%	0.071	22.00
2015	0.7058	0.0392	0.25	0.806	17.3%	82.7%	0.064	22.00
2016	0.7065	0.0385	0.25	0.756	17.1%	82.9%	0.058	22.00
2017	0.7078	0.0372	0.25	0.713	16.5%	83.5%	0.052	22.00
2018	0.7089	0.0361	0.25	0.673	16.1%	83.9%	0.047	22.00
2019	0.7100	0.0350	0.25	0.635	15.7%	84.3%	0.042	22.00
2020	0.7112	0.0338	0.25	0.604	15.2%	84.8%	0.038	22.00
Average 2002--2010					21.9%			
Average 2003--2010					22.6%			

Illustration of the Impa

Fiscal Year	Forecast Price Wellhead	Total Prod Royalties to GF Current Forecast	Total Prod Royalties to GF With HB 11	Total Bonus to GF	**GF Gain from HB 3**
2002	16.80	554.3	583.4		**29.1**
2003	20.53	653.5	703.8	5.5	**53.0**
2004	17.88	559.5	609.9	7.2	**54.1**
2005	16.56	506.2	548.9	6.2	**45.8**
2006	16.41	486.6	526.0	11.8	**45.3**
2007	16.30	467.0	500.7	18.8	**43.1**
2008	16.26	486.4	519.2	9.6	**37.6**
2009	16.28	517.1	552.1	7.0	**38.5**
2010	16.17	503.9	539.0	7.3	**38.8**
2011	16.00	482.9	516.0	6.1	**36.1**
2012	15.98	455.1	484.6	5.4	**32.3**
2013	15.78	421.5	447.5	6.0	**29.0**
2014	15.57	391.5	414.6	6.0	**26.1**
2015	15.39	371.0	391.6	6.0	**23.6**
2016	15.17	344.9	363.7	6.0	**21.8**
2017	14.94	322.2	339.1	6.0	**19.9**
2018	14.72	301.4	316.8	6.0	**18.3**
2019	14.48	281.1	295.0	6.0	**16.9**
2020	14.25	264.3	276.9	6.0	**15.6**
Average 2002--2010					**42.8**
Average 2003--2010					

Distributed by Sen. Ben Stevens

THE NATIONAL ACADEMIES
Advisers to the Nation on Science, Engineering, and Medicine

Cumulative Environmental Effects of Oil and Gas Activities on Alaska's North Slope

Since the 1968 discovery of huge oil reserves in Prudhoe Bay, Alaska's North Slope has been a site of oil exploration and production that, by the end of 2002, had produced about 14 billion barrels (558 billion gallons) of crude oil. North Slope oil currently averages about 15% of total annual domestic oil production of approximately 3.3 billion barrels and 7% of the annual domestic consumption of approximately 7 billion barrels. Active exploration on the arctic coastal plain is now expanding incrementally westward into the National Petroleum Reserve-Alaska, eastward toward the Arctic National Wildlife Refuge, and south toward the foothills of the Brooks Range (see Figure 1).

Northern Alaska's environment and culture have already been significantly affected by oil infrastructure and activities. There have been many benefits to North Slope residents including more jobs and improved hospitals and schools. These economic benefits have been accompanied by environmental and social consequences, including effects of the roads, infrastructure and activities of oil exploration and production on the terrain, plants, animals and peoples of the North Slope and the adjacent marine environment.

Although a large body of research has assessed actual and potential effects of oil and gas activities and infrastructure, no integrated, comprehensive analysis of *cumulative* effects has previously been attempted. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time or within an area. In response to a request from Congress, the National Academies convened the Committee on Cumulative Environmental Effects of Oil and Gas Activities on Alaska's North Slope to assess probable cumulative effects of oil and gas activities on various receptors—that is components of the physical, biological, and human systems of the region. The committee's consensus report assesses both present and likely future cumulative effects on the North Slope and adjacent marine waters for the time period of 1965 to 2025 (in some cases to 2050).

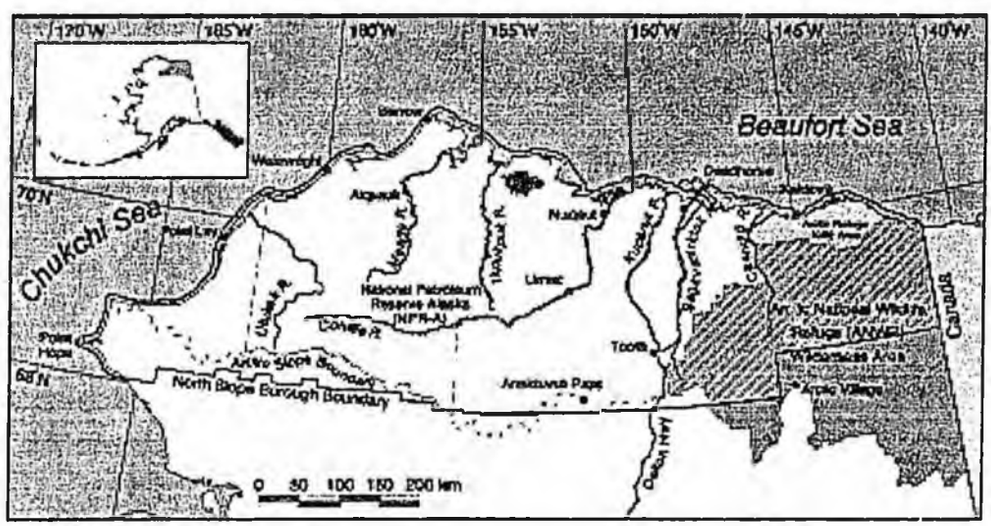


Figure 1. The North Slope (the Arctic Slope) extends from the crest of the Brooks Range to the Arctic Coast, from the Canadian border to Point Hope. Industrial activity has grown from a small operational oil field at Prudhoe Bay to an industrial complex stretching from the Alpine field near the mouth of the Colville River on the west to Badami on the east.

Accumulated Effects To Date

Unlike other U.S. oil fields, those on the North Slope are underlain by permafrost – a thick layer of earth material that stays frozen year round. The permafrost is covered by a thin active layer that thaws each summer and supports plant growth for a brief period. If permafrost thaws, the ground surface and the structures it supports will settle. To minimize disruption to the ground surface, the North Slope industrial infrastructure is specially built – pipelines are generally elevated rather than buried, and roads and industrial facilities are raised on thick gravel berms.

For a variety of reasons, nearly all of the roads, pads, pipelines and other infrastructure ever built are still in place. The environmental effects of such structures on the landscape, water systems, vegetation, and animals are manifest not only at the "footprint" itself (physical area covered by the structure) but also at distances that vary depending on the environmental component being affected. The petroleum industry continues to introduce technological innovations to reduce its footprint, for example, directional drilling and the use of ice roads and pads, drilling platforms, and new kinds of vehicles.

For some areas of concern, the committee found no evidence that effects have accumulated. For example, despite widespread concern regarding the damaging effects of frequent oil and saltwater spills on the tundra, most spills to date have been small and have had only local effects. Moreover, damaged areas have recovered before they have been disturbed again. However, a large oil spill in marine waters would likely have substantial accumulating effects on whales and other receptors because current cleanup methods can remove only a small fraction of spilled oil, especially under conditions of broken ice.

For other areas of concern, effects have accumulated, although in some cases efforts by the petroleum industry and regulatory agencies have reduced them. The committee identified the following areas in which there was evidence of effects that have accumulated.

Roads. Roads have had effects as far-reaching and complex as any physical component of the North Slope oil fields. In addition to their direct effects on the tundra, indirect effects are caused by dust, roadside flooding, thawing of permafrost, and roadside snow accumulation. Roads and activities on them also alter animal habitat and behavior and wildland values and can increase access of hunters, tourists, and others to previously inaccessible parts of the region; enhance communication among communities; and increase contacts between North Slope communities and those outside the area.

Damage to Tundra from Off-Road Travel. Surface erosion, water flow and tundra vegetation on the North Slope have been altered by extensive off-road travel. Some damage has persisted for decades. The current 3-dimensional survey method requires a high density of seismic-exploration trails. Networks of these trails now cover extensive areas and are readily visible from the air, degrading visual experiences of the North Slope. Despite technological improvements and increased care taken by operators, the potential for damage to the tundra still exists because of the large number of vehicles and camps used for exploration.

Effects on Animal Populations. Bowhead whales' fall migrations have been displaced by the noise of seismic exploration. Garbage and food provided by people working in oil fields have resulted in higher than normal densities of predators (such as brown bears, arctic foxes, ravens, and glaucous gulls) that prey on the eggs, nestlings, and fledglings of birds. As a result, the reproduction rates of some bird species such as black brant, snow geese, eiders, and probably some shorebirds in industrial areas are, at least in some years, insufficient to balance death rates. These populations may persist in the oil fields only because of immigration of individuals from source areas where birth rates exceed death rates.

The combined effects of industrial activity and infrastructure and the stress imposed by insects in some summers reduced calf production in the Central Arctic caribou herd and may have contributed to the reduction in herd size from 1992 through 1995. In contrast, the herd increased in size from 1995 to 2001, when insect activity was lower. Although accumulated effects have not prevented an increase in the overall size of the Central Arctic Herd, the spread of industrial activity into other areas caribou use for calving and insect relief, especially to the east where the coastal plain is narrower, would likely affect reproductive success, unless the degree to which it disturbs caribou can be reduced.

Interactions of Climate Change and Oil Development. Global and regional climates have changed throughout the Earth's history, but climate changes during the past several decades on the North Slope have been unusually rapid. If recent warming trends in climate continue, as many projections indicate, the effects will accumulate over the next century to alter the extent and timing of sea ice, affect the distribution and abundance of marine and terrestrial plants and animals, and affect permafrost as well as the usefulness of current oil-field technologies and how they affect the environment.

Interference with Subsistence Activities. The Inupiat Eskimo people of the North Slope have a centuries-old nutritional and cultural relationship

with the bowhead whale. Most view offshore industrial activity—both observed effects and the possibility of a major oil spill—as a threat to the bowhead whale and, thereby, to their cultural survival. Because noise from exploratory drilling and marine seismic exploration have caused fall migrating bowhead whales to change their movements, subsistence hunters have been forced to travel greater distances to find whales, increasing their risk of exposure to adverse weather and the likelihood that a whale's tissues will have deteriorated before the carcass can be landed. Recent agreements concerning the timing and placement of exploration in the fall have reduced the effects on subsistence hunters.

The Gwich'in Indians of northeast Alaska and northwest Canada have a centuries-old nutritional and cultural relationship with the Porcupine Caribou Herd. Most Gwich'in oppose any oil development that would threaten the herd, especially on the calving ground, which they consider sacred, and thereby threaten their cultural survival. These threats have accumulated because repeated attempts to develop areas used by the herd have occurred and will probably continue to occur.

Social Changes in North Slope Communities. Most North Slope residents have positive views of many of the economic changes that have resulted from revenue generated by petroleum activities, such as access to better medical care, availability of gas heat for houses, improved plumbing, and higher personal incomes. At the same time, however, balancing the economic benefits of oil activities against the accompanying loss of traditional culture and other societal problems that can occur is often a dilemma for North Slope residents. Without this revenue, the North Slope Borough, the Alaska Native Claims Settlement Act, and hence the Arctic Slope Regional Corporation, would not exist or, if they did, would bear little resemblance to their current form. This discovery of oil and its development on the North Slope has resulted in major, important, and probably irreversible changes to the way of life in communities. These effects accumulate because they arise from several ongoing, interacting causes.

Cumulative Aesthetic, Cultural, and Spiritual Consequences. Many activities associated with oil development have compromised wildland and scenic values over large areas. Some Alaska Natives told the committee that they violate what they call "the spirit of the land," a value central to their relationship with the environment. These consequences have increased in proportion to the area affected by development, and they will persist as long as the landscape remains altered.

Future Accumulation of Effects

The committee assessed possible future accumulation of effects, assuming conditions favorable to continued expansion of oil and gas activities using technology and regulatory oversight at least as good as those currently used.

Response of North Slope Cultures to Declining Revenues. For North Slope residents, the current way of life of North Slope communities made possible by oil and gas activities will be more difficult to maintain when these activities cease as oil is depleted because other sources of funds appear to be modest. Eventual adjustments to reduced financial resources are unavoidable. Their nature and extent will be shaped by adaptations North Slope communities have made to the accumulated effects of the cash economy.

Legacy of Abandoned Infrastructure and Unrestored Landscapes. The network of roads, pads and pipelines, and infrastructure that support production will likely remain in place for many years to come. The oil industry and regulatory agencies have made dramati gress in reducing the effects of new gravel ucing the size of the gravel footprint requ any types of facilities and substituting ic l for certain types of roads and pads. However, much less attention has been directed to restoring already disturbed sites. To date, only about 1% of the habitat on the North Slope affected by gravel fill has been rehabilitated.

With the exception of well-plugging and abandonment procedures, state, federal, and local agencies have largely deferred decisions regarding the nature and extent of restoration that will be required. Because the obligation to restore sites is unclear, and the costs of dismantlement, removal, and restoration are likely to be very high, the committee judges it unlikely that most disturbed habitats on the North Slope will be restored. Because natural recovery in the Arctic is slow, the effects caused by abandoned and unrestored infrastructure are likely to persist for centuries and could accumulate further as new structures are added.

Expansion of Activities into New Areas. Expansion of oil and gas exploration is spreading into hillier terrain and into coastal plain areas with soils, vegetation and aquatic environments that differ substantially from current areas of activity. To assess effects in these environments, they should be characterized through description of topography, permafrost conditions, sand, gravel, and water availability, hydrological conditions, and a description of the biotic communities present. In

addition, future exploratory activity will probably be carried out in a warming climate, with milder winter temperatures and shorter periods of freezing conditions.

Filling Knowledge Gaps

As industrial activities proceed, it is vital to continue collecting and analyzing information on the North Slope's physical, biological, and human environments to help decision makers in developing and implementing effective natural resources management. Advantage should be taken of opportunities to learn from these activities (adaptive management).

Decisions about where, when, and under what conditions and requirements industrial activities are permitted on the North Slope are made by many different federal, state, regional, and municipal government agencies. To date, decisions have generally been made without a comprehensive slope-wide plan and regulatory strategy that identify the scope, intensity, direction and consequences of industrial activities judged acceptable. A comprehensive framework and plan should be developed for the North Slope so that actions can be evaluated with respect to their compatibility with overall goals, the likely effects of individual activities on all receptors that might be affected by them, and the likelihood that the activities will result in long-term or difficult-to-reverse undesirable effects. Knowledge gaps should be addressed through the following:

- Ecosystem-level research in addition to local ecological studies.
- Studies to understand the types of effects that exist at varying distances beyond the footprint of industrial structures.
- Studies of air pollution that provide a quantitative baseline of spatial and temporal trends in air quality over long periods across the North Slope.
- Studies of effects of seismic exploration and other off-road use on the tundra.
- Research on habitat requirements of caribou, their reproductive physiology and movements, and how natural and anthropogenic disturbance affects them.
- Studies of the effects of noise on the migratory and acoustic behavior of bowhead whales and on their feeding habits in the Alaskan portion of the Beaufort Sea.
- Studies of effects of taking water from lakes on the North Slope for ice roads, pads, and other purposes.
- Studies of methods to reduce effects of oil spills including non-mechanical methods of cleaning up oil spilled in the sea, especially in broken ice.
- Research on the specific benefits and threats that North Slope residents perceive.
- Studies of effects of oil and gas activities on human health including studies of increased use of alcohol and drugs, increased obesity, and other societal ills.

Firsthand Input to the Report

To gain diverse views and perspectives, the committee traveled to Alaska several times during the course of its two-year study. The committee heard from federal and state agencies, representatives of the oil and gas industry, environmental organizations, and officials and community members of the North Slope Borough and the municipalities it visited: Barrow, Kaktovik, and Nuiqsut. It also visited Arctic Village and toured oil facilities at Prudhoe Bay, Endicott, and Alpine, and flew over Kuparuk, the offshore Northstar facility, the National Petroleum Reserve-Alaska and the Arctic National Wildlife Refuge.

This summary was prepared by the National Research Council based on the committee's report. For more information: Contact the National Research Council's Board on Environmental Studies and Toxicology at 202-334-3060. *Cumulative Environmental Environmental Effects of Oil and Gas on the North Slope* is available from the National Academies Press, Fifth Street, NW, Washington, DC 20001; 800-624-6242 or 202-334-3313 (in the Washington area); http://www.nap.edu.

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Cumulative Environmental Effects of Oil and Gas Activities on Alaska's North Slope (2003)

Board on Environmental Studies and Toxicology (BEST), Polar Research Board (PRB)