

**HB 110  
BACKUP  
MATERIALS  
MARCH 14 -  
21, 2011**

<TARGET><BILL>HB 110</BILL><SUBJECT>HB 110 BACKUP  
MATERIALS MARCH 14 - 21,  
2011</SUBJECT><COMM>HFIN27</COMM></TARGET>

3/14/11

Alaska State Legislature  
HOUSE FINANCE COMMITTEE  
Agenda  
8:00 AM

Monday, March 14, 2011

HB 110-PRODUCTION TAX ON OIL AND GAS

Presentation by Department of Revenue

Bryan Butcher, Commissioner, Department of  
Revenue

Bruce Tangeman, Deputy Commissioner,  
Department of Revenue

NEW FISCAL NOTE REV \$ replaces published #1

3/14/11



# CS HB 110 (RES) Introduction

## Proposed Changes to the Oil & Gas Production Tax



*Presentation to the  
House Finance Committee  
Monday, March 14  
Alaska Department of Revenue*



# Outline for Presentation



- Goals and Rationale for CS HB110 (RES)
- Production Tax Mechanism
- Components of CS HB 110 (RES)



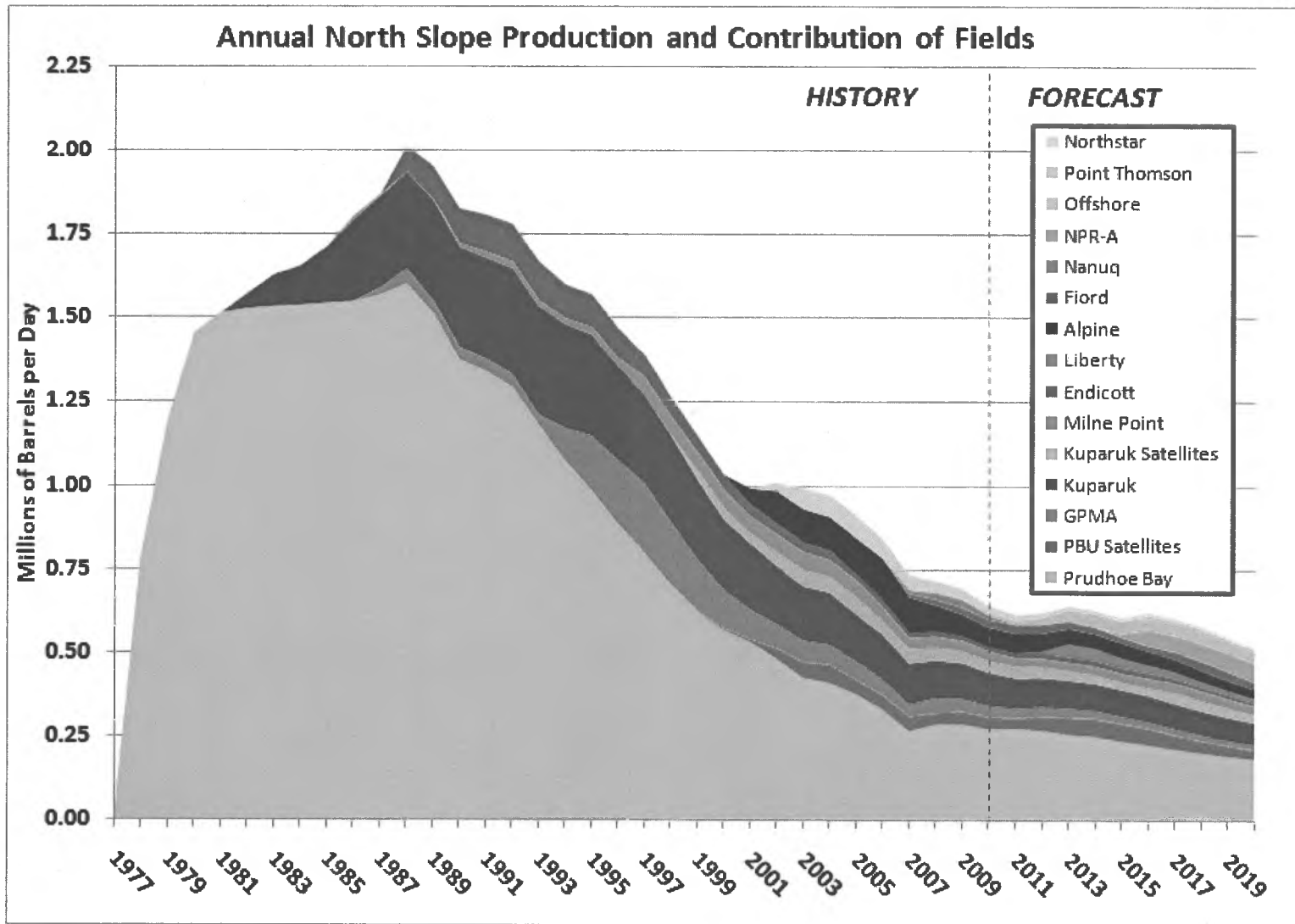
## CS HB 110 (RES) Goals



1. Improve investment climate
2. Create jobs for Alaskans
3. Increase production



# North Slope Production

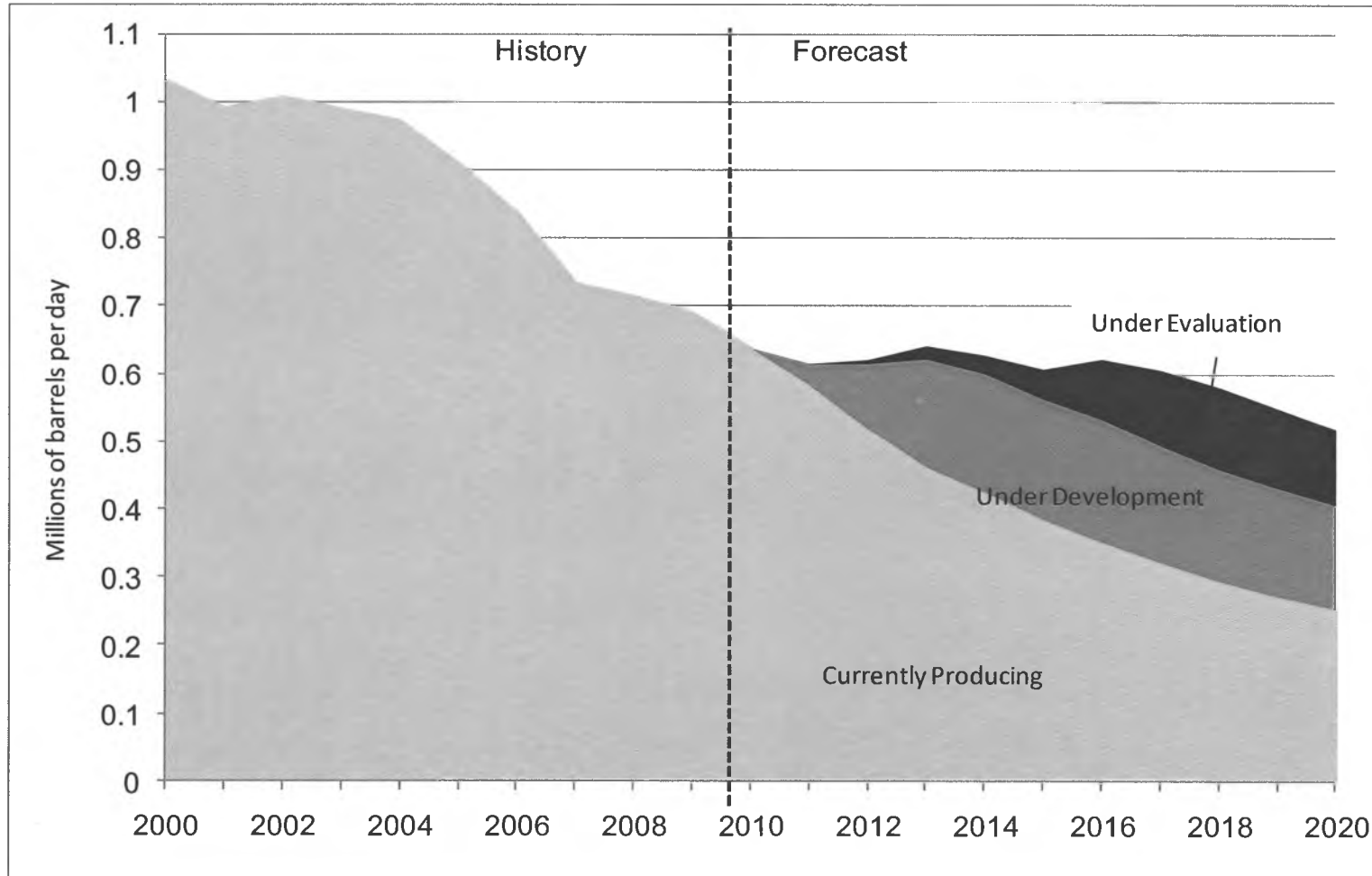


3/12/2011

Source: Fall 2010 Revenue Sources Book

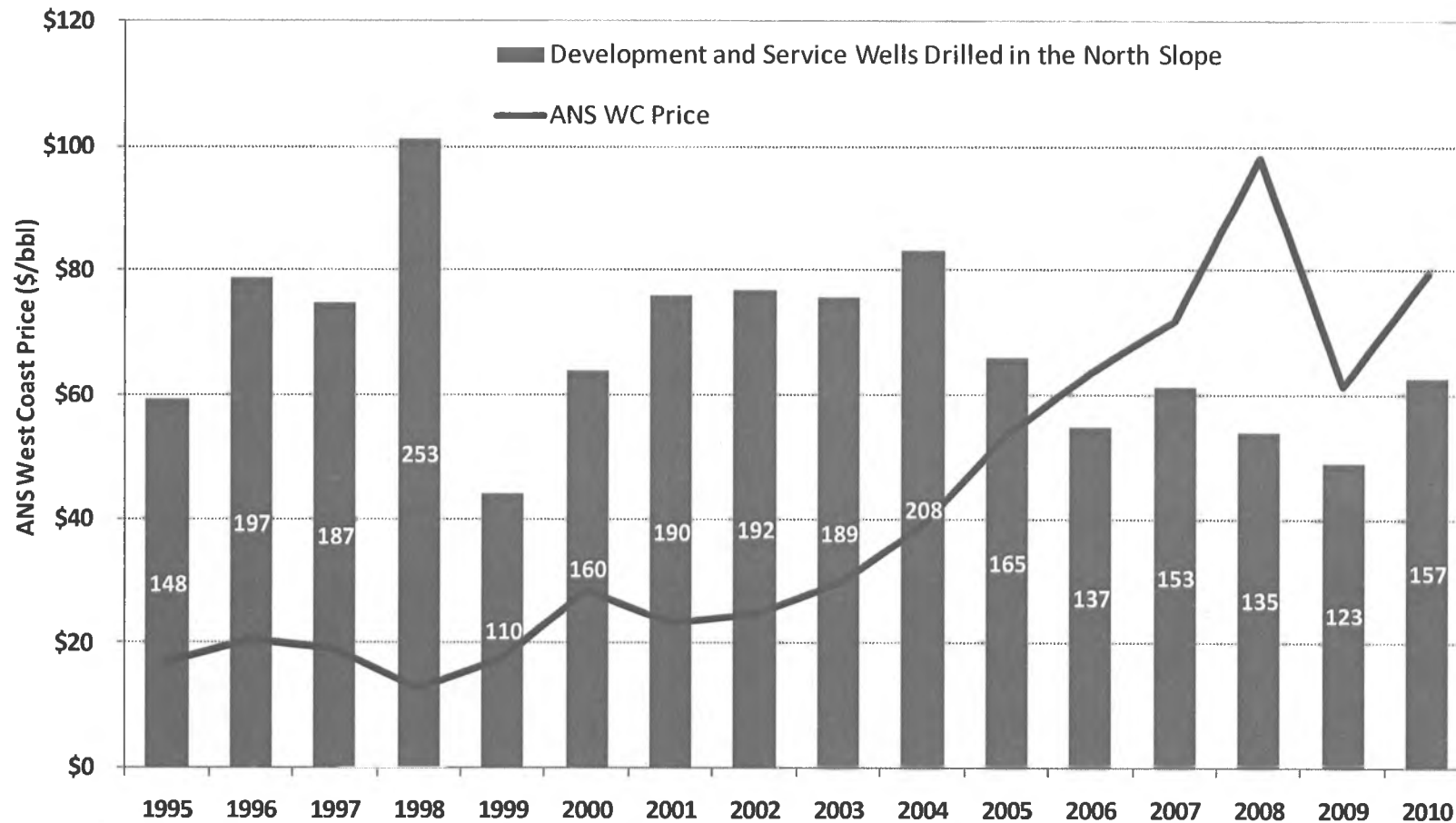


# Forecasted ANS Production FY 2010 - 2020





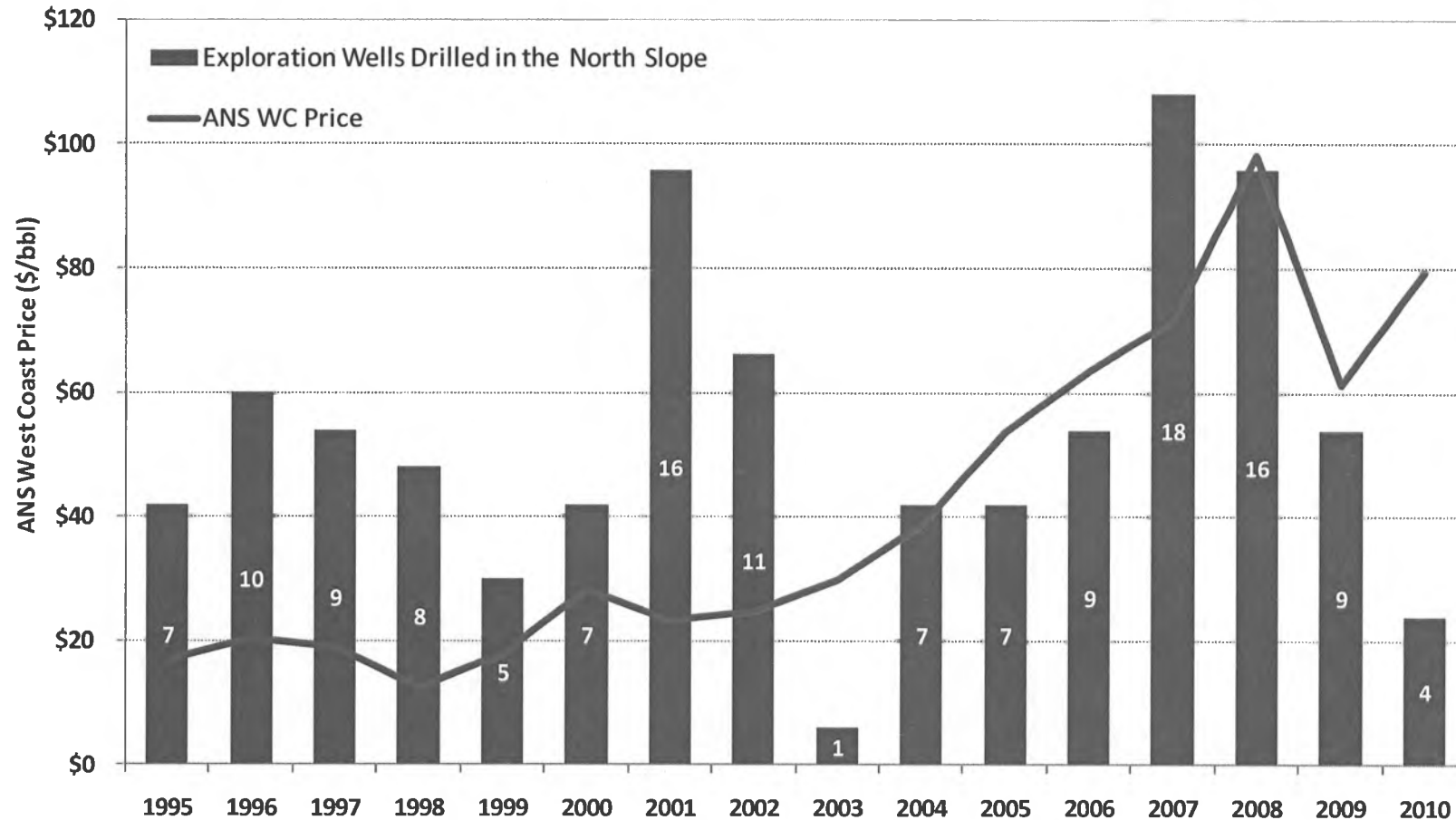
# North Slope Development Drilling



Source: Alaska Oil and Gas Conservation Commission



# North Slope Exploration Drilling



Source: Alaska Oil and Gas Conservation Commission



## There's lots of oil left in Alaska...

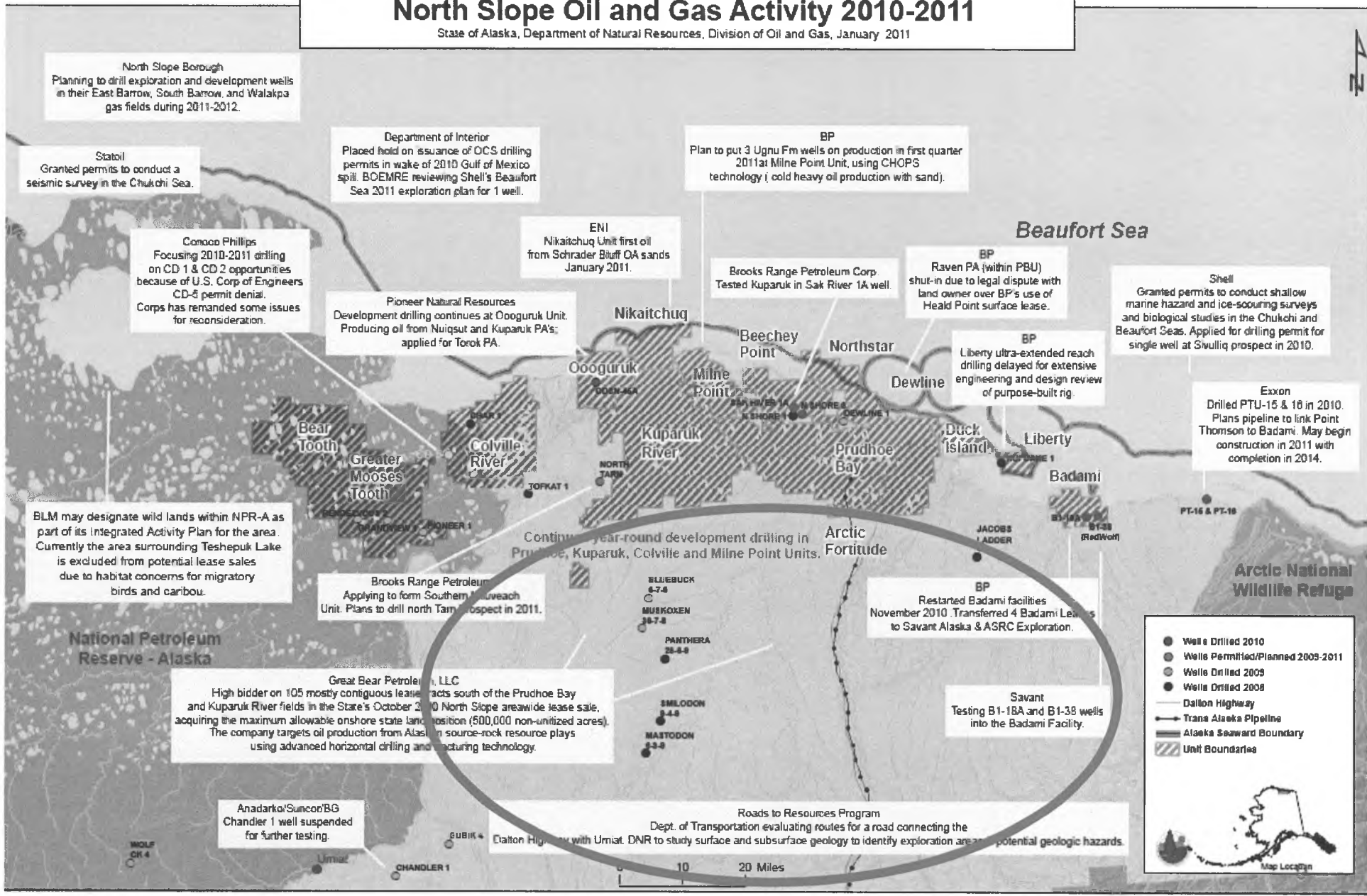


- Cumulative production through 2010 has been over 16 billion barrels
- Remaining North Slope reserves exceed 5 billion barrels
- Geology-based estimates of total oil volumes are much higher. For instance, we do not include any of the approximately 20 billion barrels in the giant Ugnu deposit, or offshore volumes from the Chukchi or Beaufort Seas, in our forecast

# Areas of North Slope are Underdeveloped

## North Slope Oil and Gas Activity 2010-2011

State of Alaska, Department of Natural Resources, Division of Oil and Gas, January 2011



**North Slope Borough**  
Planning to drill exploration and development wells in their East Barrow, South Barrow, and Walakpa gas fields during 2011-2012.

**Stabil**  
Granted permits to conduct a seismic survey in the Chukchi Sea.

**Department of Interior**  
Placed hold on issuance of OCS drilling permits in wake of 2010 Gulf of Mexico spill. BOEMRE reviewing Shell's Beaufort Sea 2011 exploration plan for 1 well.

**BP**  
Plan to put 3 Ugnu Fm wells on production in first quarter 2011 at Milne Point Unit, using CHOPS technology ( cold heavy oil production with sand).

**Conoco Phillips**  
Focusing 2010-2011 drilling on CD 1 & CD 2 opportunities because of U.S. Corp of Engineers CD-5 permit denial. Corps has remanded some issues for reconsideration.

**ENI**  
Nikaichuq Unit first oil from Schrader Bluff O&G sands January 2011.

**Brooks Range Petroleum Corp.**  
Tested Kuparuk in Sak River 1A well.

**BP**  
Raven PA (within PBU) shut-in due to legal dispute with land owner over BP's use of Heald Point surface lease.

**Shell**  
Granted permits to conduct shallow marine hazard and ice-scouring surveys and biological studies in the Chukchi and Beaufort Seas. Applied for drilling permit for single well at Sivulliq prospect in 2010.

**Pioneer Natural Resources**  
Development drilling continues at Oooguruk Unit. Producing oil from Nuiqsut and Kuparuk PAs; applied for Torok PA.

**BP**  
Liberty ultra-extended reach drilling delayed for extensive engineering and design review of purpose-built rig.

**Exxon**  
Drilled PTU-15 & 16 in 2010. Plans pipeline to link Point Thomson to Badami. May begin construction in 2011 with completion in 2014.

**BLM** may designate wild lands within NPR-A as part of its Integrated Activity Plan for the area. Currently the area surrounding Teshepuk Lake is excluded from potential lease sales due to habitat concerns for migratory birds and caribou.

Continued year-round development drilling in Prudhoe, Kuparuk, Colville and Milne Point Units.

**Brooks Range Petroleum**  
Applying to form Southern Milnebach Unit. Plans to drill north Tam prospect in 2011.

**BP**  
Restarted Badami facilities November 2010. Transferred 4 Badami Leases to Savant Alaska & ASRC Exploration.

**National Petroleum Reserve - Alaska**

**Great Bear Petroleum, LLC**  
High bidder on 105 mostly contiguous lease tracts south of the Prudhoe Bay and Kuparuk River fields in the State's October 2010 North Slope areawide lease sale, acquiring the maximum allowable onshore state land disposition (500,000 non-unitized acres). The company targets oil production from Alaskan source-rock resource plays using advanced horizontal drilling and fracturing technology.

**Savant**  
Testing B1-18A and B1-38 wells into the Badami Facility.

**Anadarko/Suncor/BG**  
Chandler 1 well suspended for further testing.

**Roads to Resources Program**  
Dept. of Transportation evaluating routes for a road connecting the Dalton Highway with Umiat. DNR to study surface and subsurface geology to identify exploration areas and potential geologic hazards.

**Legend**

- Well Drilled 2010
- Well Permitted/Planned 2009-2011
- Well Drilled 2009
- Well Drilled 2008
- Dalton Highway
- Trans-Alaska Pipeline
- Alaska Seaward Boundary
- ▨ Unit Boundaries

Map Location



# How Can We Reverse the Trend?



- Sample Investor Decision Criteria:
  - Prospectivity
  - Geopolitical stability
  - Regulations (access to resources, development permitting, environmental constraints)
  - Operations (existing infrastructure, experienced workforce availability, costs, market proximity)
  - **Tax Regime => CS HB 110 (RES) Focus**



# Outline for Presentation



- Goals and Rationale for CS HB 110 (RES)

- Production Tax Mechanism

- Components of CS HB 110 (RES)



# Production Tax Overview



- **Production Tax Value (PTV)** is the market price less transportation costs and allowable lease expenditures
  - Allowable lease expenditures include operating and capital expenditures
- **Base tax rate** of 25% on PTV
- **Progressive Surcharge Rate**
  - Triggered when a company's PTV reaches \$30 per barrel
  - $\$30.00/\text{bbl} < \text{PTV} < \$92.50/\text{bbl}$  = Surcharge adds 0.4% to tax rate for each additional \$1 increase in PTV, until combined tax rate reaches 50%
  - $\$92.50/\text{bbl} < \text{PTV} < \$342.50/\text{bbl}$  = Surcharge adds 0.1% for each additional \$1 increase in PTV until combined tax rate reaches the maximum of 75%



# Production Tax Overview



## How the Tax is Calculated

$$\begin{array}{r} \text{Production Tax Value (PTV) X Base Tax Rate} = \text{Base Tax} \\ + \\ \text{PTV X Progressive Surcharge Rate} = \text{Progressive Surcharge} \end{array}$$

---

$$\begin{array}{r} \text{Pre-Credit Tax Bill} \qquad \qquad \qquad \text{Total Taxes Before Credits} \\ - \\ \text{Credits} \qquad \qquad \qquad \text{Credits Applied Against Taxes} \end{array}$$

---

$$\begin{array}{r} \text{Final Tax Bill} \qquad \qquad \qquad \text{Total Production Taxes Owed} \end{array}$$



# FY 12 Production Tax Projected



	Per Barrel	Barrels	Value (\$ million)
<b>Avg ANS Oil Price (\$/bbl) &amp; Daily Production (bbls)</b>	\$82.67	622,182	\$51.4 / day
<b>Annual Production (bbl)</b>			
<b>Total Annual Production/Value</b>		<b>227,096,430</b>	<b>\$18,774.1</b>
Royalty and Federal barrels		(34,669,890)	(\$2,866.2)
<b>Taxable barrels</b>		<b>192,426,540</b>	<b>\$15,907.9</b>
<b>Downstream (Transportation) Costs (\$/bbl)</b>			
ANS Marine Transportation	(\$2.05)		
TAPS Tariff	(\$4.67)		
Other	\$0.33		
<b>Total Transportation Costs</b>	<b>(\$6.39)</b>	<b>192,426,540</b>	<b>(\$1,229.6)</b>
<b>Lease Expenditures</b>			
Deductible Operating Expenditures	(\$12.86)		(\$2,474.1)
Deductible Capital Expenditures	(\$13.14)		(\$2,528.3)
<b>Total Lease Expenditures</b>	<b>(\$26.00)</b>	<b>192,426,540</b>	<b>(\$5,002.4)</b>
<b>Production Tax Value (PTV)</b>	<b>\$50.28</b>	<b>192,426,540</b>	<b>\$9,675.9</b>
<b>Production Tax</b>			
Base Tax (25%*PTV)			\$2,419.0
Progressive Tax Rate = $(\$50.28 - \$30) * 0.4\% = 8.1\%$			
Progressive Tax = $(8.1\% * PTV)$			\$785.0
<b>Total Tax Due before credits</b>			<b>\$3,204.0</b>
<b>Credits Applied Against Taxes</b>			<b>(\$450.0)</b>
<b>Total Tax after credits</b>			<b>\$2,754.0</b>

Source: Department of Revenue Fall 2010 Revenue Sources Book, Appendix D

This simple model assumes constant production, price, and expenditures for the entire year; results will differ from our larger model and forecast.

The per-barrel expenditures shown are per taxable barrel and do not reflect expenditures per all barrels produced.





# Outline for Presentation



- Goals and Rationale for CS HB 110 (RES)
- Production Tax Mechanism
- Components of CS HB 110 (RES)



# Main proposed changes



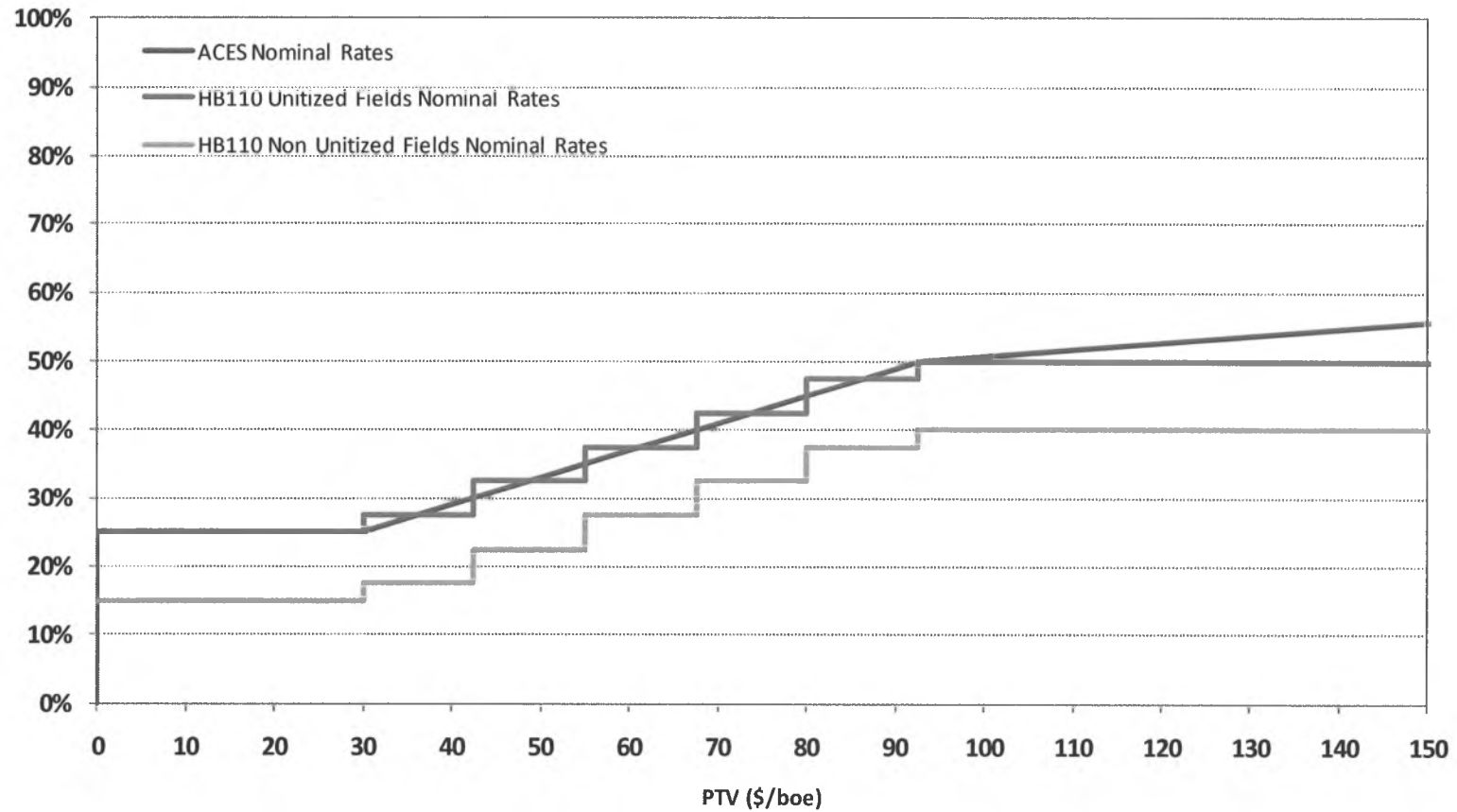
<b>Progressivity Rates &amp; Cap</b>	Progressivity defined as <u>discrete brackets</u> , rather than as a continuous function, and <u>applied only to incremental revenue</u> . <u>Maximum progressivity of 25%</u> .	2013
<b>Base Tax Rate</b>	Base tax rate reduction from <u>25% to 15%</u> for leases or properties neither unitized nor producing on or before 12/31/2010.	2013
<b>Tax Credits</b>	Extension of <u>40% well lease expenditure tax credits</u> to North Slope. Tax credits can be claimed in a <u>single year instead of two years</u> .	2012
<b>Tax Calculation</b>	<u>Yearly tax calculation</u> based on average prices and costs, instead of monthly tax calculation impacted by short term price and cost peaks.	2013

**2012** Effective 1/1/2012 for expenditures made before 12/31/2011.

**2013** Effective 1/1/2013, applies to production after 12/31/2012.



# Nominal Production Tax Rates

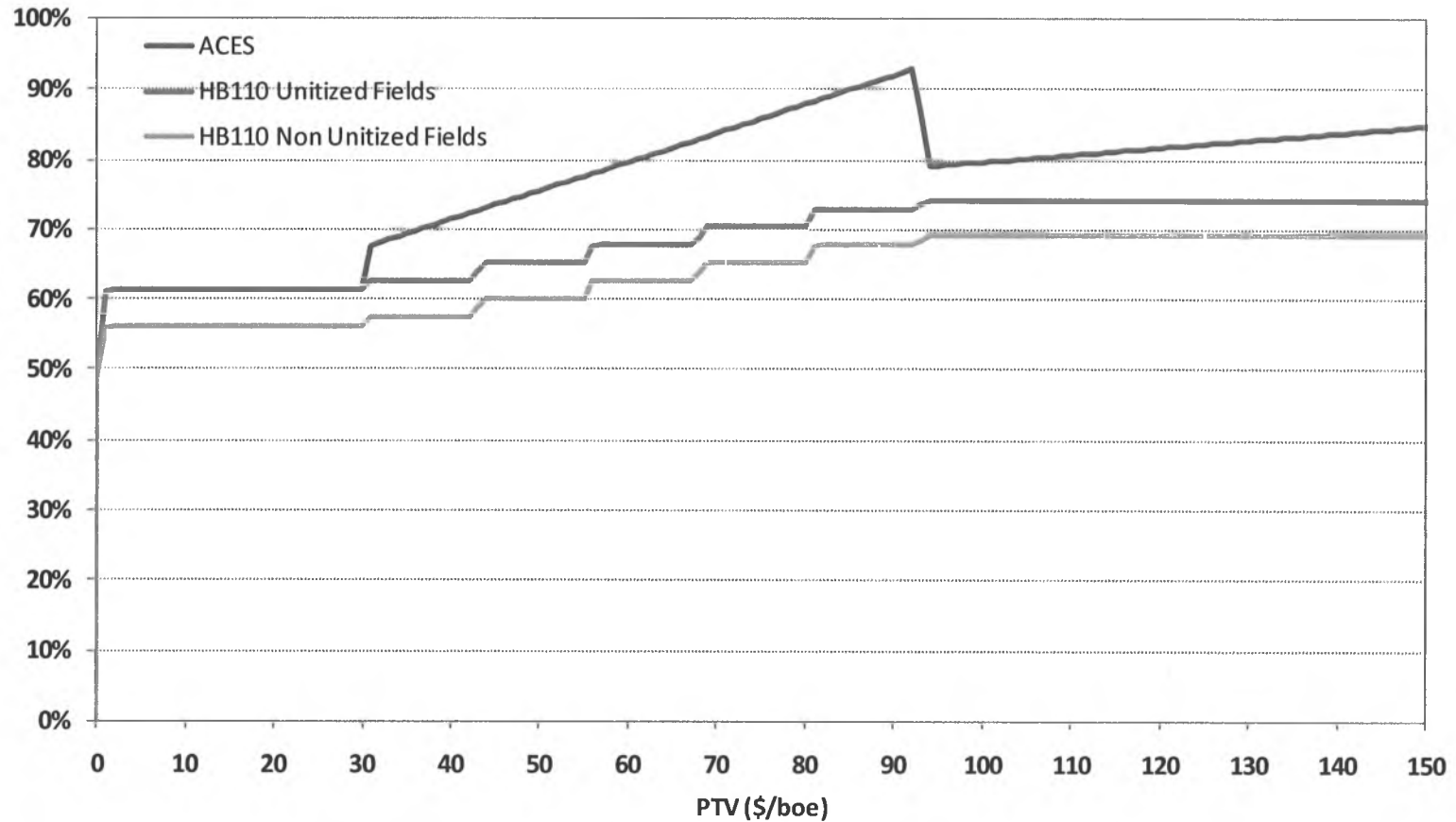




# Marginal Government Take

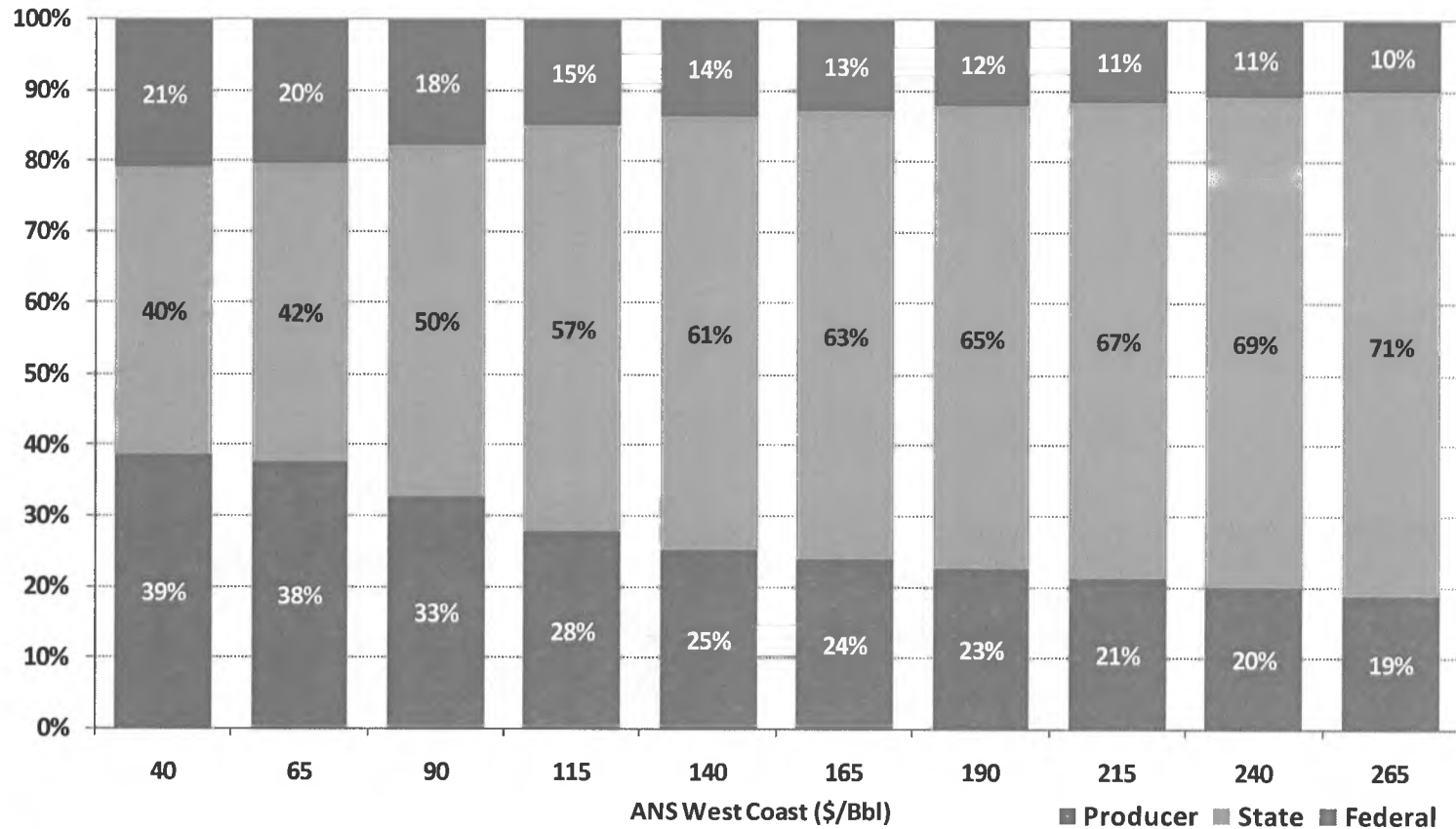


*(Incremental Government Take generated by a US\$ 1/boe increase in Production Tax Value, with all other conditions remaining unchanged)*





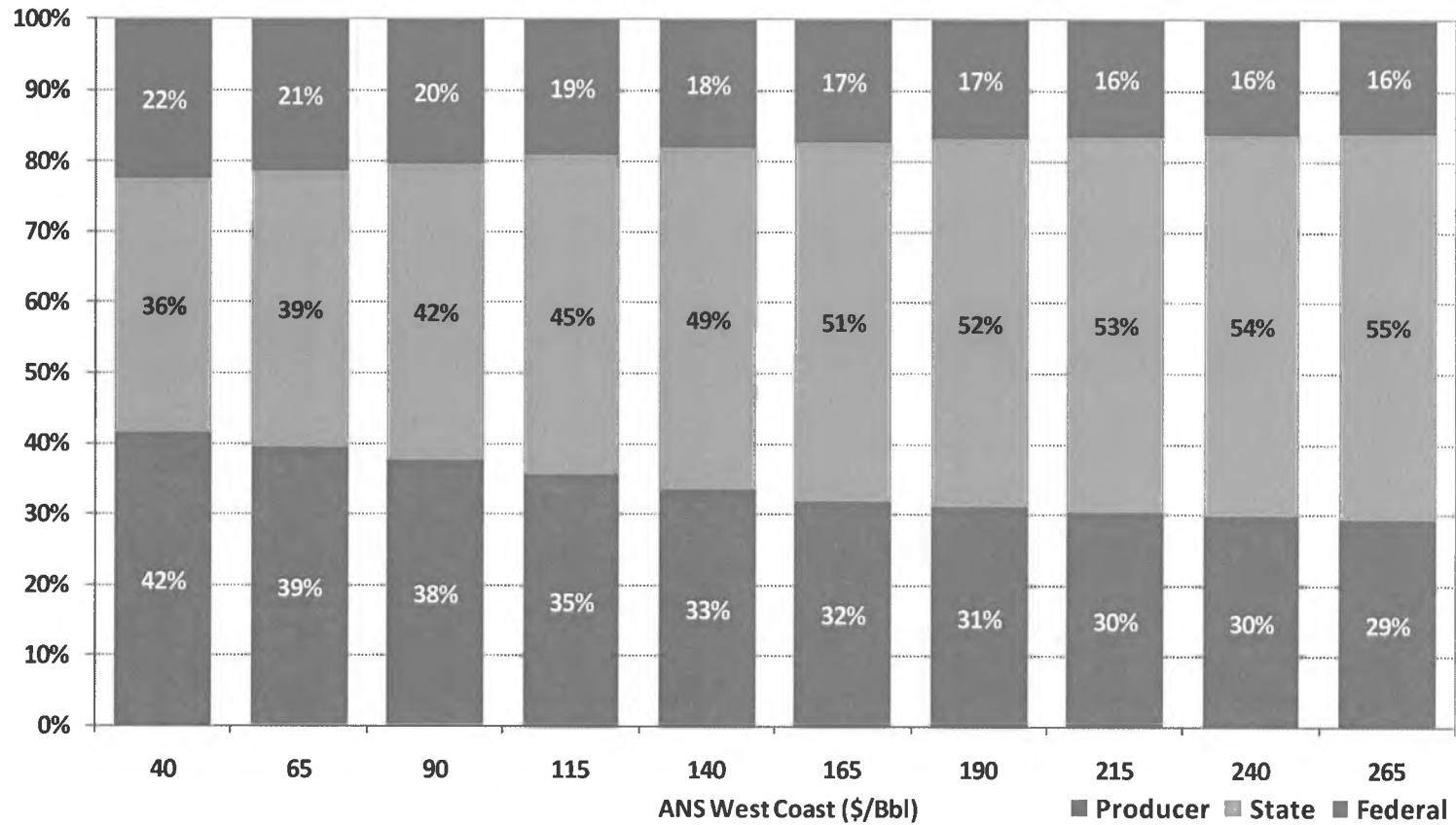
# Share of total profit - ACES



Production=600kbpd, Transport Costs=\$6/bbl, Upstream Costs=\$20/bbl



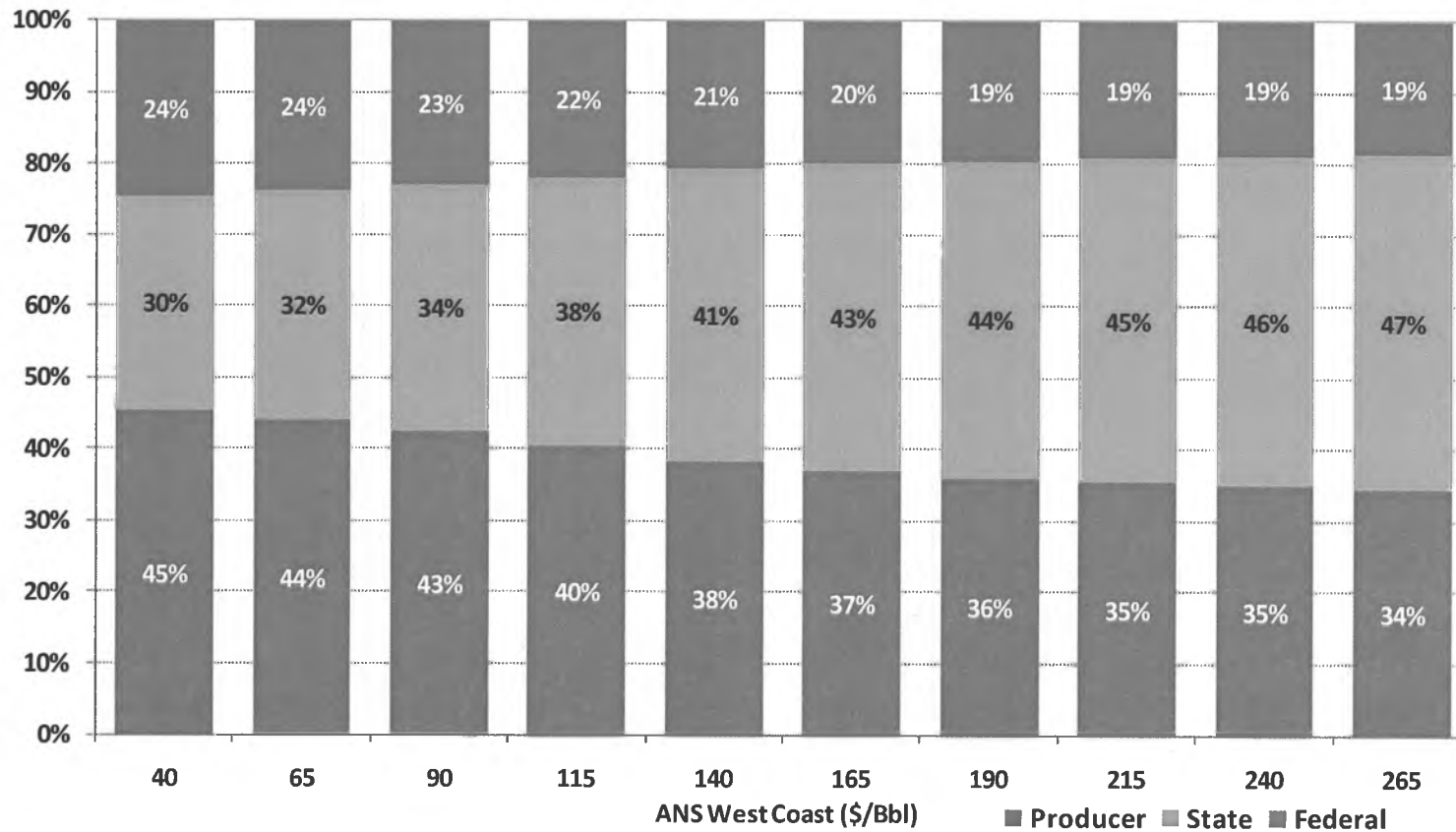
# Share of total profit CS HB 110 (RES): Unitized Fields



Production=600kbpd, Transport Costs=\$6/bbl, Upstream Costs=\$20/bbl



# Share of total profit CS HB 110 (RES): Non-Unitized Fields



Production=600kbpd, Transport Costs=\$6/bbl, Upstream Costs=\$20/bbl



# FISCAL NOTE

**STATE OF ALASKA**  
**2011 LEGISLATIVE SESSION**

Fiscal Note Number \_\_\_\_\_  
 Bill Version CSHB110(RES)  
 () Publish Date \_\_\_\_\_

Identifier (file name) CSHB110(RES)-DOR-TAX-03-04-11 Dept. Affected Revenue  
 Title Production Tax on Oil and Gas Appropriation Treasury and Taxation  
 Allocation Tax Division  
 Sponsor Rules Committee by Request of the Governor  
 Requester House Finance Committee OMB Component Number 2476

**Expenditures/Revenues** (Thousands of Dollars)

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

	Appropriation Required	Information						
		FY 2012	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
<b>OPERATING EXPENDITURES</b>								
Personal Services			267.0	267.0	267.0	267.0	267.0	267.0
Travel			10.0	10.0	10.0	10.0	10.0	10.0
Services	115.0		9.4	9.4	9.4	9.4	9.4	9.4
Commodities			1.0	1.0	1.0	1.0	1.0	1.0
Capital Outlay								
Grants								
Miscellaneous								
<b>TOTAL OPERATING</b>	<b>115.0</b>	<b>0.0</b>	<b>287.4</b>	<b>287.4</b>	<b>287.4</b>	<b>287.4</b>	<b>287.4</b>	<b>287.4</b>

<b>CAPITAL EXPENDITURES</b>								
-----------------------------	--	--	--	--	--	--	--	--

<b>CHANGE IN REVENUES</b>		***	***	***	***	***	***	***
---------------------------	--	-----	-----	-----	-----	-----	-----	-----

**FUND SOURCE** (Thousands of Dollars)

1002 Federal Receipts								
1003 GF Match								
1004 GF	115.0		287.4	287.4	287.4	287.4	287.4	287.4
1005 GF/Program Receipts								
1037 GF/Mental Health								
Other (please identify)								
<b>TOTAL</b>	<b>115.0</b>	<b>0.0</b>	<b>287.4</b>	<b>287.4</b>	<b>287.4</b>	<b>287.4</b>	<b>287.4</b>	<b>287.4</b>

Estimate of any current year (FY2011) cost \_\_\_\_\_

**POSITIONS**

Full-time			2	2	2	2	2
Part-time							
Temporary							

**Why this fiscal note differs from previous version (if initial version, please note as such)**

This fiscal note adds the amendments adopted in the House Resources committee.  
 See analysis section for detail on these amendments.

Prepared by Cherie Nienhuis, Economist; Bruce Tangeman, Deputy Commissioner  
 Division Tax Division  
 Approved by Ginger Blaisdell, Director Administrative Services Division  
Department of Revenue

Phone 269-1019  
 Date/Time 3/10/11; 8:47am  
 Date 3/10/11; 8:52am

FISCAL NOTE

STATE OF ALASKA  
2011 LEGISLATIVE SESSION

BILL NO. CSHB110(RES)

Analysis

\*\*\*The revenue impact of this bill is indeterminate.

This bill makes several changes to the oil and gas production tax system. Each of the major changes, along with their potential revenue impact, are discussed below.

1. **The interest rate on delinquent taxes is changed** from the greater of 5 percentage points above the annual rate of interest charged by the 12th Federal Reserve District or 11 percent, to the lesser of 3 percent points above the annual rate of interest charged by the 12th Federal Reserve District or 11 percent. The effective date of this provision is 7/1/11. The Department of Revenue (DOR) does not forecast interest on taxes; therefore this provision has no quantifiable revenue impact. There will be \$100,000 in one-time contractor costs to implement this change in our accounting system.

2. **The ANS WC oil price thresholds for the minimum tax are lowered** from the range of \$15 to \$25 to the range of \$12.50 to \$20 per barrel. The effective date of this provision is 1/1/2013. The DOR expects no revenue impact from this change since oil prices are forecasted to be above these amounts.

3. **The tax rate is changed and it is calculated annually rather than monthly for production in unitized areas or areas where there has been commercial production.** The tax rates under the bill are bracketed and only the increment of production tax value (PTV) within each bracket is taxed at that bracket's rate. The brackets range from 25% for PTV up to \$30 per barrel to 50% for PTV over \$92.50 per barrel. The maximum total production tax rate is 50%. The effective date of this provision is 1/1/2013. Using the Fall 2010 forecast assumptions, this provision is expected to result in revenue impacts as follows:

FY 2013: -\$382 million

FY 2014: -\$961 million

FY 2015: -\$1,126 million

FY 2016: -\$1,341 million

FY 2017: -\$1,423 million

4. **For areas that were not unitized on 12/31/2008 and where there has been no commercial production, the tax rate is changed and the lease expenditures in those areas may not be applied outside those areas.** The tax rates under the bill are bracketed and only the increment of PTV within each bracket is taxed at that bracket's rate. The brackets range from 15% for PTV up to \$30 per barrel to 40% for PTV over \$92.50 per barrel. The maximum total production tax rate is 40%. The effective date of this provision is 1/1/2013. The fiscal impact of this provision is indeterminate.

5. **The provision requiring that credits be taken over two years is eliminated.** This provision would result in companies using credits earlier than they would without this change, and except for time value of money impact, it is revenue neutral. The effective date of this provision is 1/1/2011. Using the Fall 2010 forecast assumptions, this provision is expected to decrease revenue in the amount of \$200 million in CY 2011 (taken over FY 2011 and FY 2012). Another \$100 million in refunds would also be likely sought for credit certificates in FY 2011 and FY 2012.

6. **The 40% credit for well lease expenditures is expanded to include qualified expenditures incurred north of 68 degrees North Latitude.** The effective date of this provision is 1/1/2012. The DOR has very limited data upon which to estimate the revenue impact of this provision. We estimate this provision will decrease revenue in the amount of \$200 million to \$400 million annually. No additional positions will be required, however, there will be a one-time contractual cost of \$15,000 for auditor training on well lease expenditures.

7. **A 30% credit was added for exploration expenditures north of 68 degrees North Latitude for wells that are (a) outside of a unit; (b) or for those areas in units after June 30, 2008, for expenditures incurred before the later of the date that is four years after the date of unitization or the first exploration well is drilled within the unit.** This credit applies to expenditures incurred after December 31, 2011. The fiscal impact of this provision is indeterminate.

FISCAL NOTE

STATE OF ALASKA  
2011 LEGISLATIVE SESSION

BILL NO. CSHB110(RES)

Analysis Continued

8. **Small producer, new area development, and alternative tax credit for exploration programs were extended from their current sunset date of 2016 to a sunset date of 2021.** These credits are in current law at AS 43.55.024 and AS 43.55.025. The effective date of this provision is 7/1/2011. Within the timeframes of the fiscal note, the extension of these credits is likely to have a fiscal impact, but the amount is indeterminate.

9. **The small producer credit is increased from a maximum of \$12 million per year to \$15 million per year per producer.** The effective date of this provision is 7/1/2011. This provision will decrease production tax revenue in amounts of less than \$20 million per year.

10. **A credit has been added in an amount that equals the percentage that a producer's wages and compensation paid to Alaska residents exceeds 80 percent of all wages and compensation paid by the company in the state.** The effective date of this provision is January 1, 2012. The fiscal impact of this provision is indeterminate.

11. **The tax information disclosure statute was expanded to include the disclosure of types of credits claimed and types of expenditures for which the credits were claimed.** The effective date of this provision is January 1, 2012. This provision has no fiscal impact.

The department will require the addition of two auditor positions to administer the additional credit and reporting provisions of this bill, beginning in FY 2013. These positions would be oil and gas auditor IV positions, and expected to cost \$287,400 annually.

# FISCAL NOTE

**STATE OF ALASKA**  
**2011 LEGISLATIVE SESSION**

Fiscal Note Number 2  
 Bill Version HB 110  
 (H) Publish Date 1/18/11

LL0007-DNR-DOG-1-13-2011  
 Title Oil and Gas Production Tax Dept. Affected Natural Resources  
 Sponsor Rules Committee Appropriation Resource Development  
 Requester Governor Allocation Oil & Gas  
 OMB Component Number 439

**Expenditures/Revenues** (Thousands of Dollars)

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

	Appropriation Required	Information					
		FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
<b>OPERATING EXPENDITURES</b>							
Personal Services							
Travel							
Contractual							
Supplies							
Equipment							
Land & Structures							
Grants & Claims							
Miscellaneous							
<b>TOTAL OPERATING</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>

<b>CAPITAL EXPENDITURES</b>							
-----------------------------	--	--	--	--	--	--	--

<b>CHANGE IN REVENUES</b>							
---------------------------	--	--	--	--	--	--	--

**FUND SOURCE** (Thousands of Dollars)

1002 Federal Receipts							
1003 GF Match							
1004 GF							
1005 GF/Program Receipts							
1037 GF/Mental Health							
Other Interagency Receipts							
<b>TOTAL</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>

Estimate of any current year (FY2011) cost \_\_\_\_\_

**POSITIONS**

Full-time							
Part-time							
Temporary							

**Why this fiscal note differs from previous version**

Not applicable, initial version

Prepared by Kevin Banks  
 vision Oil and Gas  
 Approved by Daniel S. Sullivan  
Natural Resources

Phone 269-8800  
 Date/Time 1-13-2011; 2:15 PM  
 Date 1/13/2011

**Analysis**

This bill may encourage producers to invest more by allowing them to receive the benefits of credits for that investment more quickly. First, currently under AS 43.55.023(b), only half the 20% qualified capital expenditure (QCE) credit can be taken in any one year. Section 11 of this bill would amend AS 43.55.23(b) to allow the full QCE credit to be taken in one year. Second, under AS 43.55.23(d), a producer that applies to obtain a transferable certificate for expenditures on the North Slope giving rise to a QCE credit or the loss carry-forward credit (AS 43.55.023(a)) will be issued two certificates, each for half the credit amounts, with one of the certificates only good for the next calendar year.

This limitation dilutes the incentive the credit provides to the extent that a producer/investor must wait before receiving the full benefit of the credit. Section 12 of this bill would amend AS 43.55.023(d) to allow the certificates received be for immediate use for North Slope expenditures, just as they are currently for expenditures in Alaska outside the North Slope. Third, Section 17 of the bill makes it easier for a small producer receiving a credit for North Slope expenditures to sell that credit to the State by eliminating the requirement that the producer spend additional money before receiving the credit monies.

In addition to allowing a quicker monetization of a given amount of credits, the bill extends the current 40% credit provided under 43.55.023(l) for well expenditures in Alaska off the North Slope to well expenditures on the North Slope. Currently, the North Slope producers receive a 20% qualified capital expenditure credit for well expenditure capital. Under the amendments provided in Sections 15 and 16 of the bill, producers would receive a 40% credit for those expenditures. This increased credit amount may encourage investment in wells on the North Slope.

This bill has a higher minimum tax rate apply to lower ANS West Coast prices. To the extent investors perceive the possibility that ANS West Coast prices will fall this low, these changes to the minimum tax may discourage investment. Also, by having separate production tax value calculations for "new production" units, the investors in these new units will have less ability to lower tax liability on "old production" units.

This bill lowers the marginal tax rates for existing and new fields by having progressively higher tax rates only apply to incremental production tax value. To the extent that investments are made as a consequence of these changes to the tax regime, royalty revenue may rise. The fiscal impact on royalty revenue is an indeterminate positive.



STATE CAPITOL  
PO Box 110001  
Juneau, Alaska 99811-0001  
907-465-3500  
fax: 907-465-3532

550 West 7th Avenue #1700  
Anchorage, Alaska 99501  
907-269-7450  
fax: 907-269-7463  
www.gov.alaska.gov  
Governor@alaska.gov

Governor Sean Parnell  
STATE OF ALASKA

January 17, 2011

The Honorable Mike Chenault  
Speaker of the House  
Alaska State Legislature  
State Capitol, Room 208  
Juneau, AK 99801-1182

Dear Speaker Chenault,

Oil production in Alaska remains the backbone of our economy. As oil production declines and as the federal government forbids multiple development opportunities we must better incentivize development of state lands. To that end, under the authority of Article III, Section 18, of the Alaska Constitution, I am transmitting a bill to make Alaska more competitive as an oil producing state by proposing amendments to Alaska's oil and gas production tax.

The bill would provide tax incentives and credits for the oil and gas industry to increase exploration for, and development of, Alaska's oil and gas resources at any price range. We must remain focused on getting more oil into the pipeline, and creating jobs for Alaskans.

The bill accomplishes six primary goals: (1) encourages development of new, currently undeveloped leases or properties; (2) encourages investment in exploration, development, and production at all price ranges; (3) strengthens the minimum tax; (4) extends tax incentives to North Slope activities and allows producers to apply tax credits in one year; (5) limits the time for assessment of additional production taxes; and (6) reduces the interest rate on delinquent taxes and refunds. These changes would ensure the State continues to receive reasonable revenue and establish a more competitive investment climate for job creation.

These amendments to Alaska's oil tax regime will foster new production sources to stem the decline in North Slope production. More oil means more jobs for Alaskans, more long-term revenue to the State, and lower Trans-Alaska Pipeline System tariffs per barrel.

I urge your prompt and favorable action on this measure.

Sincerely,

A handwritten signature in cursive script that reads "Sean Parnell".

Sean Parnell  
Governor

Enclosure

Alaska State Legislature  
HOUSE FINANCE COMMITTEE  
Agenda  
8:00 AM

Tuesday, March 15, 2011

HB 110-PRODUCTION TAX ON OIL AND GAS

Presentation by Roger Marks, Petroleum Economist *mar*  
Legislative Consultant 

Presentation by Department of Revenue  
Bryan Butcher, Commissioner, Department of Revenue  
Bruce Tangeman, Deputy Commissioner, Department of  
Revenue

Alaska State Legislature  
HOUSE FINANCE COMMITTEE

Agenda  
8:00 AM

Wednesday, March 16, 2011

HB 110-PRODUCTION TAX ON OIL AND GAS

Presentation by Department of Revenue  
Production Forecasts

Presentation by Alaska Oil and Gas Conservation Commission  
Dan Seamount, Alaska Oil and Gas Conservation  
Commission Chairman

*Drilling, Well permits, Exploration vs. Maintenance vs.  
Production Wells*

*What the numbers are telling us about the industry?*

ON TELECONFERENCE:

Steve Davies, Sr. Petroleum Geologist, AOGCC

PRESENT:

Department of Revenue Commissioner (Designee) Bryan Butcher  
Department of Revenue Deputy Commissioner Bruce Tangeman  
Legislative Consultant Roger Marks, Petroleum Economist



*Presentation to the  
House Finance Committee  
March 16, 2011  
Alaska Department of Revenue*



# Three Categories of Forecasted Production



- 1) Currently Producing- Includes base production and enhanced recovery production from investment in rate enhancing activities (perforations, stimulations, well workovers, gas and water injection support).
- 2) Currently under Development- New projects that are currently funded or awaiting project sanction in near future.



# Three Categories of Forecasted Production



- 3) Currently Under Evaluation- Includes technically viable projects in the stage where engineering, cost, risk and reward are being actively evaluated. Unfunded but are considered to have a high chance of being brought to fruition.



# Factors That Affect Production Forecasting



## 1. GEOLOGY

- Rock type and formation characteristics
- Depth, thickness, pressure
- Oil & gas characteristics (oil gravity, viscosity, water content, etc.)

## 2. DEVELOPMENT PLAN

- Well density and development rate
- Well bore size and completion technique
- Artificial lift and enhanced oil recovery
- Facilities & surface operations

## 3. COMMERCIAL

- Project economics
- Oil price and market conditions
- Government Policy: access, regulation, taxation

## 4. PRODUCTION PROFILE

- History, stage of depletion
- Use production profile to extrapolate trends

## 5. TIMING!



## North Slope Production Decline



**FY 1988: production peak → 2.01 million barrels per day (bpd).**

**FY 2010: production → 644,000 bpd, a 68% decline since peak.**

**FY 1988 to date: production decline rate ~ 5% per year, on average.**

**Over the last 10 years, production decline rate ~ 4.2% per year, on average.**

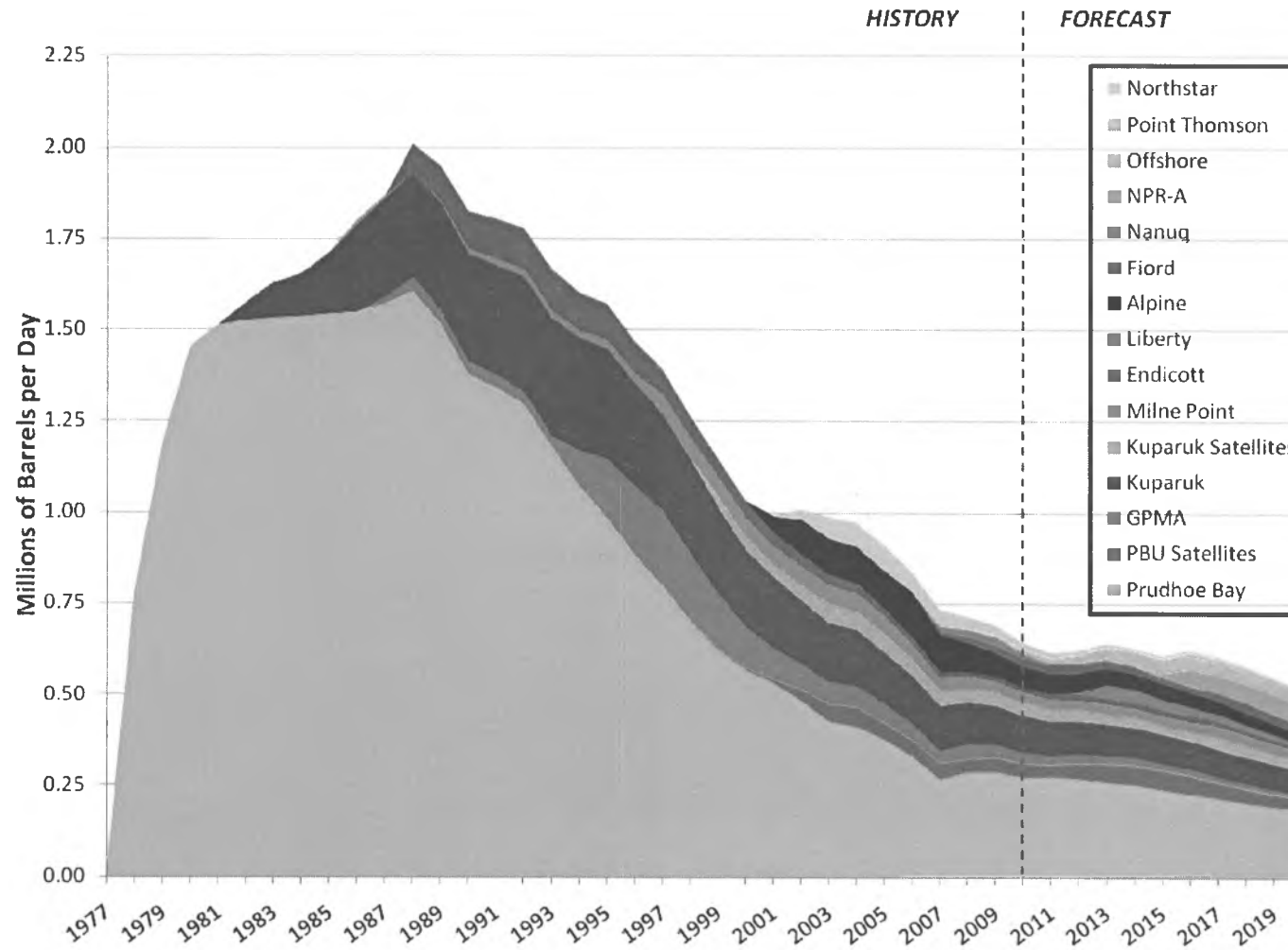
**We expect the decline rate to flatten out to 3.2% per year, on average, through FY 2030.**



# ANS Production History & Forecast



Annual North Slope Production and Contribution of Fields

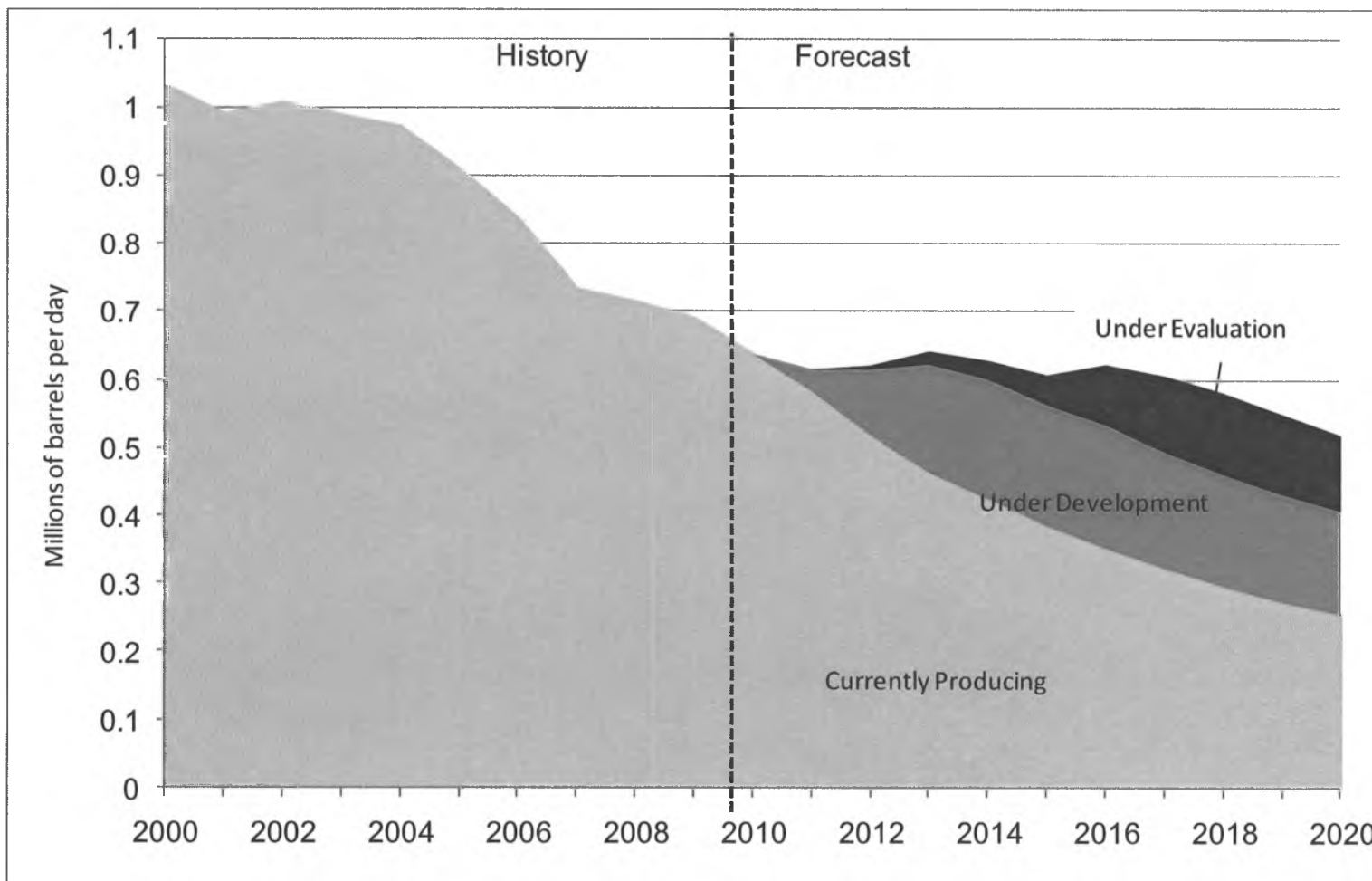


3/15/2011

Source: Fall 2010 Revenue Sources Book



# Forecasted ANS Production FY 2010 - 2020





# Conclusion on Production



- Production forecasting requires consideration of each project's geology, development plans, commerciality, production profiles, decline curves and timing.
- Department uses extensive well and field specific data acquired from producers, AOGCC, and DNR
- New field development is very important in mitigating decline rates.

3/16/11

**State of Alaska**  
Department of Revenue

*Commissioner Bryan Butcher*



**SEAN PARNELL, GOVERNOR**

333 Willoughby Avenue, 11<sup>th</sup> Floor

P.O. Box 110400

Juneau, Alaska 99811-0400

Phone: (907) 465-2300

Fax: (907) 465-2389

The Honorable Bill Thomas, Jr  
Alaska State Representative  
State Capitol Room 505  
Juneau AK, 99801

March 15, 2011

The Honorable Bill Stoltze  
Alaska State Representative  
State Capitol Room 515  
Juneau AK, 99801

**SUBJECT: Response to Questions from House Finance Meeting on March 14, 2011**

Dear Representatives Thomas and Stoltze:

The purpose of this document is in response to the follow-up questions from the House Finance Committee meeting on March 14, 2011. The requests/questions and responses follow. In addition, several suggestions were raised in regards to information for inclusion in our future presentations to the committee; these are appreciated and have been noted.

**(1) Provide a chart showing nominal, marginal, and effective tax rates under ACES and HB 110.**

The chart on the following page shows the nominal, marginal and effective tax rates under ACES and HB 110. The nominal tax rate reflects the tax rate listed in statute for the relevant oil price. The marginal tax rate reflects the tax rate on a \$1 increase in production tax value. The effective tax rate is the average tax rate assessed on the gross value at the point of production after credits have been applied. This chart shows tax rates for production tax only and do not include other government revenue such as royalty, corporate income tax, or property tax.



**(3) Evaluate what production taxes would have been in previous years if HB110 had been in place instead of ACES.**

The following table provides the estimated impact of HB 110 using historical Department of Revenue models, which are set up to provide revenue forecasts by fiscal year. HB 110 as proposed would use calendar year prices to determine the average price for calculating progressivity and then allocate the revenue to fiscal years. This structural difference might cause the impacts to be slightly more in one year and less in the next, but the revenue impact should be the same over time.

Note also that this table does not reflect production level increases that would likely have been experienced had HB 110 been implemented during these years.

<b>Production Tax Revenue under ACES and the Estimated Impact of HB 110/SB 49 on Production Tax Revenue in Prior Years*</b> (in \$billions)					
Year	Production Tax Revenue under ACES	Impact of Tax Rate Change	Impact of Well Lease Exp Credit	Total Estimated Impact	Estimated Production Tax Revenue under HB 110/SB 49
FY 2008	\$6.81	-\$2.06	-\$0.30	<b>-\$2.36</b>	\$4.45
FY 2009	\$3.10	-\$0.99	-\$0.30	<b>-\$1.29</b>	\$1.81
FY 2010	\$2.86	-\$0.60	-\$0.30	<b>-\$0.90</b>	\$1.96

**\*Notes regarding this analysis**  
 This analysis considers revenue impacts of only those provisions of HB 110 and SB 49 that can be reasonably quantified and that are not considered revenue neutral over time (such as the elimination of the credit split). Additionally, because historical models are maintained on a fiscal year basis, fiscal year inputs such as prices, production and costs were used for this analysis, even though annual tax calculations in HB 110 and SB 49 are based on calendar year inputs. For the well lease expenditure credit, we chose a median of the range of \$200 to \$400 million per year as stated in the fiscal note. **This analysis does not consider the likely production increases had HB 110 been in effect.**

**(4) Explain why the reduction in State take leads to greater Federal Government take.**

Federal income tax laws allow deductions for certain state taxes paid, including state oil and gas production taxes. Using a flat 35% federal income tax rate, the amount of state production tax paid would not be taxed under the federal income tax. The following example illustrates this concept:

**Scenario 1**

Profit before Production Taxes	\$100
Less Production Taxes Paid	\$40
Profit after Production Taxes	\$60
Federal Corporate Income Tax Rate	35%
<b>Federal Corporate Income Tax Paid</b>	
<i>(Profit after Production Taxes times Federal Corporate Income Tax Rate)</i>	<b>\$21.00</b>

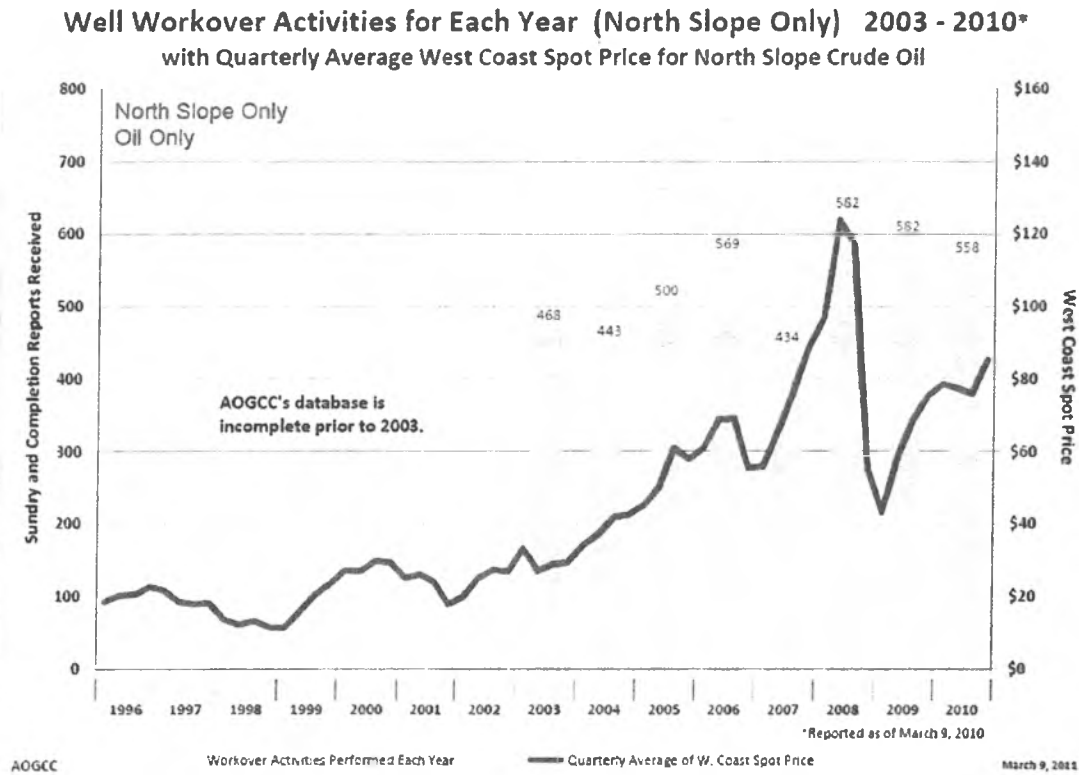
**Scenario 2**

Profit before Production Taxes	\$100
Less Production Taxes Paid	\$20
Profit after Production Taxes	\$80
Federal Corporate Income Tax Rate	35%
<b>Federal Corporate Income Tax Paid</b>	
<i>(Profit after Production Taxes times Federal Corporate Income Tax Rate)</i>	<b>\$28.00</b>

**In this example, a 50% decrease in State Take increases both Producer and Federal Govt Take each by 33%**

**(5) How many of the development wells are new wells, versus recompletions.**

The Alaska Oil & Gas Conservation Commission reports well workover activity separately versus new development wells. The following chart shows well workover activities by year as reported by the AOGCC.<sup>1</sup> They can provide additional detail when they testify before the committee.



<sup>1</sup> Source: AOGCC web site at [http://doa.alaska.gov/ogc/ActivityCharts/Well%20Workovers/CHARTS\\_Workovers\\_for\\_each\\_Year\\_and\\_Quarter\\_NS\\_vs\\_ANS\\_W\\_Coast\\_Spot\\_110309.pdf](http://doa.alaska.gov/ogc/ActivityCharts/Well%20Workovers/CHARTS_Workovers_for_each_Year_and_Quarter_NS_vs_ANS_W_Coast_Spot_110309.pdf)

(6) Provide estimates of unrestricted state revenue with no oil or gas production in the state.

Assuming the state had no oil or gas production and that there are no new sources of revenue introduced to make up for the loss, the state's forecast would look similar to the following:

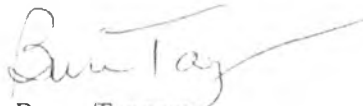
**FY 2010 Actual and Forecast of  
Unrestricted Non-Oil Revenue (in \$millions)**

<b>Non-Oil Revenue Sources</b>	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012</b>
Non-Oil Taxes	\$293.7	\$321.0	\$328.1
Charges for Services	\$17.1	\$19.3	\$19.3
Fines and Forfeitures	\$9.7	\$9.0	\$9.0
Licenses & Permits	\$39.5	\$40.4	\$40.7
Rents & Royalties	\$13.2	\$12.4	\$12.4
Other	\$40.8	\$78.4	\$77.6
Investment Revenue*	\$184.0	\$217.4	\$195.7
<b>Total Non-Oil Revenue</b>	<b>\$598.0</b>	<b>\$697.9</b>	<b>\$682.8</b>
<i>Oil Revenue</i>	<i>\$4,914.7</i>	<i>\$4,673.9</i>	<i>\$5,061.1</i>

\*Investment Revenue not adjusted for loss of oil revenue

We hope our responses fully answer your questions.

Sincerely,



Bruce Tangeman  
Deputy Commissioner

3/16/11

**State of Alaska**  
Department of Revenue

*Commissioner Bryan Butcher*



**SEAN PARNELL, GOVERNOR**

333 Willoughby Avenue, 11<sup>th</sup> Floor  
P.O. Box 110400  
Juneau, Alaska 99811-0400  
Phone: (907) 465-2300  
Fax: (907) 465-2389

The Honorable Bill Thomas, Jr  
Alaska State Representative  
State Capitol Room 505  
Juneau AK, 99801

March 15, 2011

The Honorable Bill Stoltze  
Alaska State Representative  
State Capitol Room 515  
Juneau AK, 99801

SUBJECT: Response to Questions from House Finance Meeting on February 18, 2011

Dear Representatives Thomas and Stoltze:

The purpose of this document is in response to the follow-up questions from the House Finance Committee meeting on February 18, 2011. The requests/questions and responses follow.

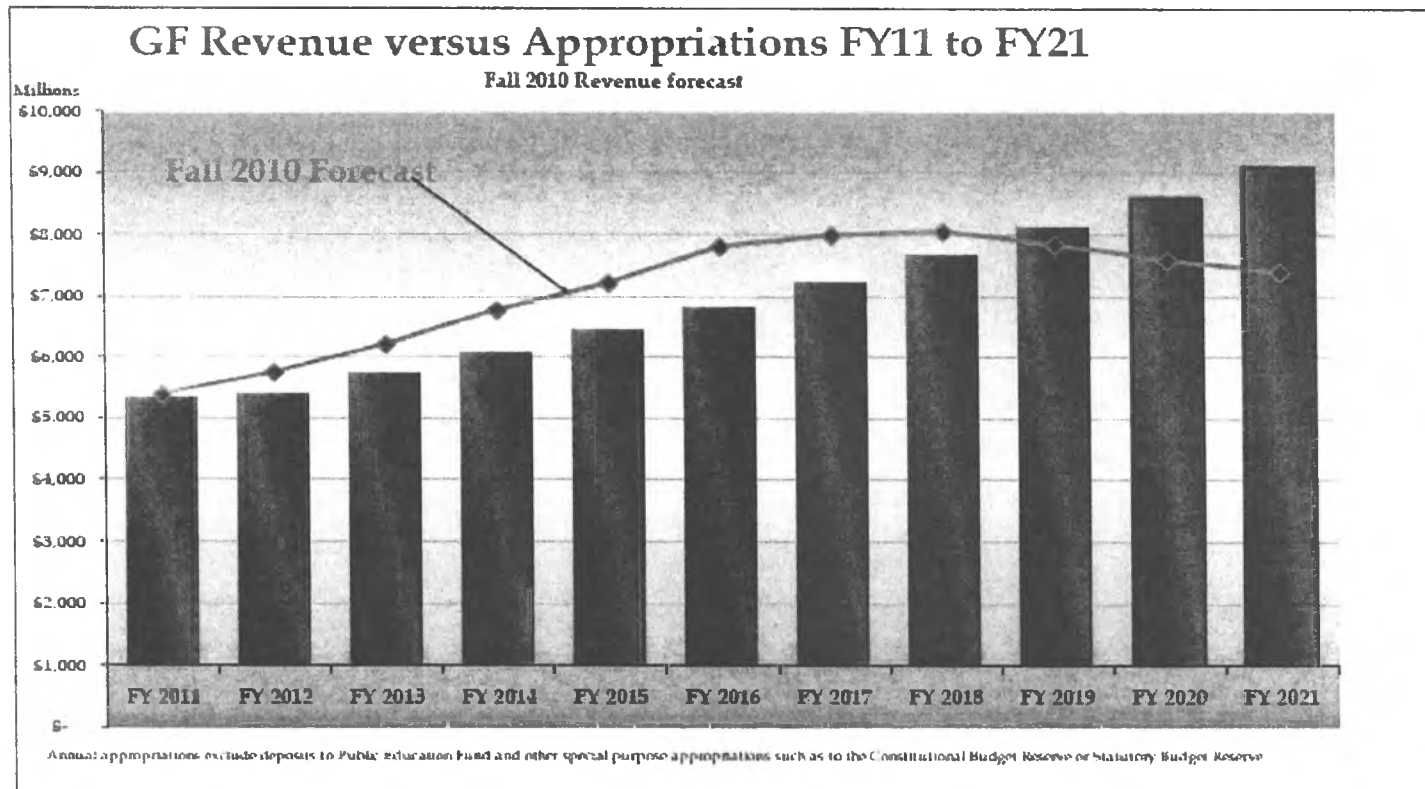
**(1) Provide a picture of the 10-year outlook slide that uses a higher budget growth projection.**

The 10-year outlook slide presented was taken directly from the FY 2012 10-year plan prepared by the Office of Management and Budget. The slide was intended to represent just one of many possibilities, based on the Fall 2010 revenue forecast. Expenditures in future years could be higher or lower than the 3% budget growth assumption presented. The 10-year plan included other scenarios based on higher and lower budget growth assumptions. The table on the following page, for example, compares revenue and expenditures using the Fall 2010 revenue forecast, and a 6% annual expenditure growth assumption. This table was taken from page 14 of the Executive Summary of the FY 2012 10-year plan.

The complete FY 2012 10-year plan can be found at the following website:  
<http://omb.alaska.gov/html/information/10-year-plan/fv12-10-year-plan-current.html>. Any questions on the 10-year plan should be directed to the Office of Management and Budget

*Note: The projections in the FY2012 plan are intended to be used as a planning tool. They do not represent a commitment by the Administration to propose spending nor bring in revenue at a particular level in FY2011, FY2012, or any future year.*

### Scenario 3: FY2012 Governor's Budget with 6% Annual Expenditure Growth



Appropriations projections in the plan do not represent a commitment by the Administration to propose spending or generate revenue at a particular level in FY2011, FY2012 or any future year. The 10 year forecast shows that unanticipated budget shortfalls during the 10-year period could be filled primarily through the use of reserve funds; however, other fiscal tools including spending reductions would likely be used in addition to, or in lieu of, reserve funds.

The plan will be revisited as conditions warrant.

**(2) Provide information about the amount of storage capacity on the North Slope, and how much production was put into storage in the January shutdown, compared to production that was lost during the shutdown**

Crude oil holding capacity at Pump Station 1 on the Trans-Alaska Pipeline System (TAPS) is listed as 420,000 barrels on page 36 of the Trans Alaska Pipeline System FACTS book, which can be found online.<sup>1</sup>

During the January 2011 TAPS shutdowns 447,885 barrels of crude oil were put into storage tanks at Pump Station 1.

During the January TAPS shutdown the Department of Revenue provided a rough estimate of the revenue impact to the State from the actual reduced production level when compared to expected production levels for the period of the shutdown. The department estimated the TAPS shutdown reduced state revenues by approximately \$18 million per day in royalty and taxes.

**(3) Provide a year-by-year production decline rate, and address where the oft-quoted “6% decline rate” might come from.**

While it would be difficult to definitively identify the source of the “oft-quoted 6% decline rate,” mention of a 6% decline rate in North Slope production is attributed to Angus Walker of BP in the March 19, 2006 Petroleum News. This appears to be one of the first sources to refer to a 6% decline rate.

The North Slope is on a 6 percent decline rate with the existing tax system. The new tax system “is a huge additional tax burden on major producers on the North Slope,” Walker said, and BP is concerned that it may move production to a steeper decline than 6 percent. The goal should be to find a solution that gets us to 3 percent, he said, and that would require lower taxes, not higher taxes.

The change in production from year to year can be seen in the table below, including both increases and decreases in production over the years.

<b>% Change</b>	<b>Year</b>
<b>51.7%</b>	1979
<b>21.8%</b>	1980
<b>4.0%</b>	1981
<b>4.0%</b>	1982
<b>3.6%</b>	1983
<b>1.6%</b>	1984
<b>3.5%</b>	1985
<b>5.2%</b>	1986
<b>3.7%</b>	1987

<sup>1</sup> [http://www.akresource.org/curriculum\\_cd/energy/energyresources/alyeska.pdf](http://www.akresource.org/curriculum_cd/energy/energyresources/alyeska.pdf)

7.6%	1988
-2.9%	1989
-6.5%	1990
-1.1%	1991
-1.5%	1992
-6.3%	1993
-4.1%	1994
-1.9%	1995
-6.5%	1996
-5.2%	1997
-9.1%	1998
-9.1%	1999
-10.2%	2000
-3.9%	2001
1.7%	2002
-1.9%	2003
-1.7%	2004
-6.5%	2005
-7.9%	2006
-12.6%	2007
-2.4%	2008
-3.3%	2009
-7.1%	2010

**(4) Provide analysis of our past production forecast accuracy. Based on the 5 factors affecting production forecasts, where have past forecast errors come from?**

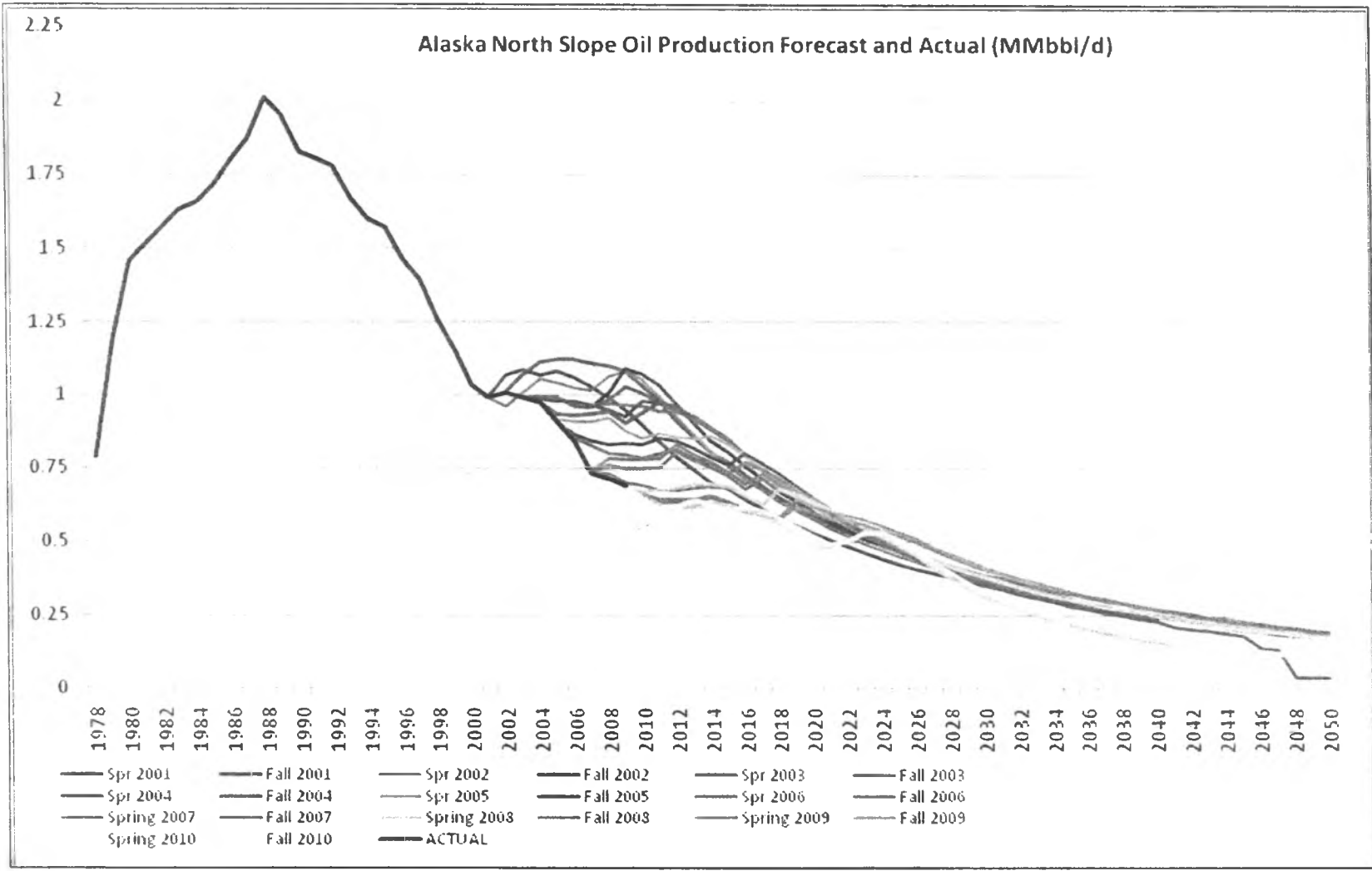
A chart showing Department of Revenue production forecasts from spring 2001 through fall 2010 and actual production can be found on the following page.

The majority of revenue comes from oil production. The department's revenue forecast is driven primarily by two inputs: oil production and oil price. The following discussion briefly discusses the department's history in forecasting these two variables.

**Production Forecasting**

Recently, inquiries have been made regarding the accuracy and reliability of historical oil production forecasts published by the Department. The response that follows will examine factors that may have contributed to differences in forecast vs. actual production for Alaska's North Slope (ANS).

The department's production forecasts (both past and present) are based solely on technically recoverable barrels without the added complexity and uncertainty of predicting future oil prices in the equation. The production forecasts for the last ten years or more have been overestimated.



The Department of Revenue relies on historical production data as well as both public and private information as the basis for its biannual production forecast. Because forecasts are directly affected by the quality of the input data, the Department of Revenue production forecasts are sensitive to data provided both publicly and privately by the field operators.

It is important to define both what is involved in a production forecast and what is not. In general terms, a forecast is simply an opinion of future oil production. In addition to the quality of the input data, the uncertainty of the forecast will also depend on the methods employed by the forecaster. Historically, the Department engaged a single contractor to conduct its forecasts until 2009. This contractor relied on a certain method to produce his forecasts. Beginning in 2009 a new contractor was engaged to perform the forecasts and relies on a different methodology to forecast production.

It is also necessary to understand from the outset that, under both current and former methodologies, the production forecasts conducted for and under the directive of the Department have been based only on technically recoverable oil. The forecasts do not include any analysis of whether or not barrels that are technically recoverable are also economically recoverable. This is reasonable given that near term oil production should be relatively certain. Involving an analysis that included economically recoverable barrels would add another layer of complexity and uncertainty to the forecast and require that the department, in essence, predict the future value of a barrel of oil. At the same time this added uncertainty would not provide any cure for near term production overestimates.

As previously mentioned, the accuracy of the forecast will be highly dependent on the methods used by the person making the forecast. In this regard, the current methods employed by the department's staff and contractor have changed significantly from the previous contractor. The result has been that the near term forecasts have been within about 2% of actual production during that same time period.

Perhaps one of the most significant changes in methodology relates to the use of a well-by-well analysis to forecast production and decline curves as used in the current practice, whereas in the past, forecasting had been done on an area-wide or field basis. While the well-by-well basis is more time and labor intensive, the methodology reveals trends that are not observable on an area-wide basis.

Current practice also includes internal staff in addition to the contractor. The department performs in-depth analysis of production trends, forecast to forecast by field, and comparisons of forecasted production to actual, among other analyses.

Another factor that has likely had a material impact and is currently employed in the new methodology is the magnitude of the exponent, or "b factor" used to calculate the production decline curve. As the "b factor" increases, the production forecast increases in a non-linear fashion. The factor previously used had been as high as 1.4 and has now been reduced to be less than 1.0 in current practice. There is a large body of empirical evidence indicating that hyperbolic exponents should never be greater than 1.0 in any field.

By employing a method of forecasting that adheres to strict and standard petroleum engineering principles the department now excludes barrels that may fall into a high risk area of eventually being brought into future production. For example, both back out barrels and certain recovery projects that have not been tested and proven could be subject to many variables that may or may not lead to their ultimate production. Accordingly, these volumes are now only included in the department's forecast if they are shown to be in place and have demonstrated a response.

Some factors are beyond the state's control. A standard practice is to go to the producer's and ask when new fields may come on line. A good example is Liberty, which had originally been predicted to begin production in 2011. However, recent events and decisions by the company have delayed start-up until somewhere around 2013. Even though the Liberty pool is in federal waters, facilities are located onshore and production will flow through TAPS and had been included by the state in forecasting total ANS production. When setbacks in timing such as Liberty are unforeseeable, they will by definition, show up as errors in any forecast at a later date.

Below are three additional examples:

1. Aurora Field

"BP Exploration (Alaska) Inc. said Feb. 23 that production is expected to increase to a peak rate of 15,000 to 20,000 barrels per day as field development continues." *"Aurora field begins production."* 2/28/01 *Petroleum News*

- Production at Aurora peaked at an average of 10,447 barrels per day in 2006 according to DNR – just over half of the highest estimate by BP in 2001.

2. Polaris Field

"BP will develop Polaris with water flood, which is expected to improve total recovery to 15-30 percent of original oil in place, with production rates expected to peak at 12,000-15,000 barrels of oil per day from water injection..." *"BP applies for pool rules for viscous Schrader Bluff Polaris accumulation: Company tells AOGCC western Prudhoe satellite will be developed with water flood, EOR test deferred; initial wells proving up productivity, but hydrate formation causing problems in keeping wells operating; Ugnu sand included."* 12/29/02 *Petroleum News*

- Through 2009 production at the Polaris field had not reached the levels predicted by BP in 2002. Specifically, production at the Polaris field peaked at an average of 4,764 barrels per day in 2008 – approximately 60% less than BP predicted in 2002.

3. West Sak Field

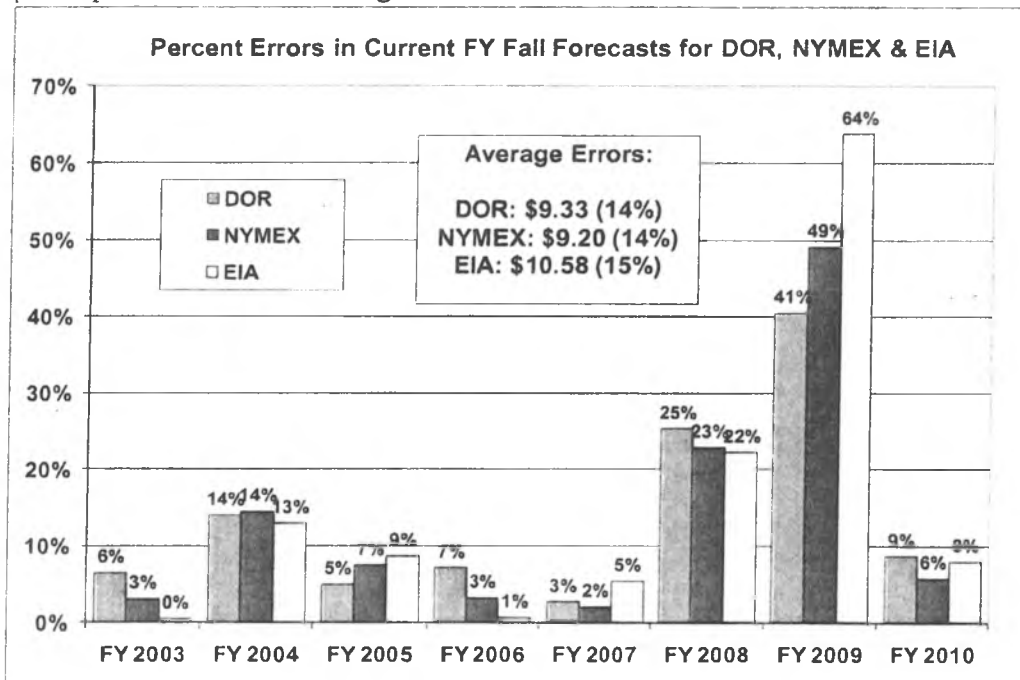
"The companies said production of West Sak oil is now at about 10,000 barrels per day, and with the Drill Site 1E and 1J project, production is expected to reach approximately 45,000 bpd by 2007." *"\$500 million West Sak heavy oil project approved."* 8/15/2004 *Petroleum News*

- According to DNR, production at West Sak was just over 11,000 barrels per day in 2004. In 2007 West Sak produced an average of 17,575 barrels per day or less than 40% of the rate forecast by BP in 2004. As of 2009, production at West Sak still has not reached 20,000 barrels a day.

Because the Department of Revenue relies, at least in part, on information provided by the operators of each field in order to forecast production, bias or error inherent in the operator's view of future production often translates into the forecast variances by the Department of Revenue. In short, the forecast is limited by the quality of the data inputs, the methodologies used, and unforeseen events. Incorporating internal staff, the additional in-depth analysis and controls, and sound petroleum engineering methods are steps taken by the department to improve the quality of the production forecast.

**(5) Provide analysis of our past price forecast accuracy, compared to outside experts.**

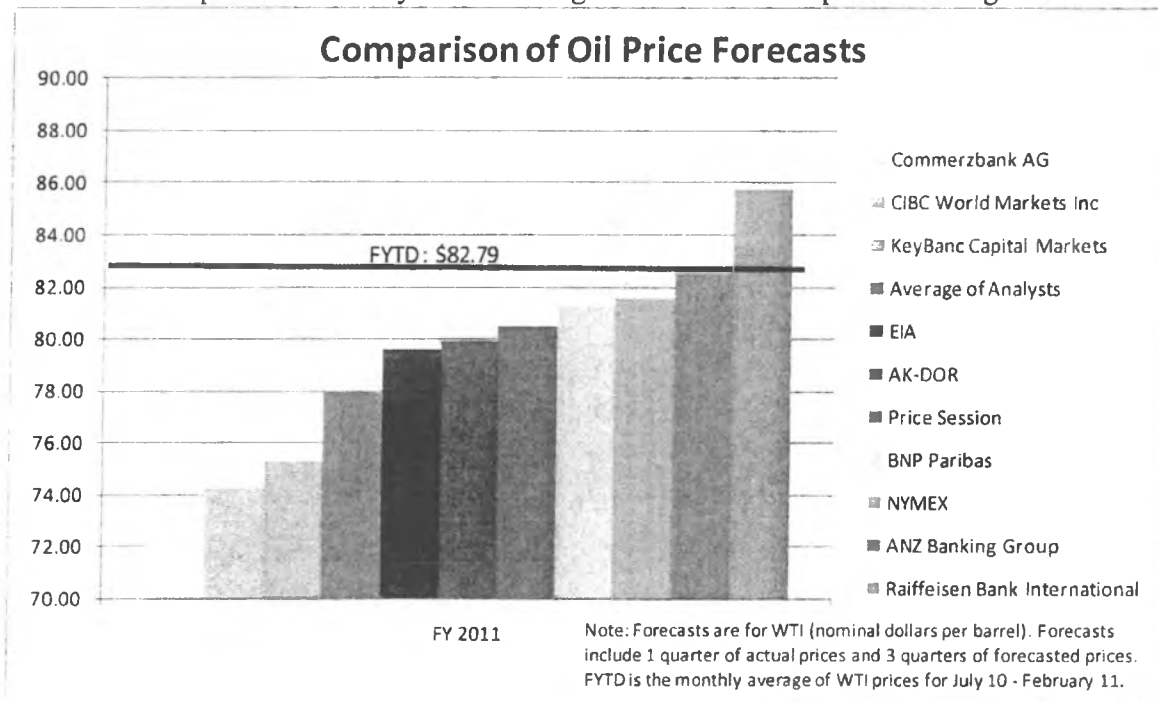
The chart below compares the department's fall oil price forecast accuracy to the accuracy of NYMEX futures prices and the Energy Information Administration (EIA) forecasts. It shows the absolute percent error in forecasting the current fiscal year oil price from FY 2003 to FY 2010. On average, the department's forecast is no more or less accurate than forecasts by the EIA or forecasts generated with NYMEX futures prices. All three forecasts did not anticipate the sudden price spike and crash occurring from FY 2008 to 2009.



(6) In terms of future price projections, provide a chart showing all analyst forecasts so the committee can see where the high and low expectations are.

The chart below shows the department's fall forecast of WTI (nominal dollars per barrel) for FY 2011 along with forecasts from various other groups. The chart includes the average of several oil market analysts and individual forecasts from select analysts that tended to be more bullish or bearish than others. All forecasts were created in fall 2010 when WTI was priced around the high \$70s to low \$80s per barrel range.

As is evident from the chart, there was a range of views on where oil prices would be headed in FY 2011. Most forecasters, however, did not anticipate the sudden rise in oil prices that did occur in FY 2011. The department's forecast was consistent with the view of other forecasters, which was that prices would stay within the high \$70s to low \$80s per barrel range for FY 2011.



**(7) Provide the number of PERS and TERS participants.**

The most recent actuarial valuations for PERS and TERS provide the following statistics:

**TRS:**

- 58 Member Employers
- 2 Defined Benefit (DB) Tiers
  - 10,255 retirees
  - 884 terminated members entitled to future benefits
  - 8,226 actives (78.4%)
  - 19,365 total members
- 1 Defined Contribution (DC) Tier
  - 0 retirees
  - 394 terminated members entitled to future benefits
  - 2,269 actives (21.6%)
  - 2,663 total members

**PERS:**

- 160 Member Employers
  - 3 Defined Benefit (DB) Tiers
    - 25,015 retirees
    - 6,566 terminated members entitled to future benefits
    - 27,565 actives (74.55%)
    - 59,146 total members
  - 1 Defined Contribution (DC) Tier
    - 0 retirees
    - 304 terminated members entitled to future benefits
    - 9,412 actives (25.45%)
    - 9,716 total members

**(Clarification) Based on committee discussion, we would like to clarify that capital credits are accounted for in two groups – (1) credits applied against tax liabilities; and (2) credits for explorers/producers that have no tax liability against which to apply the credits.**

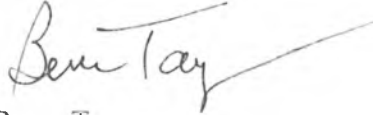
For production tax accounting purposes, credits against production tax fall into two basic groups: (1) credits applied against tax liabilities; and (2) credits for explorers/producers that have no tax liability against which to apply the credits.

Credits in group (1) – those applied against tax liabilities – are included in the production tax calculation because they are a direct deduction from the total production tax revenue anticipated in a given time frame. For this group, producers simply subtract the number of credits from their before credit tax liability and make a payment on that net amount. That is why this group of credits is included in the income statement format shown in Appendix D-1 of the Fall 2010 Revenue Sources Book.

Credits in group (2) – those credits for explorers/producers that have no tax liability against which to apply the credits – for accounting purposes are not a direct deduction from the total production tax revenue anticipated in a given time frame. Credits in this group are normally turned into transferable tax credit certificates and either sold to another producer or refunded by the state. State refunds for these certificates are made through the Oil and Gas Tax Credit Fund, established at AS 43.55.028. This fund consists of money that is appropriated to it from the legislature, usually from general funds. As such, refunds made from this fund are considered to be budget items as opposed to revenue items, and are not part of the production tax revenue forecast. For that reason, credits that are certificated are not included in the income statement format shown in Appendix D-1 of the Fall 2010 Revenue Sources Book.

We hope our responses fully answer your questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Bruce Tangeman", with a long horizontal flourish extending to the right.

Bruce Tangeman  
Deputy Commissioner

Alaska State Legislature  
HOUSE FINANCE COMMITTEE

Agenda  
1:30 PM

Wednesday, March 16, 2011

Bills Previously Heard or Scheduled

**HB 166-STATE AGENCY PERFORMANCE AUDITS**

NEW CS WORKDRAFT 27-LSO492\X

NEW FISCAL NOTE\$ Legislature / Replaces previous NEW FN\$ Legislature  
component # 775

**HB 110-PRODUCTION TAX ON OIL AND GAS**

Presentation by Department of Revenue

Production Forecasts

Presentation by Alaska Oil and Gas Conservation Commission

Alaska Oil and Gas Conservation Commission Chairman

Dan Seamont

~~6200~~  
A. J. Wooderman

3/16/11

# Alaska Oil and Gas Conservation Commission (AOGCC)

333 W. 7<sup>th</sup> Ave., Ste. 100  
Anchorage, AK 99501  
(907)279-1433

[www.aogcc.alaska.gov](http://www.aogcc.alaska.gov)



**Daniel T. Seamount – Geology Commissioner, Chair**  
**Cathy P. Foerster - Engineering Commissioner**  
**John K. Norman – Public Member Commissioner**

## Alaska Oil and Gas Conservation Commission

- AOGCC Mission
- Charts and Statistics
  1. Historical O & G Activity
  2. Drilling Permits (the Plan)
  3. Drilled Wells and Well Work (the Actual Work)
- The Future

# Alaska Oil & Gas Conservation Commission (AOGCC)

Quasi-judicial State regulatory agency

- Oversight for underground oil & gas operations
  - Private and public lands in Alaska
  - Exercises police power of the State

Regulate drilling and production for oil, gas  
& geothermal resources

# AOGCC Mission

- Prevent waste of energy resources (Oil, Gas, Geothermal)
- Promote greater ultimate energy resource recovery
- Protect underground fresh water from damage caused by oil, gas, and geothermal operations
- Protect human safety
- Protect correlative rights

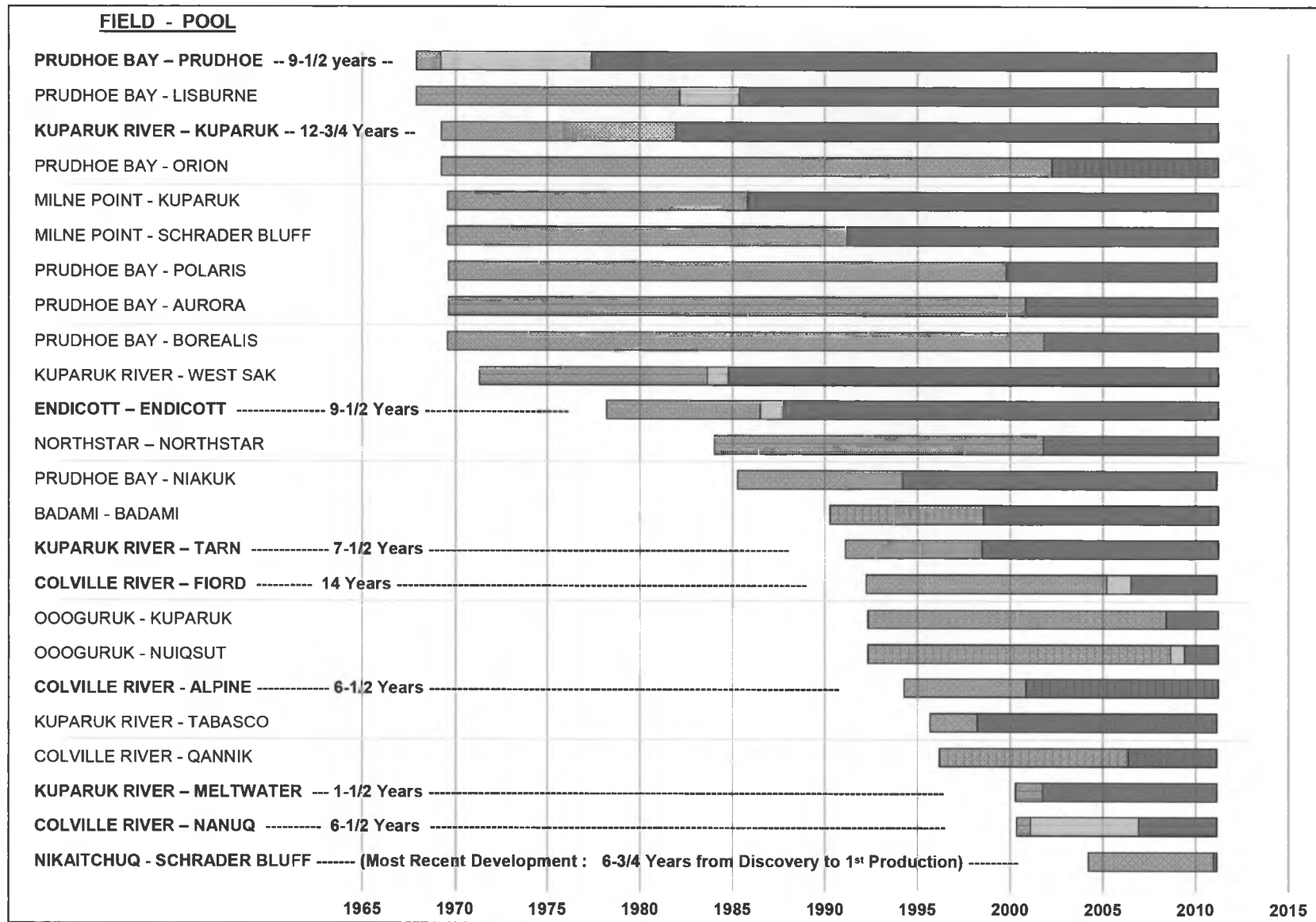
# AOGCC Jurisdiction

- Oil and gas resource development
- Geothermal resource development
- Underground storage of natural gas
- Metering accuracy for custody transfer

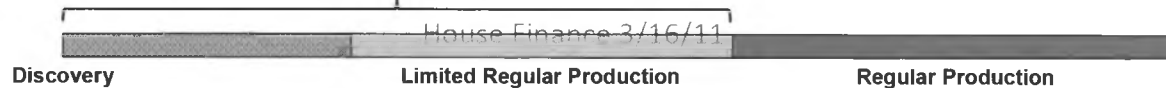
# Types of AOGCC Permits/Decisions

- Drilling- 2300+ last 10 years
- Wellwork- 4000+ last 10 years
- Underground Injection (EOR, Waste disposal, Gas Storage)- 46 last 10 years
- Conservation Orders (mainly Pool Rules)- 192 major orders plus 100's more modifications over last 10 years
- Special development considerations (dispute adjudication, gas flaring, safety equipment, and others)- 67 last 10 years

# Development Timeline for North Slope Oil Fields



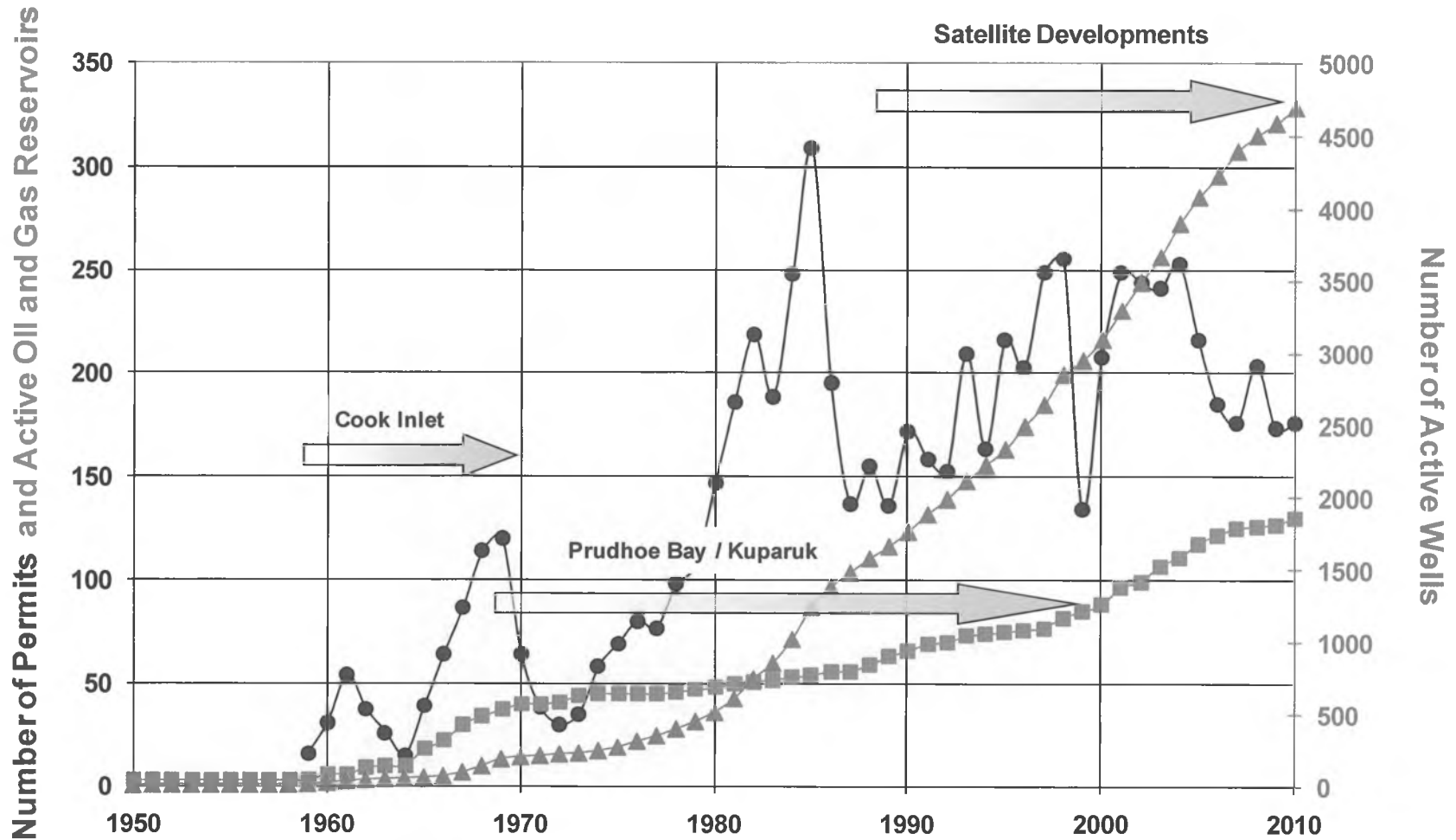
Average = 11 years (neglecting the 5 longest)



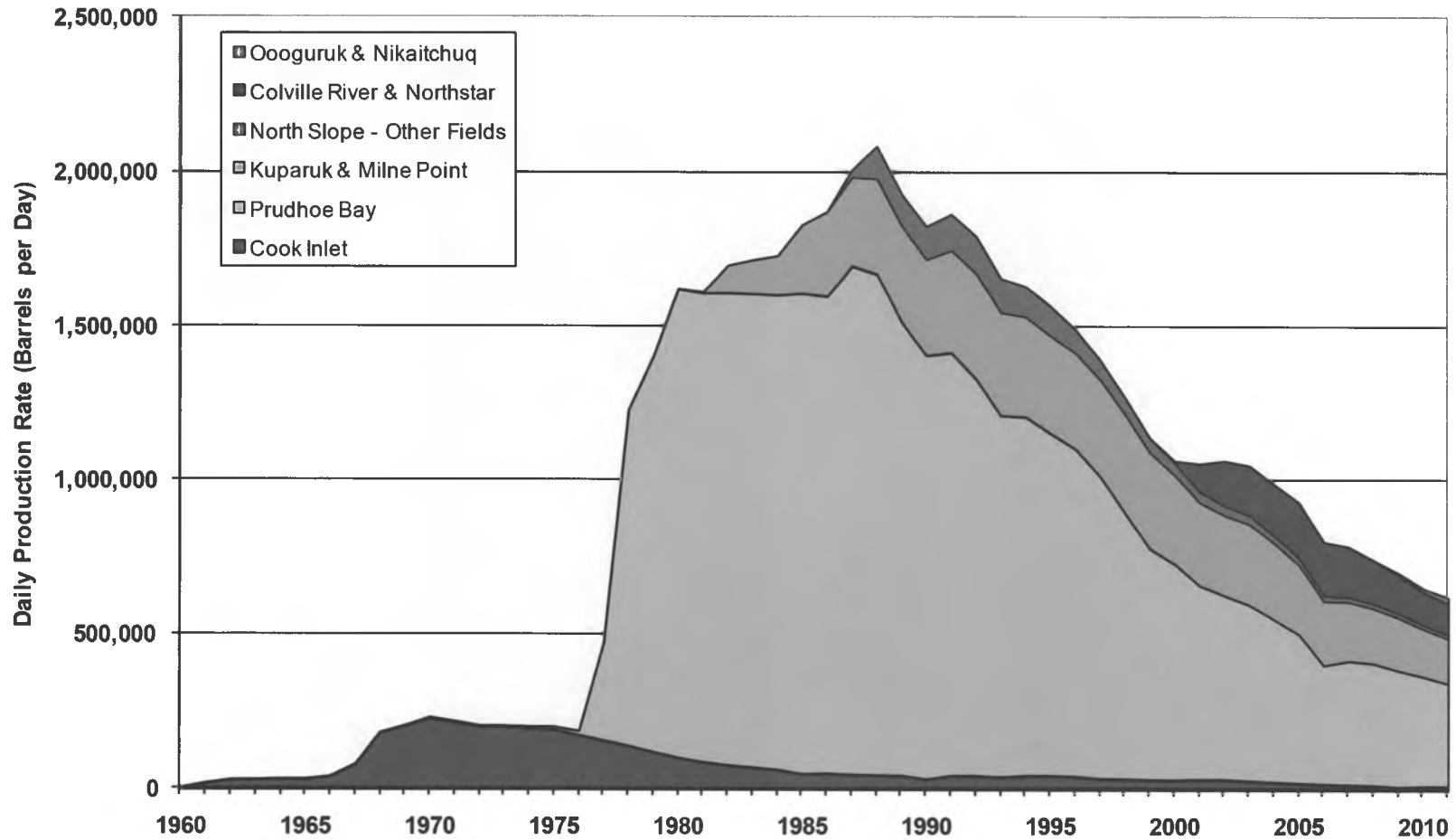
## Alaska Oil and Gas Conservation Commission

- AOGCC Mission
- **Charts and Statistics**
  1. **Historical O & G Activity**
  2. Drilling Permits (the Plan)
  3. Drilled Wells and Well Work (the Actual Work)
- The Future

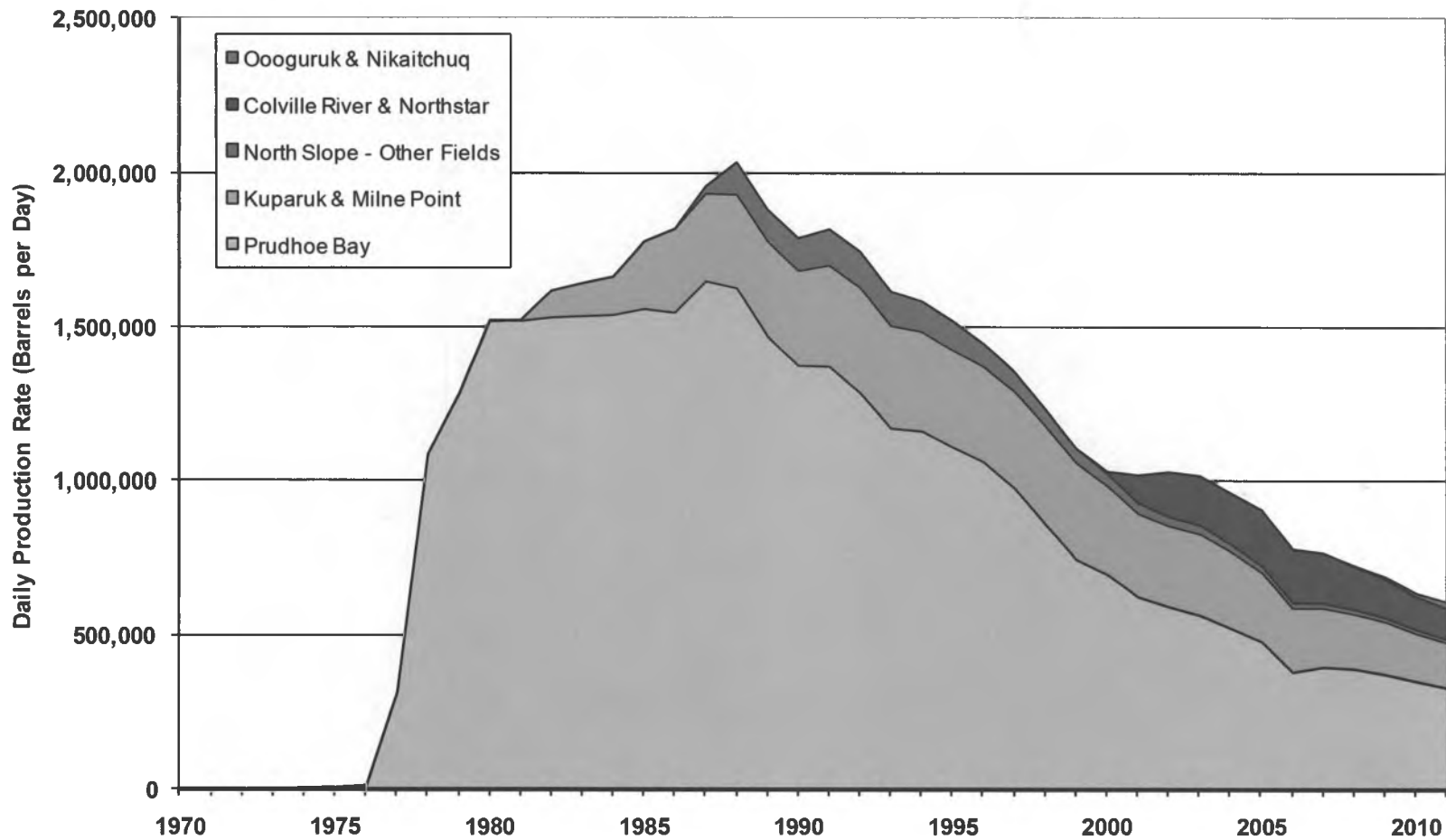
# Alaska Oil & Gas Activity



## Alaska's Average Daily Oil & NGL Production Rate



# North Slope Average Daily Oil & NGL Production Rate



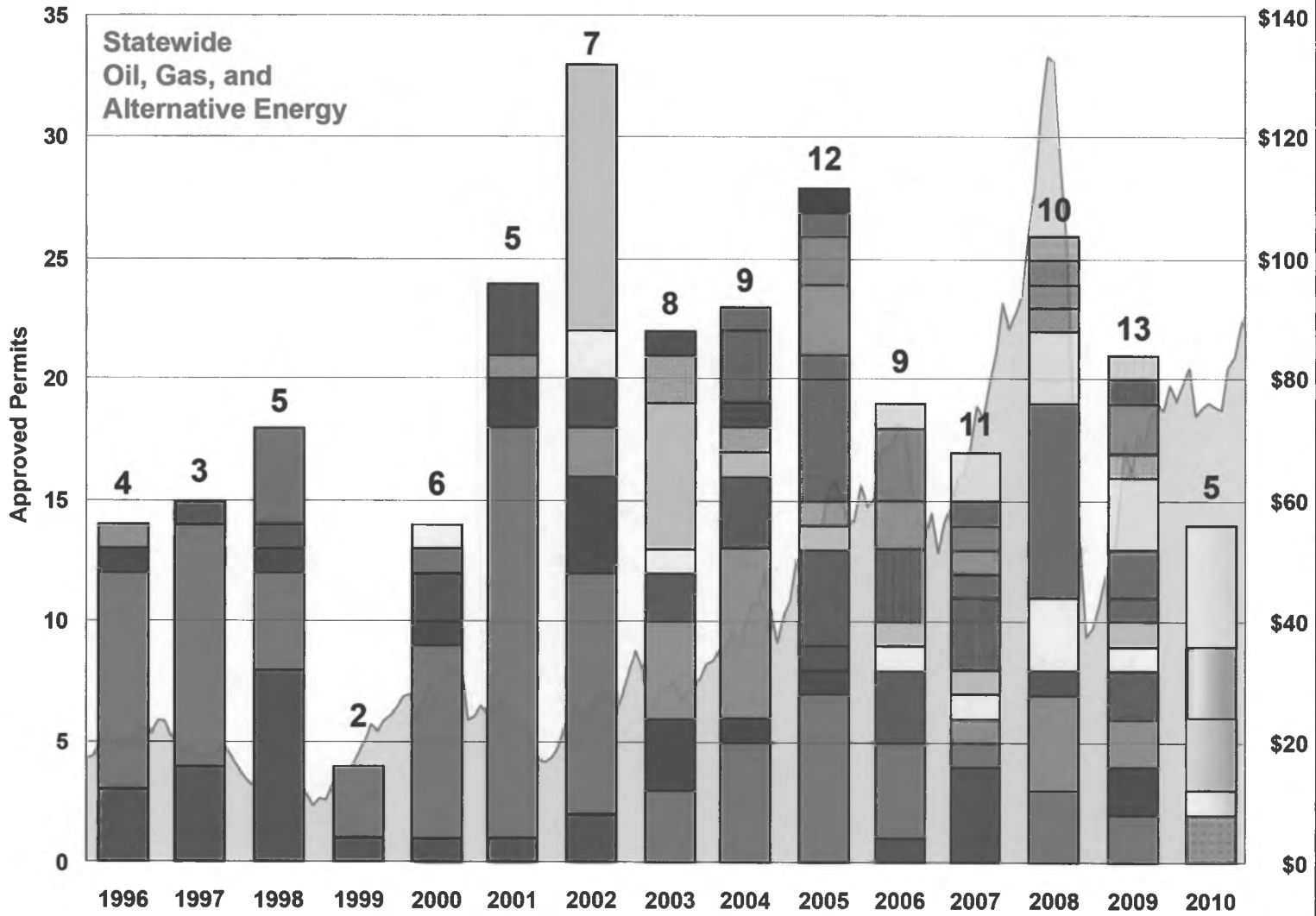
## Alaska Oil and Gas Conservation Commission

- AOGCC Mission
- Charts and Statistics
  1. Historical O & G Activity
  2. **Drilling Permits (the Plans of interested serious potential investors)**
  3. Drilled Wells and Well Work (the Actual Work)
- The Future

# EXPLORATORY WELL PERMITS (1996 - 2010)

## Statewide: Oil, Gas, and Alternative Energy

with West Coast Spot Price for Alaska North Slope Crude Oil (Dollars per Barrel)



**Key**

**5** Number of Operators obtaining permits during specified year

**Alternative Energy Permits**

- CIRI
- ORMAT NEVADA
- CITY OF AKUTAN

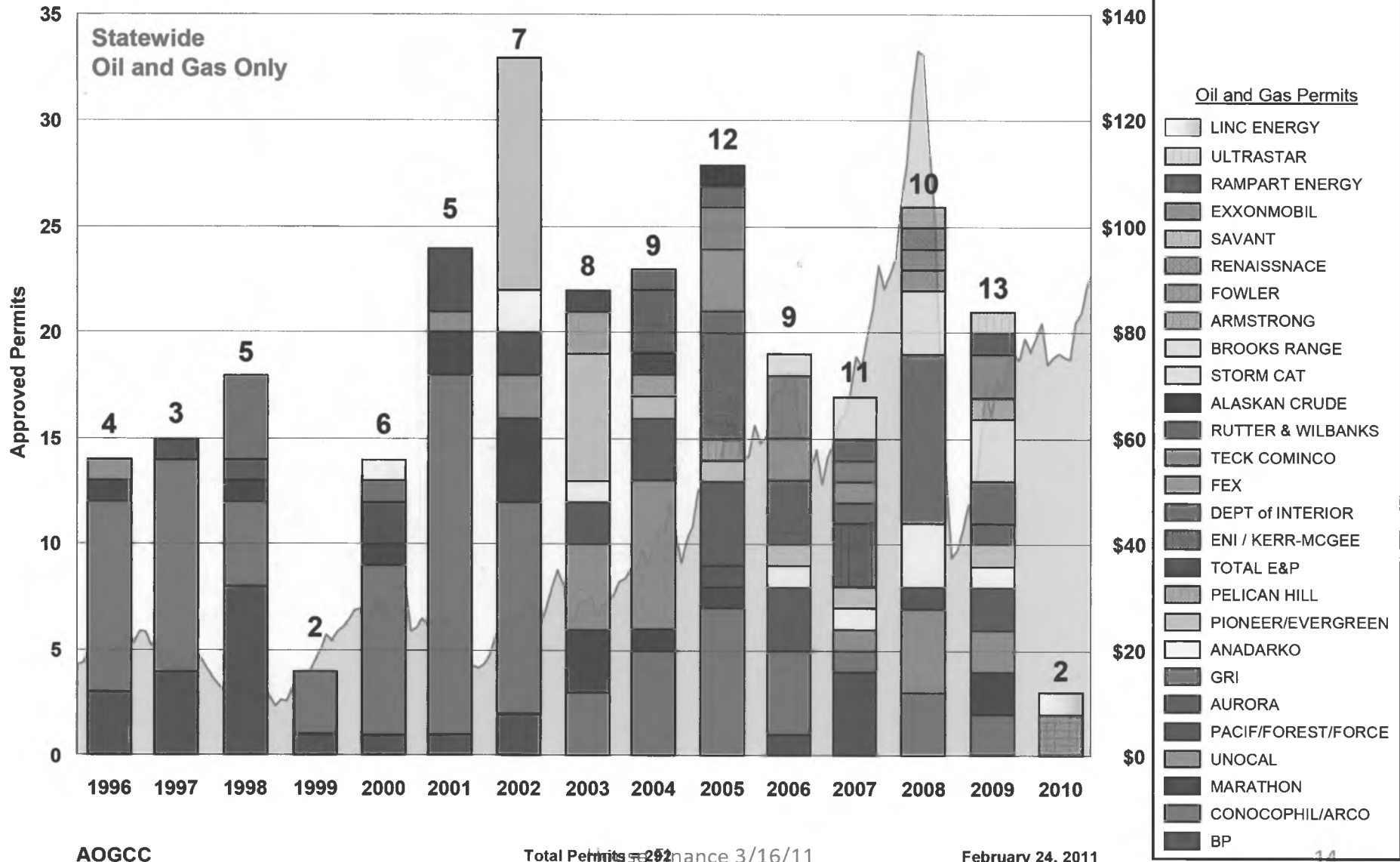
**Oil and Gas Permits**

- LINC ENERGY
- ULTRASTAR
- RAMPART ENERGY
- EXXONMOBIL
- SAVANT
- RENAISSANCE
- FOWLER
- ARMSTRONG
- BROOKS RANGE
- STORM CAT
- ALASKAN CRUDE
- RUTTER & WILBANKS
- TECK COMINCO
- FEX
- DEPT of INTERIOR
- ENI / KERR-MCGEE
- TOTAL E&P
- PELICAN HILL
- PIONEER/EVERGREEN
- ANADARKO
- GRI
- AURORA
- PACIF/FOREST/FORCE
- UNOCAL
- MARATHON
- CONOCOPHIL/ARCO
- BP

# EXPLORATORY WELL PERMITS (1996 - 2010)

## Statewide: Oil and Gas

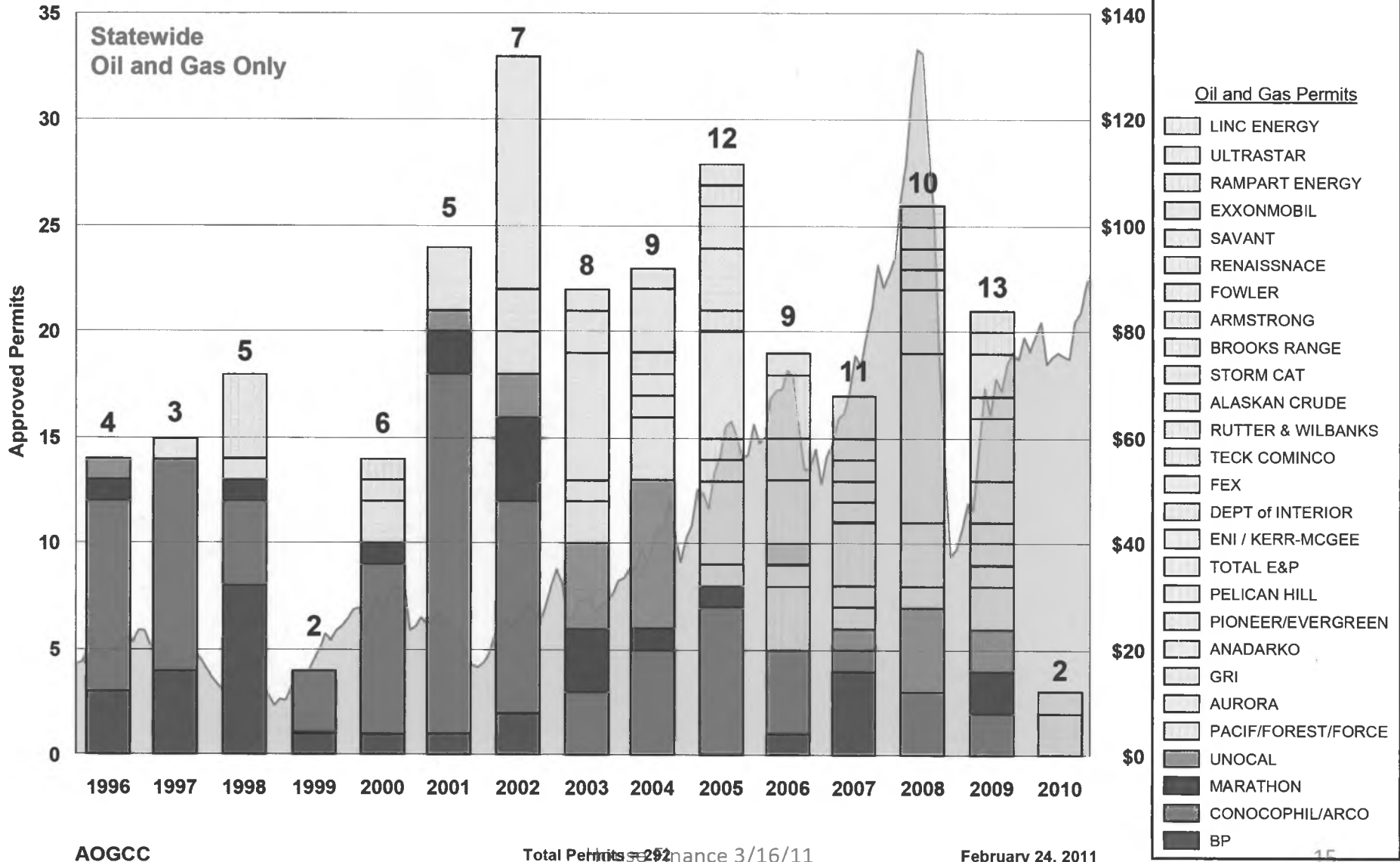
with West Coast Spot Price for Alaska North Slope Crude Oil (Dollars per Barrel)



# EXPLORATORY WELL PERMITS (1996 - 2010)

## Statewide: Oil and Gas

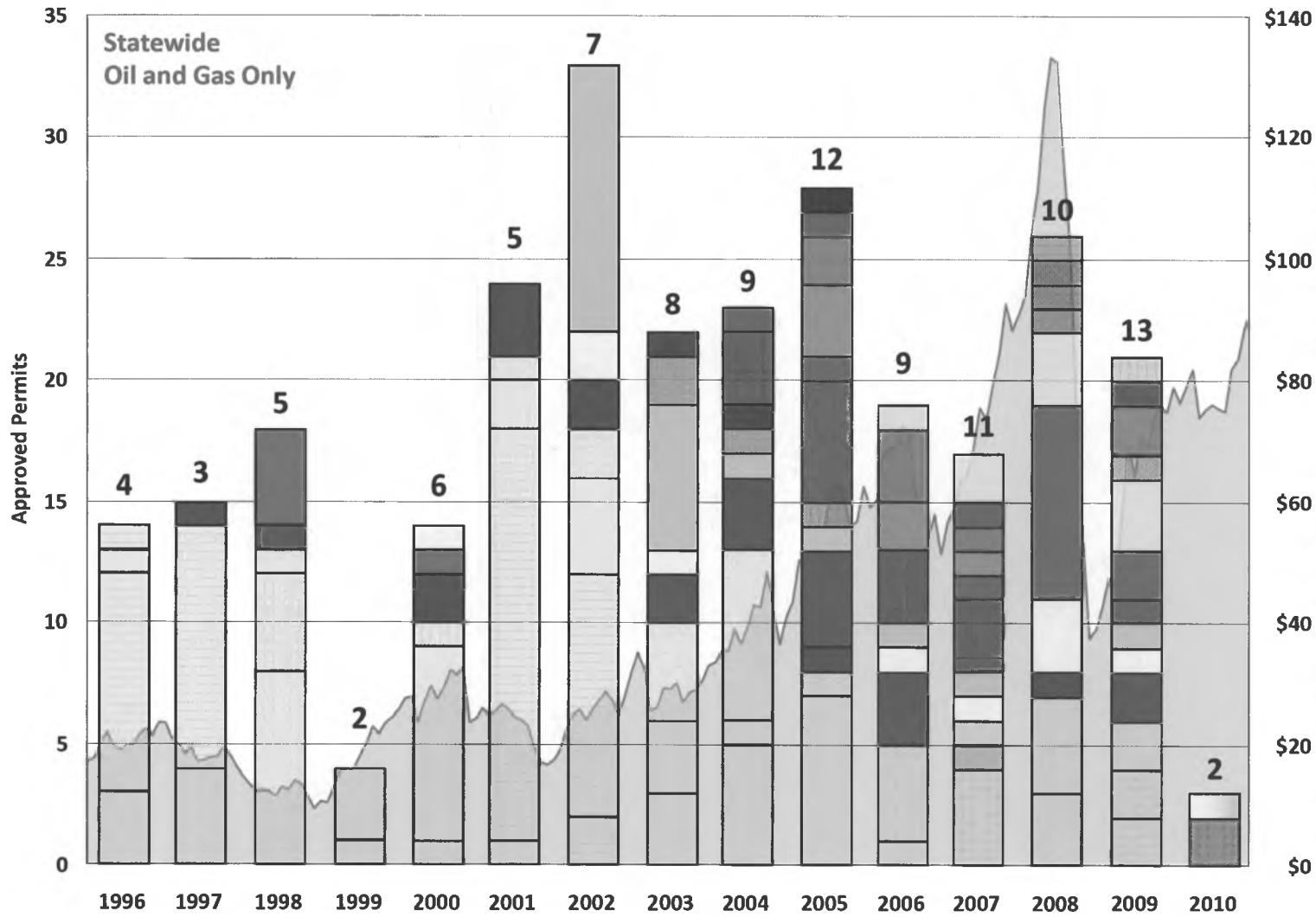
with West Coast Spot Price for Alaska North Slope Crude Oil (Dollars per Barrel)



# EXPLORATORY WELL PERMITS (1996 - 2010)

## Statewide: Oil and Gas

with West Coast Spot Price for Alaska North Slope Crude Oil (Dollars per Barrel)



**Key**

**2** Number of Operators obtaining permits during specified year

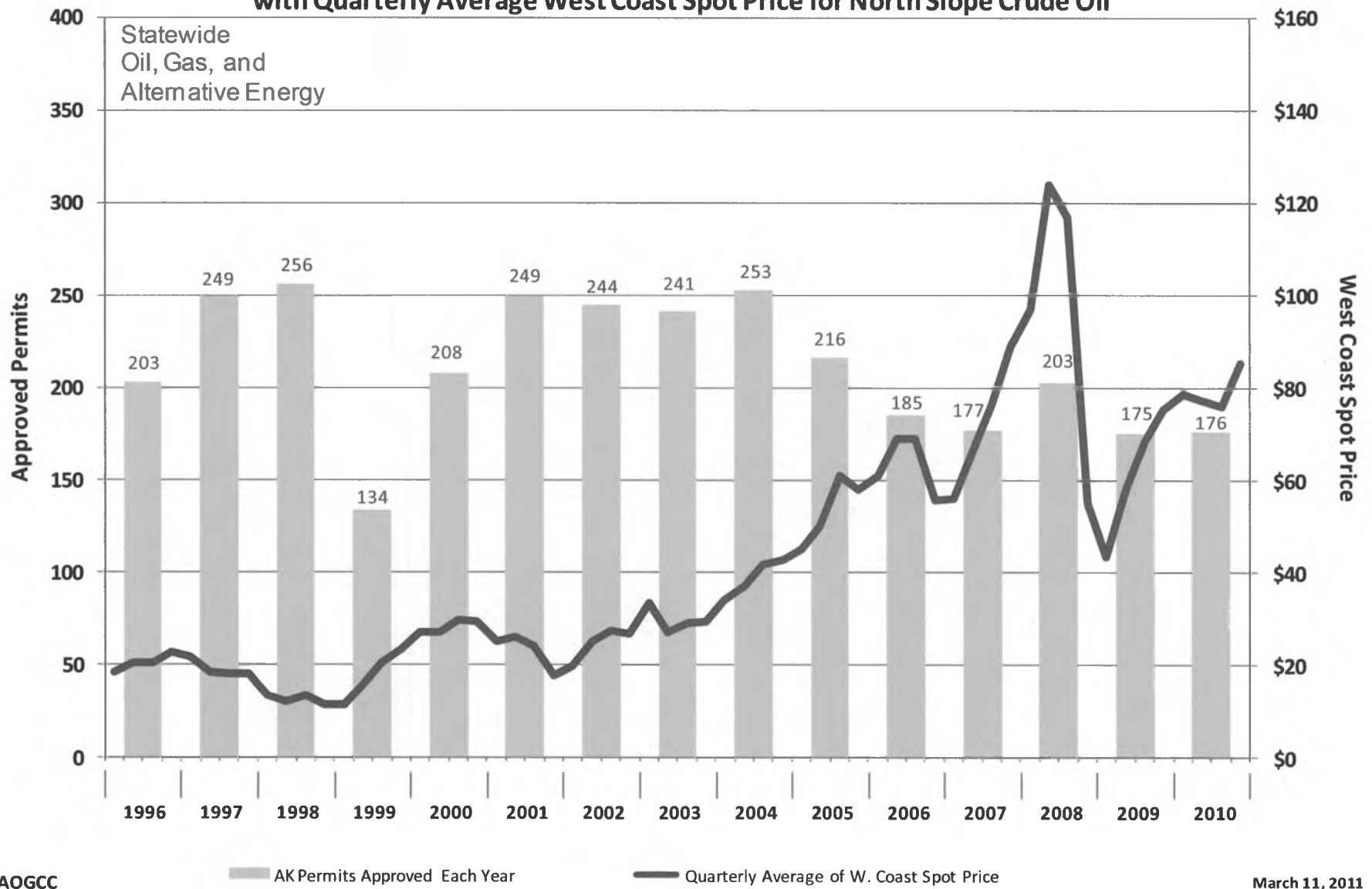
**Oil and Gas Permits**

- LINC ENERGY
- ULTRASTAR
- RAMPART ENERGY
- EXXONMOBIL
- SAVANT
- RENAISSANCE
- FOWLER
- ARMSTRONG
- BROOKS RANGE
- STORM CAT
- ALASKAN CRUDE
- RUTTER & WILBANKS
- TECK COMINCO
- FEX
- DEPT of INTERIOR
- ENI / KERR-MCGEE
- TOTAL E&P
- PELICAN HILL
- PIONEER/EVERGREEN
- ANADARKO
- GRI
- AURORA
- PACIF/FOREST/FORCE
- UNOCAL
- MARATHON
- CONOCOPHIL/ARCO
- BP

# Approved Permits to Drill for Each Year (1996 - 2010)

## Statewide: Oil, Gas and Alternative Energy Wells and Wellbores

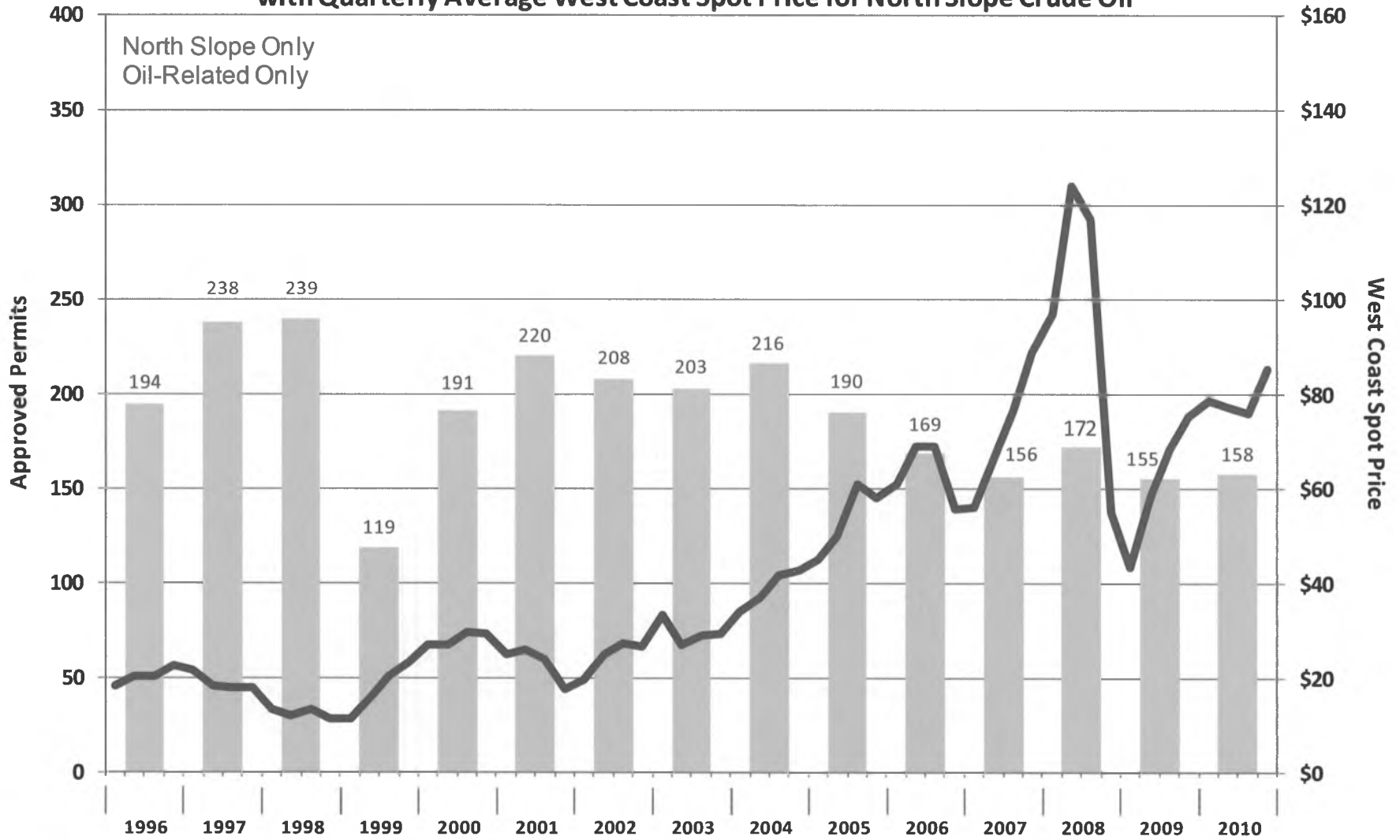
with Quarterly Average West Coast Spot Price for North Slope Crude Oil



# Approved Permits to Drill for Each Year (1996 - 2010)

## North Slope: Oil-Related Wells and Wellbores

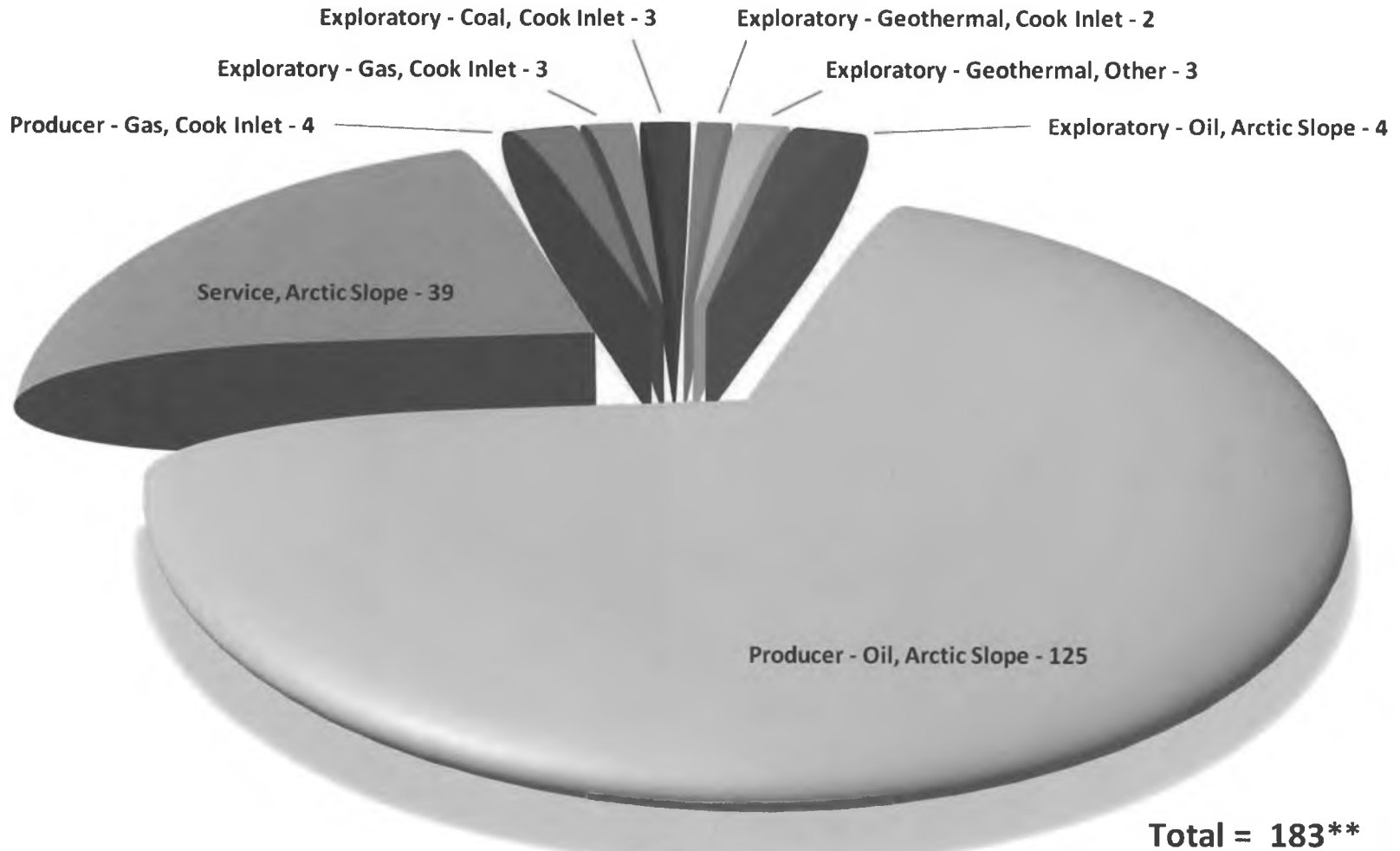
with Quarterly Average West Coast Spot Price for North Slope Crude Oil



## Alaska Oil and Gas Conservation Commission

- AOGCC Mission
- Charts and Statistics
  1. Historical O & G Activity
  2. Drilling Permits (the Plan)
  3. **Drilled Wells and Well Work (the Actual Work done by actual investors)**
- The Future

# Alaska 2010 Wells and Wellbores\*



AOGCC

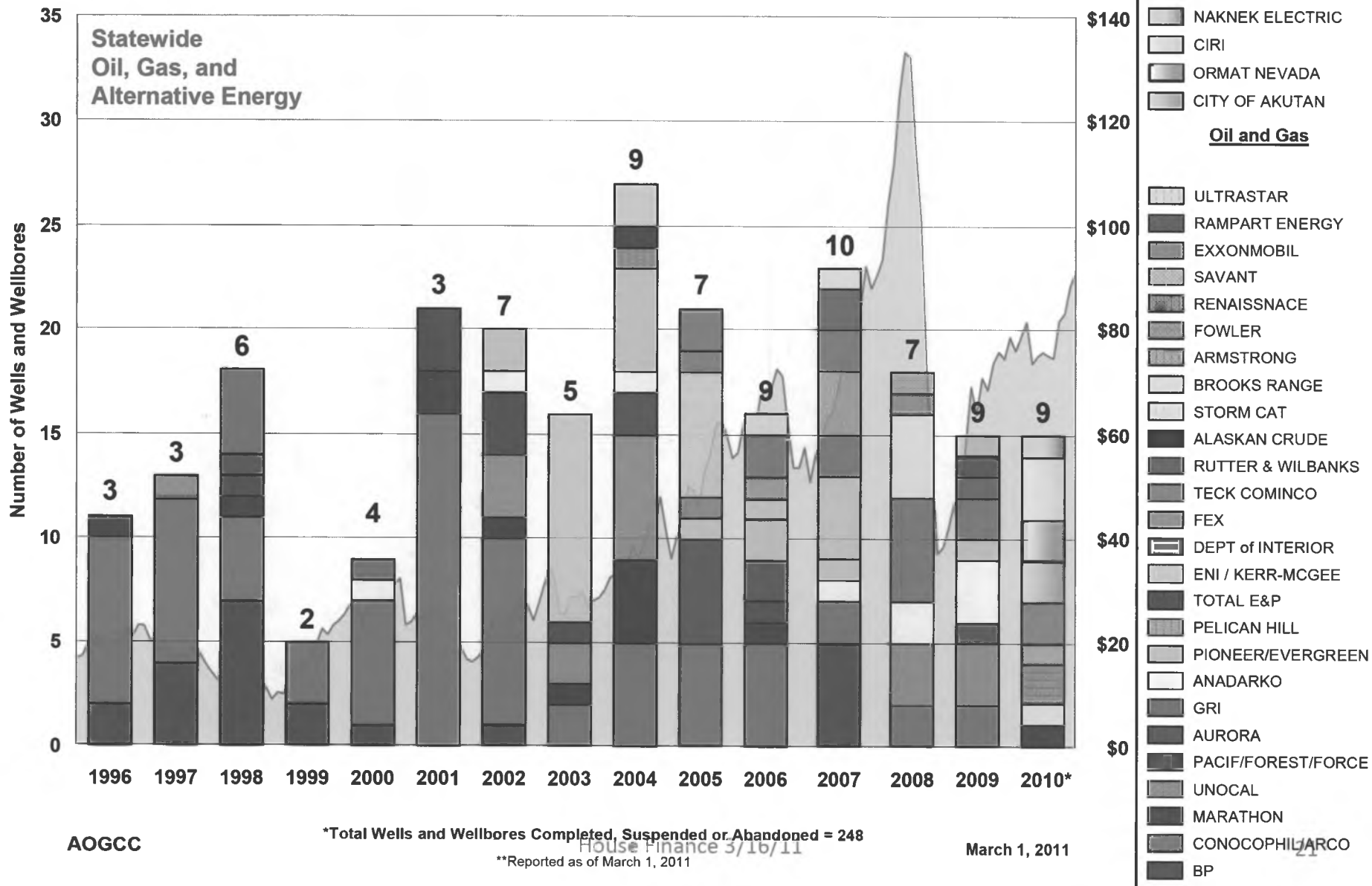
\* Completed, Suspended or Abandoned  
\*\* Reported as of March 1, 2011

March 1, 2011

*Pg 20*

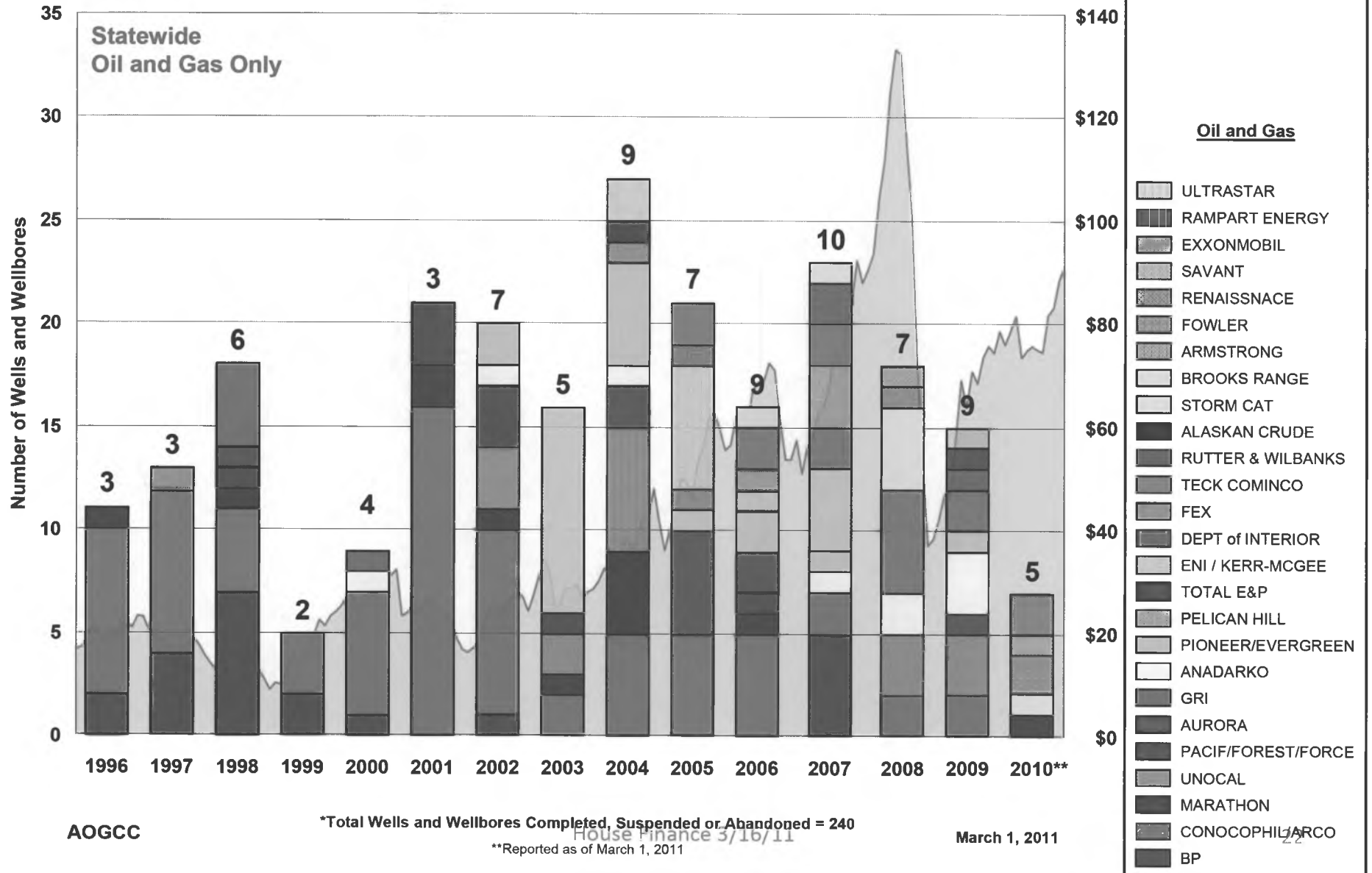
# EXPLORATORY WELLS AND WELLBORES

Statewide: Completed, Suspended or Abandoned (1996 - 2010)\*  
with West Coast Spot Price for Alaska North Slope Crude Oil (Dollars per Barrel)



# EXPLORATORY WELLS AND WELLBORES

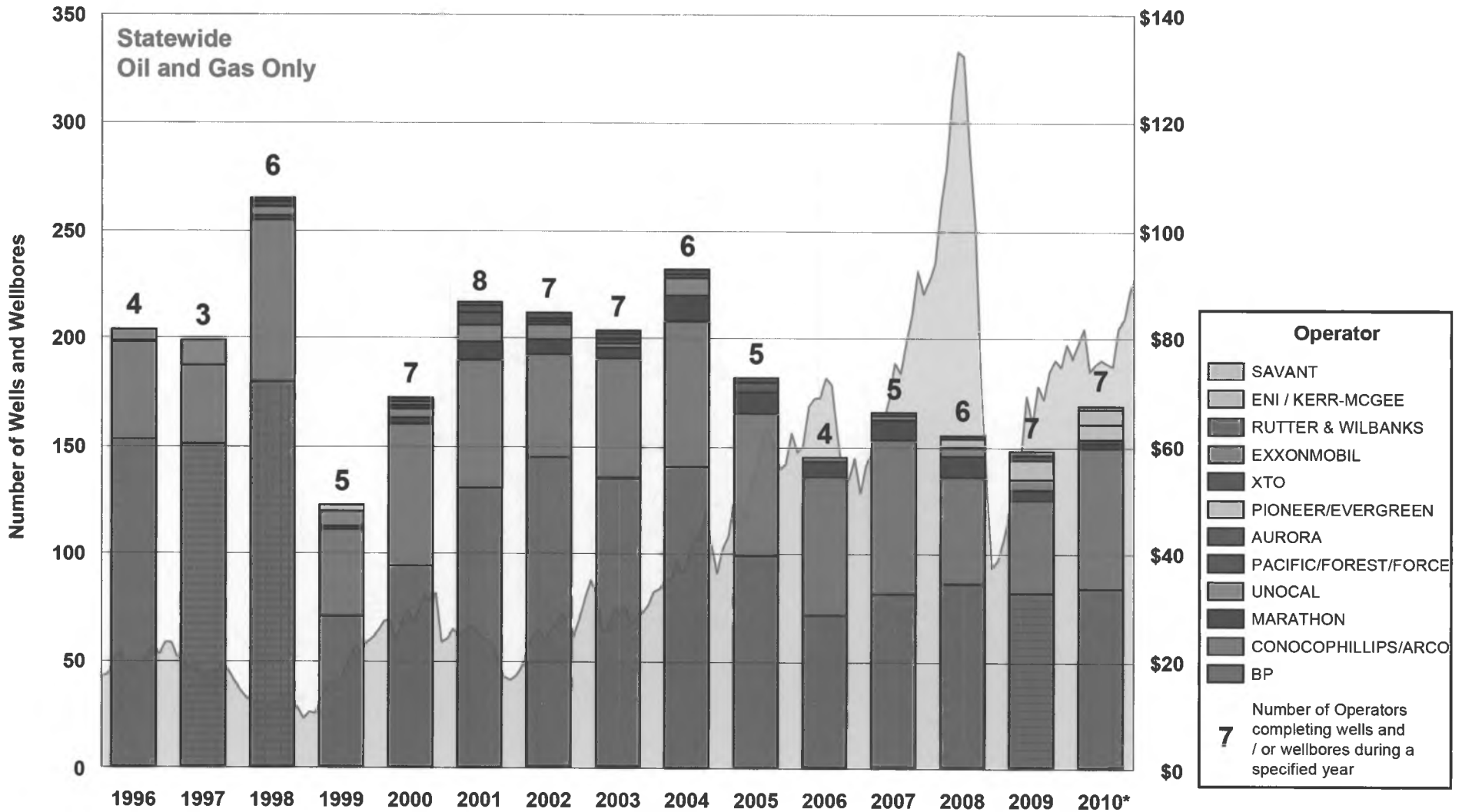
**Oil and Gas: Completed, Suspended or Abandoned (1996 - 2010)\***  
with West Coast Spot Price for Alaska North Slope Crude Oil (Dollars per Barrel)



# DEVELOPMENT AND SERVICE WELLS / WELLBORES

## Statewide: Completed, Suspended or Abandoned (1996 - 2010)\*

with West Coast Spot Price for Alaska North Slope Crude Oil (Dollars per Barrel)

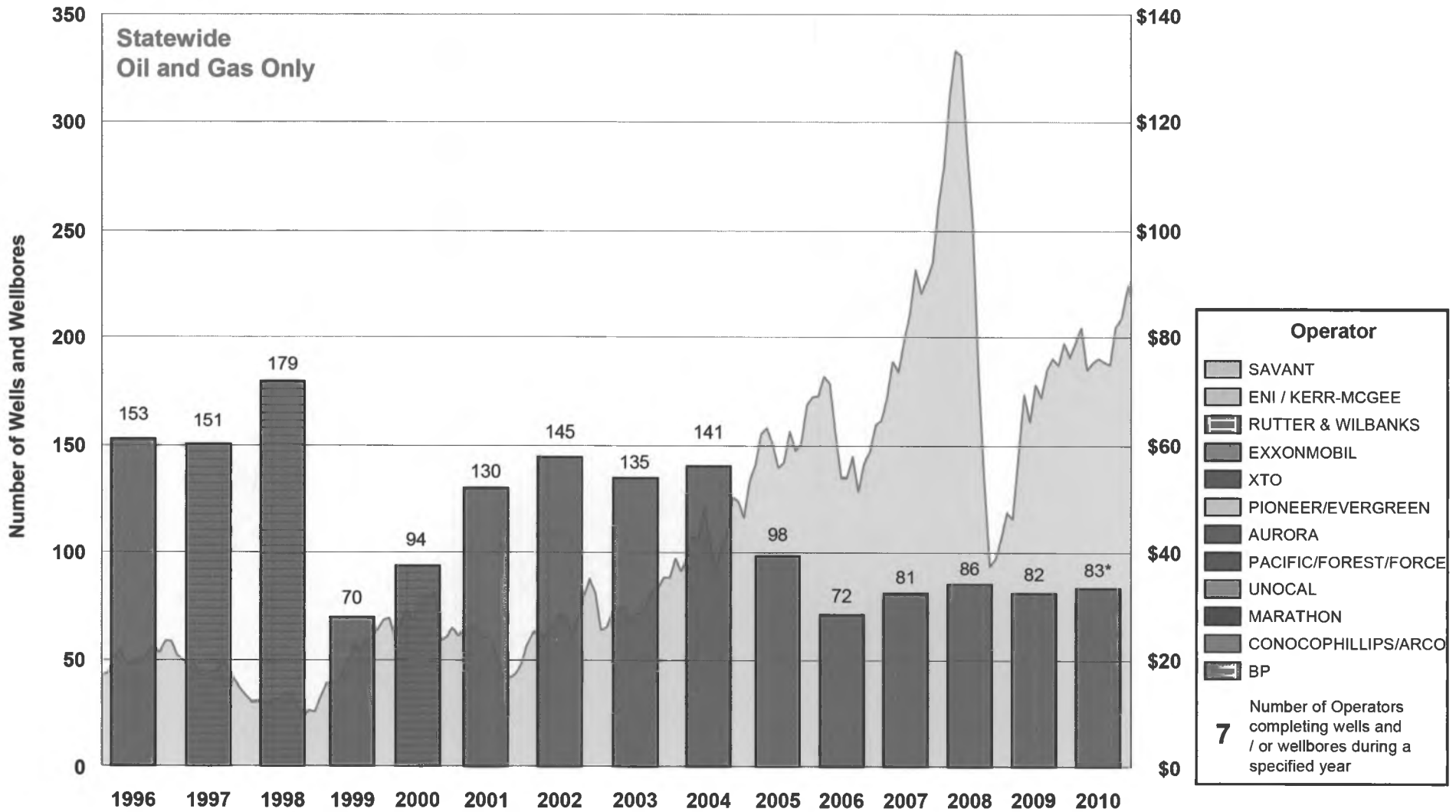


# DEVELOPMENT AND SERVICE WELLS / WELLBORES

## Statewide: Completed, Suspended or Abandoned (1996 - 2010)\*

### by BP Exploration (Alaska), Inc.

with West Coast Spot Price for Alaska North Slope Crude Oil (Dollars per Barrel)

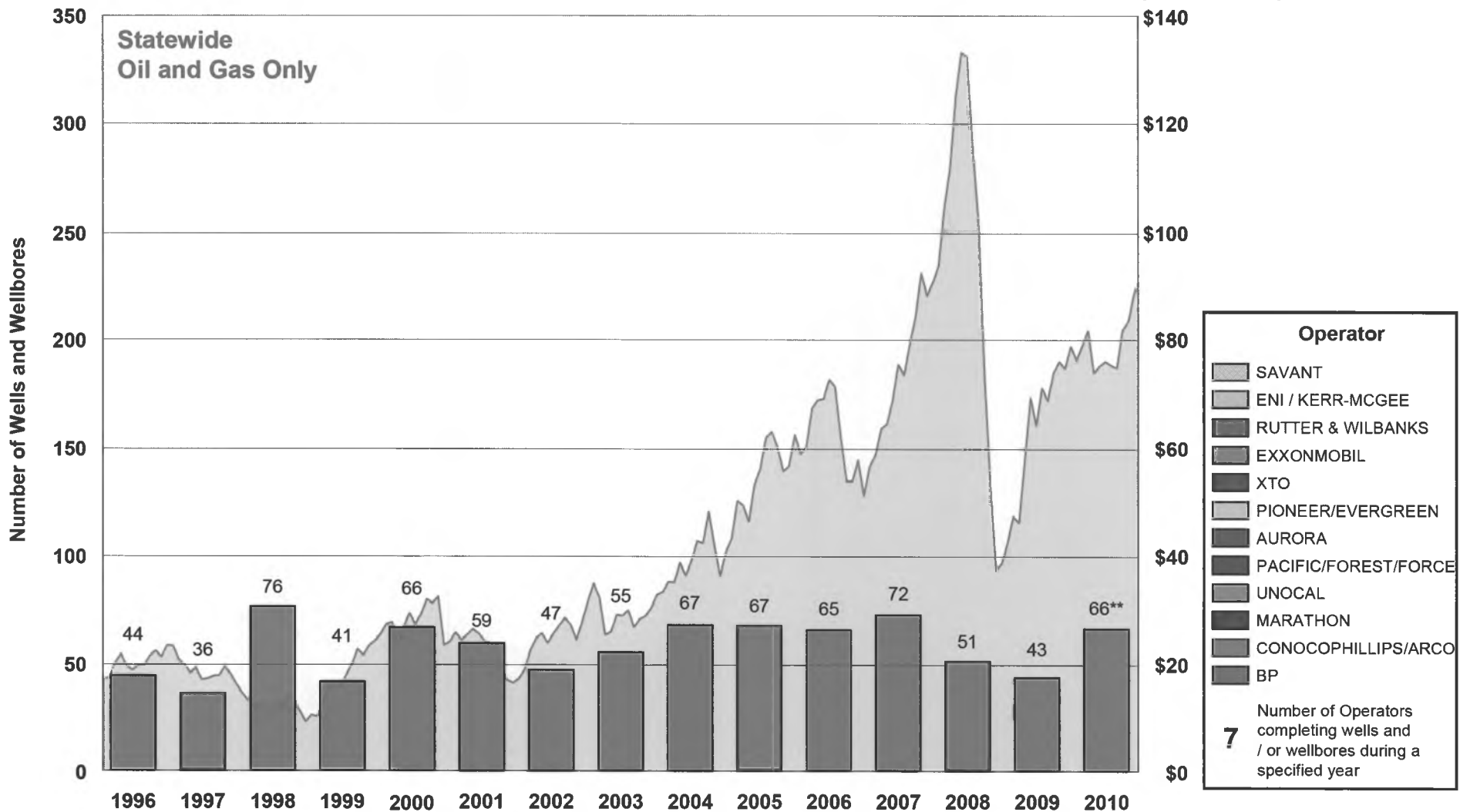


# DEVELOPMENT AND SERVICE WELLS / WELLBORES

## Statewide: Completed, Suspended or Abandoned (1996 - 2010)\*

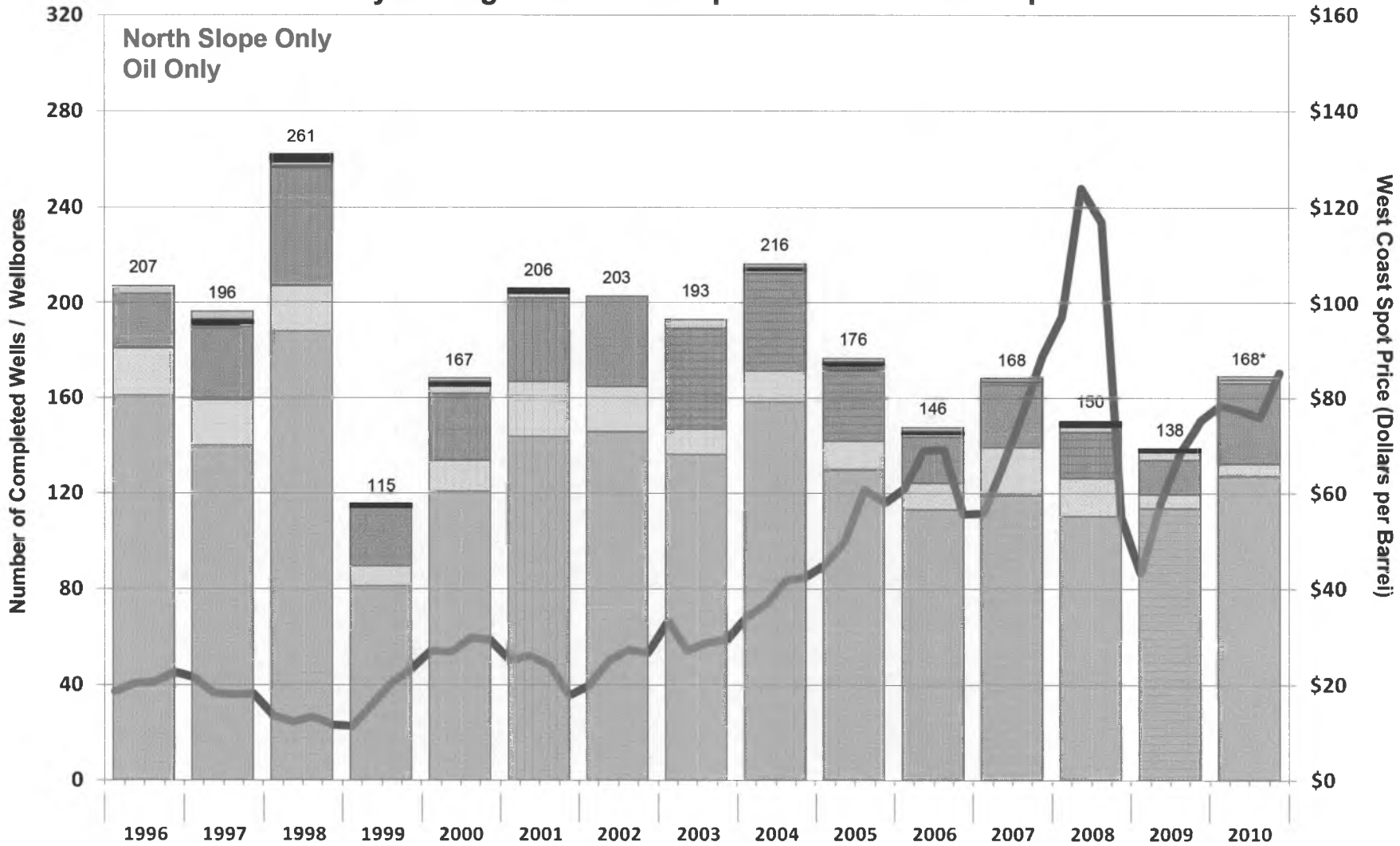
### by ConocoPhillips Alaska, Inc.

with West Coast Spot Price for Alaska North Slope Crude Oil (Dollars per Barrel)



# Completed, Suspended and Abandoned Oil and Support Wells and Wellbores – North Slope Only 1996 – 2010\*

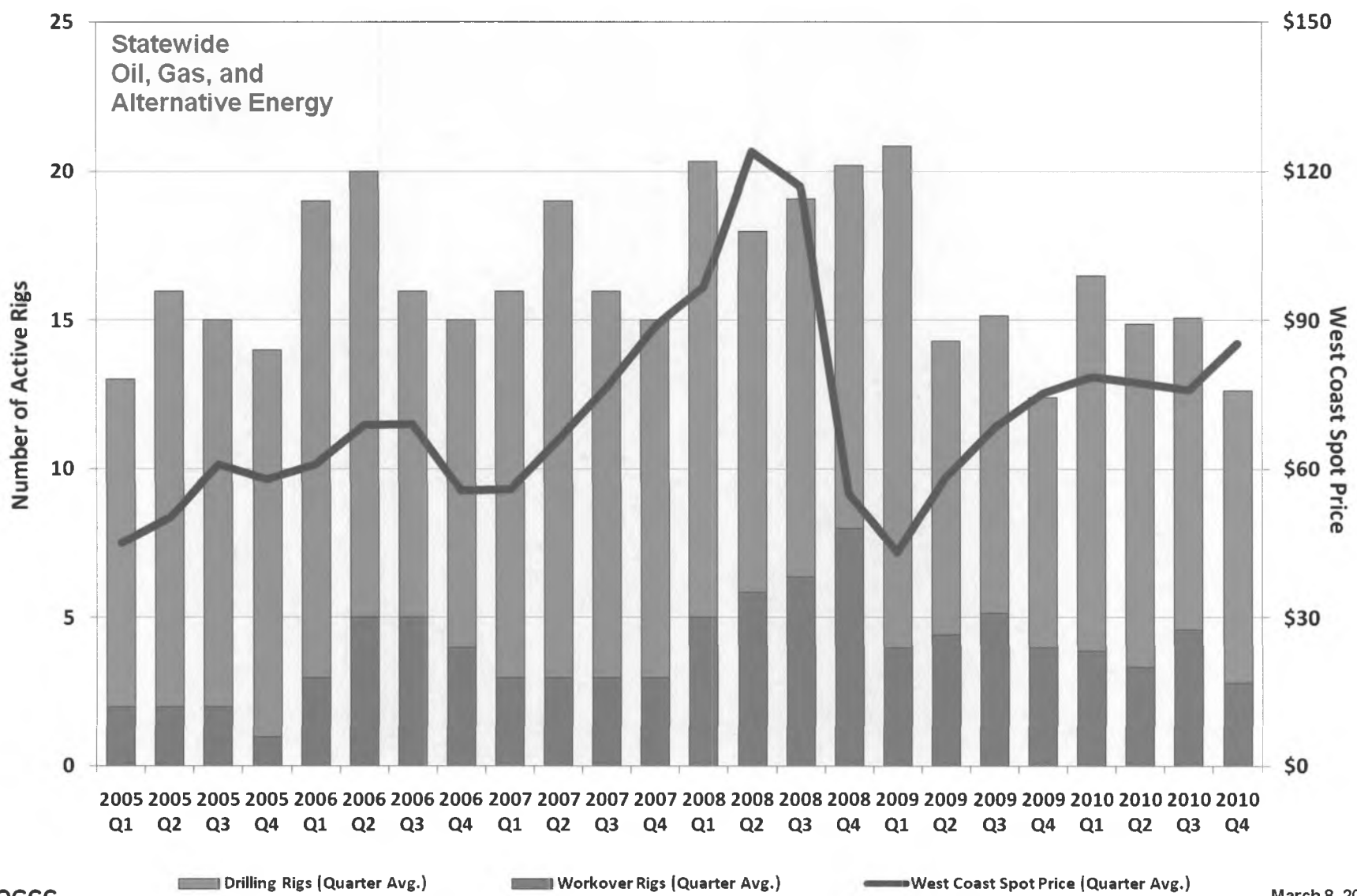
with Quarterly Average West Coast Spot Price for North Slope Crude Oil



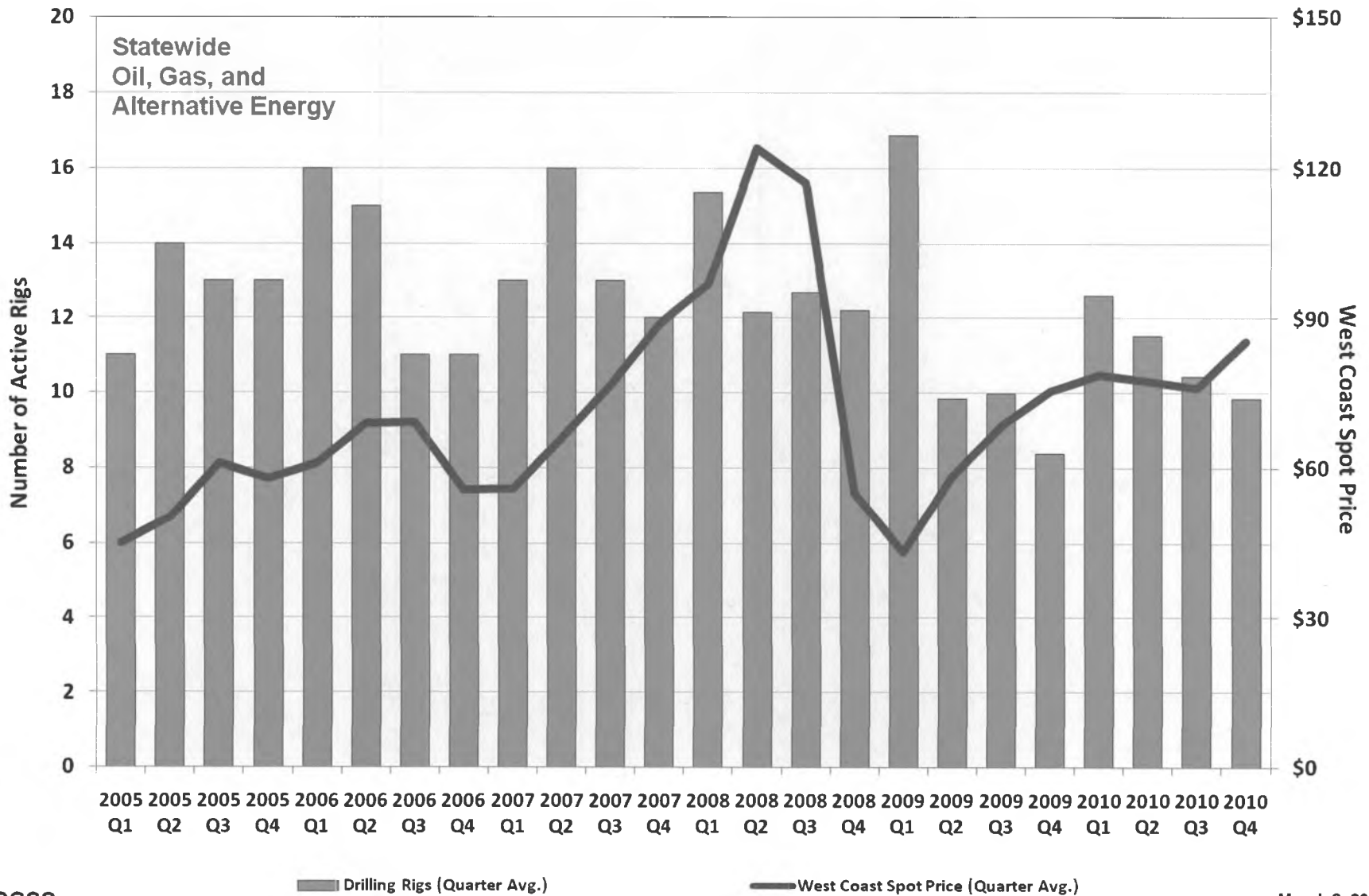
Oil Producer - Inactive    
  Injector - Inactive    
  Water Supply  
 Oil Producer - Active    
  Injector - Active    
  Injector - Waste

Quarterly Average of W. Coast Spot Price  
**Total Wells and Wellbores = 2,710**  
 \*Reported as of March 1, 2011

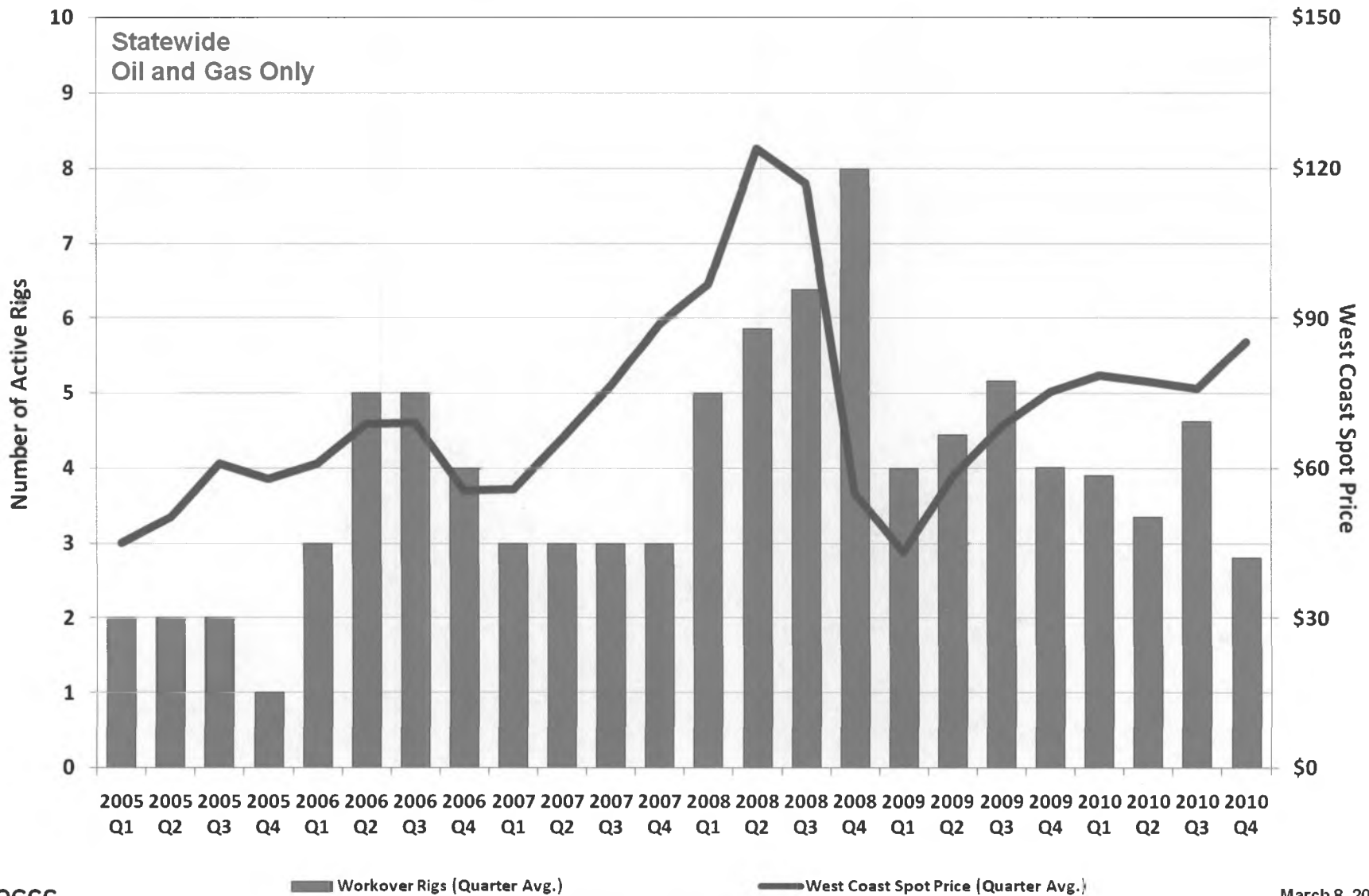
# Alaska's Active Drilling and Workover Rigs for Each Quarter (2005 - 2010) with Quarterly Average West Coast Spot Price for North Slope Crude Oil



## Alaska's Active Drilling Rigs for Each Quarter (2005 - 2010) with Quarterly Average West Coast Spot Price for North Slope Crude Oil

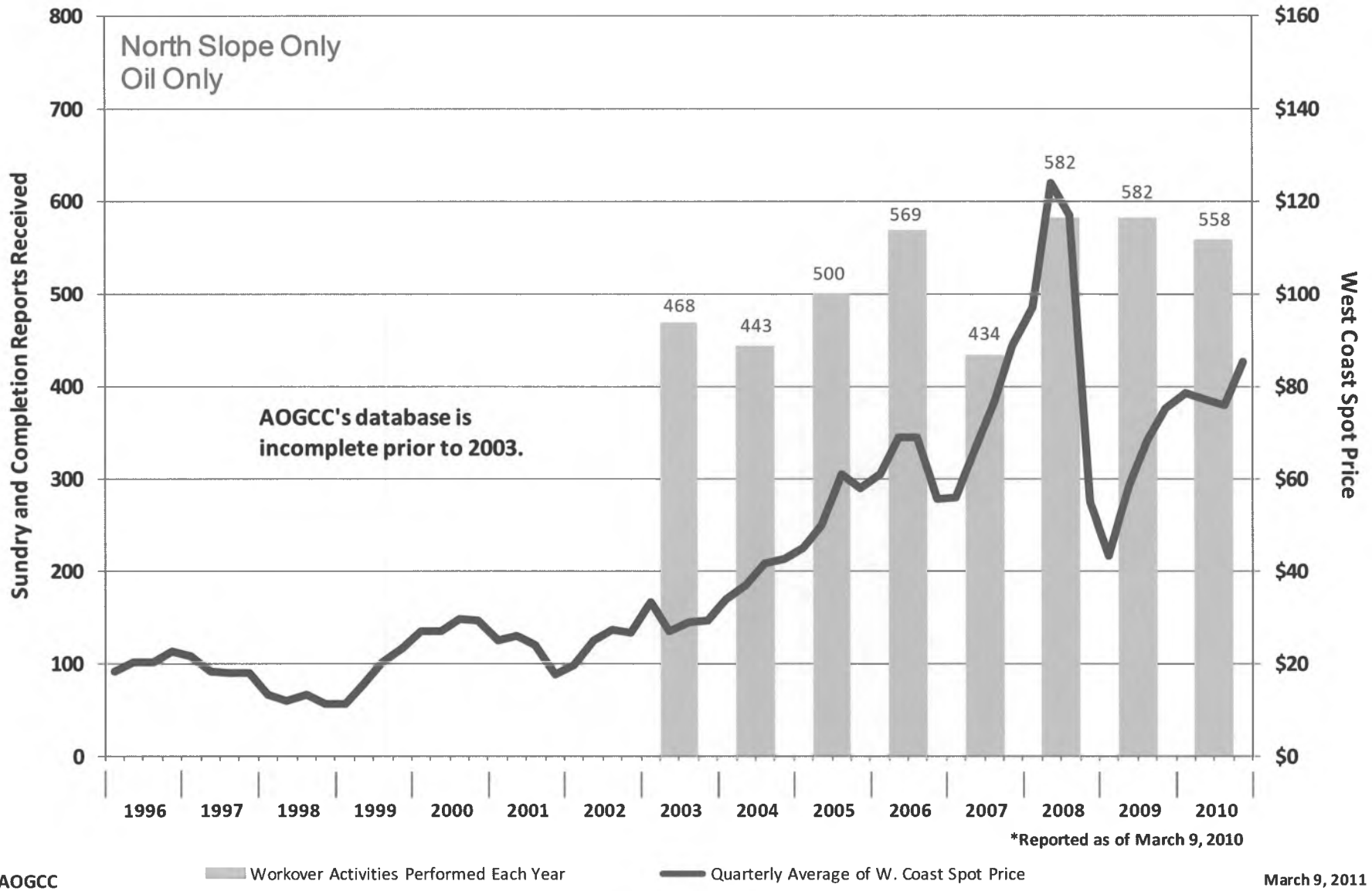


## Alaska's Active Workover Rigs for Each Quarter (2005 - 2010) with Quarterly Average West Coast Spot Price for North Slope Crude Oil



# Well Workover Activities for Each Year (North Slope Only) 2003 - 2010\*

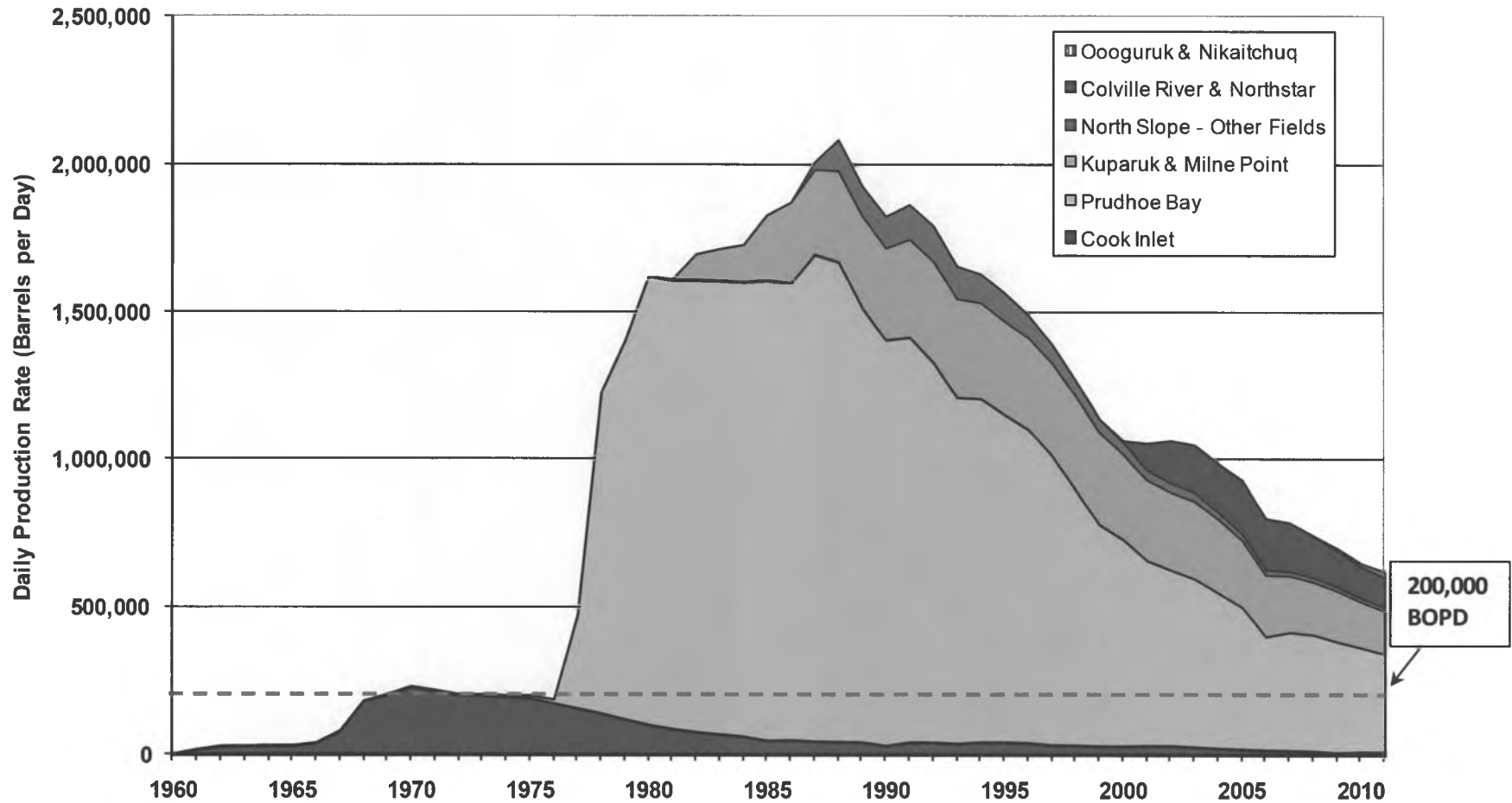
## with Quarterly Average West Coast Spot Price for North Slope Crude Oil



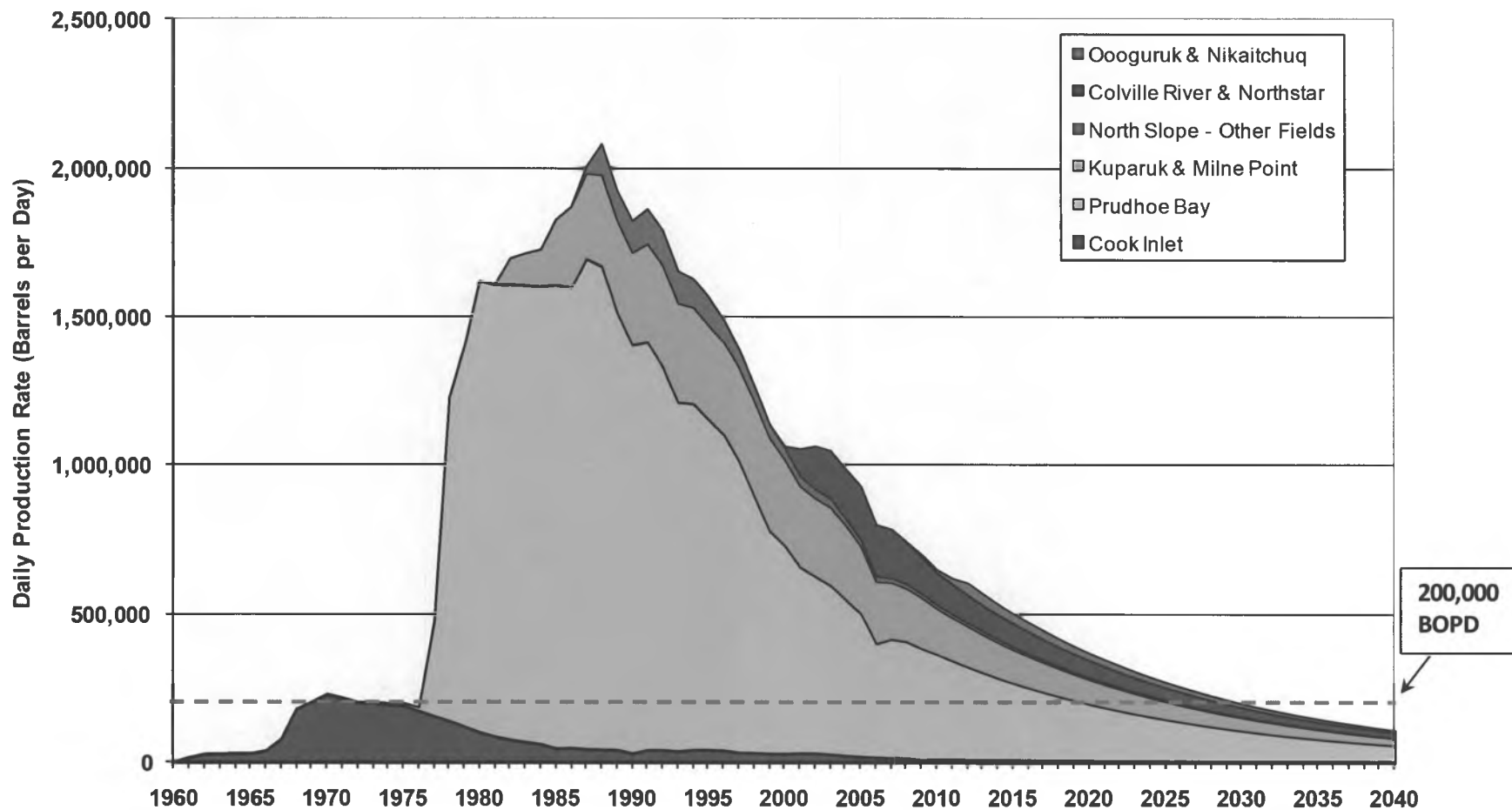
## Alaska Oil and Gas Conservation Commission

- AOGCC Mission
- Charts and Statistics
  1. Historical O & G Activity
  2. Drilling Permits (the Plan)
  3. Drilled Wells and Well Work (the Actual Work)
- **The Future**

# Alaska's Average Daily Oil & NGL Production Rate

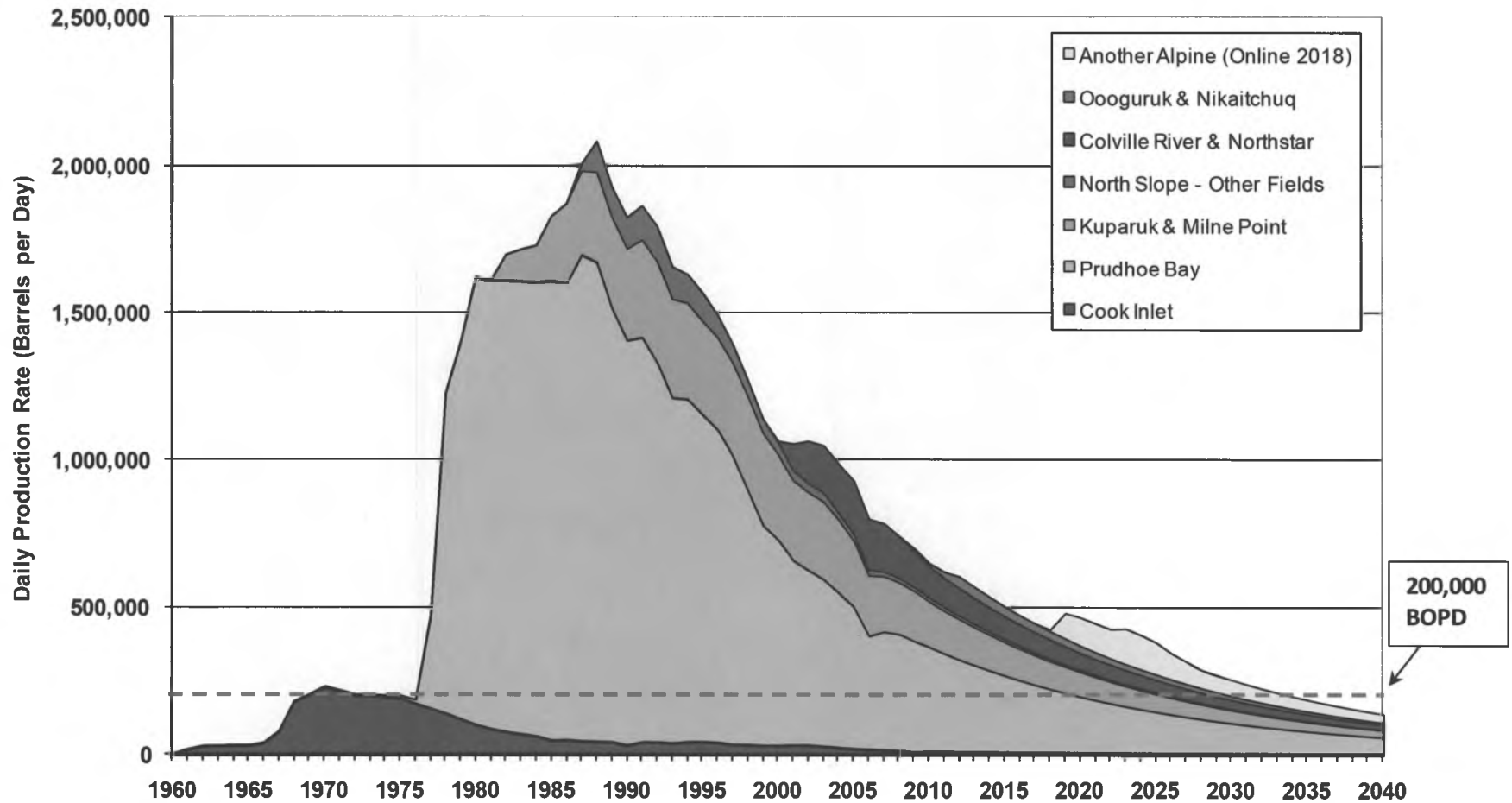


## Alaska's Average Daily Oil & NGL Production Rate (6% Annual Decline Rate)



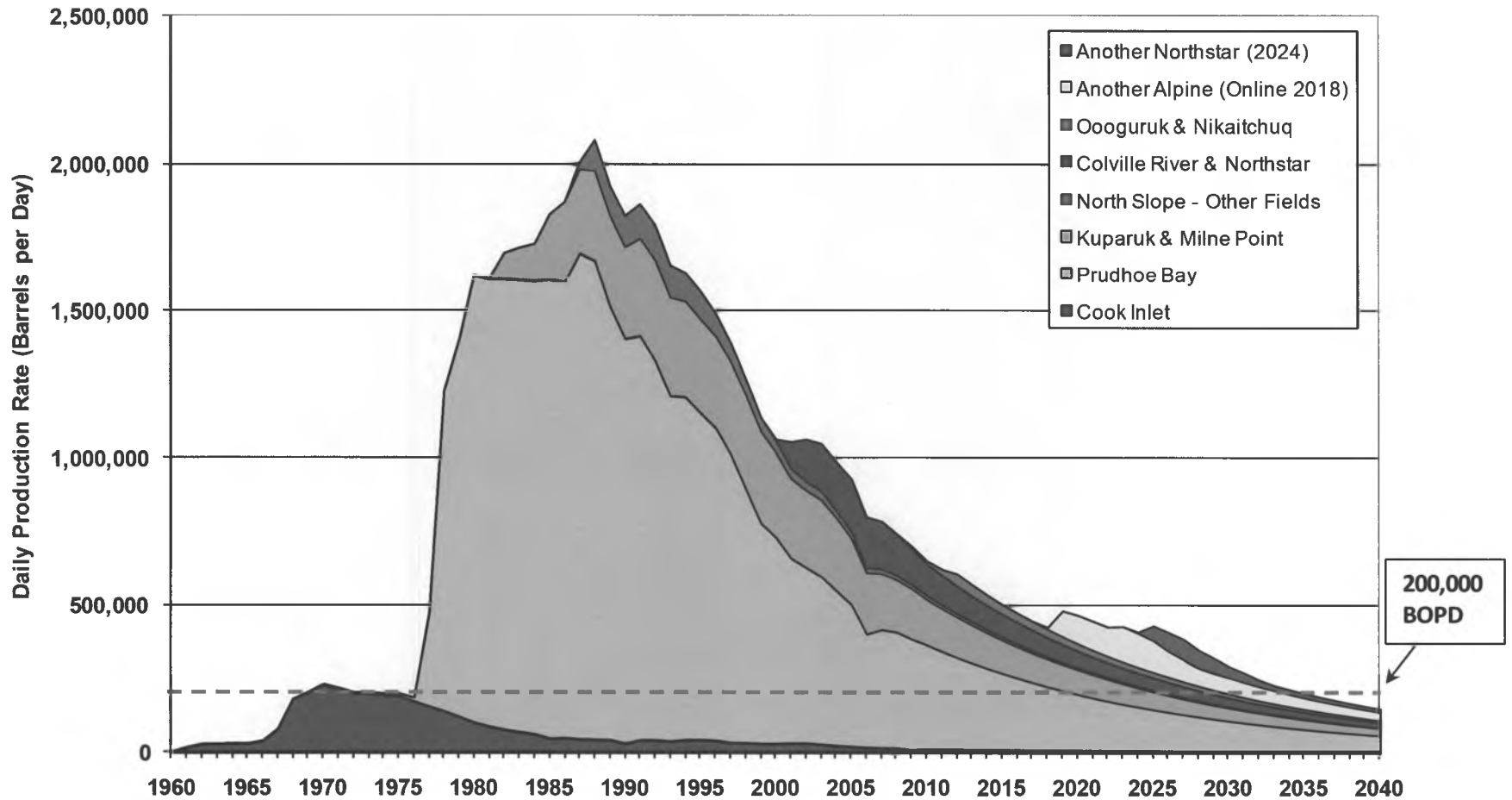
# Alaska's Average Daily Oil & NGL Production Rate

(6% Annual Decline Rate with Alpine-Sized Field Added 2018)



# Alaska's Average Daily Oil & NGL Production Rate

(6% Annual Decline Rate with New Fields Added 2018 and 2024)





# Alaska Oil and Gas Conservation Commission (AOGCC)

## Contact Information

Phone: (907) 793-1221

Fax: (907) 276-7542

[www.aogcc.alaska.gov](http://www.aogcc.alaska.gov)

Photo by Daniel T. Seamount III

Alaska State Legislature  
HOUSE FINANCE COMMITTEE

Agenda  
8:00 AM

Thursday, March 17, 2011

HB 110-PRODUCTION TAX ON OIL AND GAS

Presentation by Department of Revenue  
Production Tax Credits

Bryan Butcher, Commissioner, Department of Revenue  
Bruce Tangeman, Deputy Commissioner, Department of  
Revenue

# PRODUCTION TAX CREDITS

## PRESENTED TO THE HOUSE FINANCE COMMITTEE

MARCH 17, 2011

3/17/2011

Alaska State Department of Revenue

# Overview

2

## **Types of Production Tax Credits**

- Credits Applied Against Production Tax Liability
- Transferable Tax Credit Certificates
- Cash Refunds History

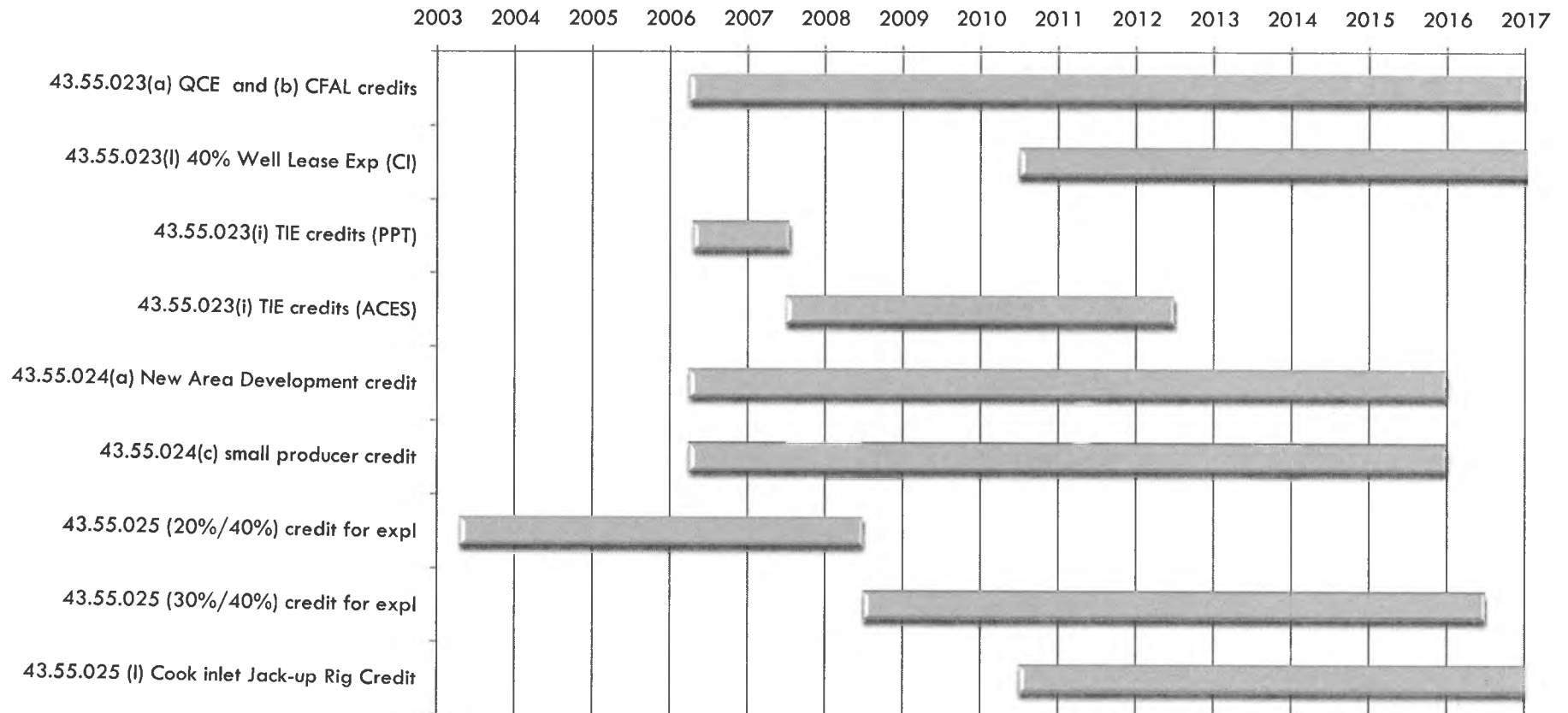
# Types of Production Tax Credits

3

Credits which may be taken against oil and gas production taxes include:

- Capital Expenditure Credits
- Alternative Tax Credits for Oil and Gas Exploration
- Net Operating Loss (“NOL”) Carry Forward Credits
- Transitional Investment Expenditure (“TIE”) Credit
- Additional Nontransferable Tax Credits
- Well Lease Expenditures Credit
- Cook Inlet Jack-up Rig Credit

# Timelines for Production Tax Credits



# Overview

5

- Types of Production Tax Credits
- Credits Applied Against Production Tax Liability**
- Transferable Tax Credit Certificates
- Cash Refunds History

# Credits Applied Against Production Tax Liability

6

## Credits may be redeemed in two ways:

### (1) All Credits may be applied against production tax liability

- Capital Expenditure and Capital Exploration Credits split over two years (except south of 68 degree North latitude – eff. July 1, 2010)
- NOL , TIE, Small Producer and Alternative Tax Credits for Oil and Gas Exploration may all be applied against tax liability in total in a single year

### (2) Some Credits may be converted into a transferable Tax Credit Certificate

- Capital Expenditure, Capital Exploration, NOL, and Alternative Tax Credits for Oil and Gas Exploration are convertible to tax certificates
- Capital Expenditure, Capital Exploration and NOL Tax Credit Certificates must be applied over two years (except south of 68 degrees North latitude – passed 2010)
- Alternative Tax Credits for Oil and Gas Exploration Certificates can be used in single year

# Production Tax Credits Applied Against Tax Liability (Fiscal Year)

7

	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010*</u>	<u>2011*</u>	<u>Total</u>
Capital Expenditure Credit	65	227	219	280	349	391	1,535
TIE Credits	33	138	73	0	0	0	243
Small Producer Credits	9	37	30	26	28	40	169
Exploration Credits	1	47	55	28	34	20	185
<b>Totals</b>	<u>107</u>	<u>449</u>	<u>375</u>	<u>333</u>	<u>417</u>	<u>450</u>	<u>2,131</u>

\* Estimated

# Overview

8

- Types of Production Tax Credits
- Credits Applied Against Production Tax Liability
- **Transferable Tax Credit Certificates**
- Cash Refunds History

# Transferable Tax Credit Certificates

9

Companies may also claim tax credits by applying for a Transferable Tax Credit Certificate (TTCC)

- ❑ Available to companies (explorers) with no tax liability to which credits can be applied
- ❑ Tax Credit Certificates under 43.55.023(a) and (b) must be split or applied over two years (except credits issued for expenditures incurred south of 68 degrees North latitude effective July 1, 2010)
- ❑ May be transferred to another taxpayer or cashed with the state

## Production Tax Credits Under AS 43.55 Claimed by FY (\$M)

10

Credit Type	Pre-2007	2007	2008	2009	2010	2011*	Total
Capital Expenditure - .023(a)		68.2	91.7	109.6	168.0	72.8	510.3
Net Operating Loss .023(b)		38.1	148.5	153.5	138.7	.2	479.0
Well Lease Expenditure - .023(l)						5.8	5.8
Exploration -.025	<u>48.3</u>	<u>44.9</u>	<u>85.5</u>	<u>56.6</u>	<u>99.5</u>	<u>2.4</u>	<u>337.2</u>
Total	<u>48.3</u>	<u>151.3</u>	<u>325.6</u>	<u>319.7</u>	<u>406.2</u>	<u>81.3</u>	<u>1332.4</u>

\* Applications received through January 4, 2011.

# Transferable Tax Credit Certificate Activity by Fiscal Year (\$M)

11

	Pre-2007	2007	2008	2009	2010	2011*	Total
Issued	16.2	99.9	130.8	308.2	361.3	191.5	1,107.9
Refunded		(54.6)	(54.1)	(193.1)	(250.5)	(299.3)	(851.6)
Transferred/ Applied to Taxes	<u>(12.3)</u>	<u>(40.0)</u>	<u>(46.6)</u>	<u>(20.0)</u>	<u>(1.2)</u>	<u>(62.7)</u>	<u>(182.8)</u>
Activity by year	3.9	5.2	30.1	95.1	109.6	(170.4)	
Transferable Tax Credit Certificates Outstanding	<u>3.9</u>	<u>9.1</u>	<u>39.2</u>	<u>134.2</u>	<u>243.9</u>	<u>73.4</u>	<u>73.4</u>

\*Payment activity through February 4, 2011.

# Overview

12

- Types of Production Tax Credits
- Credits Applied Against Production Tax Liability
- Transferable Tax Credit Certificates (TTCC)
- Cash Refunds History

# Cash Refunds History

13

## **Cash Refunds Governed by AS 43.55.028:**

- To cash must be usable against tax liability
- Must show subsequent (24 months) QCEs or lease bids equal to cash sought (repealed in 2010)
- Have a zero tax owed in current and past years
- Have no more than 50,000 BOE/d

# Cash Refunds History

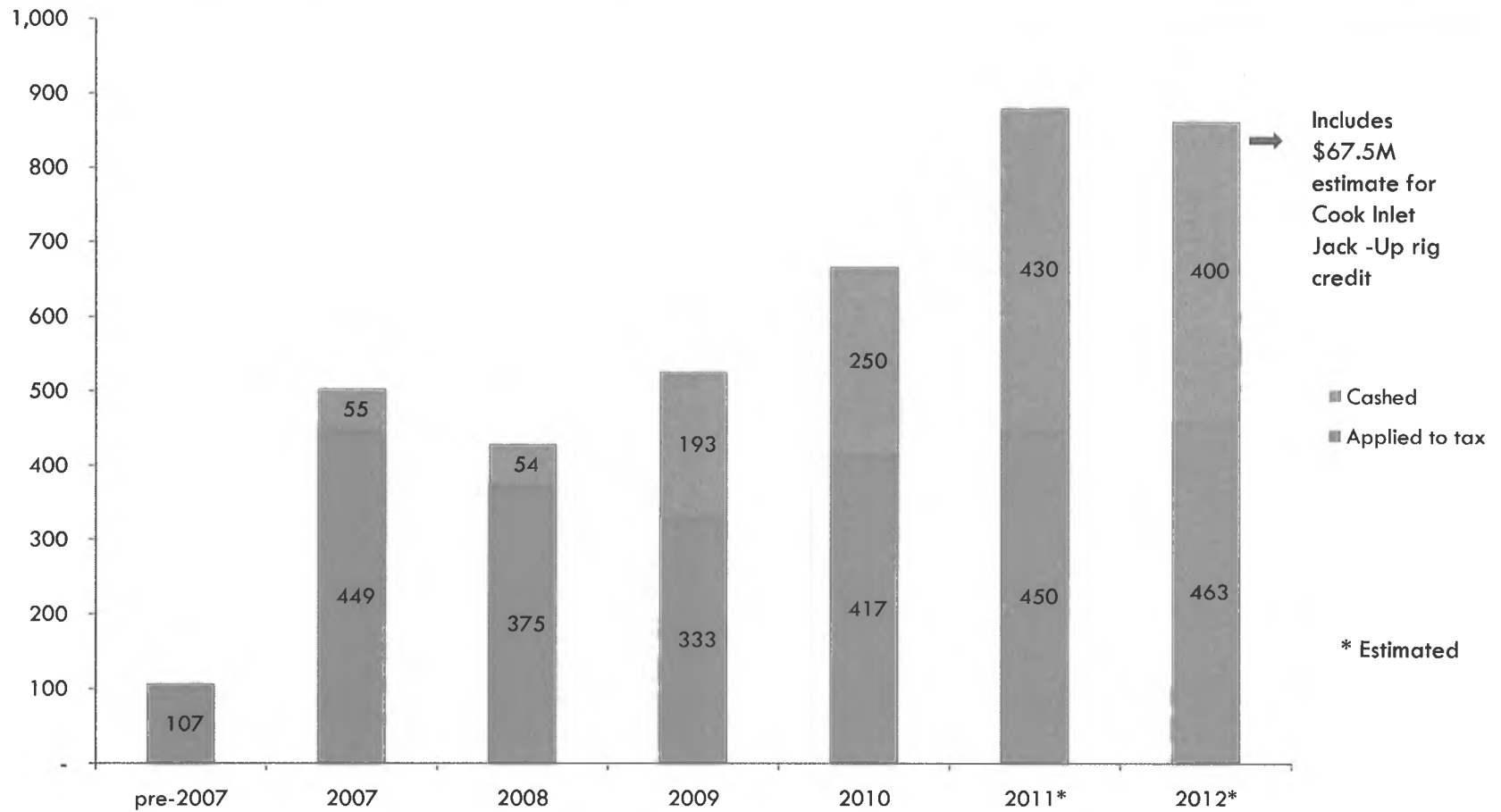
14

## Oil & Gas Tax Credit Fund

Appropriations -	\$ 904	M
Tax Credit Purchases (TC Fund)	(772)	M
Tax Credit Purchases (GF)	(79)	M
Interest Earned	<u>22</u>	M
Balance	<u>\$ 75</u>	M

# Impact of Production Tax Credits Total State Stimulus

15



3/17/11 10:00 mtg

# Alaska's Petroleum Industry: Transformative, But is it Sustainable?

by

Scott Goldsmith

Institute of Social and Economic Research  
University of Alaska Anchorage

Alaska House Finance Committee  
Invited Presentation

March 17, 2011

Juneau, Alaska

Institute of Social and Economic Research  
University of Alaska Anchorage

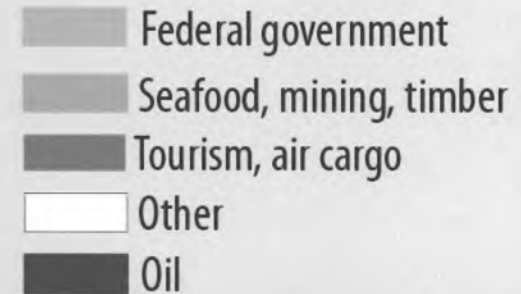
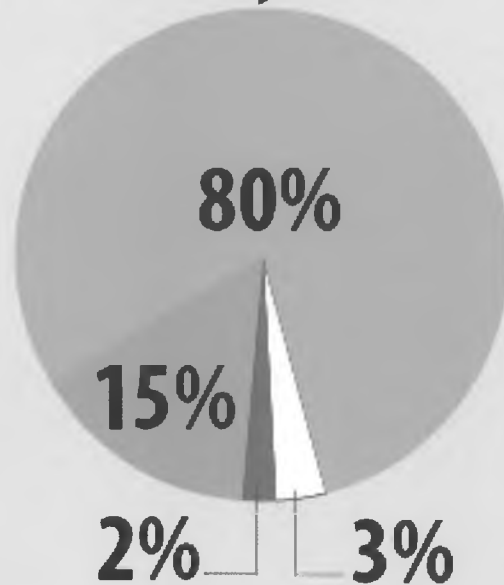
# Alaska at Statehood



- SMALL: 90 thousand jobs
- THIN: limited support businesses
- SEASONAL: summer private jobs 2x winter
- TRANSIENT: seasonal and temporary
- FEDERAL DOMINATION: ½ jobs with fed
- INFRASTRUCTURE UNDERDEVELOPED
- LIMITED TAX BASE
- POOR: Income 10-20% below US average

# 1960 Economic Structure

**Actual 1960**  
92,000 jobs

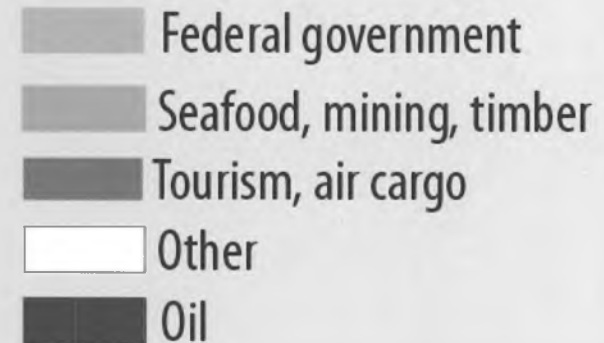
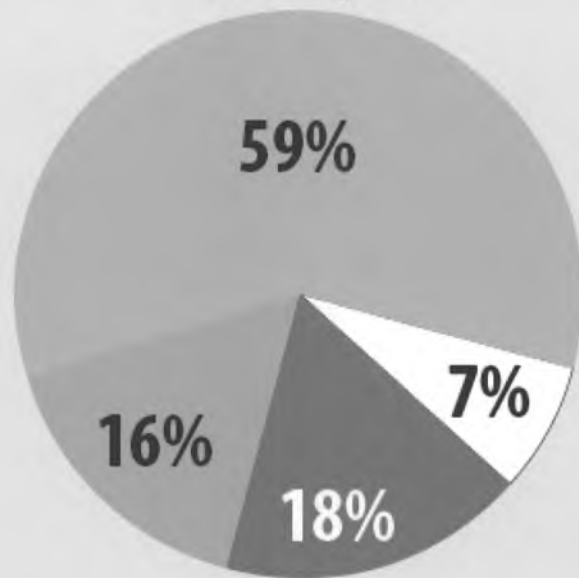


# Alaska Today: No Oil

- SMALL: 187 thousand jobs
- THIN
- SEASONAL
- TRANSIENT
- FEDERAL DOMINATION
- INFRASTRUCTURE UNDERDEVELOPED
- LIMITED TAX BASE
- POOR: Income 10-20% below US average

# 2007 Economic Structure without Petroleum

**2007 Without Oil**  
187,000 jobs



# Alaska: An Island Economy

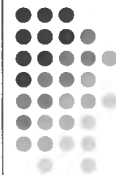


# Petroleum Jobs: Oil Patch Related



## The Role of the Oil and Gas Industry in Alaska's Economy

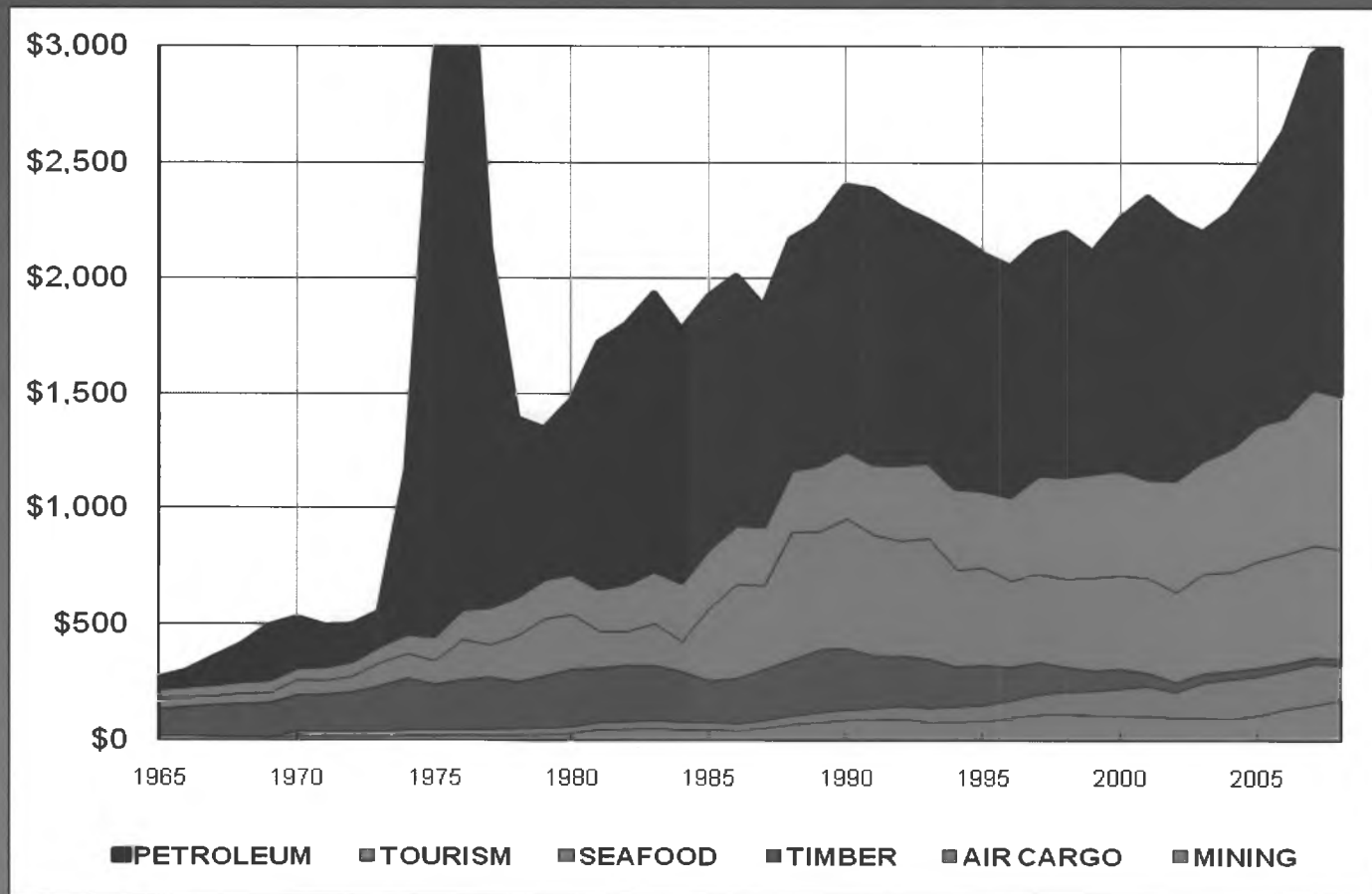
Anchorage Chamber of Commerce  
June 30, 2008



## Job creation

- 41,744 jobs – direct, indirect, induced
  - 4,497 Direct – primary companies
  - 8,410 Indirect – support industry companies providing goods and services
  - 28,837 Induced – jobs created when direct and indirect employees spend their income locally

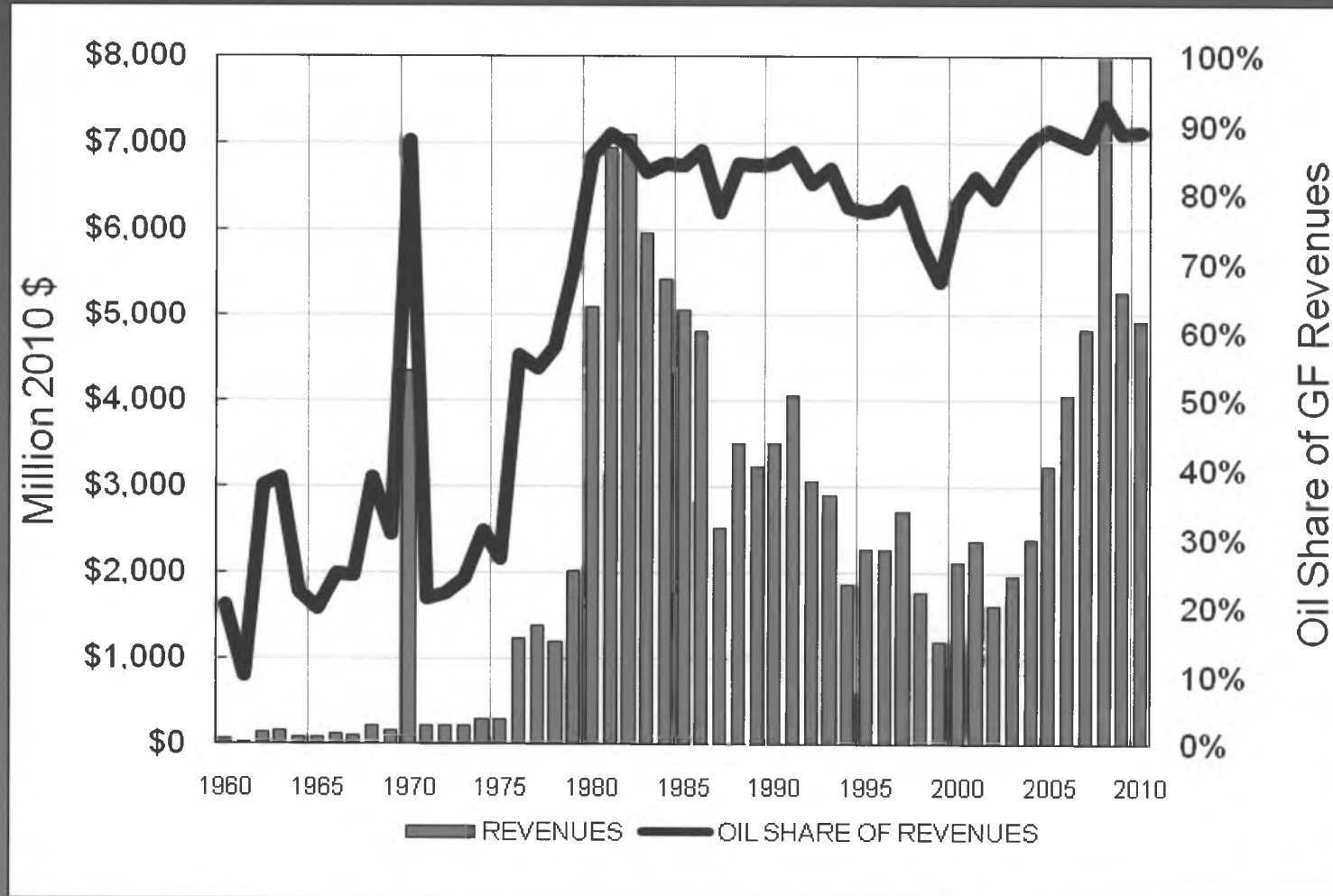
# Petroleum Jobs: Oil Patch Payroll (Million \$)



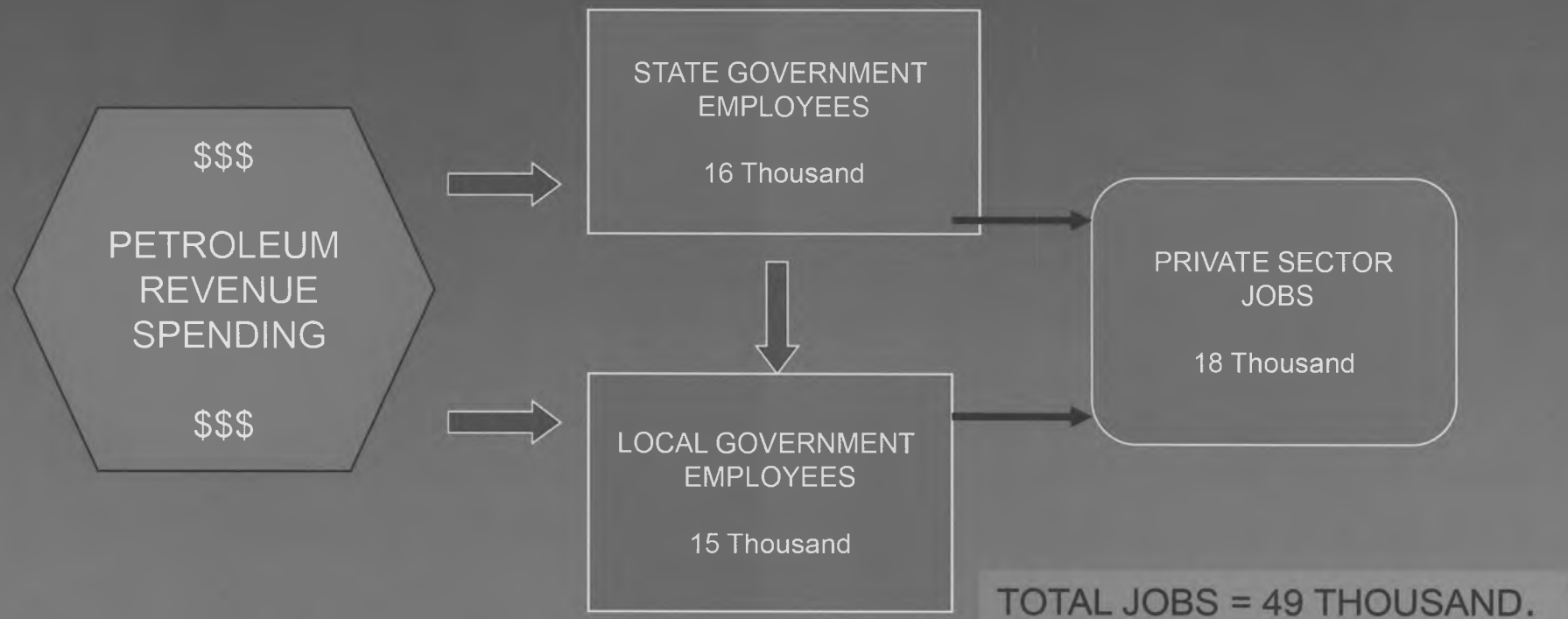
# Petroleum Jobs: Oil Patch Support



# General Fund Oil Revenues

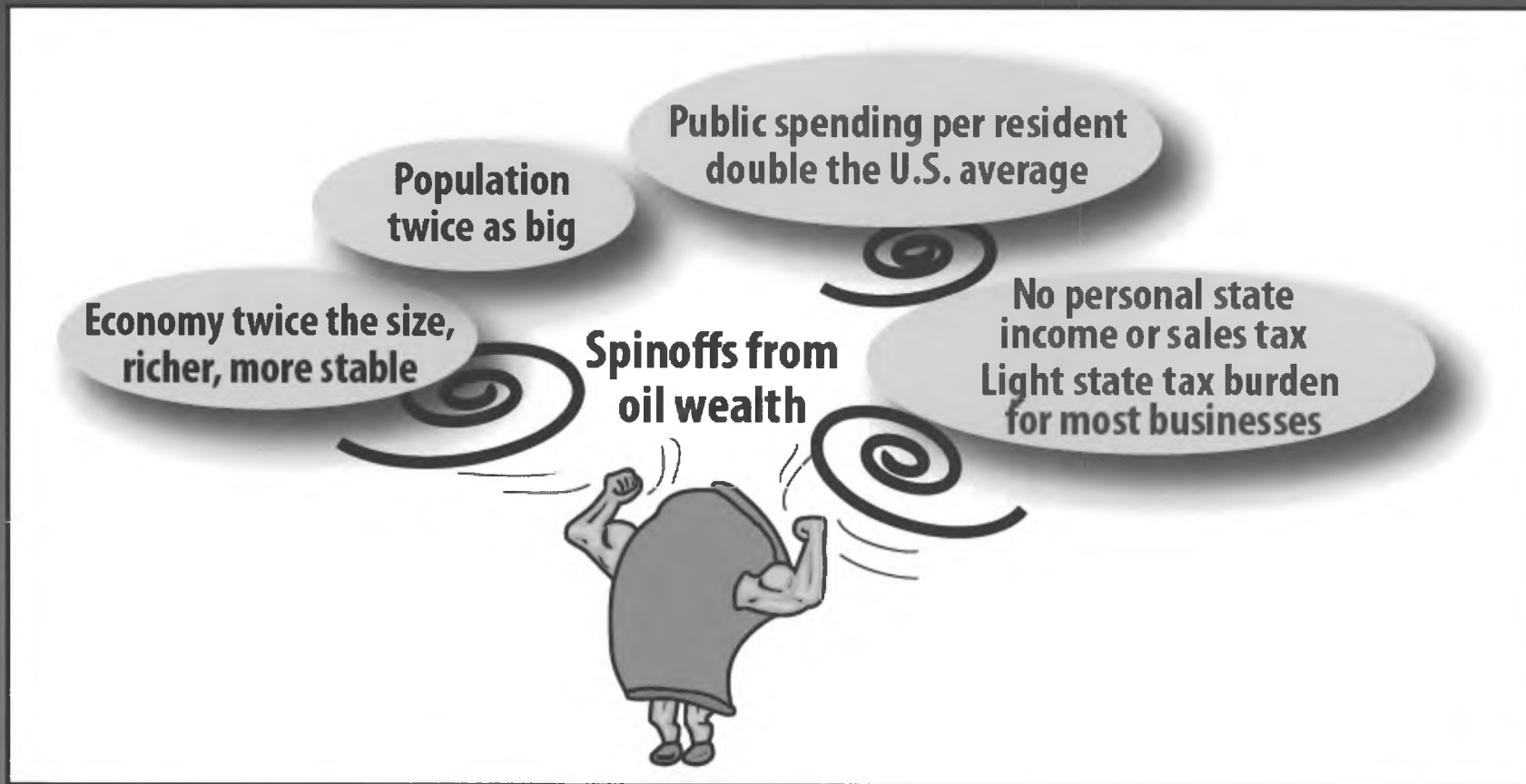


# Petroleum Jobs: Funded by Petroleum Revenues



Assumption: All Spent Petroleum Revenues Pay for Operations.

# Spinoffs from Petroleum



# Alaska Petroleum Revenues



SAVE  
\$37  
Billion



Lighter Tax Burden



Greater Public Spending



\$120  
Billion

59-10 in 2010 \$

12

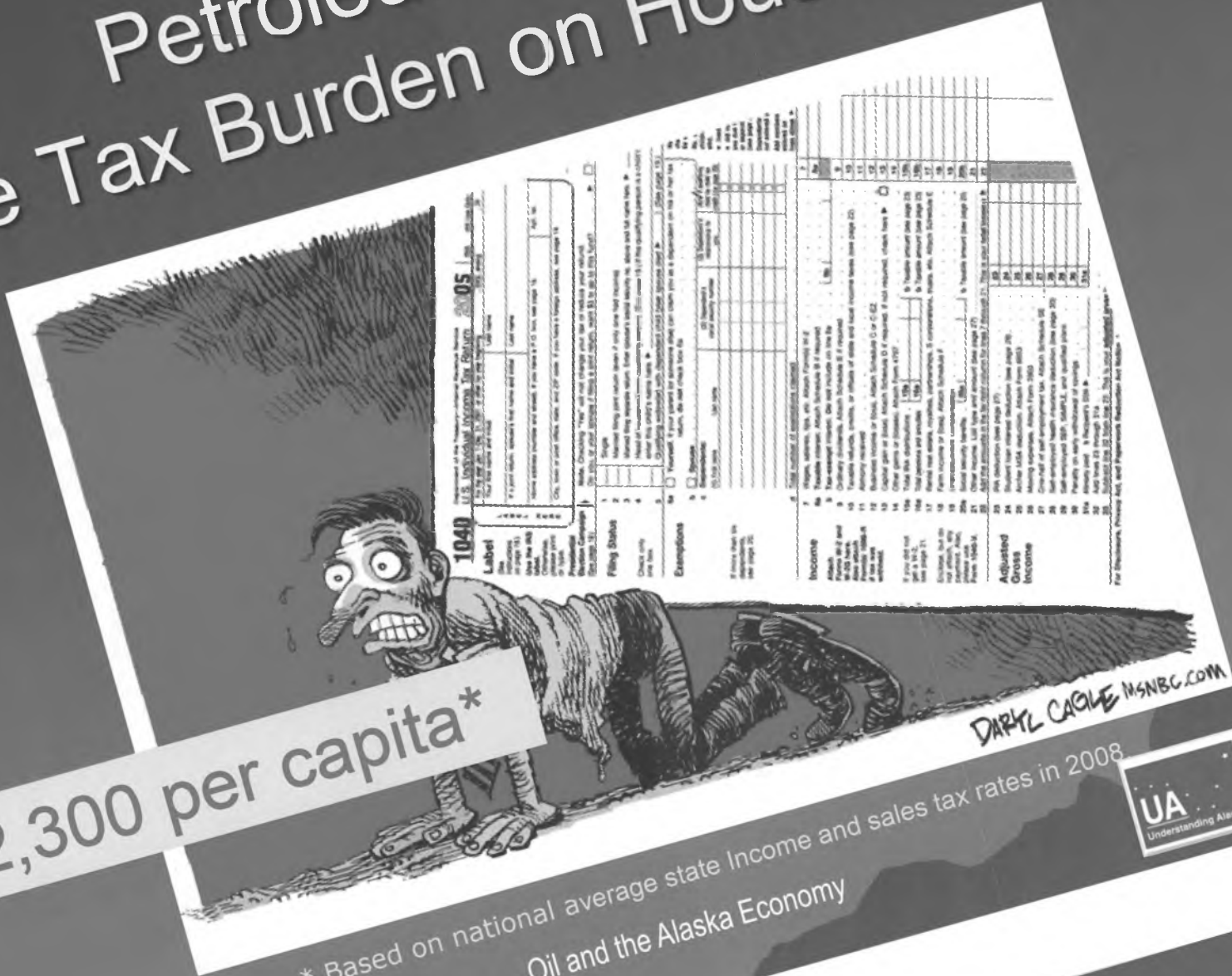
# Petroleum Spinoff: Lite Tax Burden on Households

**\$2,300 per capita\***

\* Based on national average state income and sales tax rates in 2008  
Oil and the Alaska Economy

Institute of Social and Economic Research  
University of Alaska Anchorage

Understanding Alaska:  
Special Economic Studies



# Petroleum Spinoff: Lite Resource Industry Tax Burden



## State & Local Revenues from Seafood, Tourism, Mining, Timber

Actual (avg 05-07)	\$200 mill
If Oil \$ Disappeared	\$900
Incremental Burden, no Oil \$	\$700
Increase in Tax Rate	4 X

# Petroleum Spinoff: Enhanced Public Spending

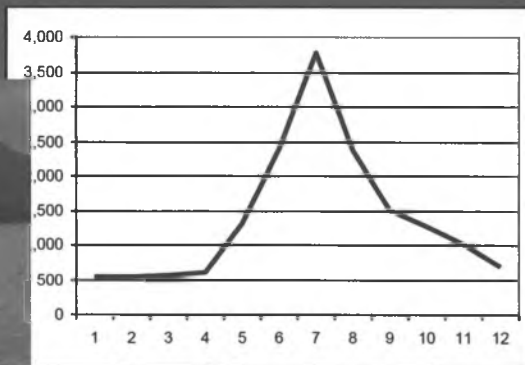


Institute of Social and Economic Research  
University of Alaska Anchorage

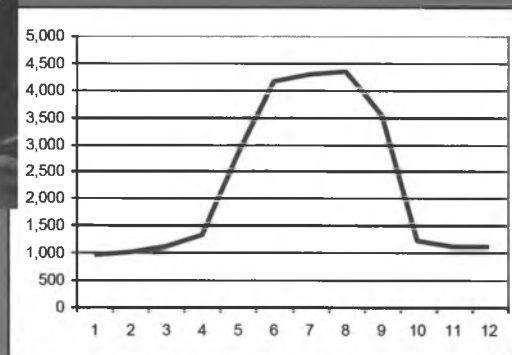
Oil and the Alaska Economy



# Petroleum Spinoff: Stability



Bristol Bay

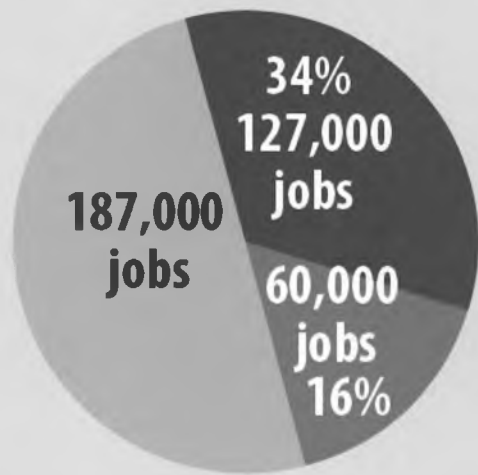


Denali Borough



# Petroleum Transforms Alaska Economy

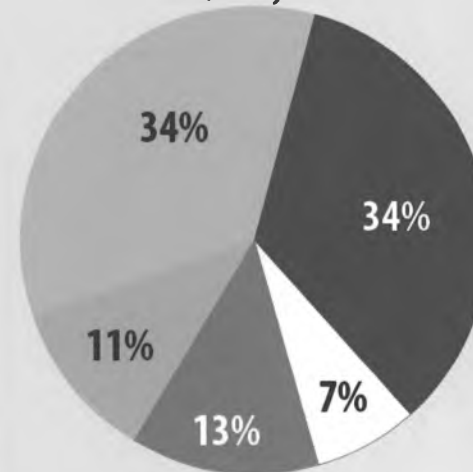
**Actual 2007**








Jobs from oil production and state oil revenues

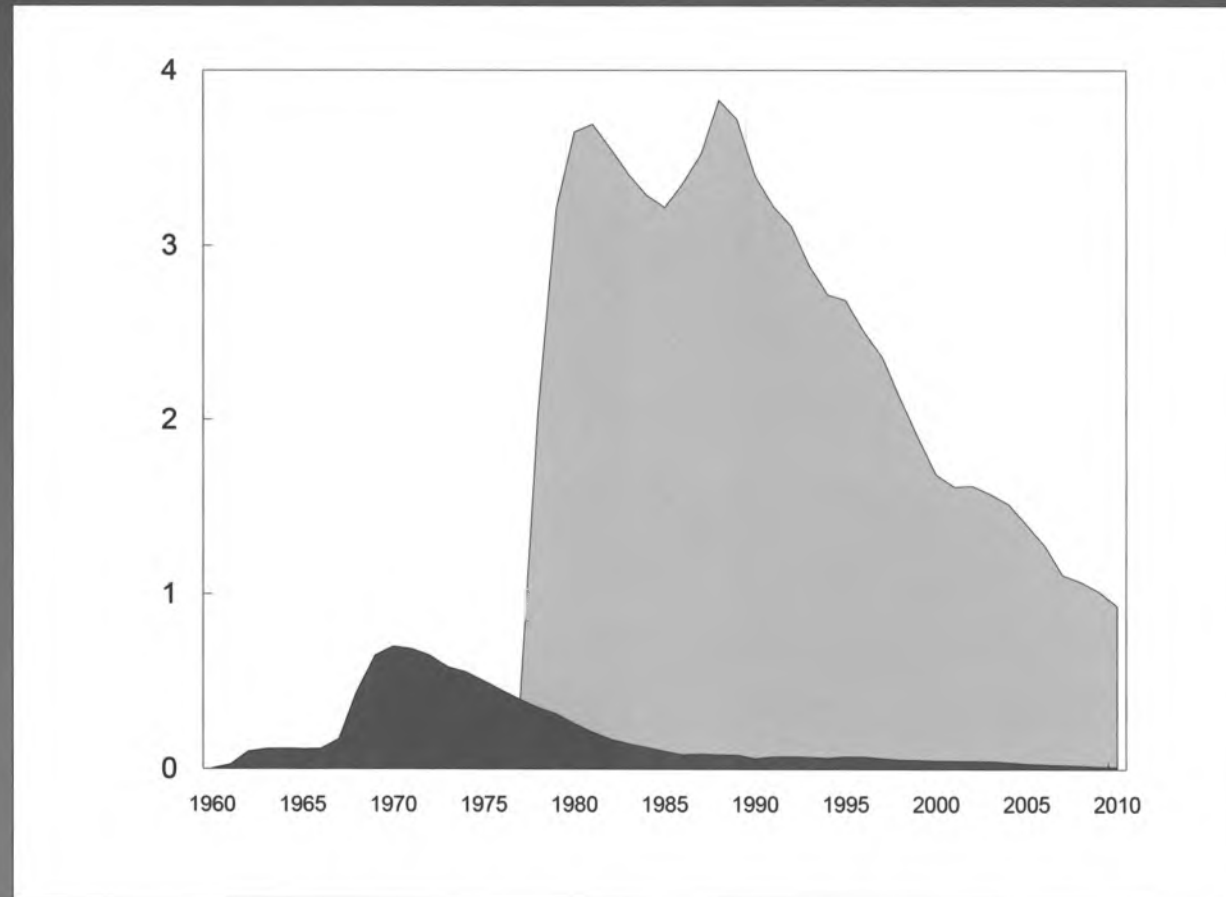
Spinoff jobs from oil wealth

**Actual 2007**  
374,000 jobs

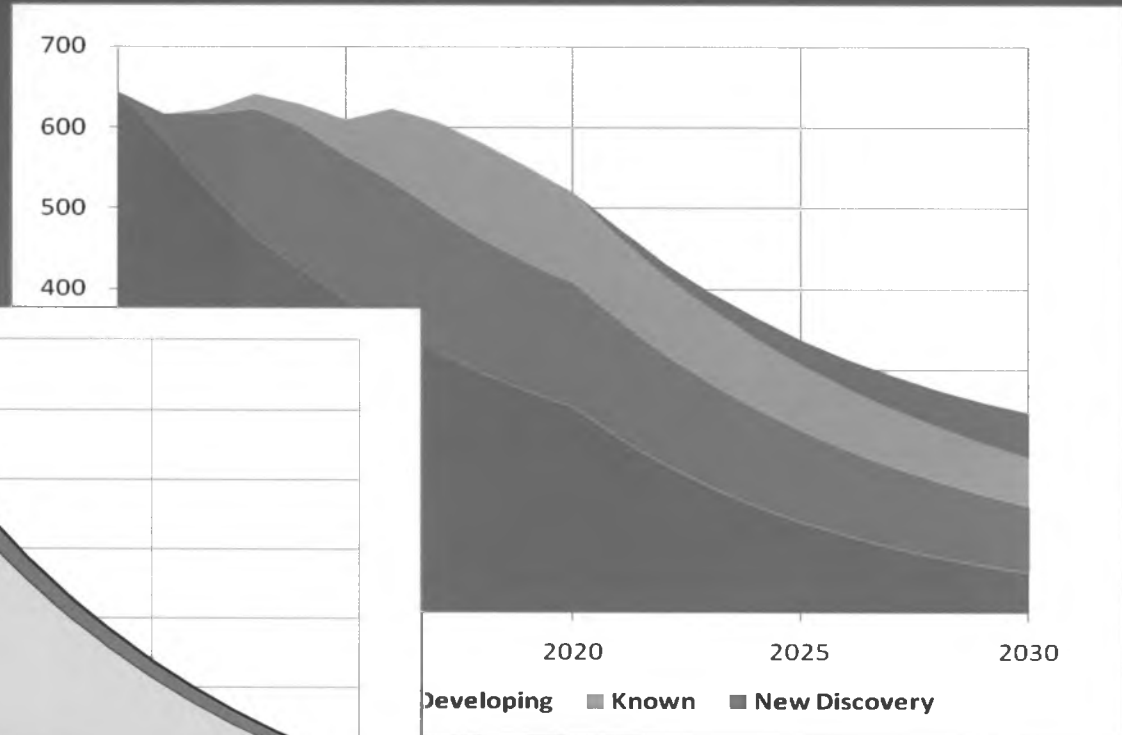
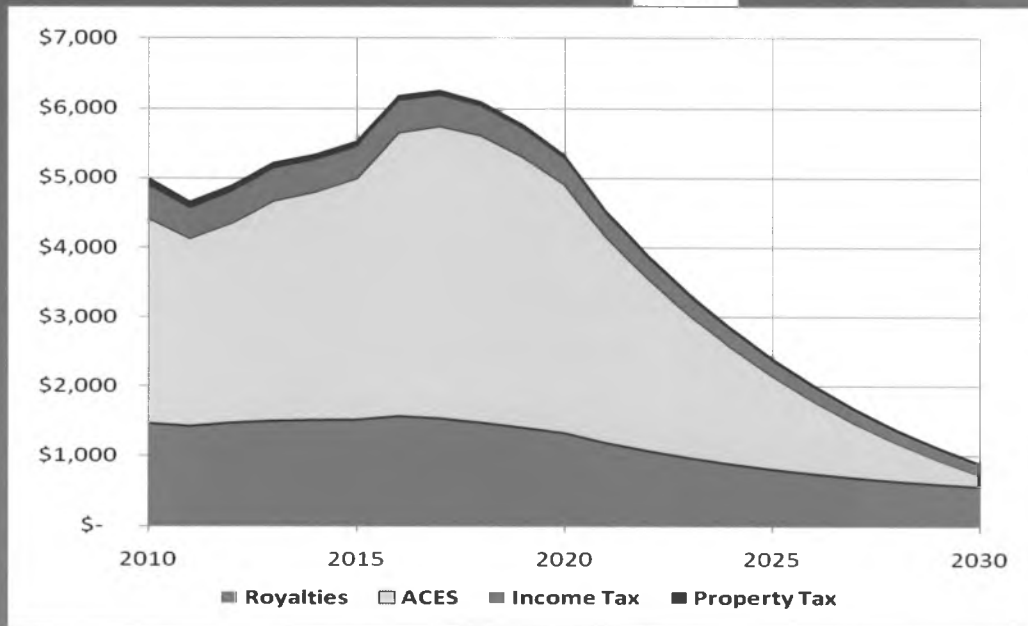


-  Federal government
-  Seafood, mining, timber
-  Tourism, air cargo
-  Other
-  Oil

# A Troubling Indicator: Oil Barrels per Capita

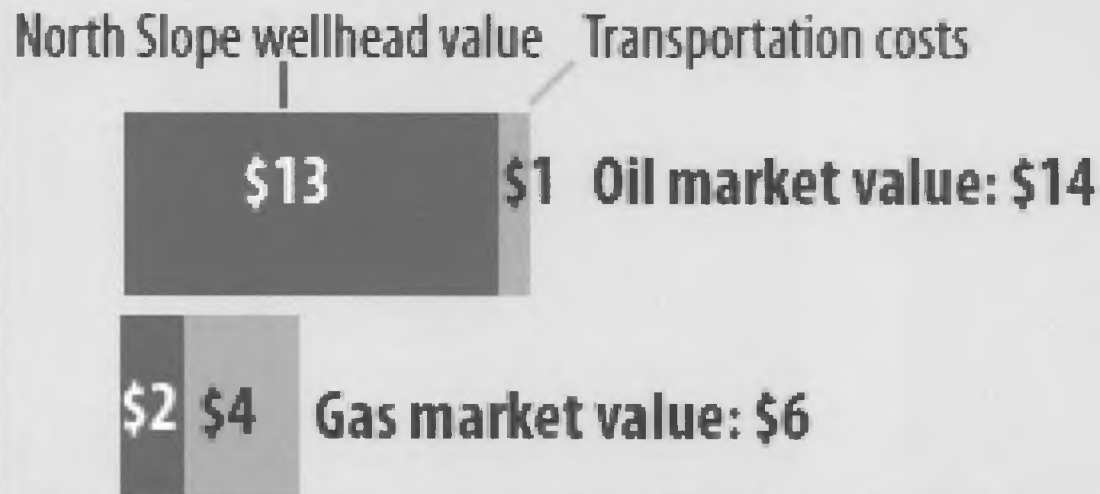


# Looking Ahead: The Official Story (Extended)



# Strategies Moving Forward #1: Gasline

**Figure 7. Value of Equivalent Energy from Oil and Natural Gas\***  
(1 million BTUs, or about one-sixth of a barrel of oil)



\*Assumes oil at \$80 per barrel and 5.6 million BTU per barrel; price per thousand cubic feet of gas

# Strategies Moving Forward #2: Non Petroleum Natural Resources



**MINING 1K**  
**\$4,000 / Oz.**

**TOURISM 10K**  
**\$2,000 / Visitor**



\* \$3 Billion



**SEAFOOD 0K**  
**\$20 / Salmon**

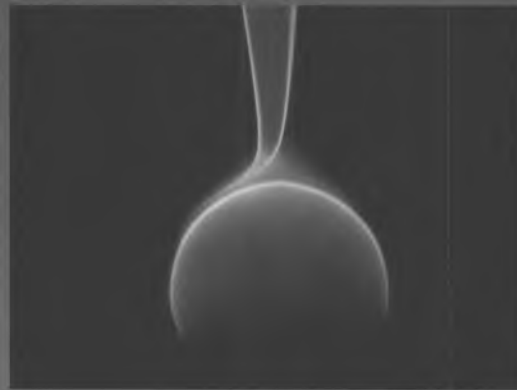
# Strategies Moving Forward #3: Traditional Economic Development

The Google logo is displayed in its classic serif font, centered within a white rectangular box. The background of the slide is a dark, textured grey with a faint silhouette of a mountain range at the bottom.

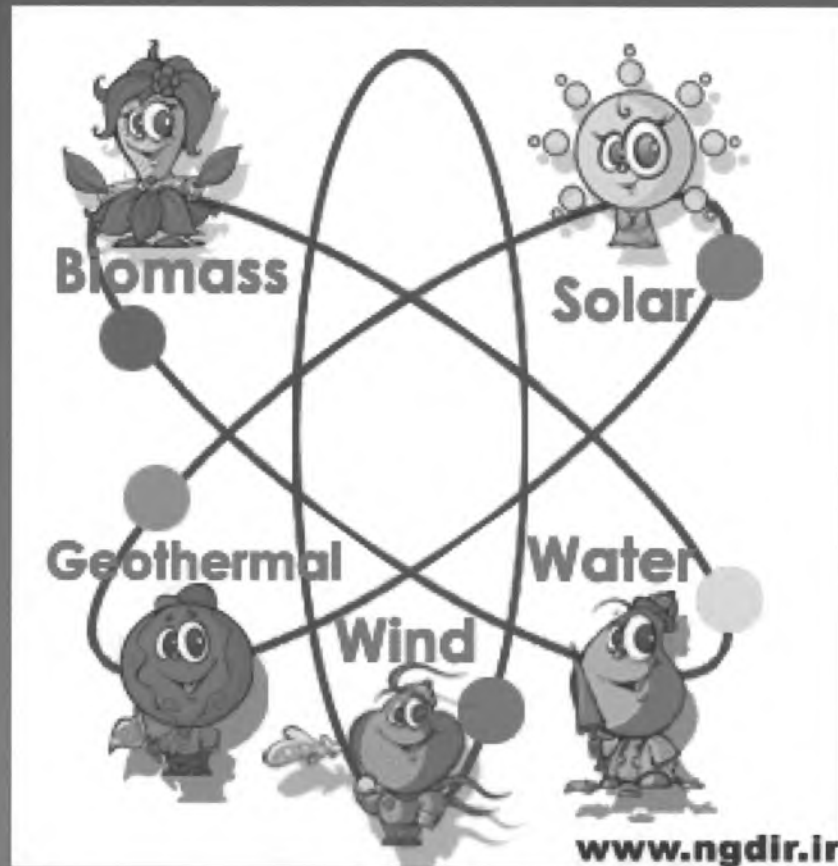
## Alaska Economic Development Strategic Plans

About 374,000 results

# Strategies Moving Forward #4: Speculatively Invest in Infrastructure



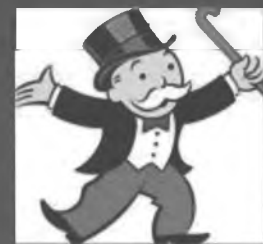
# Strategies Moving Forward #5: Develop Renewable Energy



# What Is the Economic Future of Alaska?

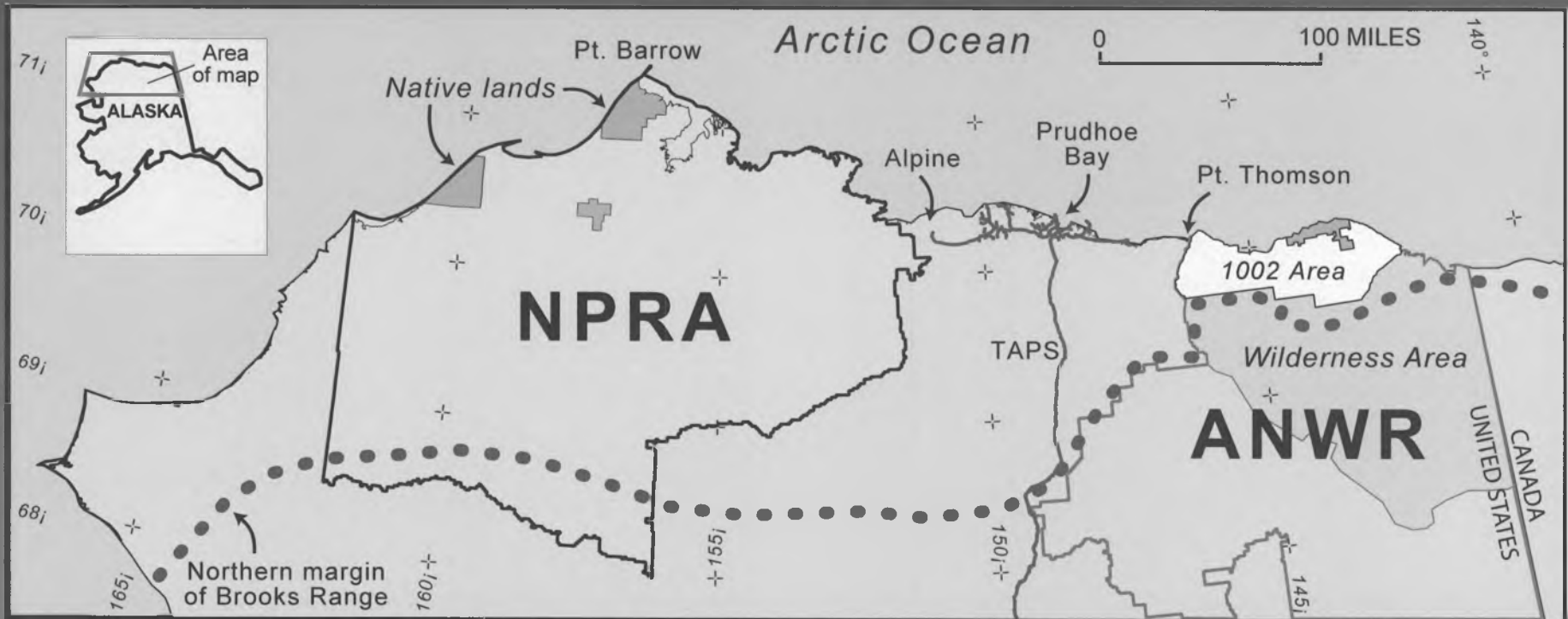
- We Are the Chosen Ones
- The Big Crash
- The Slow Squeeze

# Undiscovered Potential North Slope Resources: Technically Recoverable

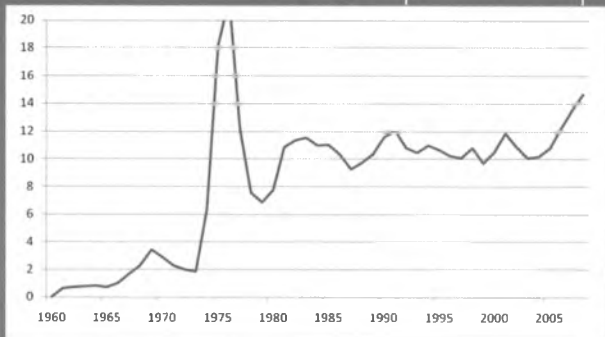


	OIL (Billion Barrels)	GAS (TCF)
Colville/Canning	4.5	37.5
ANWR 1002	10.3	3.8
OCS-Beaufort	6.9	32.1
OCS-Chukchi	15.5	60.1
NPRA	.9	52.8
<b>TOTAL</b>	<b>38.1</b>	<b>186.3</b>

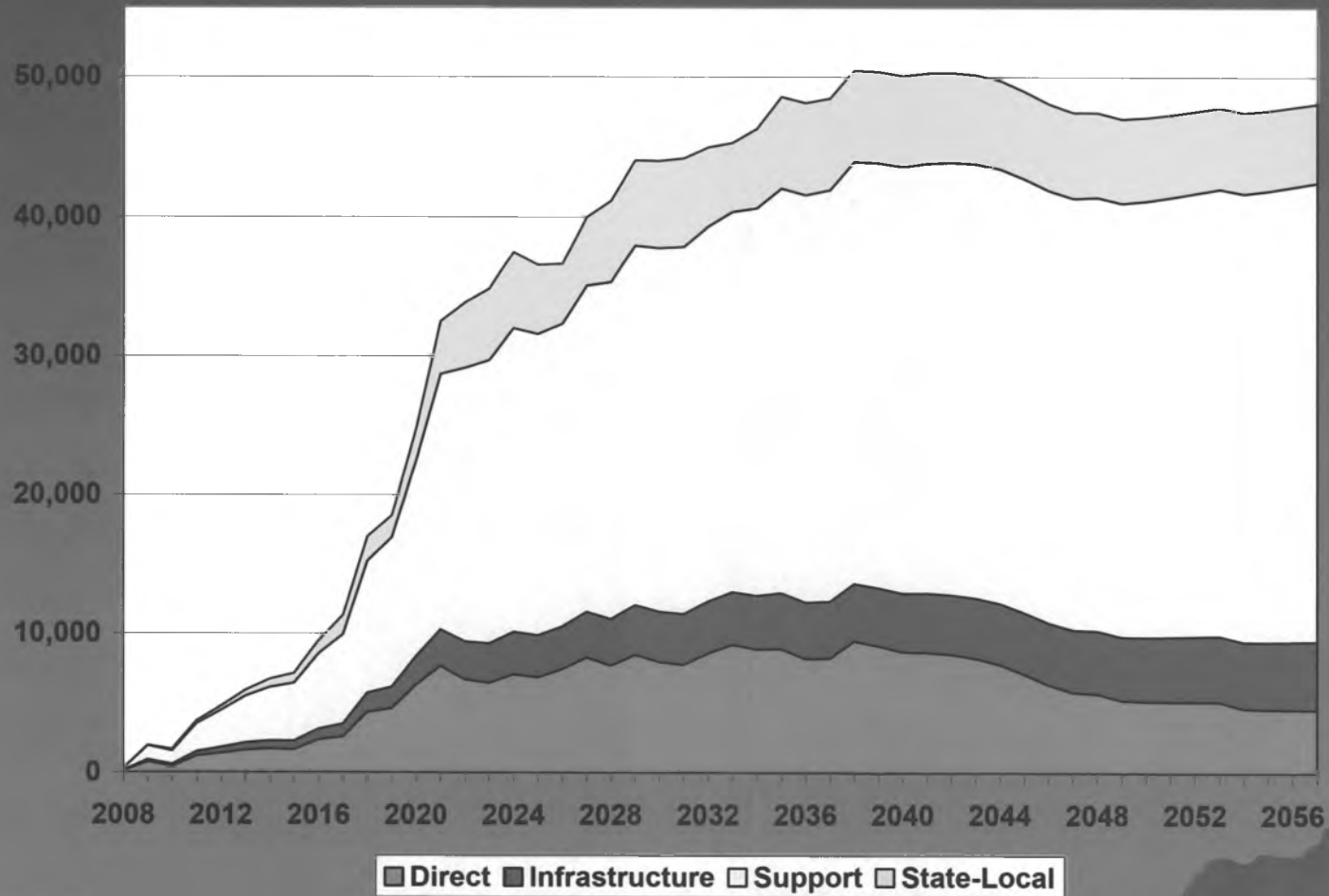
# Alaska's North Slope



# Daily Oil Production per Worker (Barrels)



# One Petroleum Employment Projection



# How to Get Those Petroleum Jobs

Get Access Federal Lands

Find the Petroleum Tax “Sweet Spot”

# Fiscal Terms

	ONSHORE TO 3 MILES OFFSHORE							OFFSHORE	
	STATE				FEDERAL		PRIVATE*	FEDERAL	
	North Slope		Cook Inlet						
	Lease <1980	Lease >1980	Lease <1980	Lease >1980	NPRA*	ANWR*		3-6 Miles	More Than 6 Miles
ACES Production Tax	Yes	Yes	ELF	ELF	Yes	Yes	Yes	No	No
Corporate Income Tax	Yes	Yes	Yes	Yes	Yes	Yes	Yes	?	?
Property Tax	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No
State Royalty: Negotiated	Typical 12.5% of value	Typical 12.5% of value	Typical 12.5% of value	Typical 12.5% of value					
Federal Royalty					Typical 12.5% of value	Typical 12.5% of value		Typical 12.5% of value	Typical 12.5% of value
State Share of Federal Royalty						50%		27%	0%
Royalty—PF Share	25%	50%	25%	50%		25%		25%	
Royalty—GF Share	75%	50%	75%	50%		75%	-	75%	-

# State Revenues (million \$ / year): Hypothetical Field

	ONSHORE TO 3 MILES OFFSHORE							OFFSHORE	
	STATE				FEDERAL		PRIVATE*	FEDERAL	
	North Slope		Cook Inlet						
	Lease <1980	Lease >1980	Lease <1980	Lease >1980	NPRA*	ANWR*		3-6 Miles	More Than 6 Miles
ACES Production Tax	\$ 400	\$ 400			\$ 400	\$ 400	\$400		
Corporate Income Tax	\$ 99	\$ 99	\$ 99	\$ 99	\$ 99	\$ 99	\$ 99		
Property Tax	\$ 20	\$ 20	\$ 20	\$ 20	\$ 20	\$ 20	\$ 20		
State Royalty: Negotiated	\$ 319	\$ 319	\$ 319	\$ 319					
Federal Royalty & State Share of Federal Royalty					\$ 319	\$ 319		\$ 319	\$319
						\$ 160		\$ 86	\$ -
<b>TOTAL</b>	<b>\$ 838</b>	<b>\$ 838</b>	<b>\$ 438</b>	<b>\$ 438</b>	<b>\$ 518</b>	<b>\$ 678</b>	<b>\$ 519</b>	<b>\$ 86</b>	<b>\$ -</b>
—PF Share	\$ 80	\$ 160	\$ 80	\$ 160		\$ 40	\$ -	\$ 22	\$ -
—GF Share	\$ 758	\$ 678	\$ 358	\$ 278	\$ 518	\$ 638	\$ 519	\$ 65	\$ -



# Petroleum Wealth (Billion \$)

<b>FINANCIAL ASSETS</b>	<b>\$45</b>
Permanent Fund	\$33.3
Constitutional Budget Reserve	\$8.7
Statutory Budget Reserve	\$1
General Fund	\$2
Other	-

## PETROLEUM IN THE GROUND: **\$81** NET PRESENT VALUE OF REVENUES

Oil	\$74
State Land—North Slope 2011-2020	\$45
State Land—North Slope 2021+	\$27
State Land—Other Locations	-
State Land—Heavy Oil	\$1
Federal NPRA	-
Federal OCS	\$1
Federal ANWR	-
Gas	\$7



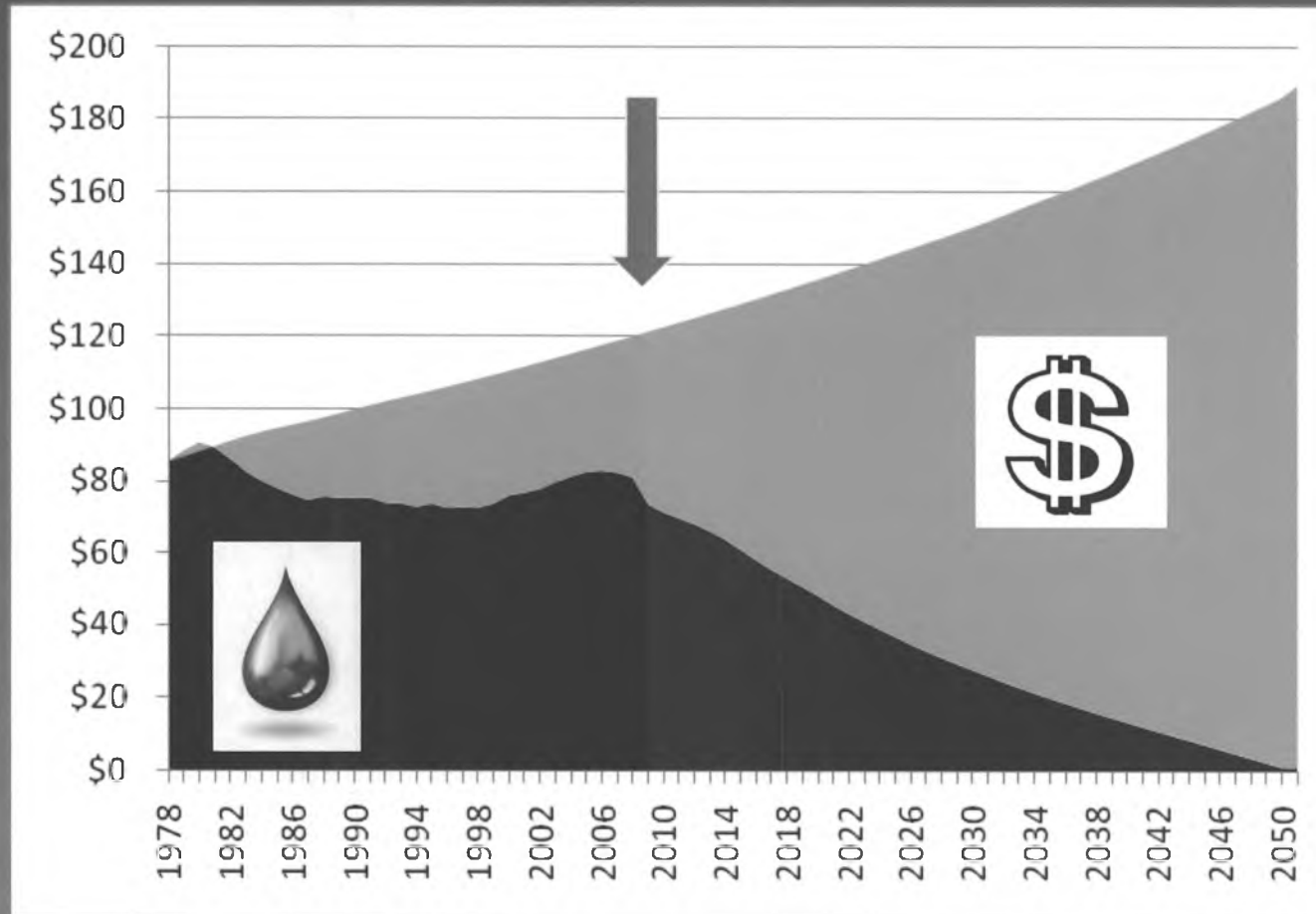
# What is My Annual Share?

\$7,200

# Wealth Preservation Strategy: Implementation = Spending Cap

	<b>Annual Share</b>	<b>\$7,200</b>
<b>X</b>	<b>Population</b>	<b>700,000</b>
<b>=</b>	<b>Petroleum Wealth Spending Cap</b>	<b>\$5.0 Billion</b>

# Wealth Preservation Strategy: The Long View



# Can We Do It?



# Alaska's Petroleum Industry: Sustainable— If We Take Action.

by

Scott Goldsmith

Institute of Social and Economic Research  
University of Alaska Anchorage

Alaska House Finance Committee

Invited Presentation

March 17, 2011

Juneau, Alaska

Institute of Social and Economic Research  
University of Alaska Anchorage

Alaska State Legislature  
HOUSE FINANCE COMMITTEE

Agenda  
8:00 am

Friday, March 18, 2011

HB 110-PRODUCTION TAX ON OIL AND GAS

Presentation by Alyeska Pipeline Co.

Admiral Tom Barrett, Alyeska Pipeline Co., CEO

Available for Questions:

Pat McDevitt, Low Flow Study Project Manager, Alyeska Pipeline Co.

3/18/11



P.O Box 196660

ANCHORAGE, ALASKA 99519

TELEPHONE (907) 787-8700

**TESTIMONY OF TOM BARRETT, PRESIDENT  
ALYESKA PIPELINE SERVICE COMPANY  
ON DECLINING THROUGHPUT  
HOUSE FINANCE COMMITTEE  
MARCH 18, 2011**

Good morning. My name is Tom Barrett, and I am President of Alyeska Pipeline Service Company. I have been asked to speak today about the impacts of declining crude oil on the Trans Alaska Pipeline System. Thank you for having me.

My experience includes 15 years in Alaska, serving in positions including Commander of Coast Guard 17<sup>th</sup> District operations in Alaska. I previously served as deputy federal coordinator for the Alaska Natural Gas Transportation Projects and worked as a regulator, both as Deputy Secretary of the United States Department of Transportation in Washington, and also as the first Administrator of the U.S. Pipeline and Hazardous Materials Safety Administration. My wife Sheila and I have lived in Alaska for 15 years. We have four grown children. One is a University of Alaska Fairbanks graduate and one lives in Anchorage and works for University of Alaska. Alaska is home to my family and Alyeska and TAPS are important to me personally, and to our state and to our nation. I am here today representing Alyeska and the employees and contractors that operate and maintain TAPS.

Since joining Alyeska on January 1<sup>st</sup>, many people have asked me, at what point will the declining flow of crude oil in our pipeline become a problem?

My response is simple: We HAVE a problem now.

This is not facing us down the road. This is not theoretical. This is an issue we confront today. Without increased throughput in our

pipeline, challenges will only increase as time passes. The challenges related to declining flow were made abundantly clear during an unscheduled winter shutdown we experienced in January. I will talk more about that today. That event was a wake-up call for Alyeska and it should be for all Alaskans.

Stopping our steady decline and increasing throughput in the Trans Alaska Pipeline System is an urgent concern for everyone who works on TAPS and for our state.

TAPS was designed as a warm-oil pipeline. At its peak throughput in the late 1980s, we were moving about 2.1 million barrels of oil day.

Since 1989, we have experienced a steady decline in crude coming off of the North Slope – about 5 to 6 percent a year in the past 5 years.

Today, our average throughput is typically about 640,000 barrels a day. We expect an annual decline of between 5 and 6 percent to continue. At one time, according to Energy Information Administration data, TAPS delivered about 25 percent of our nation's domestic crude oil supply. According to the Energy Information Administration, for 2010 TAPS delivered about 12.4 percent of our nation's oil production.

In 2007, we launched a \$10 million study to examine declining flow on TAPS. Our goal was to evaluate the potential implications of the future operation of TAPS at throughputs and oil temperatures considerably lower than those assumed for original pipeline design.

The scope of the study included examining water accumulation in the line under low-velocity conditions; looking at potential for increased corrosion due to declining flow; assessing the potential for ice formation in the pipeline in winter; examining increased wax deposits in the pipeline, in crude tanks and in front of pigs; evaluating potential geotechnical impacts to the pipeline due to freeze-thaw conditions increasing; considering impacts to operating pigs due to wax and ice forming; and finally, researching water accumulation and ice formation at low-lying points of the pipeline during emergency winter shutdown conditions.

When we started our low flow study in 2007, the Department of Revenue had projected the 2011 throughput to be 676,000 barrels per day. We are already behind that projection.

The most low flow pressing issue facing us is the temperature of the oil in the pipeline. This is a function of flow rate, velocity and time. Temperature of the oil continues to drop as throughput continues to decline. A prolonged winter shutdown is a continuing serious risk for TAPS due to these colder crude temperatures.

In 1989, with throughput peaking at 2.1 million barrels a day, it took oil approximately 4 and a half days to move from Pump Station 1 to the terminal. Today, each barrel takes approximately 14 days to reach our terminal in Valdez. At 500,000 barrels per day, it will take the oil 18 days to travel the pipeline. At 300,000 barrels per day, it will take a month. That is a steady increase in risk.

During a winter shutdown, water can settle and turn to ice, creating conditions that could block or damage valves, pumps, and other sensitive equipment, potentially causing an extended interruption to our operation.

Just to offer you a snapshot of what that would mean to Alaska: Without TAPS running, the refineries in North Pole and Valdez can't operate. That directly cuts our state's supply of jet fuel and the heating fuel that is so essential to many of our rural communities. When the pipeline is shut down, we ask producers on the North Slope to scale back operations. In winter, this could mean they shut in wells that cannot recover. The bottom line is, any significant impact to pipeline operations is a direct hit to Alaska. No one knows this better than the Legislature, where you see the significance of our pipeline to the state revenue stream.

Many of you are familiar with events we faced in January that led to an extended shutdown. During January, the pipeline was shutdown for a combined 148 hours.

It started on January 8<sup>th</sup>, when an employee on routine rounds at Pump Station 1 discovered a leak in our booster pump building. This

leak was contained in our building. Throughout the incident recovery, we recorded no significant injuries or adverse impacts to the environment.

But we did have a leak. We needed to fix it rapidly. Our employees and contractors put in an extraordinary effort, designing and engineering bypass piping to circumvent the leak site and allow us to restart.

While this work was going on, declining throughput was on everyone's minds and was the center of many conversations and the driver of many decisions. I think it's fair to say that although lower throughput has greatly impacted our operations for several years, it had never been as pressing and critical a factor as it was during this January event.

Carefully weighing the risks, we decided the most prudent course of action was to do an interim restart of the line even though oil would continue leaking into the containment basin at Pump Station 1.

This was driven by dropping oil temperatures and by issues related to ice and wax in the line and the fact we had scraper pigs in the line that we needed to remove or capture.

It would have been a far greater risk to remain shut down.

Restarting helped warm the oil while the Pump Station 1 bypass was fabricated and assembled and allowed us to move the pig that was upstream of Pump Station 8 into a pig trap line at that pump station. Moving that pig off the mainline was critical. We were concerned about what would happen if that pig came up against concentrations of wax and ice. Without intervention, that pig could have pushed the ice and wax into equipment and disabled the line. For example, if ice damaged our mainline pumps, we would risk shutting down the pipeline for weeks or months.

When we were fully prepared to put the bypass piping in at Pump Station 1, we shut down again and got the job done quickly and safely.

During the January event, the crude oil in the majority of the pipeline was between 29 and 40 degrees Fahrenheit. About 100 miles of the pipeline, located in interior Alaska, cooled to minimums between 29 and 30 degrees Fahrenheit.

After restarting the line and restoring operations, we ran specially designed pigs through the line to reduce the risk of damage from our standard hard pig. Even today, we remain in an alternative pigging mode as a result of recovering from the January shutdowns.

The main factor in many decisions made in responding to the Pump Station 1 event was crude temperature. There are other serious risks associated with declining throughput.

Some of these risks are associated with what happens with the water in crude oil in declining-flow conditions – including during flowing operations and winter shutdowns.

For current throughputs of roughly 640,000 barrels a day, water typically travels along in the crude in small droplets. Once throughput drops below 500,000 barrels a day, the water is expected to separate out in a flowing layer at the bottom of the pipe. This will locally increase water concentrations, especially at low-lying points on the pipeline, and where the pipeline has upward slopes. Assuming we have a 6 percent decline a year, we would drop below 500,000 barrels per day sometime around 2015.

At lower throughputs, water that enters TAPS at Pump Station 1 can coalesce and drop out, settling at the bottom of the pipe. Once water accumulates at a low point, the force of gravity may exceed the motive force that moves the oil. This prevents it from being flushed through the pipe during normal flow.

The accumulated water provides an environment for corrosion. During an extended TAPS winter shutdown, or at low flow rates, the locations with liquid hold-up may freeze and impact the pipeline's ability to restart or maintain flow. Water buildup within TAPS could also create conditions conducive to ice formation within the flowing oil stream. We were concerned about this risk during our January shutdown.

Unless the oil is heated, the temperature of the oil will begin to dip below the freezing point of the water during winter months when flow rates decline below roughly 550,000 barrels a day. Engineering analysis indicates that freezing of water in the oil during flowing conditions is very likely at this point. The operational impacts of this could include icing, which could disable check valves, and buildup at tees, bends, and inside mainline valve bodies. The ice could damage relief valves, mainline pumps or other sensitive equipment.

Wax – a common enemy of crude oil pipelines regardless of flow rates – also becomes a greater problem in declining flow conditions.

Crude oil includes paraffins, asphaltenes and other naturally occurring substances that tend to drop out of the crude as temperature drops. High molecular weight paraffin, or hard wax, is of particular concern because it can build up on the pipe walls, potentially creating an environment for corrosion to occur. Soft wax can also precipitate and be deposited on the pipe wall, transforming into a hard wax.

Excessive accumulation of wax can also cause pressure differentials along the pipeline, resulting in less efficient oil movement. Wax deposition will continue even if the crude oil is heated in the future.

Another potential operational issue associated with declining flow rates are frost heaves. And by the time frost heaves become an issue, we would already be dealing with multiple other declining throughput challenges, not just during a winter shutdown, but also during flowing conditions.

TAPS was designed as a warm oil pipeline and buried in thawed and frozen soil. In areas where the warm pipeline caused melting that would result in excessive settlement, the pipe was insulated, elevated above ground, and supported to keep the permafrost frozen.

With declining TAPS throughput, and associated declining temperature, the thaw bulb that currently surrounds the buried hot pipe may shrink. Should this occur, if the crude oil temperature cools below freezing in an underground segment of the pipe, the thaw bulb

may refreeze and form ice lenses. Eventually, this could result in frost heaves and impose strain on the pipeline beyond its design limits.

Assuming we do nothing to intervene and further heat the crude oil, we anticipate through engineering analysis that TAPS would face potential for frost heaves between 300,000 and 350,000 barrels a day. These frost heaves could overstress the pipe.

We are currently taking multiple actions to respond to declining throughput.

We are constantly monitoring and adjusting our pigging program.

We have increased our use of cleaning pigs to minimize the potential impact of wax accumulation on oil movement and pipeline integrity. The volume of wax that can be removed by a typical cleaning pig run will continue to be an operational and waste disposal issue. Wax build-up can cause failures in the sensors on our instrument pigs that take important pipe measurements.

As noted earlier, we adjusted our pigging after the January shutdown.

We expect pigging to continue to challenge us as we move into the future and manage our way through further declining throughput.

Because of the study I mentioned earlier to look at the impacts of declining flow, we're looking at various ways to add heat to the line.

This work could include installing oil heating units at strategic locations to maintain operational crude oil temperatures. It could also include adding insulation to the pipe at some of the sites that are known to be the coldest, upstream of North Pole. This could assist in minimizing the operations of heaters. It is also very likely that we will use some of our offline pump stations during winter operations to recycle crude oil to keep the temperatures up. Additionally, we need to analyze the capabilities of our instrument pigs at declining throughput volumes.

These measures are not quick, they are not cheap, and they involve complex solutions to a complex problem.

The slide that you see now shows the decline of crude oil in TAPS that we've experienced, and the further decline that we expect. This reality is very troubling to me as it should be to you.

TAPS is enormously important to our state. You all know this. You've seen the numbers and understand that this pipeline delivers the bulk of the state's operating budget. We can't afford to compromise Alaska's oil transportation system.

As you all are shaping policy, I hope you share the same urgency that I feel.

During the January response at Pump Station 1, we found ourselves in new territory, truly driven by the very real risks of a cold-weather shutdown in the face of declining throughput. We knew it wasn't just TAPS that was threatened, but North Slope operations and Alaska's economy.

The work we did would normally take months to plan the project, obtain materials, complete required permitting, inform stakeholders, and ultimately, execute the work. We did it in days. We felt tremendous urgency to get the line back up.

All told, our response was an extraordinary effort. It involved hundreds of people – Alyeska employees, contractors, and state and federal regulators. And I especially appreciated the presence of Commissioners Hartig and Sullivan, who were onsite in Fairbanks helping us manage this event.

At the end of the day, our bottom line is simple: We need more oil in our pipeline. And as the TAPS operator, I would hope the Legislature would attach the same urgency to this issue that Alyeska and contract employees attached to restoring service in January.

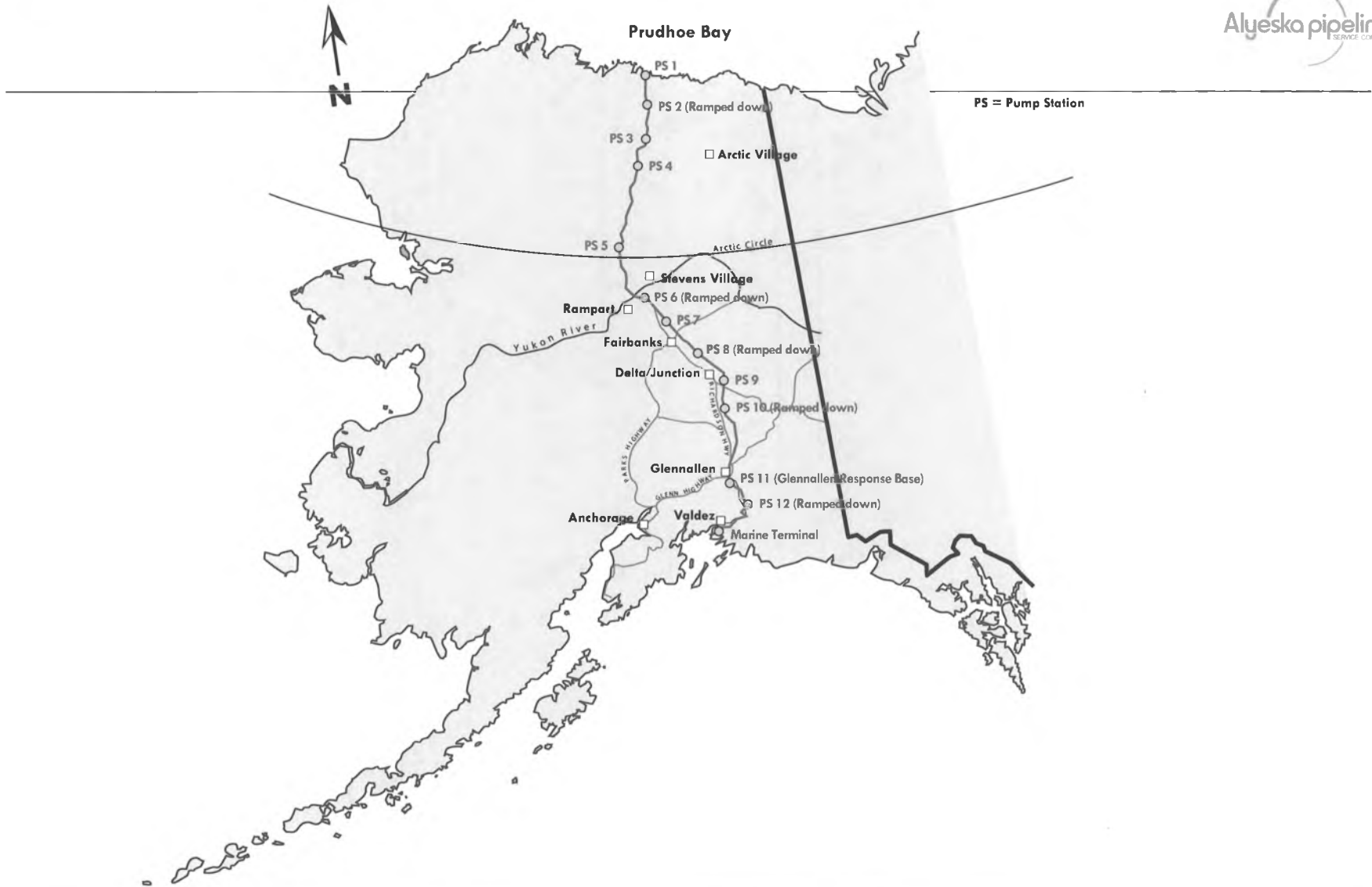
We need your help. TAPS viability depends on political will for Alaska oil development. We need your support for increasing safe and responsible production in Alaska. It is urgent and it is critical.

I'd be happy to take questions at this time. Thank you.

# Declining Throughput on the Trans Alaska Pipeline System

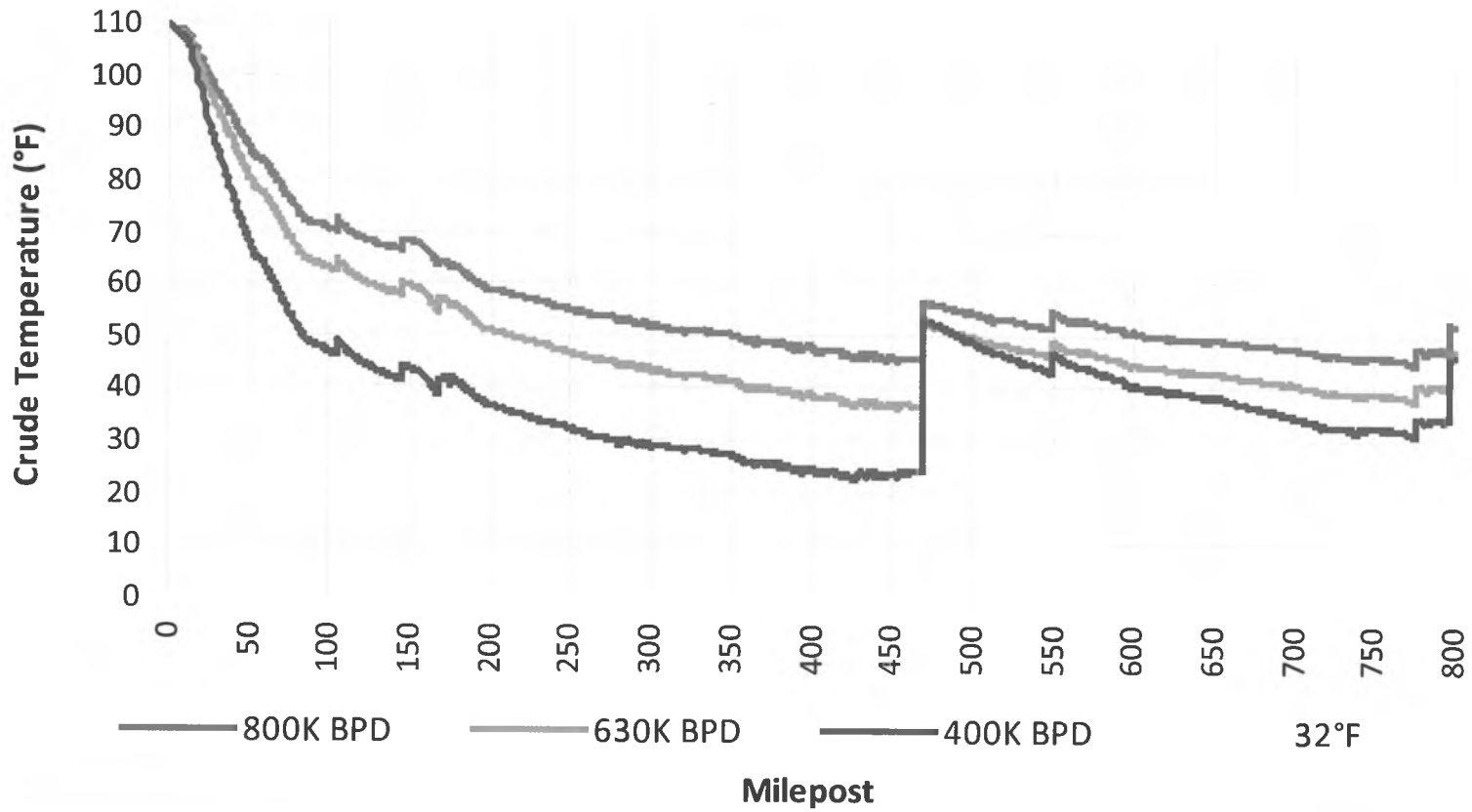
Alaska House Finance Committee / March 18, 2011





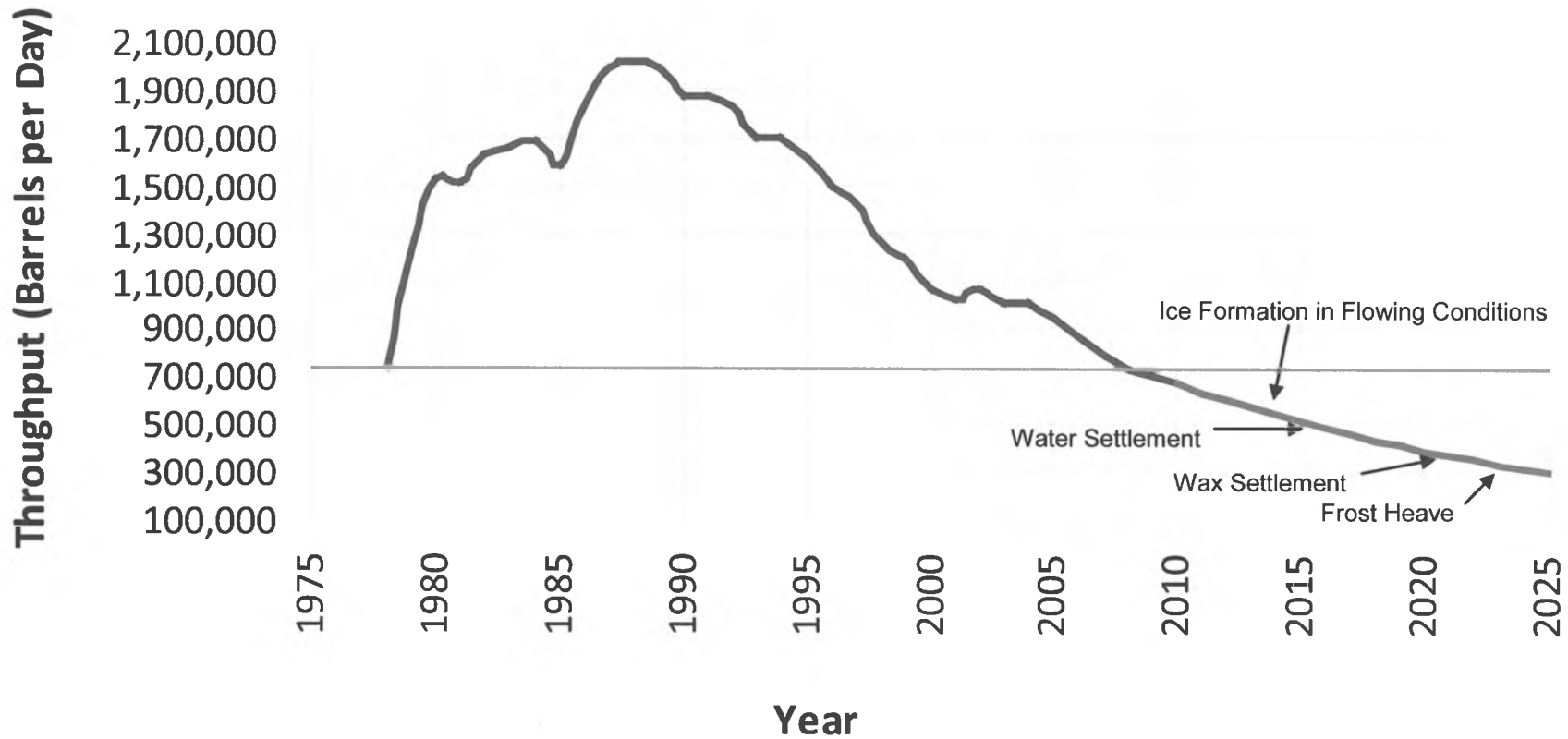
LOW FLOW CHALLENGES

## January Crude Temperatures



# Throughput history...

## January Average Throughput



LOW FLOW CHALLENGES

## Technical challenges

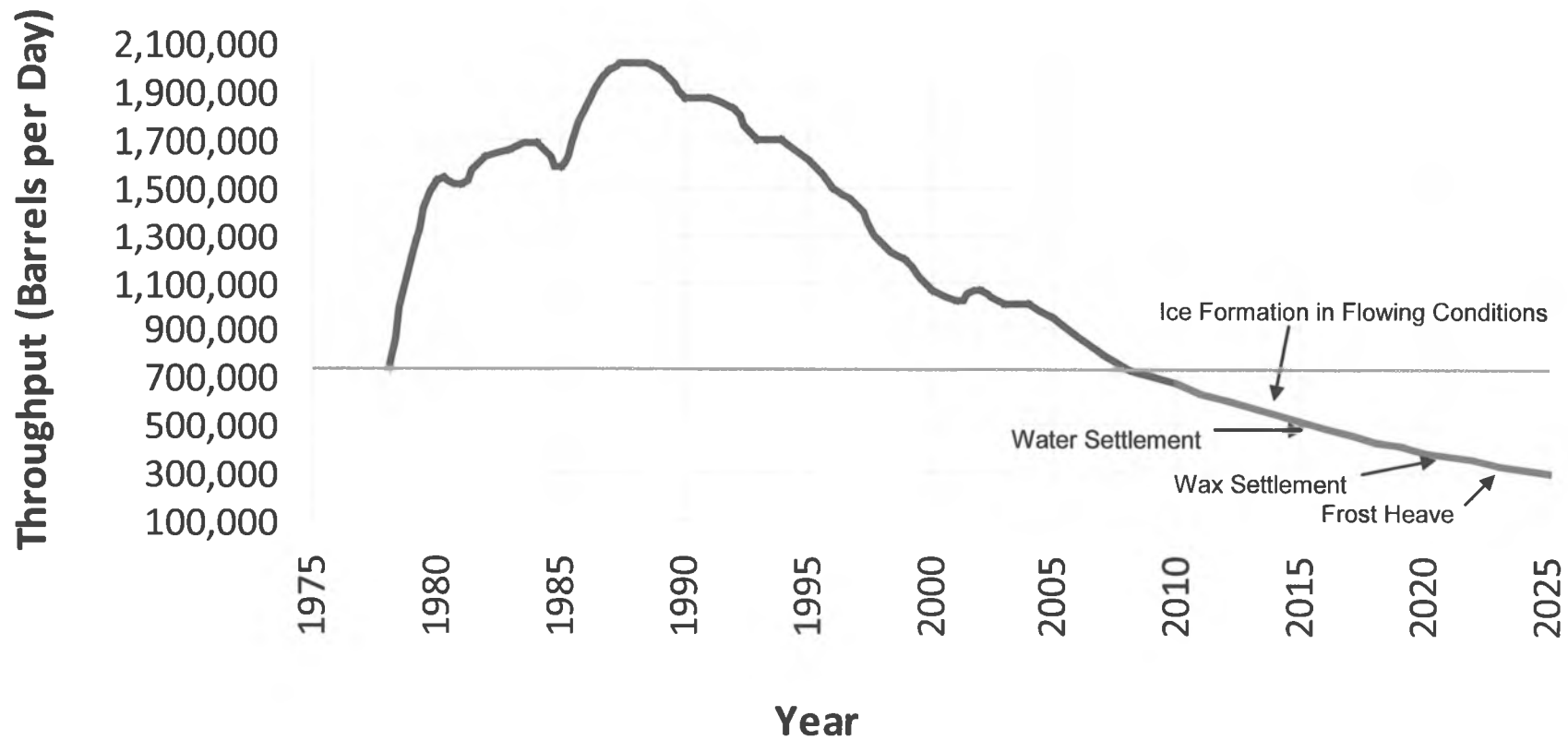
TAPS is facing significant technical challenges associated with declining throughput, including:

- Declining temperatures
- Water transport and ice formation
- Wax formation
- Frost heaves
- Pigging challenges



# Throughput history...

## January Average Throughput



Alaska State Legislature  
HOUSE FINANCE COMMITTEE

Agenda  
1:30 PM

Thursday, March 17, 2011

HB 110-PRODUCTION TAX ON OIL AND GAS

Presentation by Institute of Social and Economic  
Research University of Alaska

Dr. Scott Goldsmith

3/21/11  
Anchorage  
meeting  
Re: HB 110

CIRI  
Margie Brown  
Ethan Schutt

Doyon  
Aaron Schutt

ASRC  
Tara Sweeny-  
Senior Vice President of External Affairs & Communications

NANA  
Joe Mathis President of NANA Pacific  
Lance Miller VP of Resources NANA Regional Corp.

*Eric Fox  
NANA Management Services*

Kuukpic Corporation  
Issac Nukapigak President  
Joe Nukapigak Former President

*Thomas Leonard - Calista Corporation  
(907) 279-5516*

Tentative Afternoon Lineup

- |                |         | Northrim                                    |
|----------------|---------|---|
| — 1            | Mark    | Langland Bank                               |
| — 2            | Jim     | Jansen Lynden Inc                           |
| — 3            | Mark    | Hysten Beacon Occupational Safety           |
| — 4            | Jim     | Egan Commonwealth North                     |
| 5              | Patrice | Case Florcraft                              |
| — 6            | Tom     | Maloney RDC                                 |
| — 7            | Kevin   | Durling Petroleum Equipment & Services Inc. |
| — 8            | Peter   | Macksey Steel Fab                           |
| — 9            | Doug    | Smith Little Red Services Inc               |
| — 10           | Steven  | Pratt Consumer Energy Alliance Alaska       |
| — 11           | Jeff    | Lentfer Midas Alaska                        |
| — 12           | Ben     | Cleveland VP Peak Oil                       |
| — 13           | Edward  | Gohr Delta Leasing                          |
| — 14           | Dana    | Pruhs Pruhs Construction                    |
| not yet → * 15 | Linda   | Leary Carlile                               |
| — 16           | Lynn    | Johnson Dowland-Bach Inc.                   |
| — 17           | Dave    | Hebert Nabors Alaska Drilling               |
| — 18           | Keith   | Silver The Silver Agency                    |

*Lisa Preeder  
Dave Harbour*

3/21/11  
(morning testimony)

**TESTIMONY OF JOE NUKAPIGAK TO THE HOUSE FINANCE  
COMMITTEE ON HOUSE BILL 110**

**March 21, 2011**

My name is Joe Nukapigak. I am testifying as the former President and former Chairman of the Board for Kuukpik Corporation. I was President of Kuukpik Corporation when the Alpine Oil Field was discovered and continued in that position through the design, permitting and most of the construction of the Alpine facilities. The Alpine facilities are partly built on land owned by Kuukpik Corporation.

Then I was Chairman of the Board of Kuukpik Corporation for much of the past decade during completion of Alpine and discovery and then development of the first two satellites of the Alpine Oil Field. Those two satellite oil fields are Nanuq and Fiord. I have been involved in resource development, particularly in the oil and gas industry for more than 20 years. I am also President of Nanuq, Inc., a wholly owned civil construction subsidiary of Kuukpik Corporation.

Almost all of the residents of Nuiqsut are Kuukpik shareholders, are spouses of shareholders, or are children of shareholders who will someday inherit their parent's share of Kuukpik stock. Our shareholders and their families pursue a subsistence lifestyle, but Kuukpik has always been in favor of balanced and environmentally responsible development of the North Slope's oil and gas resources.

Our subsistence lifestyle is the foundation of our Inupiat culture. Many of our shareholders work or have worked at different times for the oil companies or for oilfield service companies. Those jobs provide the money to buy fuel and ammunition for us to pursue our subsistence lifestyle. Even more importantly, they pay for the boats and equipment that help us go whaling and the snowmachines that make it easier for us to travel during the winter months.

The profits from Nanuq, Kuukpik Drilling, LLC and Kuukpik's other oil field service businesses help Kuukpik pay dividends to our shareholders and their families, to help support their subsistence lifestyle and culture.

For these reasons, a healthy oil industry in Alaska has always been important to Kuukpik.

Most of the oil and gas exploration on the North Slope over the past 10 years has been in NPR-A. ConocoPhillips has at least 3 satellite oil field which it wants to build in NPR-A. Those 3 satellites are Alpine West, Lookout, and Rendezvous. Permits for Alpine West, also called CD-5, have delayed development of these three satellite oil fields in NPR-A. Once those satellites are built, it will be more economical to develop oil fields further to the west, through use of existing pipelines, roads and potentially some other facilities.

As we have traveled our traditional hunting lands in NPR-A over the last 10 years, we have seen the gas flares from a number of exploration wells besides those of the 3 satellite oil fields proposed by ConocoPhillips. We believe that discoveries have been made by several oil companies, but no projects have been built in NPR-A.

There has been no exploration in NPR-A for the last two winter exploration seasons. Part of that is that there is no point in exploring in NPR-A if the industry is not allowed by federal agencies to actually build any facilities in NPR-A.

Permits for CD-5 are critical, but so is a reasonable and fair severance tax. Kuukpik and our families are seeing less oil field activity and fewer jobs across the North Slope. We believe that the causes are not just the economic downturn and the denial of the permit for CD-5. ACES in its present form is part of the problem.

Oil is not a renewable resource, so the State needs to get a fair share for oil produced within the State. But, the current ACES tax takes too great a share.

I believe that the current ACES tax is too high at higher oil prices. If we want to see onshore development in NPR-A, we need to reduce the share of profits that ACES takes away from the oil industry at higher oil prices. The oil companies have too much of the risk for new developments and not enough of the reward when prices are high.

We need to strike a balance that works for both the oil companies and for the State of Alaska.

Thank you.

3/21/11



**March 21, 2011**

**Testimony to House Finance Committee**

Lynden Incorporated  
6400 South Airpark Place, Suite #1  
Anchorage, AK 99502  
(907) 245-1544  
Fax: (907) 245-1744

**Mr. Chairman and Members of the Committee:**

**My name is Jim Jansen. I am the CEO of the Lynden Companies. I have lived in Alaska since 1970. I have spent my entire career helping to build an Alaska company that derives 70% of its business from transportation and construction, to, from and within Alaska.**

**Approximately 20% of Lynden's revenue and jobs are derived directly from the Alaska Petroleum industry, but most of Lynden's revenue and jobs are indirectly driven by the oil industry.**

**Our direct petroleum related jobs and revenue have been flat to down since 2007 when ACES was passed. It is this downward trend, contrary to oil activity elsewhere in the country and globally, that concerns me. With oil prices over \$100 per BBL, Alaska should be booming today, like the rest of the oil provinces. Instead, we have falling production, less petroleum related jobs and almost no exploratory drilling or new development.**

**There is very little engineering or seismic activity in Alaska today which is a strong indication that the oil industry is not planning to invest here. Other than routine production drilling and maintenance there is very little being done to arrest the rapidly declining production of oil. It is this trend, and the rapidly declining flow in the pipeline that troubles me most.**

**You do not need me to explain what happens to our state if the flow of North Slope oil falls below the economic and physical capacity of the pipeline.**

**For anyone whose economic horizon is 5 years or less, they should promote our current punitive tax policy. On the other hand, if we want an economic future for our state, for our children and grandchildren,**

**Alaska must create a competitive investment climate, which means taxes that are competitive with alternative locations. Oil companies will not invest here with a total Government take exceeding 80%. They will invest where they get the best return on the dollar.**

**How long to you suppose Lynden would stay in business if our prices were double our competitors? How long would you shop at your local supermarket, if its prices were not competitive? The oil companies are no different. They will invest elsewhere if Alaska is not a competitive place to invest.**

**Lynden operates a fleet of 6 Hercules aircraft. Our oil activity in Alaska for these aircraft has fallen to almost zero. We now have 1 aircraft operating in Paupa New Guinea and are very close to placing another aircraft in Peru. We do not want to operate in these difficult locations, but that is where the investment is taking place and we have no choice but to work there or go out of business. We would much prefer to stay in Alaska, and keep the jobs and Lynden's investment here.**

**We hear a lot about tax credits as an alternative to reducing production taxes. While helpful, as they reduce the down side risk, they do very little for the upside. Businesses invest for the upside. ACES has removed the upside, therefore there are no meaningful investment plans on the drawing boards.**

**We must also remember that there is a substantial lead time required for new investment. If we wait to see what happens with ACES, the results may be devastating before we have time to fix the tax system.**

**Alaska must regain its reputation as a fair and commercially viable place to invest. Failure to do so will unnecessarily result in economic ruin for our great state.**

**Thank you for this opportunity to speak today and I urge you to pass a competitive tax bill this legislative session.**

**Jim Jansen  
CEO  
Lynden Inc.**

**Thom Leonard**

*Communications Manager*



**CALISTA CORPORATION**  
[www.calistacorp.com](http://www.calistacorp.com)

301 Calista Court, Suite A  
Anchorage, AK 99518  
t: (907) 279-5516  
f: (907) 272-5060  
[tleonard@calistacorp.com](mailto:tleonard@calistacorp.com)



CALISTA CORPORATION  
www.calistacorp.com

March 21, 2011

Dear Committee members:

Calista Corporation supports a more competitive environment for Alaska's oil and gas exploration and development. We support legislation encouraging the increase in oil production on the North Slope.

Development of Alaska's resources should be considered a long term investment of long term projects. A more balanced long term strategy could benefit Alaska and the nation in many ways, from the potential of a more consistent oil and gas supply, to steady employment for hundreds of Alaskans.

The current tax structure, "ACES," can be improved. CNBC's report last summer placed Alaska as the worst state in which to conduct business in the nation. The survey determined Alaska was ranked last for the fourth year in a row.

Additionally, higher well credits can help encourage new and existing field development. Alaska has a strong history of exploration, and the state laws and regulations need to better support continued exploration and business development in Alaska. The jobs oil and gas provides for our Shareholders enables them to work rotational schedules and still live a subsistence lifestyle.

Again, Calista supports utilizing our states natural resources in a safe and responsible way, while providing a more balanced business environment for the oil and gas industry. Calista thanks you for your time in this important matter.

Sincerely,

Calista Corporation

Andrew Guy  
President/CEO

Good Afternoon,

My name is Tom Maloney and I am a long term resident of South Anchorage. Currently, I am the Alaska Area Manager for CH2M HILL and the Board President of the Resource Development Council. I am pleased to have the opportunity to testify today. I very much appreciate all of your services to the State.

By way of background, my degrees are in Accounting and Finance and I am a CPA, CMA and CFP. I am very concerned with the current state of the Alaska oil industry. Why, throughput in the Trans Alaska Pipeline System (TAPS) has been decreasing at an increased pace over the last several years. For example, in 2008 the production decline through TAPS was 18,000 barrels per day (bpd). The decline increased to 24,000 bpd in 2009 and 48,000 bpd in 2010. This is an alarming rate of decline that should serve as a wakeup call that without doing something different in the very near future, we will not have a North Slope oil industry. Just think, in the last twenty years, production rates are down around 70%.

Wayne Gretzky the Great One said, "You miss 100% of the shots that you don't take." The same is true with hydrocarbons. Without new investment, there is no drilling and without drilling Alaska gets no new production. Without new production, the only question is when will TAPS shut down? Companies involved in the oil industry know that production and related jobs are drying up in Alaska. The Department of Labor in January 2011 indicated that the oil and gas industry lost 1,000 jobs over the past year, or almost 8%. What can we do? DRILL.

How has drilling activity been over the last several years? The number of North Slope exploratory wells in 2007 was 18. This year there is 1, a decrease around 95%. Exploratory wells create a significant number of great high paying jobs. Attached is a drilling graphic that displays some of the types of jobs associated with drilling.

Fortunately for the residents of Alaska including myself and my family, the two largest oil fields in North American history – Prudhoe Bay and Kuparuk – are located on State land. These two giant oil fields require a tremendous amount of new investment to minimize decline in production numbers. Unfortunately, the number of total North Slope development wells has also been decreasing over the past several years. For example, the number has fallen from 139 in 2007 to 110 in 2010. The negative trend in drilling is resulting in a faster decline in production than most of us would care to see.

How does one stop the decline in drilling? There is only one answer and that is to DRILL, but first we must bring investment back to Alaska, in my view, it is difficult to see how the punitive tax structure of ACES will encourage the oil industry to ramp up drilling in Alaska – when the government takes almost 80 cents of each additional dollar of profit earned at \$90 oil.

Wall Street and other analysts have raised red flags about steadily declining oil production and its impact on the Trans-Alaska Pipeline System (TAPS), the lifeblood of Alaska's economy. The recent temporary shutdown of TAPS in January sent shock waves across the nation and gave Alaskans a preview of what the future may hold. A CNBC story by Scott Cohn used the shutdown to highlight the impact of declining throughput on TAPS, Alaska, and the nation.

The challenges of restarting the pipeline in extreme cold at reduced flow clearly foreshadow the line's future. Studies show that ice can form in the pipeline at a flow of 500,000 barrels a day or less, a threshold that may be breached within four years. While new investment in TAPS could help mitigate low-flow challenges, less oil in the line will hasten the day when the pipeline may be forced to shut down.

Analysts warn an accelerating TAPS throughput decline could lead to the premature shut-down of the pipeline, stranding billions of dollars in state royalty payments, which exceeded \$2 billion in 2010 alone. Remember, we only get royalties from State Lands when there is actual production.

In 2005, the State predicted TAPS production would average 832,000 barrels per day (bpd) in 2010. Actual production was 644,000, 22% less than forecasted. In 2005, the State forecasted 762,000 bpd in 2015. Yet current production is 630,000 bpd and falling. Will we be less than 500,000 bpd in 2015, or can we take steps to reverse the steep decline? With oil accounting for almost 90% of the State Treasury, we are fast approaching a very steep cliff.

Tax policy must change in a way that reflects the important role drilling has in Alaska's economy. Investors take 100% of the risk to lease, explore and develop a resource. At high prices, government can take more than 80% of the income stream of a barrel of oil. What is the incentive for an investor to take risk? Would anyone in this room with their own real estate, stock, or other investments give the government almost all the upside while taking nearly all the downside?

How has the rapid decline in North Slope drilling activities affected a major employer like CH2M HILL? In Energy, CH2M HILL works primarily in engineering, construction, and operations and maintenance including drilling and well-support services.

Our engineering segment is headquartered at 949 E. 36<sup>th</sup> Street in Anchorage. We have seen a 60% decrease in engineering and design staff. The primary driver of this lower activity is the lack of new production opportunities, including challenged or heavy oil. I might also add that the federal government has not been helping out Alaskan employment opportunities as it relates to the National Petroleum Reserve Alaska (NPR) and the Outer Continental Shelf (OCS).

Construction, including NORCON, our Union Construction Company, has also seen decreased employment. For example, with the lower level of drilling opportunities, there is a decreased need for modular construction, well tie-ins and related installation work.

In our drilling and well-support work, we have seen a decrease in all areas, including drivers, mechanics, support services, etc.

The overall downturn in business affects us and other employers in multiple ways. For example, several years ago we hired as many as 38 interns. These were high paid jobs for Alaskans, including Alaskan high school students in drafting positions. This year we expect the number to be 7 interns, which will be a challenge for us quite frankly.

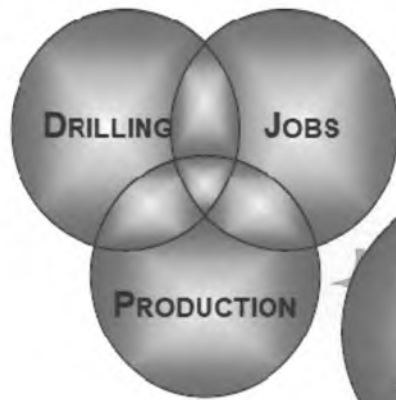
One area that really concerns me is that many years ago we use to talk about the Alaska brain drain and the fact that many of our best and brightest were leaving the State for education and job opportunities. Many Alaskan employers, including ourselves, have worked hard to educate young Alaskans about a future in the oil industry. The week of February 20<sup>th</sup> was Engineers Week, nationally. CH2M HILL had a numbers of engineers and support staff, visit a number of schools to educate our youth about engineering opportunities in the state. We want to give our young people hope that we will have highly skilled and well-compensated private industry jobs for them in the next few years.

In summary, there is a need to drill to pay the bill. To keep some dough, we need oil flow. I hope and trust that the legislature will take proactive steps this year to address the steep decline in oil production that we have been experiencing. One only needs to look at Cook Inlet production which is down 95% from its peak of 40 years ago to the Ketchikan Pulp mill, Agrium, and now the Kenai L&G plant to recognize that we cannot take industry for granted. Let's make Alaska more competitive in attracting the investment necessary to stem the production decline and sustain TAPS to the point where OCS production could ultimately enter the pipe. Please encourage more private investment, more jobs and a brighter future for our kids and grandkids. After all, I have an 18 year old son majoring in welding and non-destructive testing at UAA who is very concerned about future employment activities in Alaska.

Thank you for listening. I sincerely appreciated the opportunity.

Tom Maloney  
Anchorage, Alaska  
[Tom.Maloney@ch2m.com](mailto:Tom.Maloney@ch2m.com)

**SUCCESSFUL DRILLING = MORE PRODUCTION = MORE JOBS**



- ENGINEERING ✓
- PROCUREMENT ✓
- FABRICATION ✓
- CONSTRUCTION ✓
- LOGISTICS ✓
- SUPPORT ✓



- SUPPORT SERVICES\***
- Health, Safety & Environmental
  - Administration
  - Finance & Accounting
  - Human Resources
  - Transportation & Logistics





3 March, 2011

*Testimony to the House Finance Committee from Doug Smith, President and CEO of Little Red Services, Inc.*

~~Co-chairs Seaton and Fiege and Members of the House Resources Committee:~~

My name is Doug Smith and I am President and CEO of Little Red Services an Alaskan oil field service company employing just over 100 Alaskans who reside from Sitka to Two Rivers. We operate on the North Slope providing well services with our fleet of high pressure pump trucks with fluid heating capabilities known as Hot Oil units.

I appear before your committee today to express my support of House Bill 110, the Governor's bill to restructure the way taxes are levied upon the oil and gas industry in Alaska. Meaningful reform to ACES is necessary at this time to encourage additional industry investment in Alaska. Investment by the producers is critical for small companies, such as mine, with Alaskan employees who reside from Sitka to Two Rivers.

Oil and Gas related businesses need a long term predictable solution that encourages investment by producers and creates jobs for Alaskans. The oil and gas industry is already subject to an unpredictable marketplace and a myriad of regulatory entanglements. In order for our oil and gas resource development to thrive here, we must be granted the stability by the legislature to work in a business environment that is fiscally hospitable to development.

LRS Corporation, 9330 Vanguard Anchorage AK 99507. Ph. 907 349-2931



As an Alaskan employer working in the oilfield services industry, I am confronted daily with the ramifications of the current tax structure. Due to the decline in investment and infield production related activity small Alaskan companies are losing revenue and our employees are losing jobs. Since 2008, Little Red Services has seen a 20% drop in demand for services realized by a reduction of over 6,000 hours of hot oil truck use. For our company this resulted in an annual revenue loss of nearly \$2 million dollars and forced the layoff of 11 employees over a two year period.

“If oil is taxed at too high a rate there’s a risk that crucial investments don’t get made in the state’s most important industry.”<sup>1</sup> I can tell you, without question that this is the case, but those are not my words. Senator French and Representative Gara acknowledged this in their ADN compass piece this past December. They also said that “any reasonable tax relief proposal that will lead to more Alaska jobs and more Alaska oil will get serious consideration from this legislature.” It is clear that House Bill 110 is not meaningless pandering to the oil industry. The visible investment in areas with more competitive tax structure demonstrates that ACES is stifling investment in Alaska.

Yes, it is true that the State has put millions of dollars into budget reserves from taxes levied against producers. It is also true that oil and gas service industry employees struggle as investment stalls. ~~What~~ HB 110, following the recommendations made by the Department of Revenue , is to evolve the current tax structure, though meaningful reform, in an effort to stem

---

<sup>1</sup> <http://www.adn.com/2010/12/04/1589367/lowering-oil-taxes-doesnt-guarantee.html>



the tide of job loss and encourage investment in what is universally acknowledged to be Alaska's most important industry.

Opponents of reform argue that employment is up under the ACES structure. In reality, exploration, and production related jobs are down while maintenance jobs are up. While work camps are being built and filled with workers to meet oil and gas development needs in North Dakota, only one exploration well is planned for Alaska's North Slope this winter and development wells are down 16% from 5 years ago. Production is declining sharply and accelerating year on year. From 2001 to 2006 the ANS production declined 163,000 bbl~~4~~ per day or 16% and from 2006 to 2010 the decline increased another 217,000 bbls per day or 25%.

We do not come before you today asking for corporate welfare, nor do we enter this debate lightly or without careful consideration of long-term revenue for our state. In an environment where industry is provided competitive investment opportunities it is incumbent upon the members of that industry to hold themselves and their colleagues accountable to re-investment of profits in Alaska. This improved investment climate would serve to benefit Alaskans through continued development, increased employment, and continued strong civic engagement.

The activity of our oil and gas industry reaches every Alaskan and many times through the nonprofit organizations. In 2010 forty-four major oil and oil support companies contributed \$3.7 million dollars to United Way of Anchorage or 49% of the total raised by the private sector. My company, tiny by comparison, donated nearly \$70,000 in charitable contribution in 2010.



I commend the governor for his understanding of the oil and gas industry business environment, its key role in our future and for his leadership on this reform.

I thank you for your time and I appreciate your service to our citizens.

Thank you.

Good afternoon, my name is Keith Silver and I am a victim of ACES. My prior employer laid me off as well as three others due to the lack of new work on the slope. We provided the camp services, security, and contract labor for the oil companies and their contractors. A reduction of work on the Slope results in the subsequent reduction of support staff in Anchorage. The 2,000 slope jobs quoted often probably does not include all those in Anchorage that supported them.

I would encourage you to pass out of committee HB110. In lieu of ACES, we should call it FACT. Fair and Competitive Tax. Alaska must be competitive with other jurisdictions in order to attract investment dollars. Due to the remoteness and weather conditions of the North Slope, we are already the most expensive place in the world in which to do oil field business. Couple that with a tax system that offers no upside to the producers if the oil price increases and it is no wonder that there has been no new investment dollars put into exploration into the legacy fields. There is one exploration well being drilled this winter. Just one. At the turn of the century, it was common to have over twenty drilled in a season.

The Province of Alberta followed Alaska's example and increased its taxes in a me-too move. Shortly thereafter, the companies and contractors picked up its equipment and left. The government of Alberta recognized its mistake and reversed their taxes and the companies came back. It is time that Alaska do the same. Comments that HB110 is a \$2 billion giveaway do not help matters. We should all instead view it as a correction. A correction that is sorely needed to improve the competitive standing of Alaska's lands on the North Slope. The constitution requires you to get the best deal for the people's natural resources. 55% of something is far larger than 88% of nothing.

I don't work in the oil and gas business anymore. However, as an Alaskan citizen, I have a vested interest in how well the oil field prospers. We need more oil in the pipeline, preferably oil from state lands. Without a resurgence of exploration and production on the slope, how are we going to pay for state government a decade from now? Taxes on other resources can't cover it, payroll taxes can't cover it, and reserve funds can't cover it for long. I am all for diversifying our economy and adding new industries to the mix. But, any new industries will look at how the existing industries have been treated and decide to look elsewhere.

Please pass HB110 out of committee with a do pass recommendation. Thank you



## RESOLUTION

Whereas Alaska business and residential consumers of energy have a direct interest in consuming energy supplied from domestic sources; and

Whereas Alaska business and residential consumers of energy are dependent upon robust overall economic activity to maintain livelihoods; and

Whereas over 30% of Alaskans are dependent upon oil and gas exploration and development for employment; and

Whereas the development of Alaska's natural resources was contemplated as the economic foundation upon which Alaska became one of the 50 States of the United States of America under the Statehood Compact; and

Whereas the development of Alaska's natural resources remains the cornerstone to economic viability for the state and its citizens; and

Whereas external and internal threats to the responsible development of those resources is detrimental to the overall welfare of Alaskans as described under Section 1 of Article 8 of Constitution of the State of Alaska; and

Whereas over 85% of state revenue used to provide services to the people of the state is derived from taxes on oil production; and

Whereas oil production has declined from a peak of over 2 million barrels a day to about 640 thousand barrels a day and is in freefall at the rate of 5 - 7% per year; and

Whereas Alaska provides thirteen percent of total domestic oil production in the United States; and

Whereas Alaska's abundant natural resources and oil production are vital to the energy security of the entire nation; and

Whereas the Alaska Department of Natural Resources has, since the Alaska's Clear and Equitable Share tax regime became effective, reduced by 600 Million barrels its projected Alaska oil production for the 10 year period ending in 2020; and

Whereas new exploratory drilling is both a risky enterprise and necessary to stem the decline in Alaska oil production; and

Whereas drilling delays caused by overly burdensome and overlapping federal regulations has also increased the time, expense and opportunities to thoughtfully develop Alaska's oil and natural gas resources; and

Whereas new oil exploration in Alaska needs to compete globally for investment dollars; and

Whereas the rates and progressivity structure of Alaska's current tax regime provide a disincentive to attracting risk capital to the state; and

Whereas Governor Sean Parnell has proposed changes to Alaska's tax regime designed to increase the global competitiveness of the state; and

Whereas increased investment through increased global competitiveness will enhance Alaska's ability to fulfill its constitutional mandate to develop natural resources for the maximum benefit of the people; and

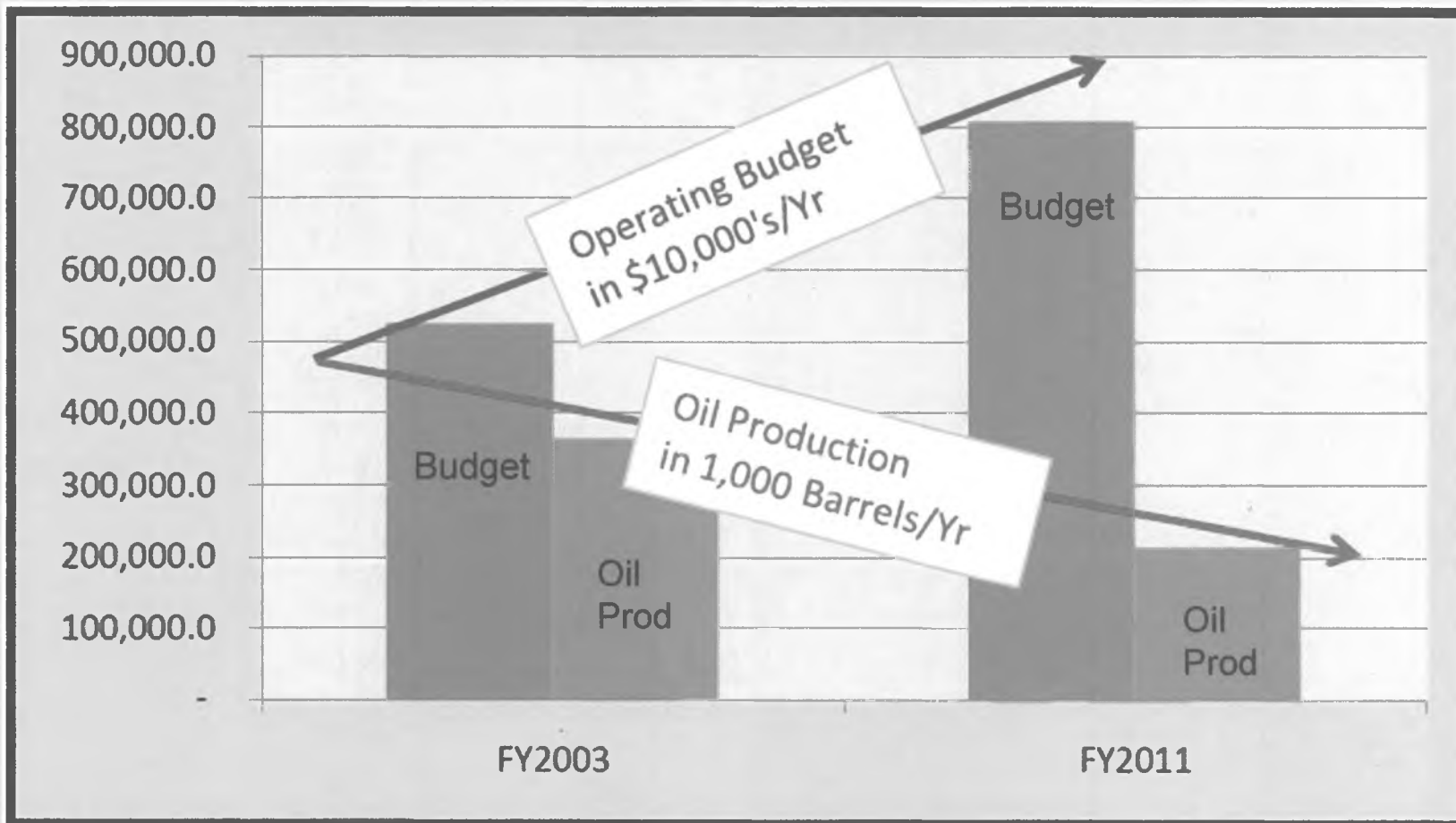
Whereas, Alaska's remoteness from the markets, Arctic climate, high labor and logistical costs argue for an even more competitive tax and regulatory structure;

Now, therefore, it is RESOLVED by Consumer Energy Alliance - Alaska:

That the Alaska State Legislature should approve the revisions to the Alaska Tax Code in substantially the same form as submitted to it by Governor Parnell without delay and without conditions or complex requirements that would discount the improved investment climate the legislation could otherwise produce.

Dated at Anchorage, Alaska this 15th day of March, 2011.

# Oil Production Down; State Spending Up



Prepared by Steve Pratt  
March 2011

Good afternoon and I thank the Committee for having this hearing in Anchorage. My name is Steve Pratt. I am testifying in support of HB 110 on behalf of Consumer Energy Alliance – Alaska. I serve on its Board of Directors and act as the Chairman of the Issues Committee.

CEA-AK is an affiliate of the national Consumer Energy Alliance organization which is a nonprofit nonpartisan organization promoting a balanced energy policy that helps consumers and enhances economic growth. This means increasing access to and production from domestic oil and gas resources, increased utilization of alternative energy sources, and enhanced energy efficiency and conservation.

CEA-Ak believes that Alaska's current tax rates and progressivity structure provide a disincentive to attracting risk capital to the state. It also believes that improvements to the tax regime have the potential to reinvigorate investment, add jobs to Alaska's private sector economy, and add to the domestic production of energy. Consequently, last week our Board of Directors passed a resolution urging passage of HB 110 and asked me to present this resolution to the Legislature.

Alaska's energy and economic security are inextricably linked to oil and gas production and resource development. The recent surprising shutdown of the LNG export facility on the Kenai Peninsula demonstrates how quickly our situation can change in response to commercial and resource realities. Alaska has unique climate, labor and logistical challenges that tax policy needs to recognize in designing a competitive tax structure.

I know that members of the House Finance Committee are all concerned about the dependency of Alaska's prosperity on oil production and how best to maximize benefits to the people. Aside from state revenue, over 30% of Alaskans are dependent upon oil and gas development for employment. For the long term, our members are extremely concerned with declining oil exploration investment in the state and potential impacts on the economy. In a fiscal sense, we are also very concerned about the simultaneous increase in state spending over the past decade combined with declining oil production.

*about recon. incentives*

~~I suspect that~~ many provisions of our Resolution trod familiar ground so I won't take up your hearing time in their recitation. But I ask you to review the document and invite you to contact us with any questions you might have. In addition to the Resolution, I will leave you with this chart. It tracks Alaska trends in oil production – down – and state spending – up. With 85% of state revenue tied directly to oil production, these trends simply cannot survive the test of time unless something changes.

As noted in our Resolution, approval of HB 110 in substantially the same form submitted by Governor Parnell to modify the progressivity structure of Alaska's tax regime will go a long way towards removing disincentives to business activity in the state. CEA-Ak believes this is the right thing to do for the state, its citizens, and its future.

I thank you again for this opportunity and will answer any questions to the extent I am able.

Steve Pratt  
Chairman, Issues Committee  
Consumer Energy Alliance – Alaska  
345-0032