

ALASKA LEGISLATURE

HOUSE and SENATE FINANCE COMMITTEE FILES, 2005-2006 3102

## Key Messages from Corporate Perspective

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- Current tax rate already uncompetitive given cost & prospectivity
- Proposed tax increases will reduce investment & production in Alaska
- U.S. federal windfall profits taxes lowered production and failed to produce expected revenues

# Jim Bowles

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## Summary

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- Higher taxes will reduce investments
  - 20% strikes the right balance
  - Increased Tax rate and windfall profits surcharge decreases project value
- Recognition of transition investments is fair
- Reasonable start date

**CRA International**  
**Review of Alaskan Fiscal Proposals**

**Presentation to Alaska Senate Finance Committee**



INTERNATIONAL

**David Bramley**

**April 5, 2006**

9:23:02 AM  
4/5/06

## Overview of CRA Approach

**Will the proposed changes to Alaska's fiscal system support new investment?**

**Comparable group  
of  
mature OECD  
producers**

**Economic potential**

- Maturity / Prospectivity
- Cost base

**Fiscal Terms:  
Total Government  
Take**

**Investor Capital Allocation Decisions**

**Comparing Alaska's fiscal proposals to other mature OECD producing areas is the basis for a realistic appraisal of their impact on investment**

**OECD<sup>1</sup> Oil & Gas Peer Group**

- Alaska
- Australia NW Shelf
- Canada Oil Sands
- Norway
- UK North Sea
- US GoM Deep Water
- US GoM Shallow Water

**Common Investment Characteristics**

**Similar strategic roles in overall investment portfolios**

- Large, established oil and gas producers
- Similar political and business risks

**High level of comparability**

- Remaining potential and costs are comparable from public data
- Similar fiscal structures

<sup>1</sup> Organization for Economic Cooperation and Development

## Alaska's production declined by 6% between 2000 and 2004: in the middle of the group

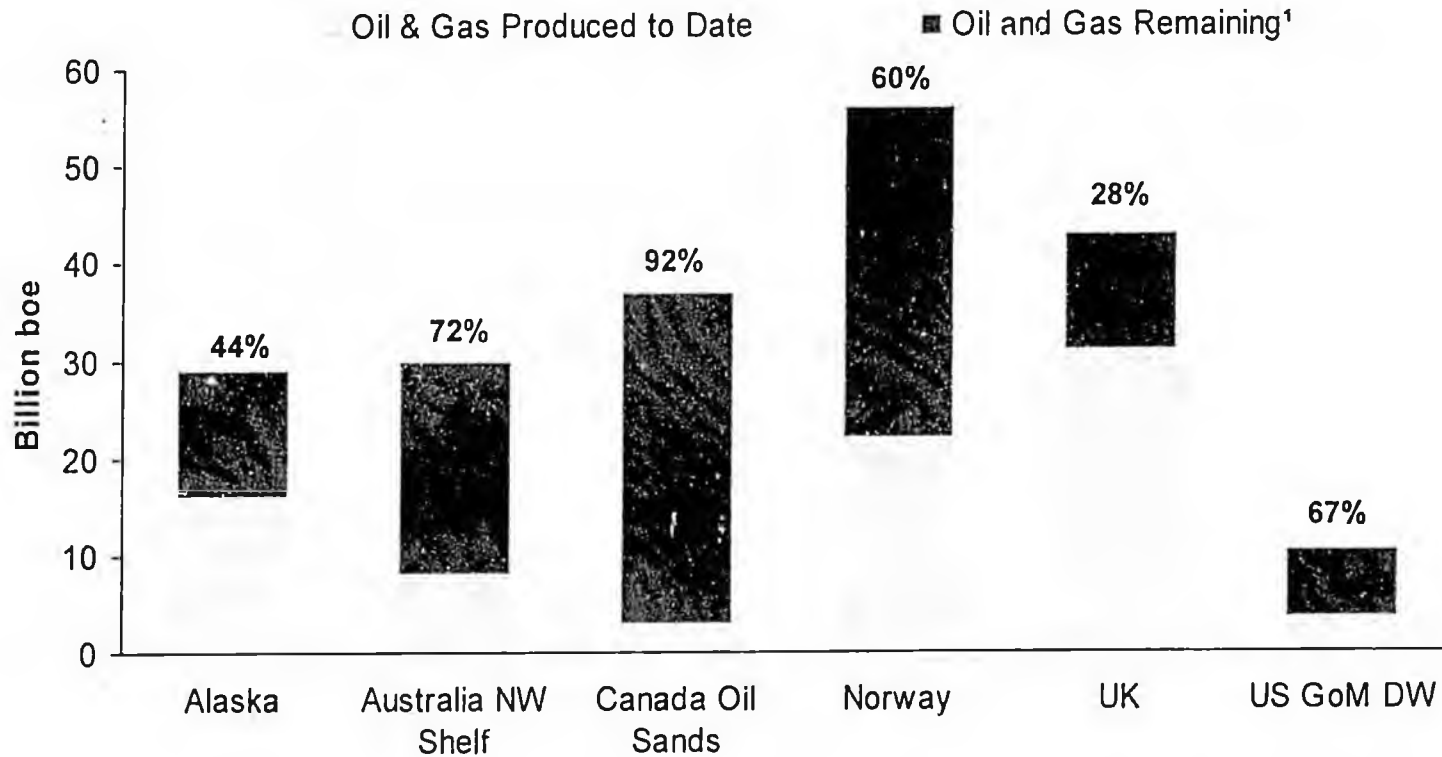
Total Hydrocarbon Production Change 2000-2004		
Region	2004 Production (mboe/day)	Growth/decline since 2000
US GoM SW	738	-27%
Australia NWS	403	-27%
UK	2,144	-19%
<b>Alaska</b>	946	-6%
Norway	3,180	8% <sup>1</sup>
US GoM DW	1,037	26%
Canada Oil Sands	997	64%

<sup>1</sup> Norway's production dropped by 10% between 2004 and 2005, the loss almost entirely through decline in oil production  
 Source: CRA Analysis of public sources of production history in each area



# Alaska has 44% of its known conventional oil and gas reserves remaining

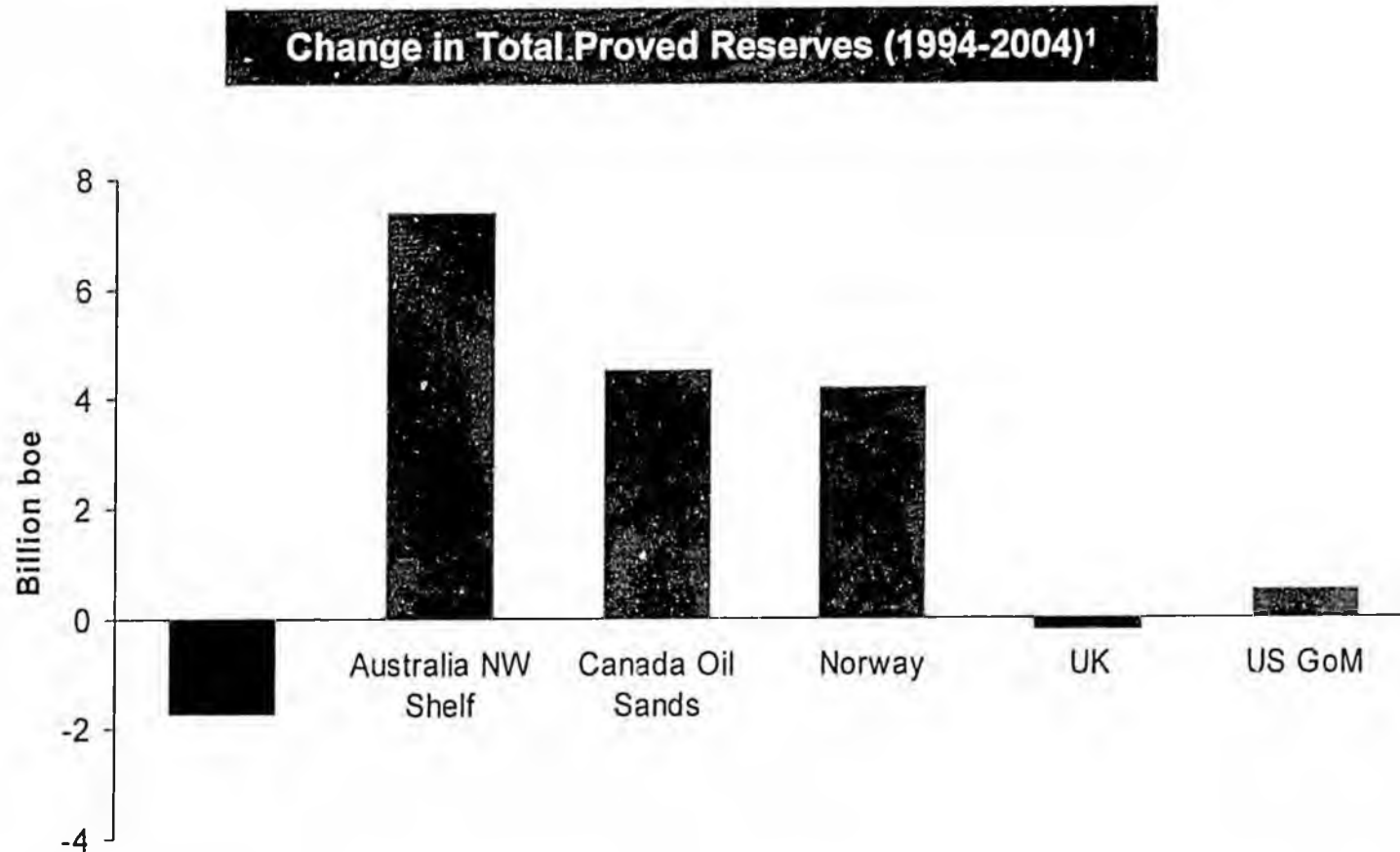
## Total Hydrocarbons Produced/Remaining



¹ Future estimates based on available data on '2P' or P50 basis: i.e. a central estimate of remaining potential  
Numbers in red are percentage of total remaining  
Sources: MMS, DOIR, Canadian Association of Petroleum Producers, NPD, DTI, DOE

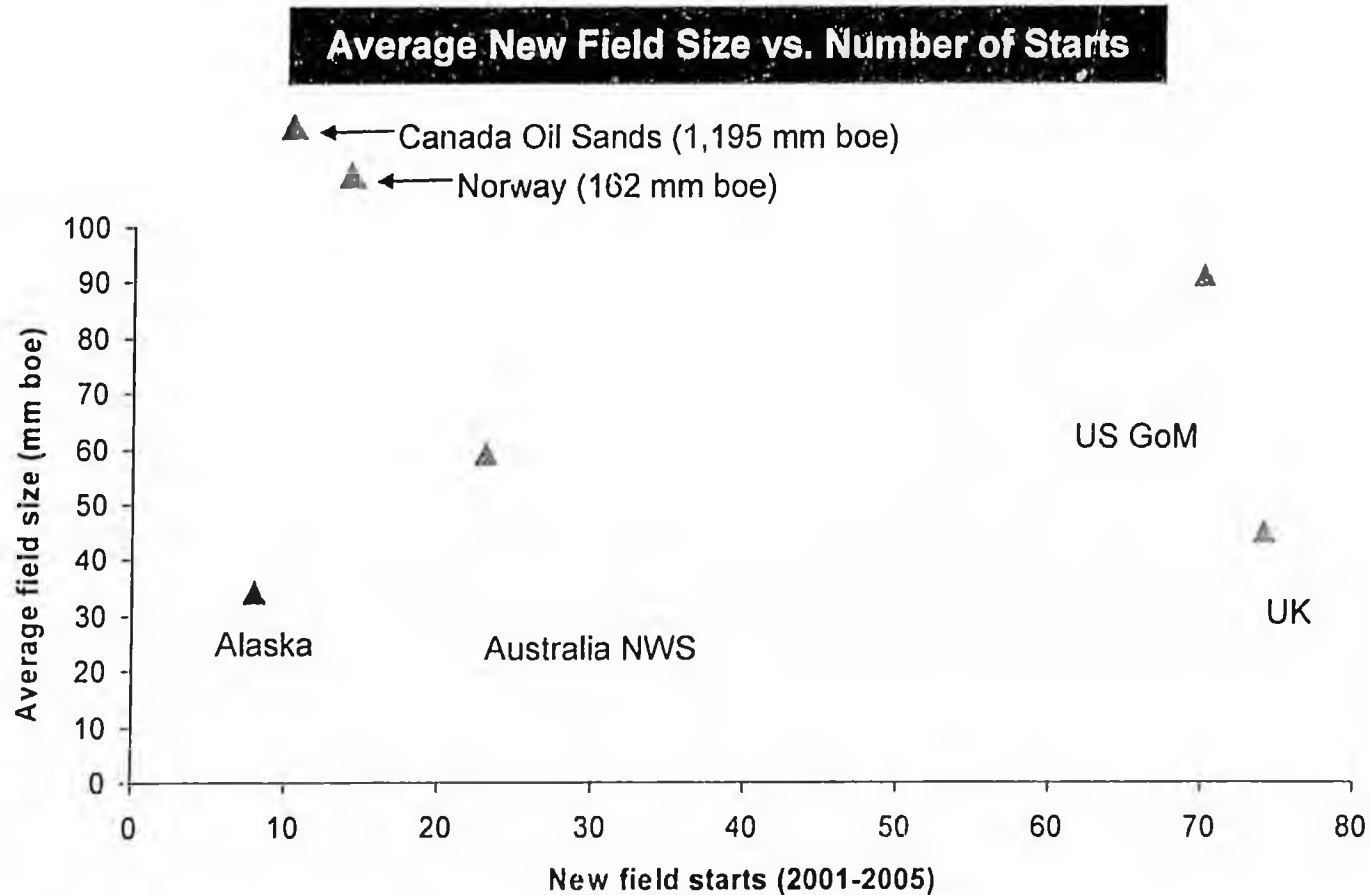


## Alaska and the UK are the only regions within the OECD group to show a decline in proven oil and gas reserves over the last decade



<sup>1</sup> – Figures based on proved (P1) reserves  
Sources: BP Statistical Review & EIA

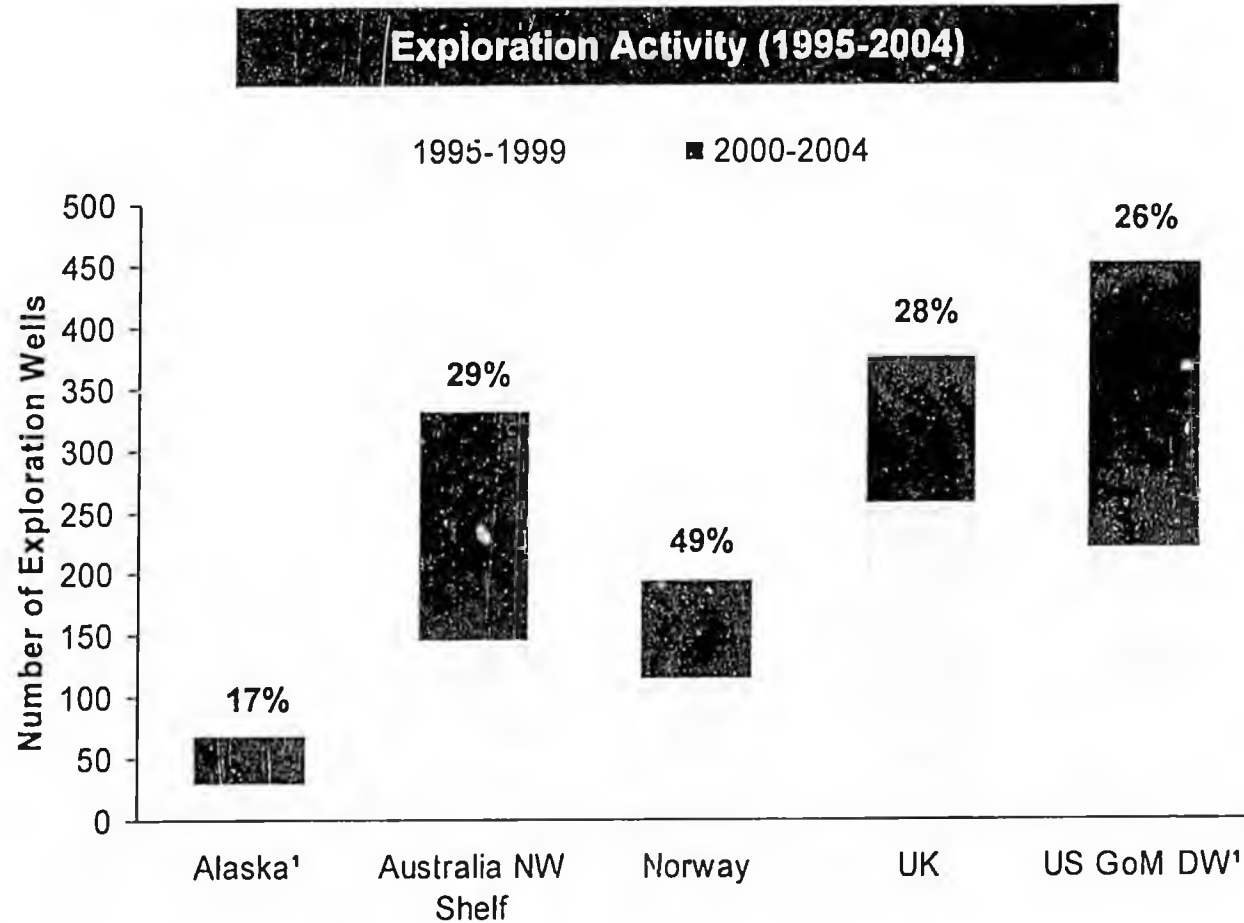
**Alaska has had only eight new fields start production since 2001 and the average field size was the smallest of the group**



Note the logarithmic scale on the vertical axis

Sources: Alaskan DNR, WA Government, NPD, UK DTI and Offshore Magazine

## Alaska has the lowest exploration (wildcat) activity and success rate in the OECD comparison group



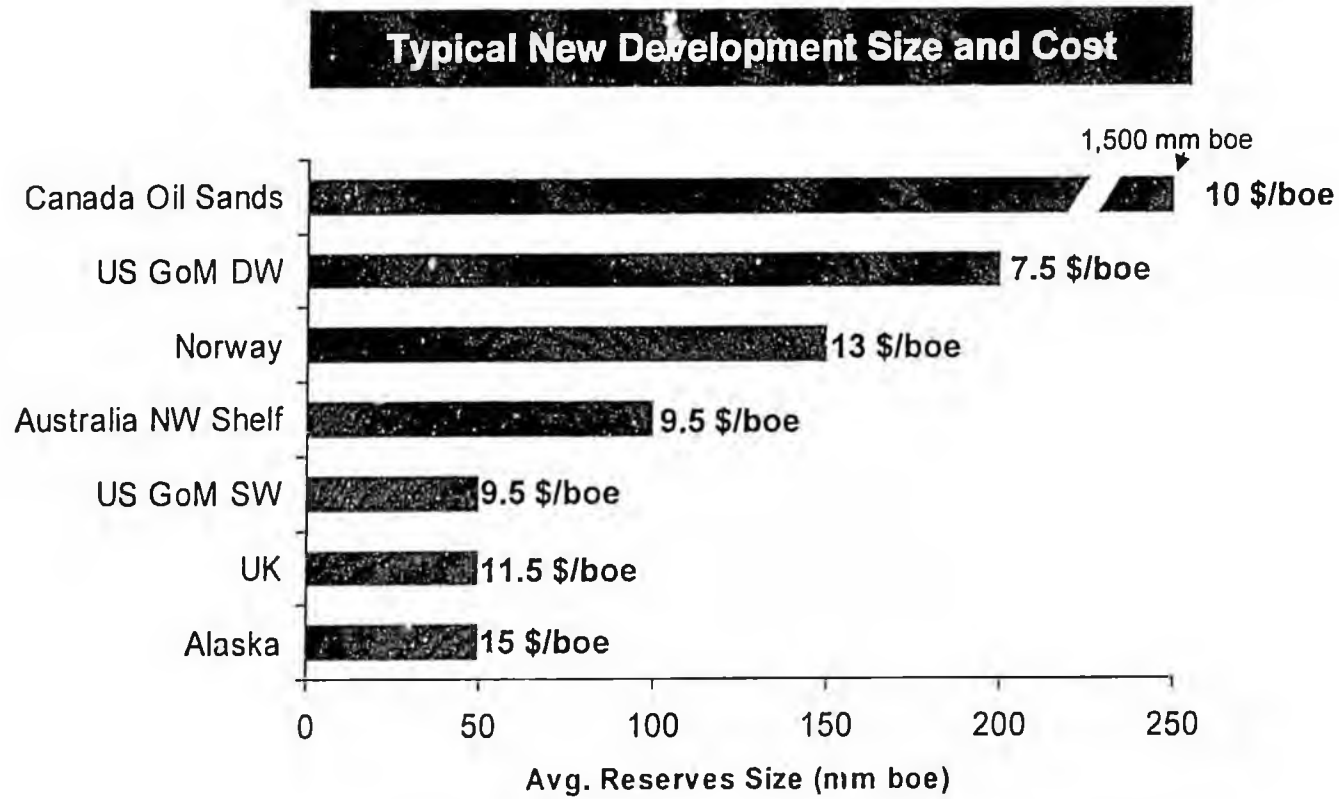
Numbers in red show exploration success per region in the period 2000-1H2004

<sup>1</sup> Alaskan and US GoM drilling numbers discounted by 50% from DNR / MMS figures for Exploration and Appraisal drilling

Sources: Alaskan DNR, Oil & Gas Resources of Australia, NPD and UK DTI, MMS



## Likely new developments in Alaska are relatively small and high cost



Figures in red show total technical costs: CRA estimates of capex and opex for a typical field.

NB Alaskan total costs include an allowance for the incremental effects of TAPS transportation and Jones Act shipping requirement costs.

Source: CRA Analysis of public sources of field development activity in each area.

## Alaska emerges on a variety of measures as a relatively mature and high cost petroleum area

	Alaska	Australia NWS	Canada Oil Sands	Norway	UK	US GoM DW	US GoM SW
<b>Production Trend</b>	-6%		64%	8%		26%	
<b>Reserves Produced</b>		28%	8%	40%		33%	
<b>Proved Reserves Replacement</b>		Very Positive	Very Positive	Very Positive	Slightly Negative	(Positive)	
<b>New Field Starts/Field Size</b>		22 / 59 mm boe	10 / 1,195 mm boe	14 / 162 mm boe	70 / 45 mm boe	65 / 91 mm boe	
<b>Exploration Wells</b>		320	n/a	180	350	450	(Large)
<b>Exploration Success Rate</b>		29%	n/a	49%	28%	26%	(Mid-range)
<b>New Field Technical Cost (\$/boe)</b>		9.5	10		11.5	7.5	9.5

**Key to remaining prospectivity levels**

High  Mid-range  Low

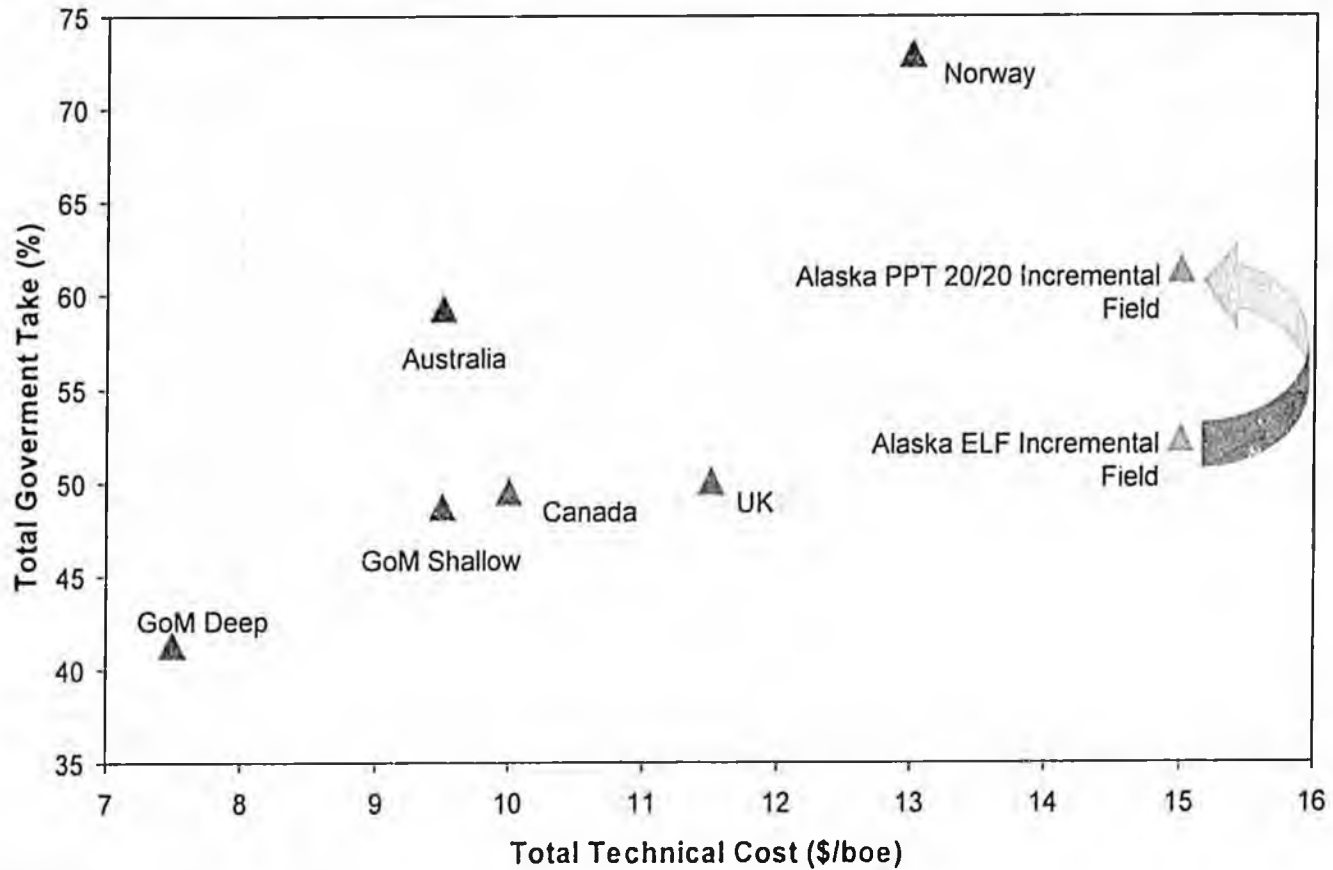
Source: CRA Analysis



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The basic<sup>1</sup> PPT 20/20 proposal gives Alaska the second highest level of total government take within the group

**Total Government Take versus Total Technical Costs**

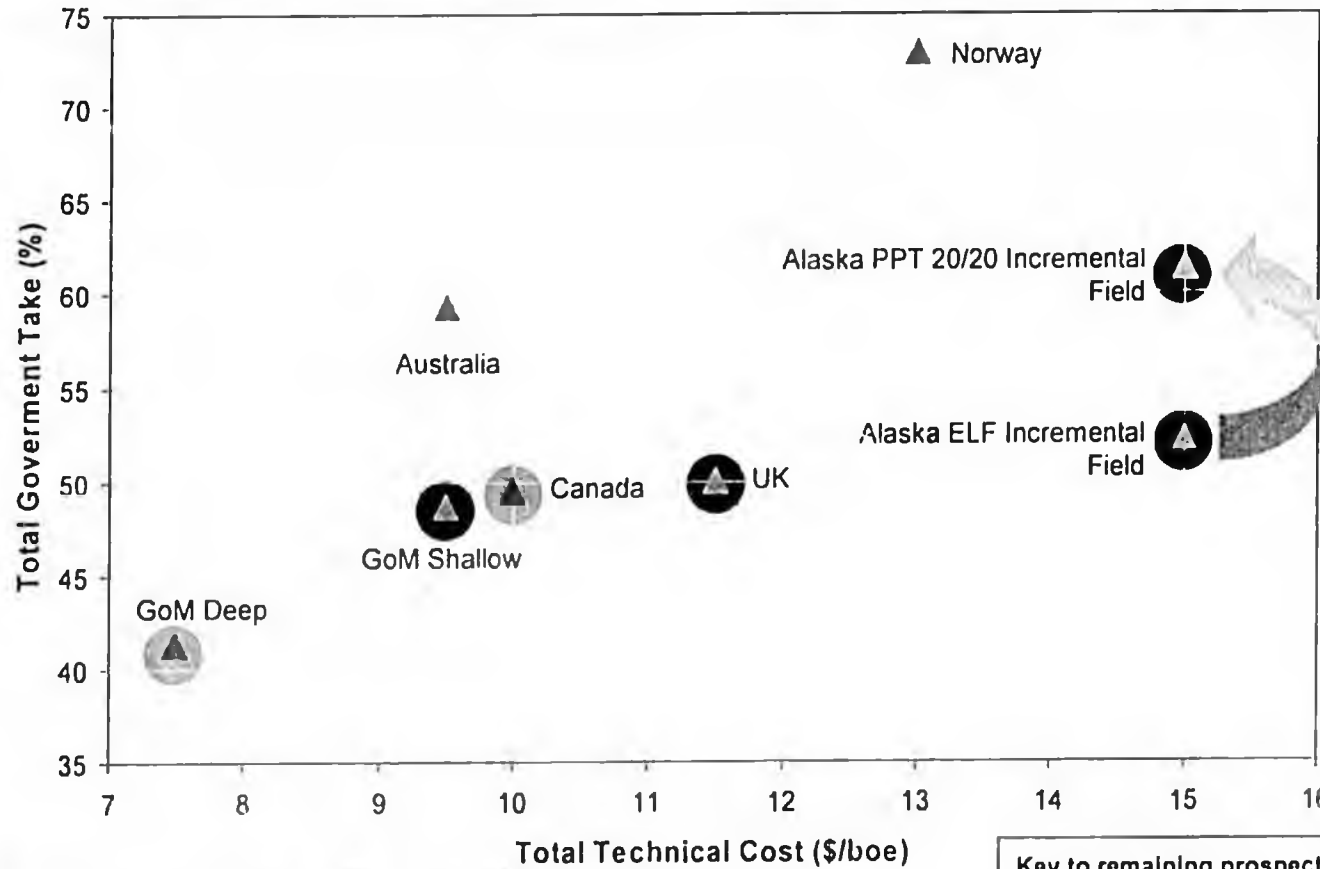


<sup>1</sup> i.e. the original SB 305.  
Calculations are based on a \$35/bbl real oil price  
Source: CRA Analysis



# High costs and lack of prospectivity compound the impact of Alaska's high overall government take

**Total Government Take versus Total Technical Costs**



Colors indicate CRA's assessment of prospectivity in each region.  
 Calculations are based on a \$35/bbl real oil price  
 Source: CRA Analysis

**Key to remaining prospectivity levels**

High Mid-range Low



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## Alaska's largest potential is in its producing fields, heavy oil and gas resources: PPT 20/20 is a dis-incentive to investment in these

Alaska's Resource Potential		
Resource Type	Comparative Size	Incentivised by PPT 20/20 proposal?
Producing Fields / EOR	2-5 bn boe	Higher tax take is a direct disincentive
Known Undeveloped Resources: <i>Conventional Oil</i>	~0.5 bn boe	Only small and/or new players have some incentive
Known Undeveloped Resources: <i>Conventional Gas</i>	6-8 bn boe	Higher tax take is a direct disincentive  Gas pipeline may transform attractiveness
Known Undeveloped Resources: <i>Heavy Oil</i>	5 bn bbl	Higher tax rates may cause serious delay to heavy oil development
Exploration Potential (YTF)	<1 bn bbl oil potential? Gas potential may be higher	Only small and/or new players have some incentive

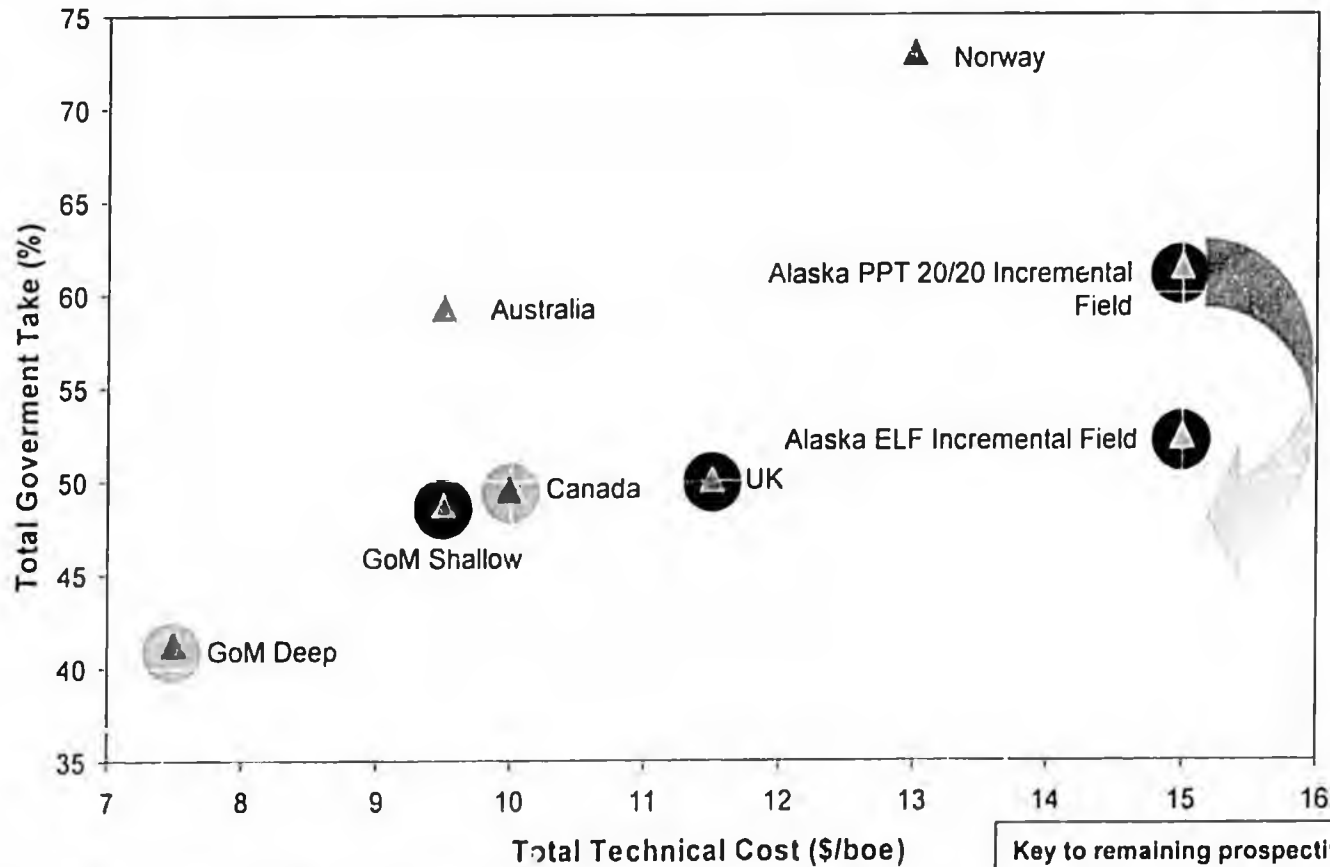
NB YTF = "Yet to Find"

Source: Alaska DNR, USGS, CRA estimates of incremental potential



If Alaska wishes the new legislation to stimulate investment, a new system that reduces total tax take would be required

**Total Government Take versus Total Technical Costs**



Colors indicate CRA's assessment of prospectivity in each region.  
Calculations are based on a \$35/bbl real oil price  
Source: CRA Analysis

Key to remaining prospectivity levels

High	Mid-range	Low
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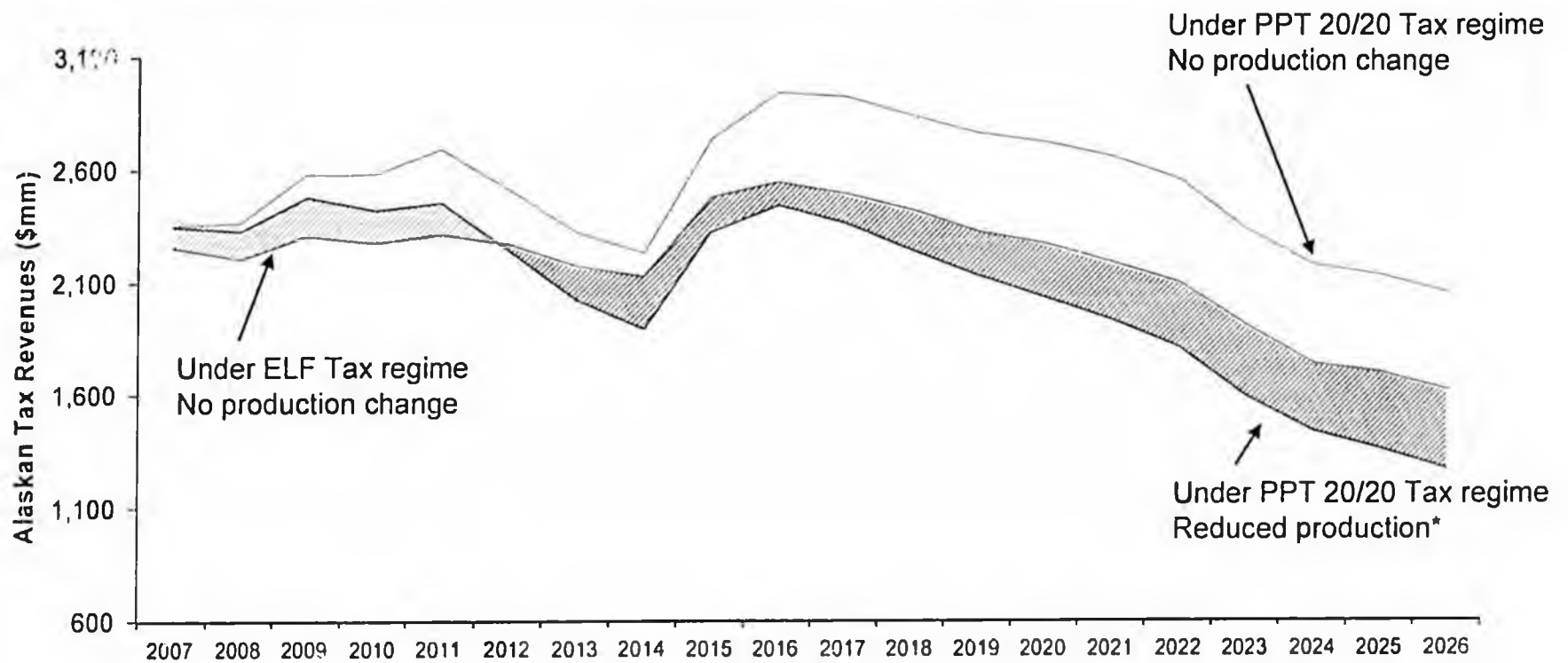


## Why is CRA more pessimistic about investment than previous testimony?

- **Investors have choices, and more tax will drive some capital away**
  - CRA 'portfolio pricing model' rather than 'threshold model'
- **Tax credits don't offset the impact of higher tax rates**
  - CRA's 'typical Alaskan field' shows clearly the economic penalty of PPT 20/20
- **Fiscal structure biased towards tax credits likely to be a dis-incentive for most investors**
  - Tax credit bias erodes upside
  - High price environment means scale, efficient use of scarce human resource, is key factor
- **Alaska's investment attractiveness low for current ELF levels of government take**
  - PPT 20/20 is already a significant dis-incentive
  - Higher rates and/or progressivity will compound the impact on investment

## So what might the future look like? Some illustrative numbers

### Tax Revenues To Alaska



**NB**

1. Base production assumes 3% decline per annum up to 2014
2. Includes all taxes to the State of Alaska: Royalty, Ad Valorem, Severance or PPT, State CIT (average rate assumed @ 3%)
3. Calculations are based on a \$35/bbl real oil price

\* Reduced production case assumes capital spending reduction of 20%, which leads to additional production decline of 2.0% per year

Source: CRA Analysis



## What could this mean for Alaska? Some illustrative numbers

Taxes: Gains and Losses <sup>1</sup>		Investment Reduced	Jobs: Lower Activity <sup>2</sup>	
2007-2011	+\$700m	20% reduction means \$2-3 bn lost over 10 years	Direct Loss	500-1000
2012-2016	-\$700m	\$1bn lost from Alaskan GDP?	Indirect Loss <sup>3</sup>	1500-3000

<sup>1</sup> Relative to ELF base case (when production profile is unaffected)

<sup>2</sup> Assumes 30% of capex and 50% of opex relates to employment and average employment cost is \$100,000 per year

<sup>3</sup> Assumes employment multiplier of 3 times, although previous studies (AOGA, 2001) have suggested 6 times

Source: CRA estimates, based on testimony of Alaskan investors



## **Increasing Alaska's oil and gas taxes will have a price**

- **We recognize the dilemma of balancing revenues and investment**
- **Alaska is mature, but has undeveloped potential**
  - Low prospectivity and new field size
  - High cost base
  - BUT huge known resources, heavy oil especially
- **Current fiscal proposals do not help competitiveness in OECD peer group**
- **Loss of competitiveness will mean less investment and lower production**

**Testimony of Marianne Kah, Chief Economist, ConocoPhillips**  
**Senate Bill 305**

Good afternoon. I am Marianne Kah, the Chief Economist for ConocoPhillips in Houston. I am glad to be back here after testifying at the Resource Committee hearings last month. I am part of the Corporate Planning function and I am here to share with you our views on how this proposed tax change might impact Alaska's competitiveness from the perspective of a global investor. Thank you for affording me this opportunity.

**Investment Criteria:** Let me start by showing you the general criteria we use at corporate headquarters to value upstream investment opportunities. The first factor we generally consider is the prospectivity of the country or opportunity. We would consider such elements as the maturity of the area, potential field size, remaining reserves and the quality of the reservoirs and crude oil. There are also a number of places around the world that have known reserves but they are difficult to develop. The larger the size of those reserves, the more feasible it will be to economically develop them.

The second factor we generally consider is the cost of the region or opportunity. This would include exploration, development and production costs as well as transportation costs to bring the crude to market.

The third criteria that is used to judge the value of opportunities is the cycle time or the amount of time it takes from exploration to first production. The value of the project is highly dependent upon whether it can be brought to

Presented 4/5/06<sup>1</sup>

the market quickly or whether it takes 7-8 years or longer before first production.

The fourth factor we consider is the attractiveness of the tax and fiscal terms and whether or not they are commensurate with the prospectivity and cost of the region or opportunity.

The fifth and last factor we consider is whether the country has a strong rule of law and efficient regulations for energy development. The stability of the political regime and the fiscal terms are also very important considerations in terms of the degree of risk that the value will turn out to be significantly lower than we anticipated.

With that said, let me show you how we would assess Alaska's competitiveness using these criteria. I will start with an overview of all of these criteria and then provide more detail on a few of them.

**Investment Criteria with Alaska Rating:** Starting with prospectivity, CRA has already showed that Alaska has fewer and smaller field sizes than even the other mature areas in OECD countries. The crude quality is moderately high sulfur and getting heavier. These are negatives.

Alaska also has high exploration, development and production costs, and a long cycle time to get to markets given Arctic drilling conditions and limited drilling seasons.

The strong rule of law and political stability have been positive factors that

explain why we have been investing in Alaska all these years. However, we are now concerned at the prospects of changing the tax regime after investments have been made without grandfathering these investments under the tax regime that was in effect when the investments were undertaken. The worst thing that you can do to an investor is to change the rules of the game after the investment is made. This significantly raises Alaska's risk profile and reduces the potential attractiveness of investing here.

**Global Average Commercial Discovery Size:** Looking at prospectivity in greater detail, this slide compares the average commercial discovery size in Alaska with various countries around the world. Areas with high prospectivity can generally assess higher tax rates, while maintaining investment. The Alaska North Slope, however, has limited prospectivity as compared to many parts of the world. Tax rates need to reflect that.

But it is also important to acknowledge that although exploration will continue to play a role in halting Alaska's production decline, it will be a small one. Based on the State's forecast, exploration will account for about 3% of production over the next 10 years and about 8% over the next 20 years. Known discoveries which have yet to be developed or are economically challenged, also play a small part in Alaska's future.

The core legacy fields such as Prudhoe and Kuparuk will still produce over 80% of the total North Slope production in 2015, providing the base infrastructure on which these smaller fields will depend. Significant capital will be required to maintain this infrastructure, as well as, in-field drilling and well work to mitigate decline. Discovered heavy oil resources would be

included in this category. However, the State's consultant acknowledged that technology limitations and development costs will constrain heavy oil production in the near term, and it could be many years before this resource reaches its production potential. The technology required to develop this resource will require huge expenditures, which the long-term major producers, such as ConocoPhillips, are more likely to make than smaller companies.

Over the next 10 years, approximately 100% of the investment in existing fields, 100% of the investment in known discoveries, and probably about half of the exploration investment (or about 98.5% of the total investment over the next decade) will come from companies that are already here. If you are interested in Alaska's future, you are interested in seeing the major existing players continue to invest here.

**Increasing Production Costs:** This slide compares the production costs (includes severance but no other taxes) of all of the major regions in ConocoPhillips' portfolio. Alaska is the highest cost region in our portfolio. And costs in Alaska are rising at a faster rate than in other regions, in part because of the aging infrastructure and declining field size. Cost also needs to be taken into account when setting the tax take. The countries with the lowest costs can afford to have higher tax rates while remaining competitive. Similarly, higher cost countries need to offset these conditions with lower tax takes.

**Alaska – High Cost, High Tax:** My next slide shows total capital and operating costs as a function of government take for about 30

countries/states in the world. This data, representing costs from 1994 to 2003, was taken from the Wood Mackenzie 2004 "Global Oil and Gas Risks and Reward Study" and was calculated at a \$35 per barrel price. The study included more countries but we removed the ones where the government was carried through exploration in response to the Legislature's consultant, Daniel Johnston's, criticism of Wood Mackenzie for not accounting for this carried equity in their government take calculation.

As can be seen, there are four quadrants shown on this chart. The one on the bottom left shows countries that are trying to attract investment. They have low costs and still maintain low rates of government take. The quadrant on the top left contains low-cost countries that are then able to maintain high tax rates while remaining competitive. The quadrant on the bottom right contains high-cost countries but they compensate for their high costs by maintaining lower tax rates. The quadrant on the top right contains countries that have high costs and high taxes. Countries that position themselves in this quadrant may not get sufficient investment since their tax rates are not commensurate with their cost structure.

This plot also shows that there are inverse relationships between Government take and Total Costs. As previously mentioned, high-cost countries often lower their tax rates to remain competitive. The lower line tends to represent net crude-importing countries who want to maximize investment. The upper line tends to represent net oil-exporting countries.

Alaska under the ELF is shown as the Red Triangle. The PPT will move Alaska into the High-Cost, High-Tax Quadrant at the same time that costs

are rising at a faster rate than in other locations.

This chart also shows with Green Triangles the OECD countries that CRA believes are more appropriate peers. Peer areas such as the Gulf of Mexico and UK North Sea are still significantly more favorable investment regimes. The high cost in the Arctic and the types of fields that are likely to be found suggest that the proposed fiscal regime could detract, rather than encourage, significant additional investment.

**Alaska – High Cost, High Tax (with prospectivity):** Now I am showing you the same slide but adding in bubbles to indicate the prospectivity of some of these countries. You can see that a number of the countries that have high tax takes also score high in prospectivity. That is why they can keep tax rates high and still be competitive.

The other point I wanted to make about this chart is that the Governor's consultant assessed the competitiveness of Alaska's tax rates by comparing tax rates of different regimes around the world applied to similar-sized fields in all locations. That is not the way investors look at it. When we compare investments in Russia versus Alaska, for example, we compare the prospects of accessing a very large field with very high tax rates in Russia versus finding a much smaller field with lower tax rates in Alaska. The greater prospectivity in Russia may compensate for the higher tax rates. Thus, it is not meaningful to compare the competitiveness of Alaskan tax terms with Russia's terms or those in Azerbaijan and Angola at the same field sizes.

**Higher Taxes Will Reduce Investment:** I will now switch gears and talk

about a concern I have with the testimony of all of the state's consultants. They would have you believe that you can raise tax rates without concern about substantially reducing investment or production in the state. This flies in the face of economic reality. To quote a phrase from Dr. Margo Thorning, the Chief Economist of the American Council on Capital Formation, "one of the axioms of public finance scholars is that if you tax something, you get less of it"<sup>1</sup>.

There are three reasons why higher tax rates will reduce investment. The first is that there will be less cash flow available to re-invest. Another less obvious reason is that you have changed the risk / reward balance. You will effectively increase the marginal cost of production and thereby lower the rewards, while at the same time increasing the perception of risk that the rules of investment will be changed after investments are made. Making the tax rate too progressive in a higher price environment also negatively impacts the risk / reward balance by shaving off the benefits of better times disproportionately more than helping in a lower price environment. Our industry invests a tremendous amount of capital on projects with long lead times and significant exploration, technical, price and economic risk. We need the tax system to be stable and to allow us to keep enough upside that we can earn adequate returns for our shareholders on average over the long price cycles our industry experiences.

The third reason why higher taxes will reduce investment is that Alaska will be viewed as a less attractive place to invest and capital will migrate to

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<sup>1</sup> Dr. Margo Thorning, "Deja-vu on Windfall Profits Tax on Oil Industry, American Council on Capital Formation", Capital Formation Newsletter, January-February 2006, Volume 31, Number 1.

countries that have tax regimes commensurate with their cost and prospectivity. The state may also receive less investment from long-time investors who believe they have been treated unfairly by the state in the transition to a new tax regime by not being given due consideration to recent investments made with different fiscal regime expectations.

There are a growing number of countries around the world who have increased their tax rates in this high price environment, which is probably making you think that Alaska can still be competitive despite the proposed tax increases. However, private investors will shift from investing in conventional oil in all of these places with higher tax rates to investing in LNG, downstream and other energy projects that have more favorable tax terms. For example, our company is now more willing to invest in downstream and infrastructure projects than we were historically when we believed that upstream investments had higher and less risky returns. If current trends continue, conventional oil will end up being the domain of national oil companies who have lower return requirements than private investors.

And finally, capital will flow out of the energy industry if tax rates rise to the point that the energy industry looks less attractive than other industries.

**COP Major Upstream Projects:** While I believe there will likely be a long-term adverse impact on investment from rising tax takes around the world, let me bring the discussion back to corporate allocation decisions we face in the next 5 years.

This slide represents the pipeline of upstream investments ConocoPhillips is pursuing in the next 5 years. We are planning on continuing investments in our base legacy OECD areas, such as Alaska. But we also are planning investments in global gas and other international areas. Investments in Alaska must be able to compete with investments in these other areas. The tax rate needs to be commensurate with Alaska's high cost and low prospectivity to ensure this state maintains its important place in our investment portfolio.

**Portfolio Ranking:** Another concern I have with the state consultants' assessment that Alaska can raise its tax rates without hurting investment is their implicit assumption that all projects with a positive net present value will be undertaken. That assumes that there is unlimited human and financial capital. Our shareholders expect companies to exercise capital discipline and to avoid doing marginal projects. We also have limited manpower and focus on projects that have sufficient scale to make a difference to the company.

As indicated in this concept slide, when Alaska raises its tax rates, some projects, like Alaska project number one, will still be in the competitive range but it may be moved down to a lower ranking than other projects the company is planning on, such as upstream project number one and the downstream project shown here. Other projects, like Alaska project number two could slip from being competitive to being deferred. And finally, some projects, like Alaska project number three could slip into the uncompetitive range.

**What's Wrong With Windfall Profits Taxes:** The proposed bill has a surcharge based on ANS West Coast oil prices over \$40 per barrel. This is tantamount to a windfalls profit tax because it shaves off the upside without helping on the downside.

The U.S. federal government has recently debated the merits of a windfall profits tax on domestic production, and this concept drew great criticism from a broad range of economists and investors across many industries. I have provided two quotes that represent the criticism of such a tax. Daniel Yergin of Cambridge Energy Research Associates stated in an interview that “what a windfall profits tax does is introduce a lot of distortion. It reduces investment, it increases a sense of political risk and it doesn’t achieve the goal that is intended ... it will really lead to decreased supply”<sup>2</sup>. A group of 250 economists from academic and other institutions across the nation, including Milton Friedman, the Nobel Laureate in Economics, recently sent a letter to the U.S. Congress stating their opposition to such a tax, indicating that it would reduce domestic production and expressing sadness that politicians hadn’t learned any lessons from past experience with this type of tax<sup>3</sup>.

The non-partisan U.S. Congressional Research Service (CRS) assessed the impacts of the federal windfall profits tax on domestic crude production that was in effect from 1980 to 1988<sup>4</sup>. CRS concluded that the tax reduced

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<sup>2</sup> Daniel Yergin interview, *Capitalism Magazine*, November 11, 2005

<sup>3</sup> Open Letter to America’s Elected Officials, 250 economists, October 25, 2005

<sup>4</sup> Salvatore Lazzari, “The Windfall Profit Tax on Crude Oil: Overview of the Issues”, Congressional Research Service, September 12, 1990

industry gross revenues by \$79 billion that could otherwise have been used for investment. As a result, the tax was estimated to have reduced domestic production by up to 1.6 billion barrels between 1980 and 1986, before the collapse in oil prices. It also increased oil imports by up to 16% during this period. The study also noted that the actual gross tax revenue collections were only 20% of what the federal government had expected. This was because prices did not remain at the very high levels of 1980 and domestic production ended up lower.

**Value Uncertainty in Balanced Government Take:** Now I want to demonstrate how a windfall profits tax would impact our project economics and investment decisions. In evaluating investment opportunities, ConocoPhillips considers risk and opportunities associated with an investment. Assuming a stable fiscal environment, factors that most often impact our North Slope investments are:

- *Oil price uncertainty, which accounts for the majority of NPV variance,*
- *Reserves and capital spending,*
- *Operating costs, and*
- *Schedule, which is particularly important in Alaska as construction windows are limited. Missing a key construction window (e.g. a sealift) can easily delay the project by a year*

The impact of the sensitivities for these key variables are demonstrated in a chart called a Tornado Diagram. In a Tornado diagram, the impact of a given variable on the project value is tested by holding all other key variables at their mean value and varying the variable being tested through

the high and low end of its expected ranges. For example, in the tornado diagram pictured on the left, if the high end of the reserve range was experienced, then everything else being the same, the project value would increase to over \$100 million. If the project was significantly delayed, then the project value would decrease to around negative \$100 million.

Once we have identified the key value drivers to a project, and assume a probability distribution for each of the key variables (e.g., 50% chance price at the mean price, 25% chance at low and 25% chance at high price), we run multiple simulations to identify a range of potential outcomes that are expected. The sum of those simulations is shown in the chart on the right, which is called a cumulative probability curve. This particular cumulative probability curve is showing that the project has a 40% chance of losing value and a 60% chance of having a positive net present value. The "probabilistic" expected value or the value at the 50<sup>th</sup> percentile is a positive \$50 million in this example. Projects that have a positive expected value would then be considered for acceptance.

**Value Uncertainty in Progressive Government Take:** I would like to demonstrate what happens when a windfall profits tax shaves off upside price risk. In the tornado chart on the left, the price bar is truncated so that there is more downside than upside price risk. After running all the probabilistic simulations, this would shift the cumulative probability curve to the left so that the project loses money 53 percent of the time and has a positive net present value only 47 percent of the time. The expected value, reading across to the 50<sup>th</sup> percentile is now slightly negative. This decrease in project value is purely associated with reducing the upside potential

associated with oil price. In other words, shaving off higher price risk creates greater risk that the project will not increase value. Thus, the project will probably not be approved.

**Balanced and Progressive Value Uncertainty Comparison:** This slide summarizes how shaving off the upside price risk reduces the chance that the project will be profitable and reduces the expected value. In this case, the project is far less likely to be undertaken without upside price risk.

It is also important to understand that our shareholders invest in energy companies because they want to be exposed to upside price risk. We will have trouble attracting capital if we were no longer exposed to this risk. Being a high cost area, Alaska in particular, is a high-price play, and shaving off the price upside will disproportionately impact investment in the state.

**Finding, Developing & Production Costs:** The last point I want to make about a windfalls profits tax is that some of what is being perceived as a windfall is actually higher reserve replacement costs. Let me explain.

While price increases across all of our energy products have recently increased our industry's earnings to record levels, it is only temporary as we are also experiencing enormous cost inflation as the industry ramps up its investment to increase supplies. This chart shows that industry finding, developing and production costs have more than doubled since 1999, excluding government take. F&D and production costs are the components of replacement cost most quoted because they are the easiest to measure in the financial statements of oil companies. However, this chart is missing a

number of the components of reserve replacement costs. It is missing all government take, which on average was probably about \$20-25 per barrel in 2005. It is also missing a cost-of-capital return and an adjustment reflecting compensation for the time value of money because you are spending money in year zero and getting production and revenues many years later. If replacement cost is being stated in terms of WTI prices, these numbers are also missing additional quality and transportation costs because most crudes are more remote and lower quality than WTI. When you add all these costs up, it is easy to see that replacement costs today are probably over \$50 per barrel. In fact, several financial analysts (e.g., Goldman Sachs, Bernstein) who track the energy business believe that long-term reserve replacement costs today are over \$50 per barrel when government take and the increased risk around cost uncertainty are included in the cost calculation.<sup>5</sup>

While oil prices may have peaked, spending levels and costs are continuing to rise. Some of this inflation reflects temporary conditions such as service industry capacity not keeping pace with industry spending levels and the high cost of materials like steel due to particularly strong industrial growth in China. Some of the cost increase is structural, and more permanent, though, reflecting the fact that our industry is investing in prospects that are smaller, more complex or remote and higher cost.

We are concerned that some of what people perceive is a “windfall” today actually reflects the tremendous cost inflation that has taken place in the industry. In addition, the size of the majors’ earnings sounds large to most

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<sup>5</sup> Bernstein Research Call, November 4, 2005, page 2; Goldman Sachs, Jeff Currie, “The sustainability of higher energy prices, April 2005, page 21

people but it reflects the scale of our business and required investment levels and enormous risk involved in replacing reserves.

This matters because if the alleged “windfall” is taxed at higher rates and reserve replacement costs really are between \$50-60 per barrel, our industry will not be able to profitably re-invest even at today’s prices.

**Key Messages from Corporate Perspective:** I will stop here and summarize my key messages.

- It is our opinion that the current tax regime isn’t competitive when compared with Alaska’s prospectivity and cost versus the other opportunities we have to invest in around the world.
- Thus, we believe that increasing the tax rate will significantly reduce our investment and production in Alaska.
- We are also concerned about the windfall profits tax the CS would put in place as it would reduce the cash we have to invest, and it would adversely impact the risk/reward balance of investing in Alaska.
- The federal government has tried a windfall profits tax in the past and it reduced investment and production and failed to generate the expected revenues.

ConocoPhillips has been a long-term investor in Alaska. Including our heritage companies we have more than 50 years of business history in

Alaska. We believe there can be a great future in this state, and although mature, there remains a lot of potential. We want to be part of this future.

Thank you for your attention.

Presented 4/16/06

1:10:09 PM

April 6, 2006, Comments To Alaska Senate Finance Committee  
CS For SB305 – Petroleum Production Tax  
By Ken Thompson

Introduction

For the record, my name is Ken Thompson. I reside in Anchorage. I am the Managing Director of Alaska Venture Capital Group, or AVCG, an independent oil exploration company with a focus on the North Slope of Alaska. AVCG is a consortium of 15 independent oil and gas companies and individuals from Kansas and my personally owned company, Pacific Star Energy, here in Alaska. AVCG has a technical and operational services' subsidiary company called Brooks Range Petroleum, with newly opened offices in Anchorage. Many of you know me as the former President of ARCO Alaska, Inc., and a past Executive Vice-President over ARCO's Asia Pacific region.

AVCG has been very active in the past six North Slope (NS) areawide lease sales and we have acquired over 160,000 acres of exploration leases in five exploration prospect areas, including new acreage we acquired in the recent March 1, 2006, NS lease sale. Our exploration strategy is to explore in the central part of the North Slope for fields in the 25-150+ million barrels range, fields that may be too small for the giant producers but fields that can be produced profitably by smaller companies like ours. We believe there are hundreds of millions if not billions of barrels of oil left on the North Slope in smaller fields of this size and these fields near infrastructure can be brought on more quickly. Our first exploration well in partnership with Pioneer Natural Resources – the Cronus #1 about 10 miles southwest of the large Kuparuk Field – completed drilling last week but results will remain confidential for some time.

AVCG plans two NS exploration wells next winter and two wells the following winter. Our 3-year exploration budget is \$46 million and with any future discovery success, we could have a gross development budget of \$500 million to \$1 billion in future years.

Let me now focus my comments on the CS for Senate Bill 305. As background, I reluctantly supported the Governor's proposed 20/20 PPT and even many details of the initial House version of the bill, HB488. But, somehow, things are beginning to derail. The CS SB305 and CS HB488 with their revisions from the original draft of a simple petroleum profits tax have evolved into very complex bills that are no longer a win-win for the State and industry, in my opinion. I don't fully understand how things began to derail into such complexity...perhaps it was due to anger at the Big 3 producers and the Governor for not revealing the natural gas contract details before demanding a new oil tax fiscal structure. Perhaps its anger at the Big 3 companies who are demanding tax certainty for 30 years when asking for three full decades of certainty truly is an unreasonable demand with Alaska's legislative type of democracy.

1:14:14

pm

I don't understand all the dynamics of the past three weeks in the legislature, but this I do know. The CS for SB305 needs to be greatly simplified and it needs to move somewhere between what it is now and the Governor's proposal if a win-win solution is to be the end result that balances more revenue share for the State but in balance with attracting more new entrants and increased investment amounts.

I am an optimist. I personally think there is still time to avoid a train wreck in this complicated business of restructuring Alaska's petroleum taxation system...if the Senate Finance Committee acts quickly. I, for one, have not given up hope that there is a version – easier to understand and to implement - that can be a win-win for both the State and the industry. There is a simpler and better way, in my opinion, for the State to improve government take while not dampening exploration and development investment. Let me outline my suggestions for a win-win and my suggestions for simplification.

1:15:30

pm

#### AVCG Owners' Perspectives

First, however, let me say that while I am Managing Director of AVCG, our other owners disagree strongly that any change should be made to the 20/20 PPT formula proposed by the Governor. The 20% PPT tax rate and the 20% credit originally presented in the Governor's bill should be the tax rate and credit enacted. Some of the AVCG owners, however, do not even support the PPT concept and believe the petroleum tax should be as simple as 10-14% of revenues and exclude any economic limit factor.

Quite honestly, the AVCG owners listened in disbelief when I told them the production profits tax rate being considered in the current CS to SB305 draft could add a "surcharge" at high prices that could significantly ramp up the additional taxes above the base PPT rate of 25%. And this surcharge will be in addition to the higher other revenues the State and Federal governments will already benefit from at higher oil prices: the State's 12.5-16.7% royalty, the ad valorem property tax, the 3-9% corporate income tax, lease bonus bid amounts, the ongoing annual lease rental amounts, and the Federal income tax rates averaging 20-35% of taxable income.

It all adds up, and AVCG Owners are saying, "enough is enough."

When I was communicating the latest CS to SB305 details to the AVCG owners by teleconference and email recently, I felt two overwhelming emotions. The first emotion was discouragement. My business judgment tells me the State crossed the line to excessive taxation that will dampen capital investment. Why invest in Alaska where you lose the upside gain at high oil prices to offset exploration risk when the government take will exceed 60%? There are politically secure opportunities in other U.S. states, Canada, the Gulf of Mexico offshore, the U.K., and other nations where government take is 55% or less. CS to SB305 takes away too much of the upside potential from the investor who is taking the risk.

But I also found interesting another strong emotion during that teleconference which surprised me a great deal. I was embarrassed. Here I was, telling a group of outside investors that recently put all of their focus and personal exploration budgets on the North Slope of Alaska, and now I was telling them that Alaska was creating the most complex, confusing production tax bill ever created since the disastrous Federal windfall profits tax. The windfall profits tax – structured similarly to the CS SB305 revenue surcharge - stalled investment in the U.S. oil and gas industry, resulting in an alarming increase in U.S. foreign oil imports which our nation lives with to this day. I was telling them that Alaska was levying the highest tax rate and government take in North America.

1:19:46  
pm

To back my points up, please let me cite some statistics. Currently, the total Alaska and Federal governments' take is just over 50%. The Governor's proposal moved this to 53% or so then ~~the original SB305~~ moved the government take closer to 55%. Then the CS to SB305 with a 25% PPT boosted the government take to over 60% with its "surcharge." This compares to following total government take including Federal government shares:

sb  
← HB 488

Alaska currently	50%+ or less, dependent on oil price and field size
Alaska Governor's bill	53%
Alaska original HB488	55%
Alaska CS SB305	60%+
U.S. Gulf of Mexico	45%
Colorado	51%
Wyoming	52%
Kansas	53%
Texas	53%
New Mexico	53%
Oklahoma	53%
California	53%
Louisiana	57%

*These tax rates apply to newer fields. Older, more mature fields at low production rates typically get exempted from these maximum tax percentages in various ways.*

U.K.	50%
Canada	39-56%

*The lower rates in Canada apply to the oil sands projects where billions of dollars for new investment are occurring with Canada's vision to lower government take on this resource base.*

1:22:47  
pm

My overall key recommendation in my comments today is this: the State should not exceed a threshold of 55% total government take, 45% producer take. The State does own the resource and may be due more than a 50% take. On the other hand, it is the producer who is taking the capital risks and deserves at least 45% for making things happen...for moving an innovative exploration or development idea into production without which no revenues would flow.

Let me say that I'm excited about what's happening in Alaska's oil patch right now, and let's not dampen the spirit. The current versions of SB305 and HB488 have dampened my spirit. I am discouraged. Let's have a new tax bill that encourages, not discourages new entrants. But I do believe it is time the State share more in the take at high prices but there is a much simpler way.

1:24:11 pm  
My Personal Perspective

Now let me shift gears in my comments to you. Because I could not get buy-in for any alternatives from the AVCG owners except the 20/20 case, I have decided to speak out alone. As an Alaskan, I am concerned and feel I must try to share a personal perspective trying to balance what is best for my continued involvement in Alaska's oil and gas industry in balance with how the State must change its system to be competitive in the world and realize a higher government share.

So, let me turn my attention to what key changes I would make to the CS of SB305. Again, my views are not supported by AVCG owners or others in industry; rather they are my personal views.

1:27:27 pm  
1) Make Tax Rate Progressive But Greatly Simplify The Taxation Formula

When the Governor's office first announced a 25% tax rate then amended that to 20%, I could see the move by legislators to somehow bridge the gap from 20% to 25%. However, the approach used by the legislative committees based on the legislature's outside consultants' work is simply too complex and will be arduous to implement. I think – and perhaps all of you think – the Federal tax code is too complex. The changes to SB305 are also too complex and will lead to different interpretation, "gamesmanship" possibly by some companies because of the unwieldy progressive tax structure formula, and future costly lawsuits when the State disagrees with a company's calculations. And the number of accountants to keep track of these complexities on both sides will balloon! I urge you to simplify, simplify, simplify...yet still have some progression at higher prices.

For my company which drills the smaller oil traps that may add up, we do not have a lot of upside potential in seeing these smaller fields grow much larger in reserves over time in contrast to the giant Prudhoe Bay and Kuparuk fields. So our main upside is in oil price escalation to offset exploration risks and to offset the cycles of oil prices downward, a reality over time for any commodity. I urge you to consider a PPT rate of 20% at lower prices but gradually escalating to the 25% level only at higher prices.

I found it so interesting to see the Econ1 consultants and consultant Daniel Johnston saying the government should take more and more at high prices when not one member of the legislature asked them a very important question they should have been asked: "how much are you and your company investing in Alaska?" I was

shocked to see that these consultants, when calculating the future revenues to the State at various escalating rates, used the same oil production curves. In reality, less capital will be spent by industry at exorbitant production profits tax rates (tax rates above 25% when coupled with all other payments such as royalty, corporate income tax, ad valorem tax, lease costs and rentals, etc.). With less capital spending, the production curve will be lower...an increasingly higher tax rate may not in the end yield the forecasted revenues for the State.

1:31:26  
PM

On a related note, our company plans to go into the private or public equity markets to raise capital for future development. Such equity investors invest in the oil markets to be fully exposed to crude price upside. When they look at investments all over the world, and see that Alaska could tax with an escalating "surcharge" when others have a predictable flat tax, they will place their capital elsewhere to continue their exposure to higher crude prices. The consultants did not address this issue of the private and public equity markets and the desire for such investors to fully benefit from upside commodity price swings without hedging or escalated taxation at high prices. This was indeed a major oversight by Econ 1 and Daniel Johnston.

I also could not believe that the consultants failed to show capital spending elasticity graphs from different countries. They did the legislature a disservice by not doing so. By convincing legislative committees to adopt a complex progressive tax rate structure, or windfall profits tax, the consultants may feel they have been successful, but not one of these consultants will be around to defend their views in the future when capital spending declines at increasingly higher tax rates above the 25% level.

So, what is a simpler alternative? What is an alternative to yield more revenues to the State at higher oil prices with a balance to attract increased investment?

I suggest that the Finance Committee revise the bill to keep the production profits tax simply that...a tax on production profits, and not a complex way to further burden gross revenues with a surcharge. A simpler way in getting the progressive rate from 20% to 25% without the surcharge treatment complexity is to adopt a graduated PPT that does accomplish a higher State take at higher prices, yet leaves a reasonable producer take.

I recommend the following production profits tax schedule as a suggested one to "simulate" revenue results somewhere between the Governor's proposal and the CS to SB305 proposal. It is one that everyone could easily understand and implement with the State realizing upside at higher oil prices yet not too much upside is taken away from explorers/producers for re-investment:

1:34:39  
PM

Up to monthly average wellhead price of \$50/barrel for a company:	PPT rate of 20%
When monthly average wellhead price is between \$50-75/barrel:	PPT rate of 22.5%
When monthly average wellhead price exceeds \$75/barrel:	PPT rate of 25%

1:35:17 PM

Let's be honest with ourselves: the surcharge is simply a windfall profits tax under a different name. I highly respect industry consultant Daniel Yergin who has an excellent reputation among industry personnel and government officials alike. In November, 2005, Mr. Yergin said this about a windfall profits tax: "What a windfall profits tax does is introduce a lot of distortion. It reduces investment, it increases a sense of political risk and it doesn't achieve the goal that is intended...it will really lead to decreased supply."

I urge the Finance Committee to seriously consider this simpler approach. I personally ask that you have the Department of Revenue run the above case to compare the State revenues from the Governor's proposal to the current CS SB305 proposal, and to the existing ELF severance tax program. But when DOR models this approach, also ask them to run some sensitivity cases to reduced capital expenditures and reduced future oil production levels if CS SB305 stays in its current form. Please greatly simplify the bill. The complexity is simply not needed.

1:36:47 PM

2) "Trigger Points" For Escalating PPT Should Not be WTI But Wellhead Value

Let me now address a second, very leveraging issue. The "trigger point" that increases the PPT tax rate from 20% should not be based on ANS West Coast (ANS) oil price. The "trigger point" should be when a company's average realized wellhead price in Alaska exceeds \$50 per barrel. Some say the trigger point should be at a lower price like in SB 305, but I do think there is strong merit that those who have invested and taken exploration risk and exposure to low prices should be able to benefit from the increased profits at higher prices..."share the pain, share the gain"...to this \$50/barrel wellhead level. However, I personally am fine with the State gradually increasing the PPT tax rate eventually to a cap of 25% when wellhead prices exceed \$50/ barrel.

Why should the State tie the PPT calculation to a company's realized wellhead price instead of to West Coast crude price? In reality on the North Slope, not one company ever sees West Coast crude prices. Every crude oil in Alaska is different in quality with viscous crude receiving less than the lighter crude oils, and oil produced from wells farther away from infrastructure receiving less wellhead value due to higher shipping costs. Conversely, oil in the Cook Inlet is close to actual refining or on the water to ship out of state and thus realizes on average a much higher wellhead value than most North Slope crude oils, a substantial plus to Cook Inlet operators who face higher operating costs with maturing fields.

So I ask, why should the tax rate increase with a price index such as West Coast price when there is such a variance in crude oil pricing factors on the Slope at the wellhead that directly affect each field's economics and economic limit differently? The production profits tax rate should not escalate at the same time for those who produce viscous crude or oil from a farther distance as compared to those who have

good quality oil right next to the TAPS line. If there is a "trigger point", it should be one based on a company's average monthly realized wellhead price for production.

1:40:  
23  
pm

I recommend that the "trigger point" for PPT tax rate escalation be \$50 per barrel realized wellhead price based on a company monthly average and not be based on \$40 West Coast price, thus allowing explorers and producers to share in the upside profits at prices to this level with no higher burden than the 20% PPT tax rate (plus burden of royalty, corporate income tax, ad valorem tax, Federal tax, etc.). Dr. Pedro van Meurs also recommended that the threshold level of \$40/bbl be re-considered. As also recommended by Dr. van Meurs, this threshold price should be linked with inflation.

1:41:37  
pm

3) The Transitional Deductible Allowance

Jumping immediately from the prior ELF severance tax to the PPT formula overnight wreaks havoc with a company's budgeting and their forecast of available cash flow for near-term capital investment. A transition adjustment of some sort is appropriate and is fair.

I support the CS to SB305 that allows for a producer to take a credit with part of a producer's transitional investment expenditures between April 1, 2001, and before April 1, 2006.

1:42:10 pm

4) The Tax Credit "Standard Allowance"

The Governor proposed a \$73,000,000 annual allowance of production profits that would not be taxed by the PPT, essentially giving a \$14.6 million tax credit per company. The Senate Resources Committee revised this downward to a \$50,000,000 annual allowance as a reasonable compromise, or a \$10,000,000 tax credit; CS HB488 further changed this to a flat \$12,000,000 annual credit. The CS to SB305 further proposed that this be changed to an annual "standard tax credit allowance" for the first 5,000 barrels per day of production.

This "standard deduction" is very important to a startup company like AVCG/Brooks Range Petroleum trying to establish a foothold in Alaska and someday contribute substantial oil revenues to the State.

I favor the HB488 solution of a \$12,000,000 annual flat tax credit exemption due to its simplicity and it is a level playing field for producers of various crude oils with different wellhead values.

1:43:55  
pm

5) Institute A Tax Credit Repurchase Program

As protection for explorers and new entrants to Alaska, the version of the profits tax in the House, CS to HB488 devised a tax credit repurchasing program for those

credits a company earns on expenditures up to \$10,000,000 per year for investments in exploration and/or lease purchases in Alaska.

This is important to explorers like AVCG who does not yet have production revenues. Without such a repurchase program, our company might be able to sell our annual tax credits to one of the major producers but have to accept only 90-95% on the dollar or less. On the other hand, the State would not be giving up anything to repurchase the credits at 100% of value because the major producers would otherwise use the credits to reduce their tax bill and reduce revenue to the State. But using the State repurchase approach, the small explorer could turn around and re-invest the State-refunded credit into new leases, seismic or exploration drilling.

**I recommend the Finance Committee support the tax credit repurchase program outlined in the CS to HB488 and amend CS to SB305 to incorporate a similar tax credit repurchase program.**

1:45:35  
pm

#### Other Revenue Sources

As a concluding remark, I urge the State in this period of high oil prices to not simply try to gain into that upside by pulling only one lever excessively...the lever of petroleum production taxes. The State could be well advised to ensure they gain additional revenues from oil in Alaska by being an entrepreneur and considering revenues from other new related business, such as acquiring a 12.5% interest in the TAPS pipeline and stop paying \$3.70/barrel profitable tariffs to major producers when you could be sharing in those profits.

1:46:47  
pm

And work with the Federal government now to ensure that they share part of the Federal royalties with the State on future offshore oil and gas production from the Beaufort Sea which I consider to be of great potential as evidenced by major leasing recently by Shell and other companies. Other states are pursuing a share of Federal offshore royalties.

And the Alaska gas pipeline revenues will be significant. The State should own 20%.

#### Concluding Remarks

The above comments are my personal views offered with a hope that there can be an eventual win-win solution to this complex subject of the State realizing more revenues at higher prices while attracting exploration and development investors who can also realize upside at higher prices. I do believe the Senate Finance Committee can get things "back on track" and better balanced.

I sincerely thank the Committee for the opportunity to present my comments.

Respectfully submitted by: Ken Thompson



State of Alaska Petroleum Production Tax  
Testimony to Senate Finance Committee  
(SB 305 RES)  
John A Barnes

*April 6, 2006*

  
**Marathon**

10:43:49 AM

Presented  
4/6/06

# Marathon Testimony – Alaska PPT

## Impact of SB 305 (RES) on Alaska Natural Gas

- ◆ Cook Inlet Natural Gas Summary: Pre PPT
- ◆ Financial Impacts of PPT
- ◆ Consequences of PPT
- ◆ What Is Needed



10:45:05 AM

# Cook Inlet Natural Gas Summary: Pre PPT

- ◆ Declining reserves and production rate.
- ◆ High operating and capital costs as compared to lower 48 natural gas provinces.
- ◆ Difficult permitting and regulatory arena.
- ◆ Need for additional exploration and development to moderate price increase to consumers and to continue to provide industrial feedstock.
- ◆ Historical price differential to Henry Hub.



10:45:24 AM

# Cook Inlet Gas Supply and Demand

May 9, 2005

State of Alaska  
Department of Natural Resources  
Division of Oil and Gas



Alaska Department of  
Natural  
Resources

<http://www.dog.dnr.state.ak.us/oil/products/products.htm>

10:46:07 AM

# Cook Inlet Areawide Lease Sale Results

	Number Bids Rec'd	Number Tracts Sold	Multiple Bid Tracts	Total Acreage Sold	Total Bonus Rec'd	Avg Winning Bid	Max Bid Rec'd
				<i>Acres</i>	<i>\$</i>	<i>\$ / Acre</i>	<i>\$ / Acre</i>
2000	27	27	0	69,928	\$609,358	\$8.72	\$36.01
2001	31	29	2	102,523	\$928,085	\$9.05	\$22.18
2002	24	21	3	64,923	\$421,840	\$6.50	\$27.03
2003	28	27	1	103,680	\$887,059	\$8.56	\$33.28
2004	77	72	5	363,520	\$2,629,820	\$7.23	\$40.25
<b>TOTAL</b>	187	176		704,574	\$5,476,162		
<b>AVERAGE</b>	37	35	2	140,915	\$1,095,232	\$8.01	\$31.75

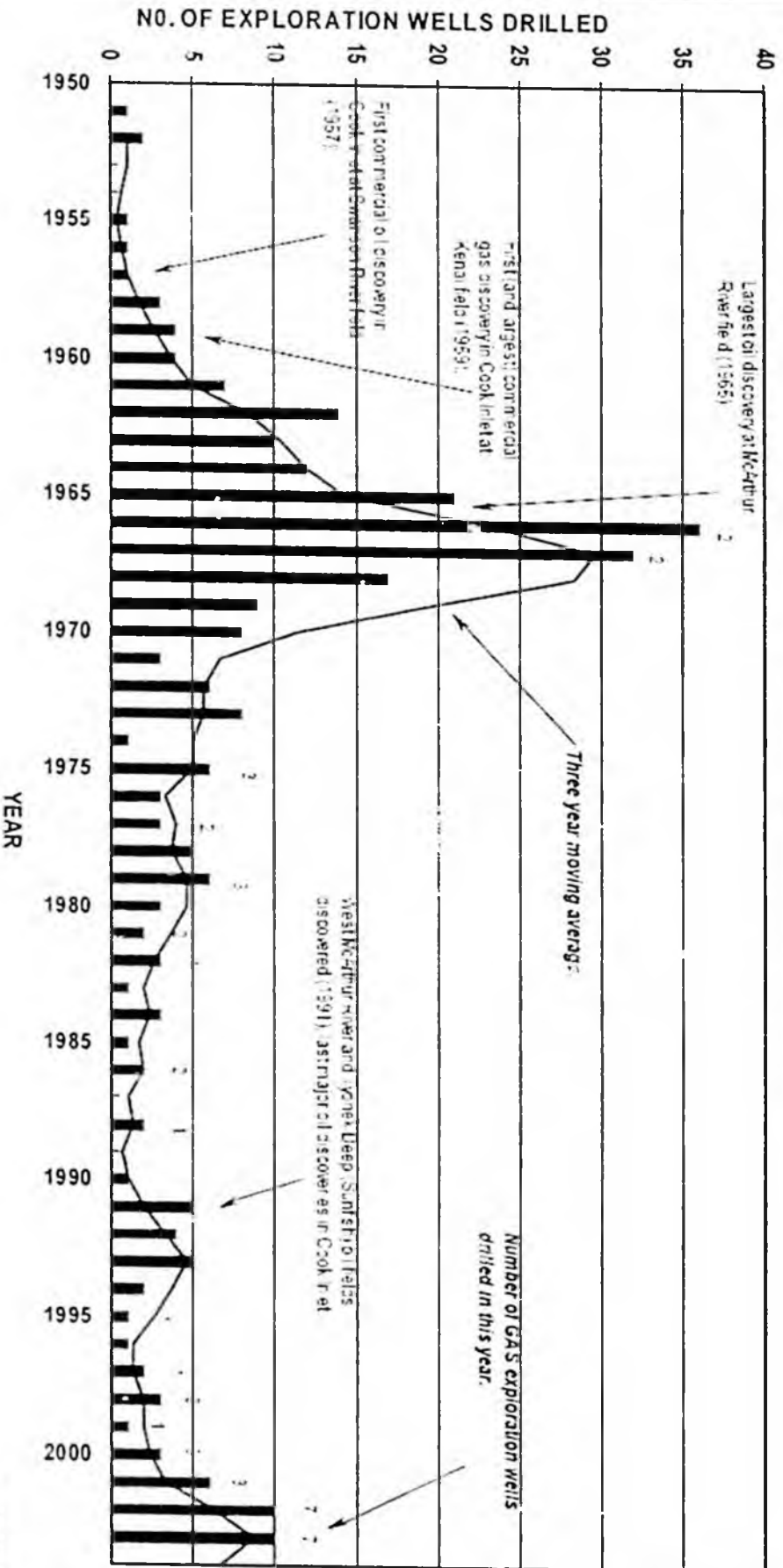
**RICHFIELD HITS OIL**

PRODUCTION CHIEF LIES 9URE

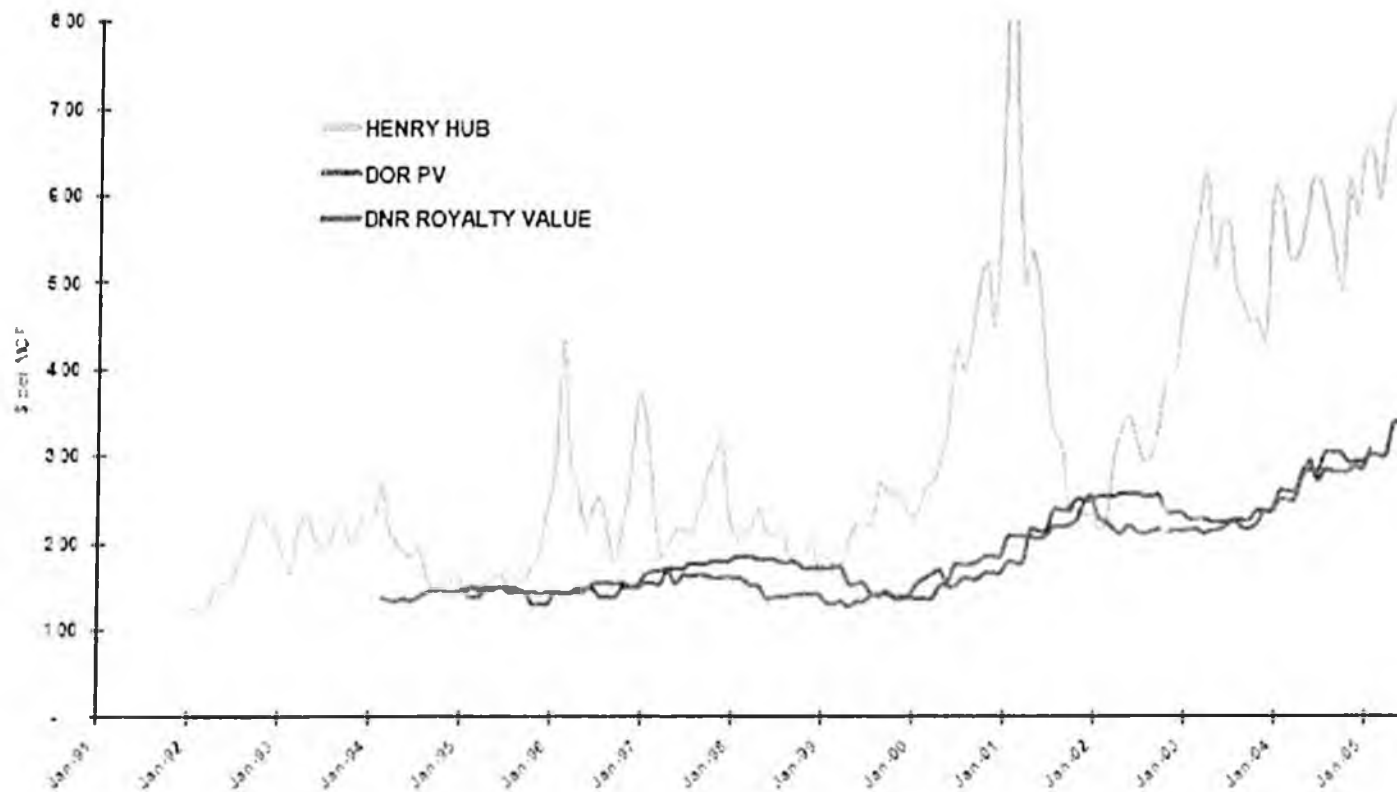


# Timeline of Cook Inlet Exploration

COOK INLET EXPLORATION WELL DATA AND IMPORTANT EVENTS



# Historic HH, DOR PV and DNR Royalty Value



10:47:27 AM

# Future of Supply

- We have moved from an “Excess Supply” market to a “Supply & Demand” market
  - Cost of Natural Gas will go up
  - More supply contracts are needed and will likely be for smaller volumes
  - Supply contracts will likely be more complicated
  - Pipeline system will be more complicated to operate
- We are working to identify and evaluate options to meet future demand
  - LNG Imports may be economic at some point
  - Storage options are being explored for peaking purposes
  - We have achieved Federal support for an in-depth DOE study of In-State demand and for conceptual engineering of a spur pipeline to Nenana Basin / Fairbanks

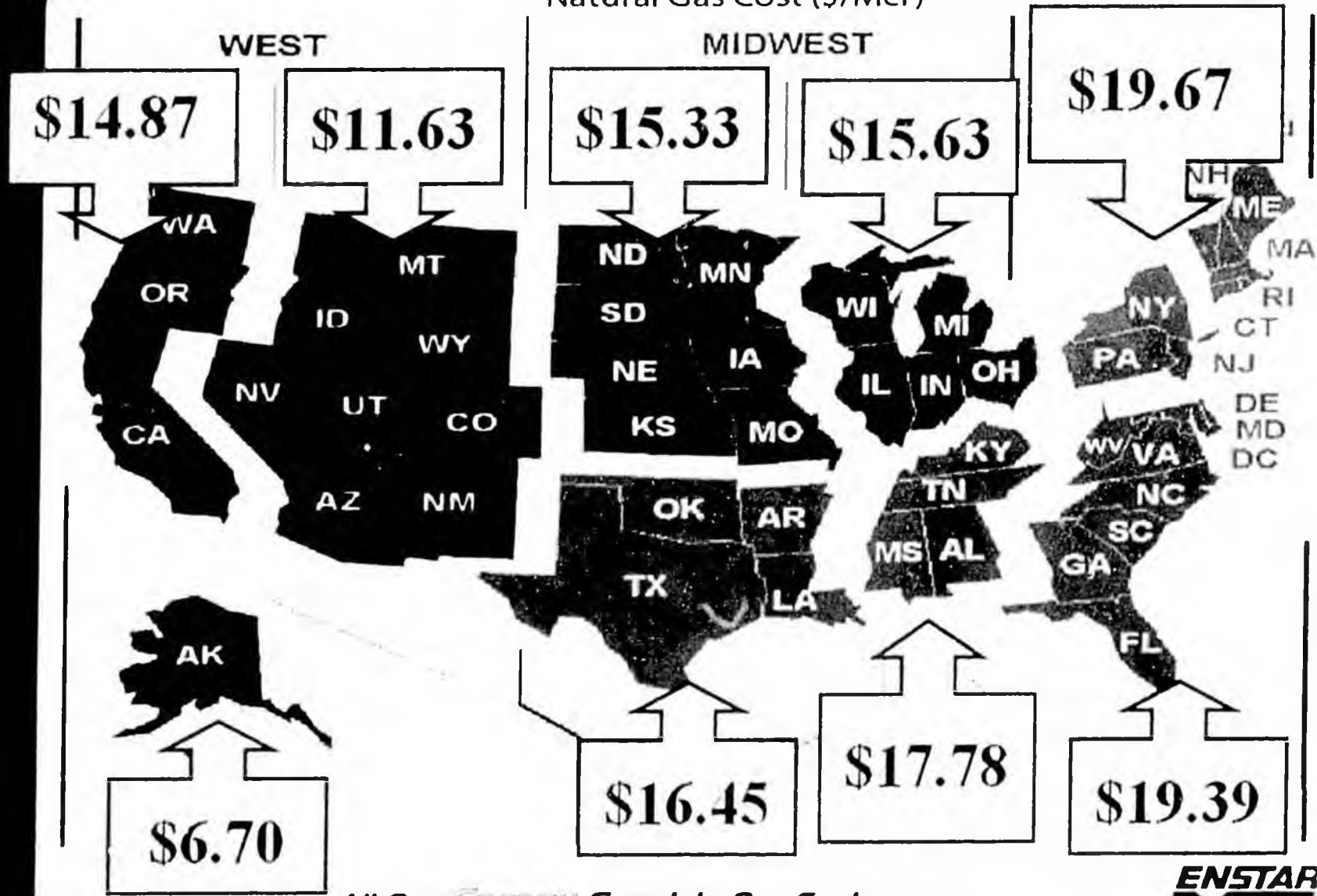
*All Our **ENERGY** Goes Into Our Customers*

**ENSTAR**  
Natural Gas Company

10:48:27 AM

# Residential Costs-By Region

Natural Gas Cost (\$/Mcf)



All Our *Energy* Goes Into Our Customers



10:48:49 AM

# Conceptual Competitive Comparison

## Common Input – Per Well Analysis

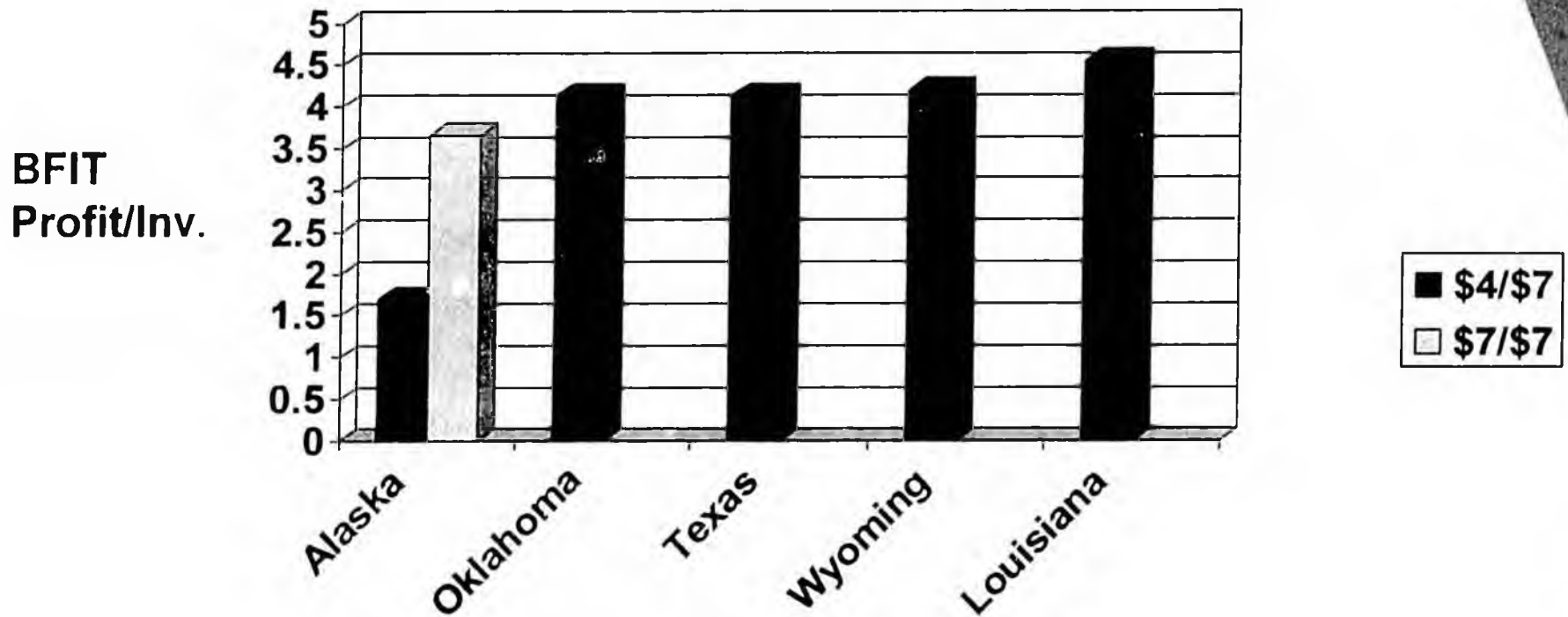
Recoverable Reserves	5 BCF
Development Cost (Capital)	\$5 million
Operating Cost	\$0.50/mcf
Royalty	1/8

Based on House PPT (SB 305, RES) and domestic severance tax rates



10:50:35 AM

# Competitiveness Comparison: Cook Inlet Natural Gas Investments Disadvantaged Against Competition



Based on ~~House~~ PPT (SB 305, RES) and domestic severance tax rates  
*Senate*



also 10:50:35 AM

# Cook Inlet Competitive Analysis

- ◆ Must compare Cook Inlet to N American gas opportunities
  - Cook Inlet does not have world class exploration opportunities
  - However, viable smaller exploration opportunities exist
- ◆ Good access to lands
- ◆ Disadvantaged by high costs
- ◆ Disadvantaged by permitting and regulatory burden
- ◆ Disadvantaged by price and closed market
- ◆ Disadvantaged or incentivized by fiscal regime?????

10:53:10 AM



# Consequences of SB 305 (RES) – Cook Inlet Gas

- ◆ Existing Fields

- Nothing wrong with ELF for Cook Inlet natural gas
- Loss of ELF and higher tax rate in low gas price environment will result in
  - Higher rate required to pay for costs (economic limit)
  - Fields will be shut in at higher production rates
  - Reserves will be lost.

- ◆ New Exploration and Development

- Higher taxes will result in:
  - Less competitive opportunities compared to N American gas provinces
  - Renewed decline in Cook Inlet exploration and development
  - Cancelled projects
  - **NO NEW RESERVES DEVELOPED**

- ◆ Loss of industrials and jobs

- ◆ **Higher and volatile costs to utility consumers**

10:54:10 AM



# Cook Inlet – What is Needed

- ◆ Problems with Progressivity
  - Potential higher tax rate at lower margins
  - Must not link Cook Inlet PPT to volatile non-related index
  - Link to Cook Inlet Department of Revenue Prevailing Value
- ◆ Must include provision for marginal low rate fields
  - 5/20 Plan for Cook Inlet
- ◆ Prioritize efforts to incentivize, not hinder exploration and development
  - Include some form of transitional investments credit
- ◆ Actions by this Legislature will have immediate and measurable impact on Cook Inlet oil and gas industry

11:02:04 AM





**Chevron**  
**Testimony on SB 305**  
**Finance Committee**

**John P. Zager**  
**General Manager, Alaska**

April 6, 2006

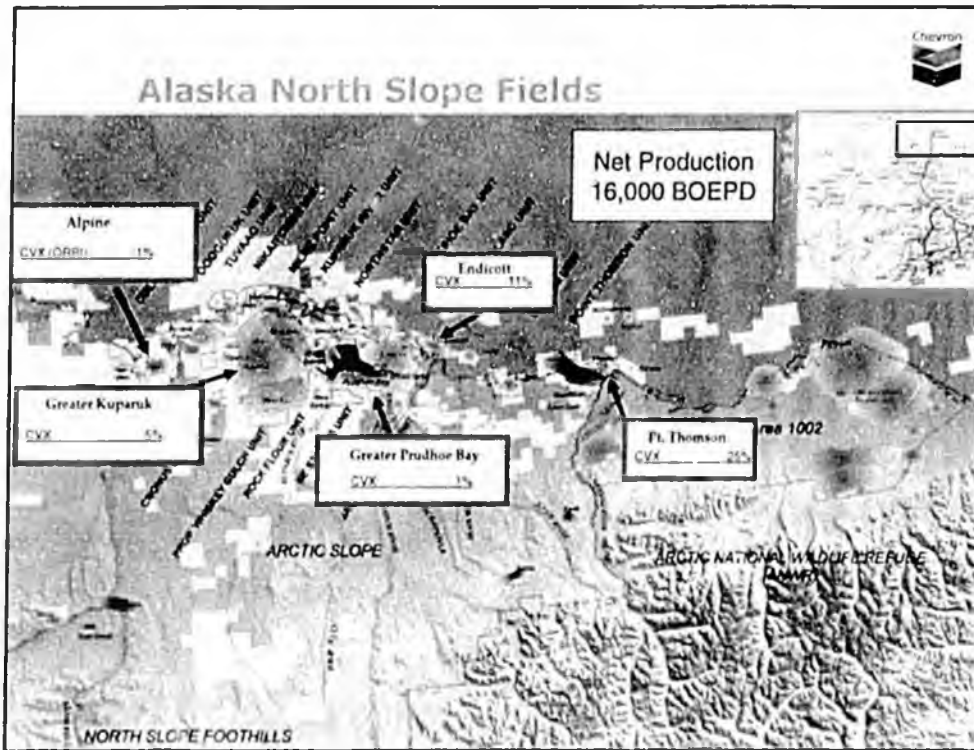
**Chevron's Alaska Presence**



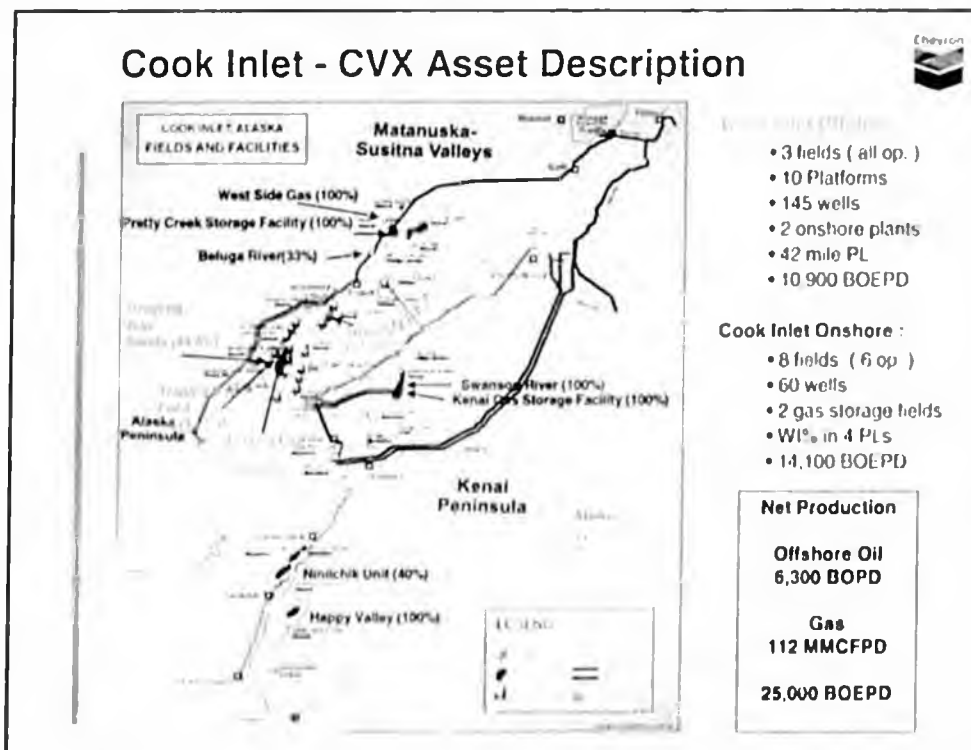
- Current Asset base is formed by combination of heritage Chevron and Unocal assets
  - Both companies have been active in Alaska for many years
- 4<sup>th</sup> largest producer in state
- 3<sup>rd</sup> largest operator
- 382 employees or full time contractors
  - 272 on the Kenai Peninsula
  - Payroll of >\$45 million
- Key customers: Tesoro, Enstar, Chugach Electric, Agrium, Aurora
- Chevron is the only producer in the state with a relative balance of assets in the Cook Inlet and on the North Slope
  - Both production streams are large enough to trigger PPT
- Chevron's Cook Inlet offshore assets are uniquely positioned to suffer from the proposed PPT

9:07:40 AM

Presented  
4/6/06

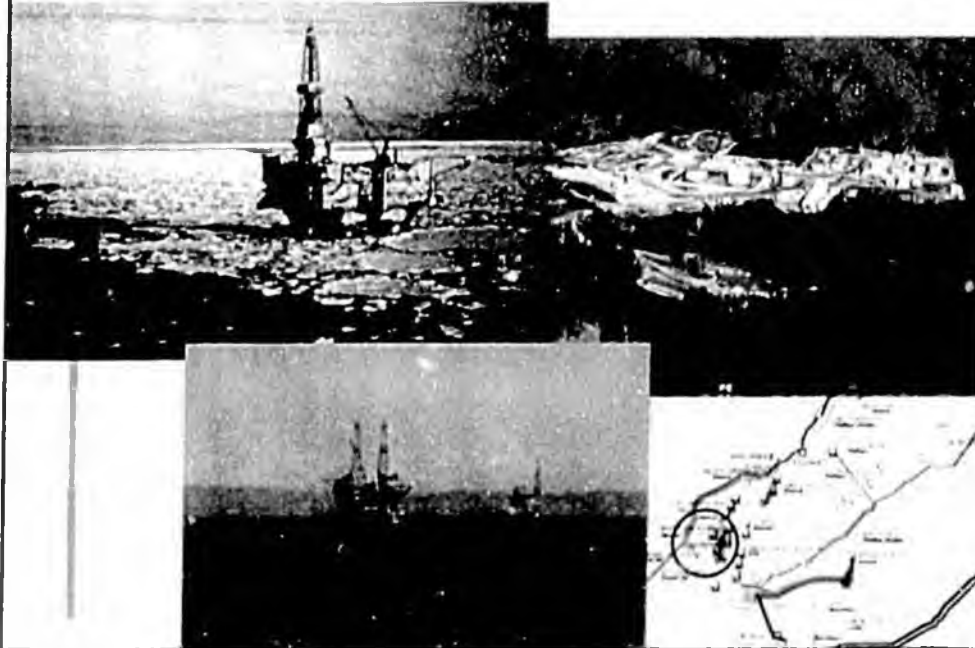


9:09:17 AM



9:10:14 AM

### Trading Bay Unit

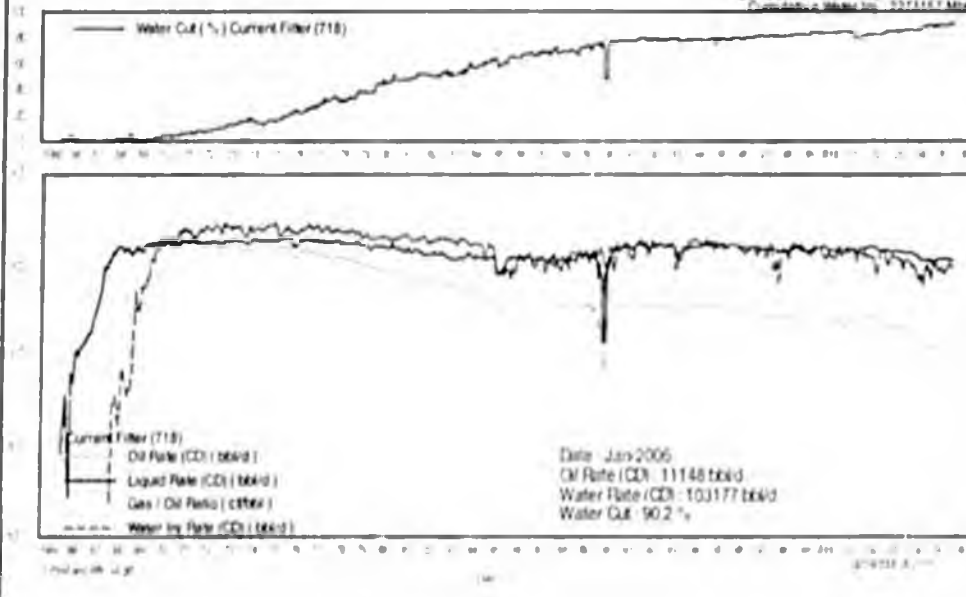


9:11:27 AM

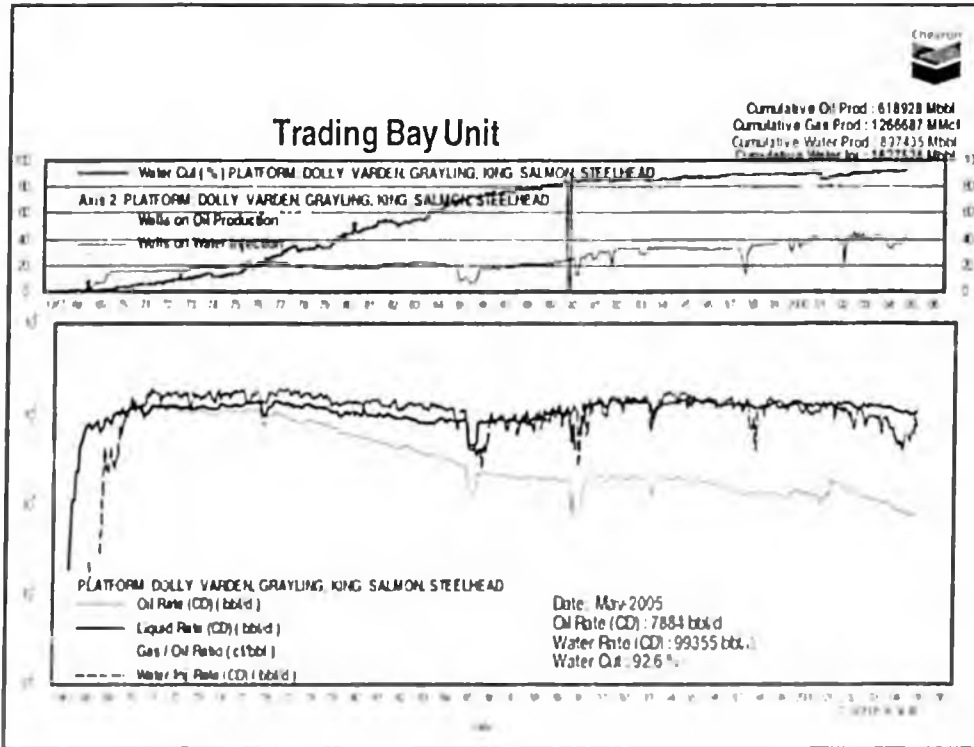
### Cook Inlet Offshore



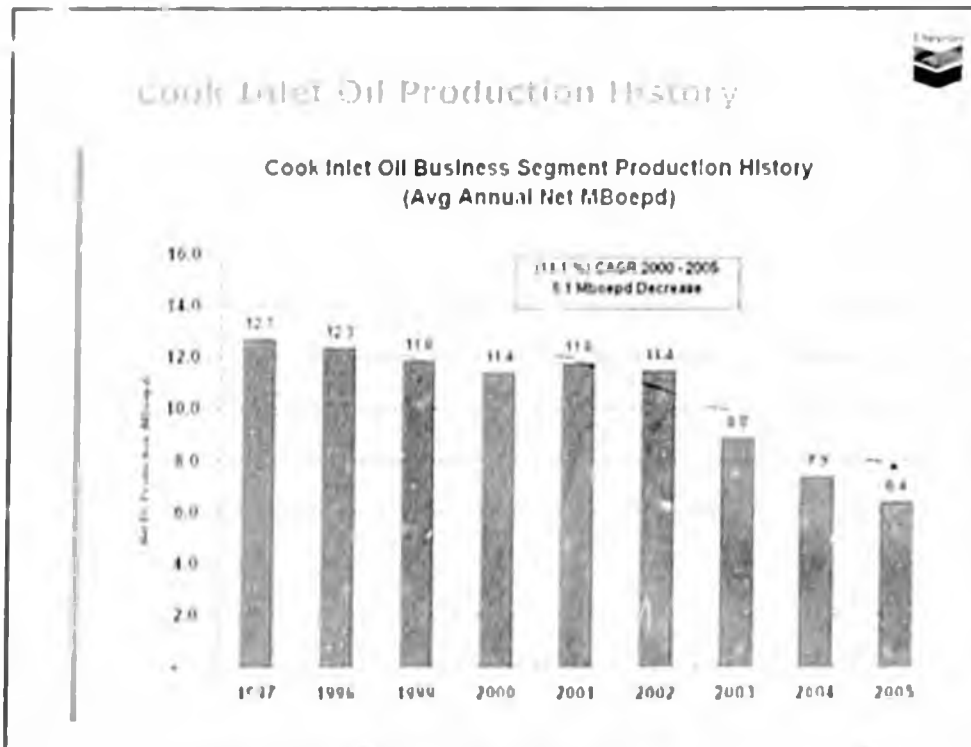
Cumulative Oil Prod: 1030570 Mbbl  
 Cumulative Gas Prod: 1587463 MMcf  
 Cumulative Water Prod: 1117381 Mbbl  
 Cumulative Water Cut: 32.2187 Mbbl



9:12:00 AM



9:13:33 AM



9:14:16 AM



### Cook Inlet Offshore Oil

- Cook Inlet Oil is very high cost
  - Direct lift cost \$20 - \$25 per BOE
  - Currently breakeven on Cash Flow @ ~ \$30/BOE
  - Currently breakeven on Earnings @ ~ \$40 - \$45/BOE
  - Further production declines will raise breakeven prices
- Significant operational risks
  - Two platforms are currently shut-in
  - Must maintain critical mass of operations
- Cook Inlet Offshore cannot afford an additional tax burden

9:14:33 AM  
29:30:06 AM



### Chevron Cook Inlet Strategic Study

- August 10, 2005 Chevron acquires Unocal
  - Much speculation about Cook Inlet asset fit in Chevron Portfolio
- October 2005 - January 2006 - Strategy work completed
  - Determined that there are incremental investment opportunities in the Cook Inlet although they are in the lowest quartile of Chevron's investment portfolio, many projects did not make the cut
- February 2006 - Great news - announce decision that Chevron will retain all Cook Inlet assets with the intent to begin a multiyear investment program
  - Chevron will retain the current office locations

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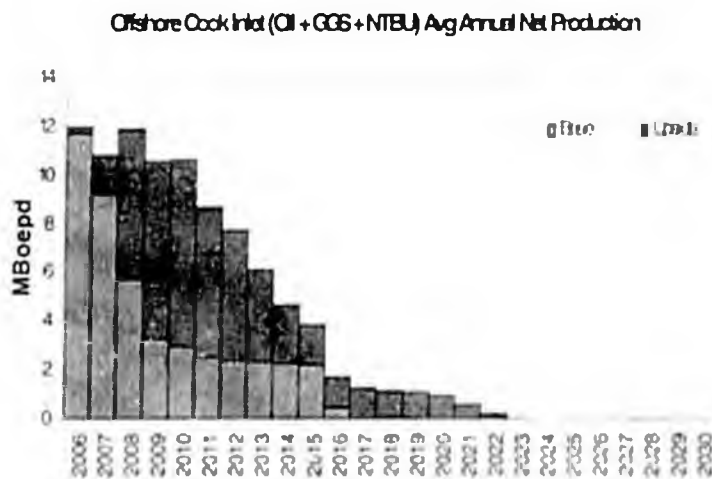
## Great news, so what's the problem?



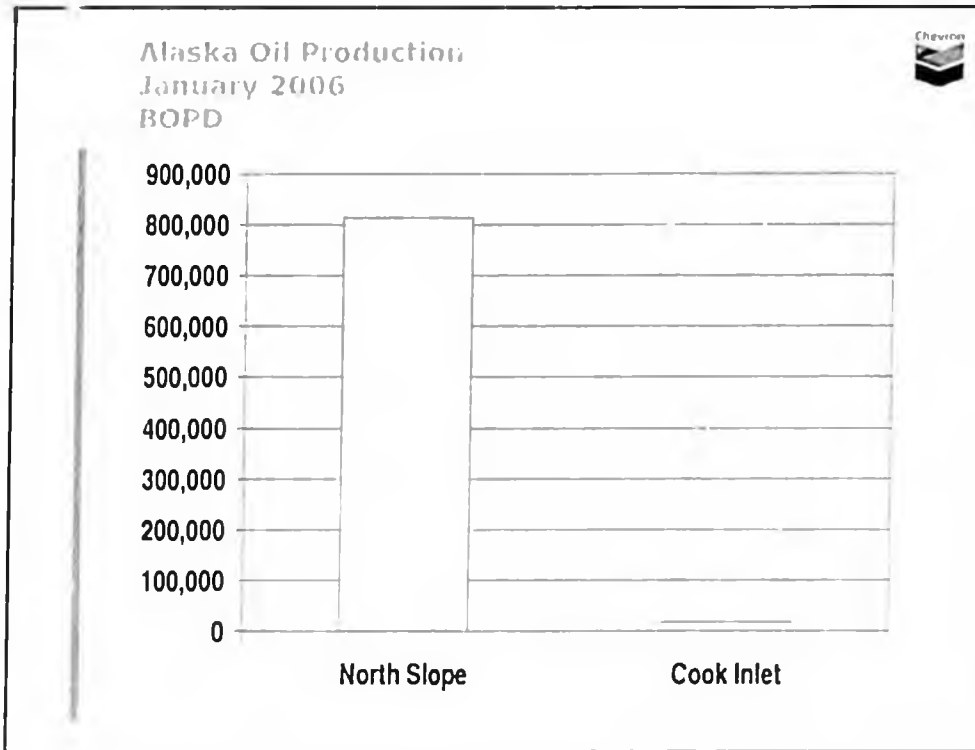
- The Cook Inlet reinvestment program was evaluated using the current severance tax assumptions (zero severance tax)
- When modeled under the proposed 20/20 PPT the economics on some projects are degraded, some projects are improved, overall poorer economics for the program
  - Oil production taxes will go up dramatically
  - Will cause investment decision to be reconsidered
  - Higher taxes will cause less capital to be spent
  - Enhanced PPT terms could significantly expand the list of economic projects in the investment program and significantly extend the life of offshore oil production

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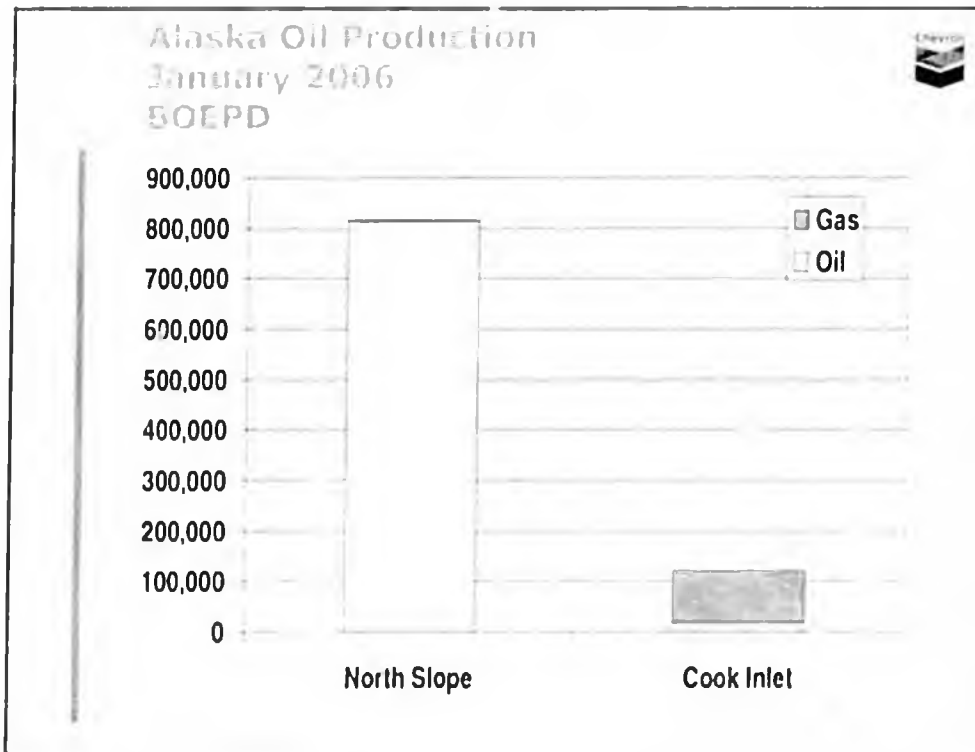
## Cook Inlet Production Forecast with Four Year Capital Plan



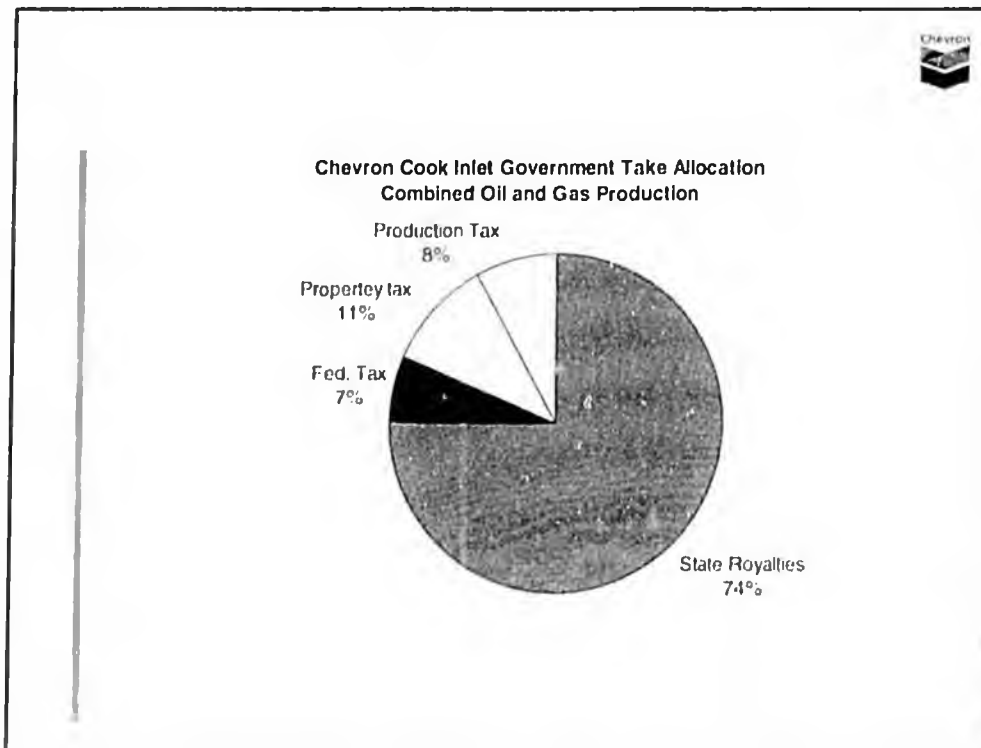
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- Reasons to Lower Taxes and Provide Incentives  
for Additional Cook Inlet Investment**
- Gas is running out
    - Home heating, electrical generation, industrial consumption
    - Additional gas supply is critical to state's economy
    - Other options are much more expensive than Cook Inlet gas
  - Production tax is a pass through on most utility contracts
    - Tax increase represents increase in gas price to consumers
  - Oil redevelopment will maintain and add new jobs and will extend field life
  - Cook Inlet competes for capital with other areas in North America, does not compete for global capital
    - Under PPT Alaska will have the worst fiscal terms in the U.S.

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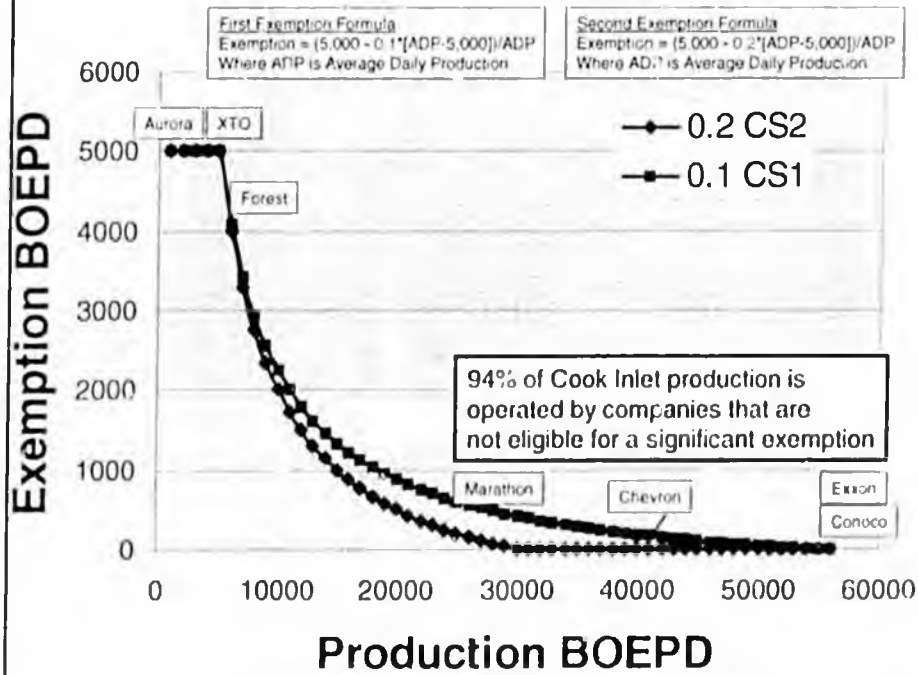
## Cook Inlet Provisions to Date



- House Resources - None
- Senate Resources - "5,000 BOPD exemption"
  - Fails to provide any real help to Cook Inlet
  - May be a "small company provision", but is not a "Cook Inlet provision"
- Any "Cook Inlet Provision" should be specific to the Cook Inlet
- Reasons given not to consider Cook Inlet provision
  - Adds complication
    - Some additional complication to help Cook Inlet is justified
  - System must be uniform over entire state
    - We already have statutes that distinguish geographic areas

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## Senate CS - BOE Exempted



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Senate Resources CS - The unique value and challenged position of the Cook Inlet is not adequately addressed



- Revisions as proposed in the CS lowers the economics of capital investments in the Cook Inlet
  - Puts Chevron's four year capital program in jeopardy
    - At the very least, increased taxes will lower investment
  - Without capital McArthur River Field is gone in ~4 years
  - Critical mass for Cook Inlet oil industry is gone

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Recommendation on Cook Inlet



Consider the following options:

- Carve out Cook Inlet
  - Leave under current system
- Apply PPT methodology to keep taxes near current levels
  - Adjust tax rates lower (5%)
  - Retain overall incentive rates (20%)

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## General Comments on CS



- 25% tax rate is too high and will discourage investment, a return to 20% overall rate is in the best interest of Alaska
- Prefer \$12 million credit to 5,000 BOEPD exemption
- Transition capital must be earned again on 2:1 basis
  - + Prefer original proposal, this is better than nothing, suggest extending time period to 10 years
- April 1, commencement date, not practical, punitive penalty and interest rate
- Progressivity – do not support - taking away the "windfalls", no matter how you couch it, lowers expected value to investors, and therefore will lower overall investments

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## Alternative Progressivity (Windfall Profit) Provision



- Reason for the state to support progressivity
  - To get a "fair share" when there is a price run up accompanied by large profits
  - NOT to raise taxes if the price increase is gradual over time and is accompanied by increases in costs and thus not accompanied by increased profits – NO! a creeping tax increase
- Problems with progressivity as currently proposed
  - "Trigger" price tied to WTI (or Henry Hub) is not inflated
    - Over time prices and costs will rise – 30 years is a long time
  - "High cost" oil will be produced in increasing quantities
  - Over the long term a fixed trigger price will not work as intended
- Consider changing the trigger from commodity price to a "net profits" trigger

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## How would a "net profits" trigger work?



- Each company already will calculate a "net profits" every month
  - Divide monthly net profits by production to get a "net profits/boe"
- Set trigger point and escalation factor based on "net profits/boe"
  - Suggest \$50/boe net profits trigger and 2.0% for each \$10 increase in profits
  - Minimum general rate of 20% tax on net profit
  - Maximum general rate of 30% tax on net profit
- Advantages
  - Self correcting for inflation, costs, commodity, high cost production (avoid discussion of WTI, ANS, Henry Hub, well head, etc.)
  - Fully captures the "windfall" upside, without creating unintended consequences
  - System is fair, since taxes and progressivity will only be attached to actual company profits

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## Examples of "Net Profits" Trigger



### 1 - Windfall Case - Price double - Costs fixed

Average Rev/BOE	60.00	110.00
Expense Per BOE	7.00	7.00
Capital Per BOE (incl. Cap credit)	3.00	3.00
Net "Profit" per BOE	50.00	100.00
PPT %	20.0%	30.0%
actual tax per BOE	\$ 10.00	\$ 30.00

### 2 - Increase Profits - Price double - Costs up

Average Rev/BOE	60.00	110.00
Expense Per BOE	7.00	37.00
Capital Per BOE (incl. Cap credit)	3.00	3.00
Net "Profit" per BOE	50.00	70.00
PPT %	20.0%	24.0%
actual tax per BOE	\$ 10.00	\$ 16.80

### 3 - Constant Profit - Price double - Costs keep pace

Average Rev/BOE	60.00	110.00
Expense Per BOE	7.00	57.00
Capital Per BOE (incl. Cap credit)	3.00	3.00
Net "Profit" per BOE	50.00	50.00
PPT %	20.0%	20.0%
actual tax per BOE	\$ 10.00	\$ 10.00

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## General Comments on CS



- Debate between "get it now" and "grow the pie"
  - "Get it now" option will balloon short term revenue creating a state windfall that must be well managed
  - "Grow the pie" option will create long term opportunities for investors and for Alaska
  - I am optimistic about the ingenuity and technology available in our industry and the people of Alaska to greatly extend oil production for the next generation
- Consultants will one day leave and we will be left to deal with our decisions
  - First you vote on behalf of the people of Alaska
  - Then over the coming years investors vote with their dollars
    - Original industry support was astounding
    - However, Investors Big and small, old and new, are now saying that the Senate Resources CS structure will discourage investment in Alaska

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## Summary Comments on CS



- Chevron cannot support the Senate Resources CS in its current form
- Urge return to original PPT terms, while inserting a 5/20 Cook Inlet provision
- Recommend inclusion of an additional capital credit for heavy oil or tertiary recovery (CO2) projects statewide
- Chevron has been in Alaska for many years and intends to continue an active exploration and production operation in the state if a sound and stable fiscal regime can be offered

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**PIONEER**  
NATURAL RESOURCES ALASKA

***SB 305 PPT***

***Senate Resources***

***Committee***

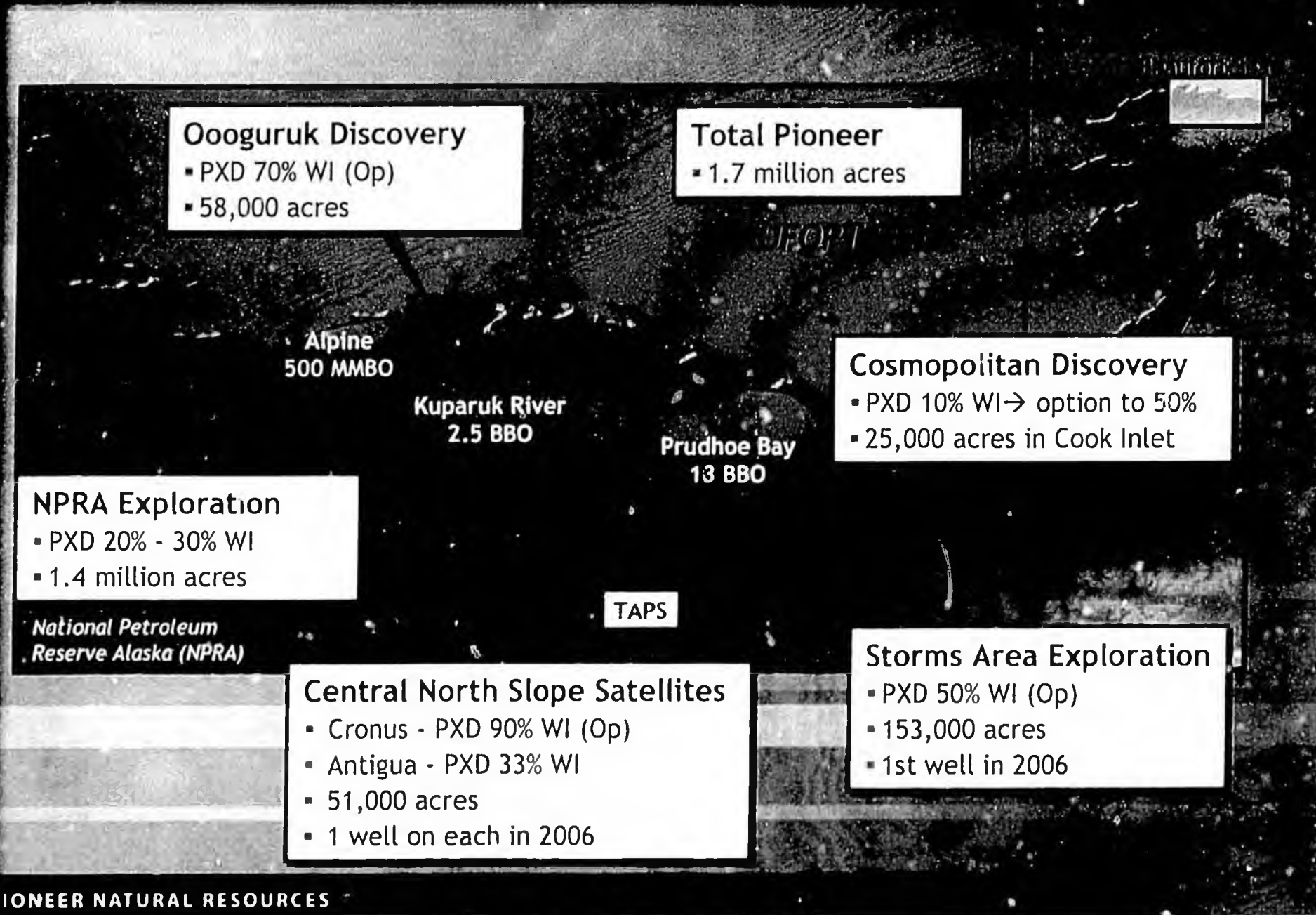
***Juneau, Alaska***

***April 7, 2006***

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Pat Tola 4/7/06

# Pioneer's Alaska Acreage



# Oooguruk Development Project

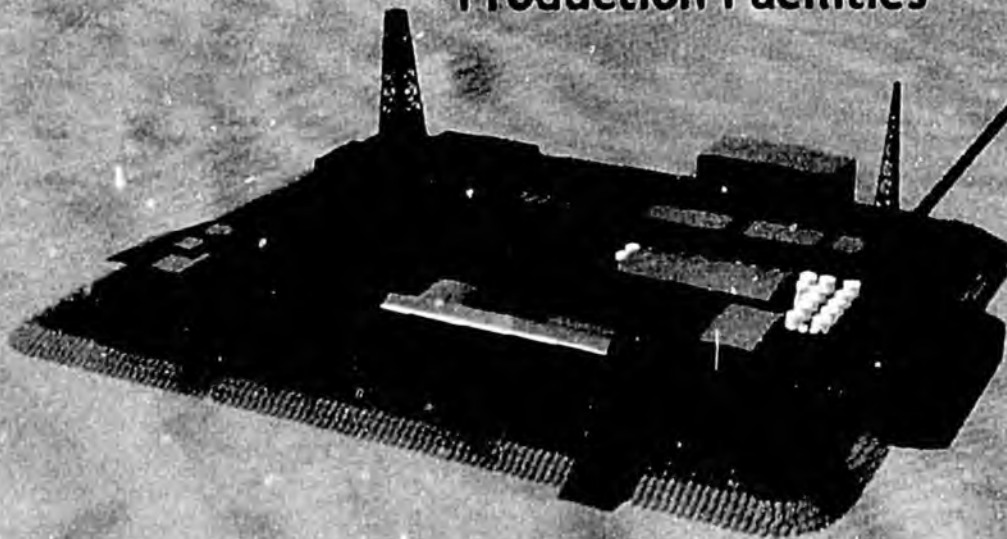


- Development Cost: \$450 – 525 million
- Reserve Potential: 50 – 90 million bbls
- Peak Flow Rates: 15 – 20,000 bbls per day in 2010

Tie-in to COP  
Kuparuk River Facilities



**Drillsite and  
Production Facilities**



**Harrison Bay**  
(4.5' water depth)

# Oooguruk Major Project Construction Components



## ▪ Winter 2006

- Gravel Mining
- Gravel Placement - Drillsite & Onshore Pad

## ▪ Winter 2007

- Flowline Installation
- Facility & Equipment Installation

## ▪ 2008 – 2011

- 38 Well Drilling Program



# Alaska's Challenges



- **Some of the Highest Costs in the World**
  - Large Minimum Economic Field
- **Future Exploration & Development**
  - Smaller Reservoirs
  - Remote Resources
  - Viscous Oil Resources
  - Gas
- **Long Cycle Times (5 to 10 years)**
- **Investment Uncertainty**
  - Exploration & Reservoir Risk
  - Price Risk
  - Fiscal Certainty