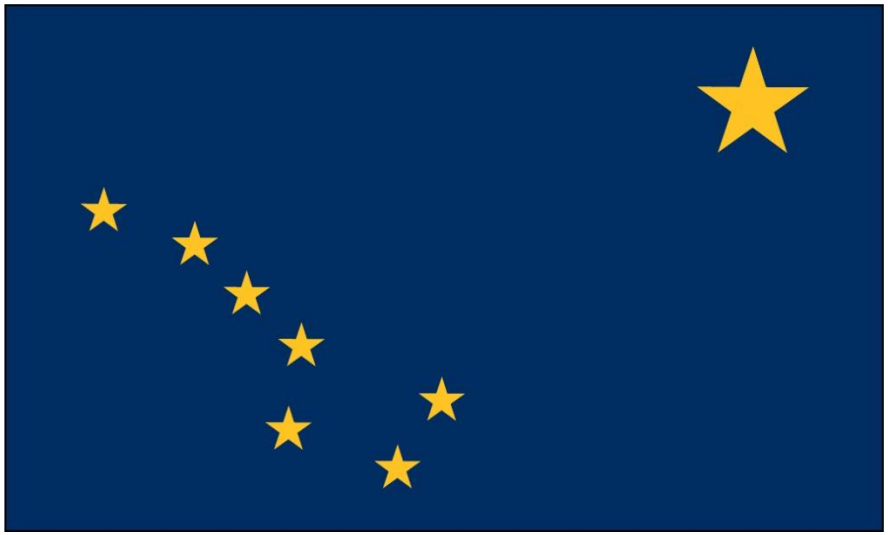
Committee Substitute for Senate Bill 192 (RES)

Oil and Gas Production Tax Rates

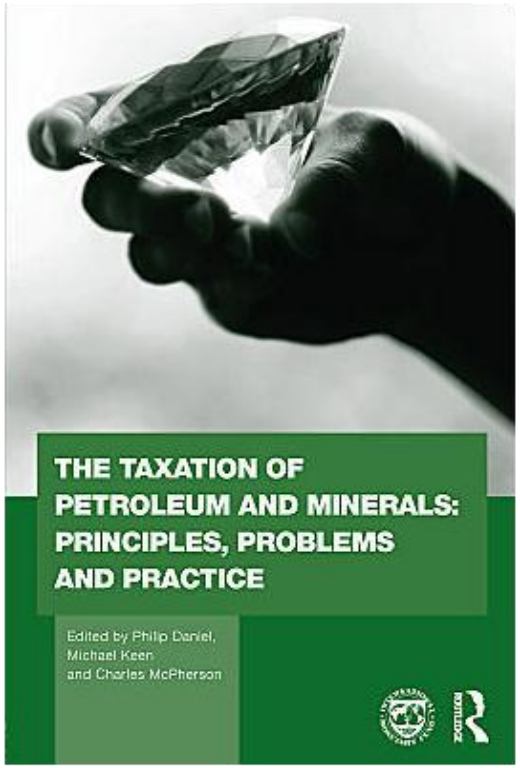


Senate Finance Committee
Tuesday, March 13

CSSB 192(RES) Overview

- Intro: Alaska is an Owner State
- Summary of DOR Reports
- Lessons Learned
- Basic Petroleum Economics
- DOR's "Facts To Begin the Conversation"
- CSSB 192(RES): Rationale and Overview
- Optimism for Alaska's Future

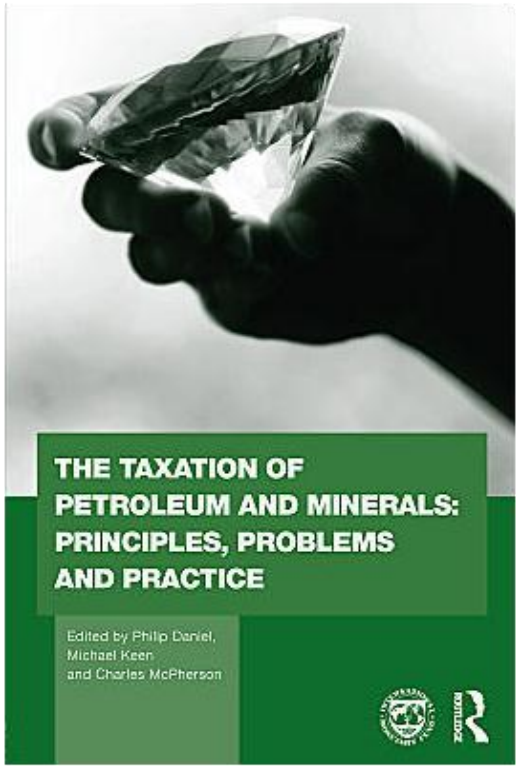
Alaska is an Owner State



"There are few areas of economic policymaking in which the returns to good decisions are so high – and the punishment of bad decisions so cruel – as in the management of natural resources wealth."

From the Preface, page ii

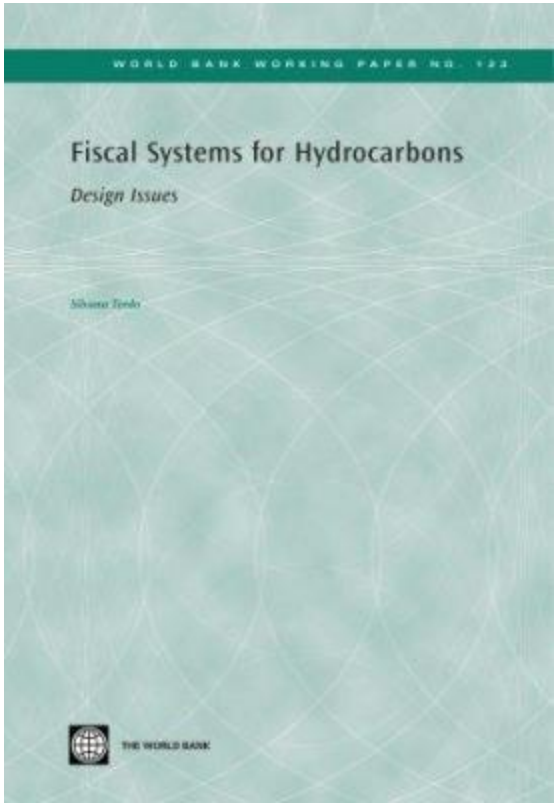
Alaska is an Owner State



"The central objective in designing petroleum fiscal regimes is easily stated. It is to acquire for the state in whose legal territory the resources in question lie, a fair share of the wealth accruing from the extraction of that resource, whilst encouraging investors to ensure optimal economic recovery of the hydrocarbon resources. How to achieve this balance is a subject of enduring controversy."

From Chapter 4 Petroleum Fiscal Regimes: Evolution and Challenges (page 89)

Alaska is an Owner State

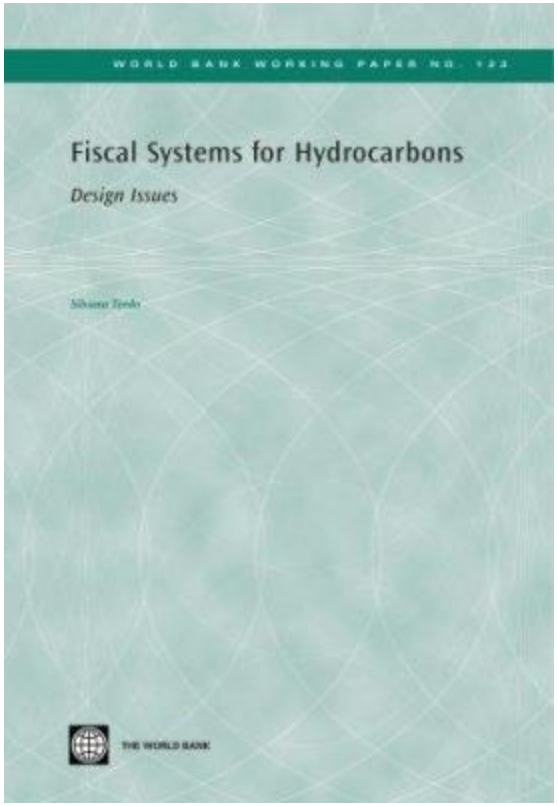


Chapter 5: Designing Efficient Fiscal Systems

Although the host government and the investor may share one common objective – the desire for the project to generate high levels of revenue – their other objectives are not entirely aligned:

Host governments aim to obtain the maximum value (not volume) for their countries over time in terms of net receipts for treasury. Their goal is to maximize the wealth from their natural resources and, at the same time, attract foreign investment. Host governments also have development and socioeconomic objectives, such as job creation, transfer of technology, and development of local infrastructure.

Alaska is an Owner State



Chapter 5: Designing Efficient Fiscal Systems (continued)

Oil companies aim to ensure that the return on capital is consistent with the risk associated with the project and with the strategic objectives of the corporation.

“Meeting the Challenge”

Bob Bartlett, Alaska Constitutional Convention

Where such vast resources potential exists one need not be clairvoyant to foresee an influx of interests wanting to develop these resources …

This moment will be a critical one in Alaska’s future history. Development must not be confused with exploitation at this time. The financial welfare of the future state and the well-being of its present and unbornn citizens depend upon the wise administration and oversight of these developmental activities.

Two very real dangers are present. The first, and most obvious, danger is that of exploitation under the thin disguise of development. The taking of Alaska’s mineral resources without leaving some reasonable return for the support of Alaska governmental services and the use of all the people of Alaska will mean a betrayal in the administration of the people’s wealth.

The second danger is that outside interests, determined to stifle any development in Alaska which might compete with their activities elsewhere, will attempt to acquire great areas of Alaska’s public lands in order NOT to develop them until such time as, in their omnipotence and the pursuance of their own interests, they see fit. If large areas of Alaska’s patrimony are turned over to such corporations the people of Alaska may be even more the losers than if the lands had been exploited. (November 8, 1955)

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ACES Status Report

Alaska Department of Revenue (January 14, 2010)

Letter from DOR Commissioner Galvin to Gov Parnell:

- "The ACES Status Report evaluates whether ACES is meeting its intended goals of providing a fair share of revenue to the state while encouraging investment in new oil and gas exploration and development activities."
- "The status report shows that ACES successfully allowed the state to share in the benefits of high oil prices while accommodating fluctuations in production costs and oil prices. ACES adjusted when oil prices tumbled and kept the oil operations in Alaska highly profitable relative to other oil provinces."
- "Since ACES passed the legislature, overall spending on oil and gas activities on the North Slope has increased. However … it would be premature to attribute the increased level of oil company investment to the success of ACES."

ACES Status Report
Alaska Department of Revenue (January 14, 2010)

Letter from DOR Commissioner Galvin to Gov Parnell (cont):

"Oil taxes are clearly an important factor in industry investment decisions. However, it is misleading to isolate their influence from other key factors, such as world oil prices, geologic potential, access to land, resources and markets, costs of infrastructure and support services, and the legal and regulatory framework. As noted in the report, the true merit of Alaska's current fiscal system can only be determined when it is evaluated in conjunction with these other variables."

ACES Status Report
Alaska Department of Revenue (January 14, 2010)

ACES Structure and Tax Rate (page 9 – 11):

"As with any tax, ACES may be evaluated using a variety of different metrics, including 'effective,' 'nominal,' and 'marginal' tax rate comparisons. While each of these can be helpful under the appropriate circumstances, each is also subject to certain limitations. It is important when using these metrics to understand their relative value and how they reflect upon the objectives of the tax system …"

"The 'marginal tax rate' is the rate theoretically applied to each dollar increase in oil price … With a net based tax system, this metric shows a company the impact of making additional investment, because each dollar they invest is 'subsidized' by the government based on the amount of marginal tax they have avoided paying on that dollar … For example, a marginal tax rate of up to 87% initially sounds excessive. However, at that same price level, the effective tax rate is less than 40%. The marginal rate of 87% actually represents that state's 'portion' of any new investment made at such high prices."

ACES Status Report

Alaska Department of Revenue (January 14, 2010)

Conclusion (page 15):

"Overall, the information reviewed by the department indicates that ACES is performing as expected when it was passed by the Legislature in 2007. The economic provisions are resulting in the revenue levels anticipated, and the investment incentives appear to distribute the increased tax burden in a fashion that continues to encourage reinvestment, though the experience with the credit program could be improved for new explorers. Challenges remain in the implementation by the department, but they are manageable and the department is positioned to meet those challenges."

Production Tax Status Report to the Legislature by DOR (January 18, 2011)

From the Executive Summary (pages 1 – 2)

- **Industry Investment** – Investment in the form of capital expenditures has increased in each of the four fiscal years since implementation of the net profits tax, however, it is unclear how much of the capital expenditures were drilling or well-related and how much were maintenance or facilities-related.
- **Impact on Exploration, Development, and Production –** Exploration has generally increased from 2003, when the EIC credit was implemented, but has dropped off in 2010. Development continues in three relatively new North Slope projects, yet production continues to decline.
- **Industry Employment and New Entrants –** Industry employment rose steadily from 2006 through 2009, but dipped slightly in 2010. The number of companies filing annual tax returns doubled between 2006 and 2009, indicating interest by companies that are either new or returning to the Alaska oil and gas industry.

Production Tax Status Report to the Legislature by DOR (January 18, 2011)

From the Executive Summary (cont.)

- **Use and Expansion of Tax Credits –** The amount of credits used has increased annually since 2006 and we expect the trend to continue as new credit programs were added in the 2010 legislative session.
- **Tax Administration and Compliance –** The department continues to write regulations for the new tax system, and the first audits under the net profits tax have been completed. The department has, however, been hampered in its tax reporting and compliance efforts by the lack of a centralized database to house and manage the large volumes of oil and gas data it receives.
- **Conclusions and Recommendations –** Based on the multiple changes to the tax laws over the past few years, drawing any conclusion about their effect on Alaska's investment climate is difficult. However, what is clear is that production continues to decline. The state should continue to monitor its competitiveness with other oil and gas jurisdictions worldwide and be prepared to change its tax structure as needed.

Production Tax Status Report to the Legislature by DOR (January 18, 2011)

Conclusion and Recommendations (Pages 14 – 15):

"A government's fiscal regime is just one element for oil and gas companies to consider when weighing options for where to invest. Many other elements, such as resource risk, political risk, environmental factors, and availability of labor and equipment, also play a part in companies' decisions about where to invest. It is very difficult to separate these factors in order to determine the extent to which a government's fiscal system influences investment choices.

"While it is untenable to blame a tax system for the lack of industry investment, it is equally untenable to claim that the tax system is the reason increased activity or investment occurs. The past three years have seen dramatic swings in oil prices from a high of $134 per barrel to a low of $38 per barrel just 6 months later. An economic recession stifled investment and business activity in the United States and much of the developed world for over a year. The economic activity of the past three years may not have been the best benchmark by which to judge the impact of a tax system …

"… State officials should continue to monitor the state's competitiveness in oil and gas opportunities, and be prepared to modify it as the need arises."

HB 110 PRODUCTION TAX ON OIL AND GAS

January 18, 2011: Read the First Time – Referrals

SB 49 PRODUCTION TAX ON OIL AND GAS

January 19, 2011: Read the First Time – Referrals

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Comprehensive Plan and Feasibility Study by FAST Enterprises, LLC (October, 2010)

Excerpts from the Executive Summary

The Alaska Department of Revenue's Tax Division (DOR/TAX) relies on a patchwork of 17 automated systems and over 100 manual "side-systems" to administer 22 tax programs.

- DOR/TAX manages over $3 billion in Oil and Gas Tax revenue using an eclectic mix of home-grown side-systems that include multiple databases and unsecured, unstable spreadsheets stretched well beyond their intended use. Storing sensitive taxpayer information in these databases and spreadsheets poses a high security risk.

- The 17 systems used to administer different taxes and functions have been pieced together over the past 15 years without integration or an overall architecture. The systems do not scale to meet current needs and are inflexible and difficult to maintain. Since the initial development of the systems, many tax laws have changed and the systems have not changed accordingly.

Comprehensive Plan and Feasibility Study by FAST Enterprises, LLC (October, 2010)

Excerpts from the Executive Summary (continued)

- DOR/TAX employees spend a higher proportion of their time compiling, organizing, and reconciling data than actually auditing, examining, analyzing, forecasting, or managing tax programs.

- The limitations and inflexibility of existing systems impose a burden on taxpayers. Current reporting processes are inefficient and ineffective, and create unnecessary work and cost. As one taxpayer stated, "the Tax Division's inefficiency makes taxpayer interaction with the division inefficient."

- DOR/TAX cannot easily produce reports required by the legislature and policy makers because the current systems prevent timely, complete, and correct extraction of data. Reports can be inaccurate and misleading due to incorrect and incomplete data and human error.

Department of Revenue Additional Information

Single Audit of the State of Alaska (Feb 28, 2011)

- Recommendation: "DOR's commissioner should ensure staff within its Tax Division implement controls to improve the auditing of oil and gas severance tax revenues."
- Legislative Audit's Current Position: "Significant control deficiencies continued over the auditing of oil and gas severance tax revenues in FY10. A loss of experienced audit staff during FY10 compounded the struggles that the audit section was already experiencing."

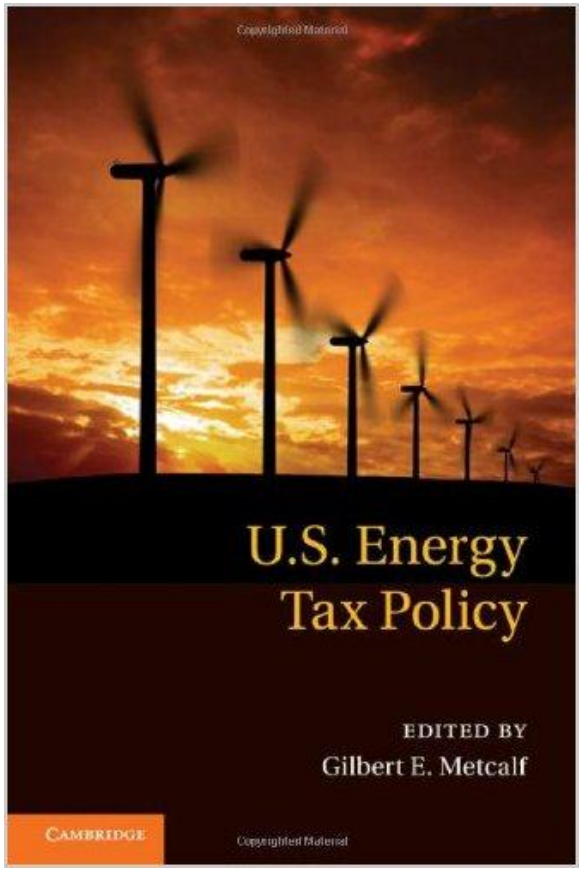
Decision Following Trial De Novo: 2007, 2008, and 2009 Assessed Valuations of the Trans Alaska Pipeline System (December 30, 2011)

- "The Department's Production Forecasts and Reserves Estimates are Unreliable" (page 170)

U.S. Energy Tax Policy (2011)

(Chapter 9) State Tax Policy and Oil Production:

The Role of the Severance Tax and Credits for Drilling Expenses



Introduction

"Although most energy-producing states have levied taxes on the value of oil, natural gas, and coal production for many years, changes in these taxes have become headline news as state governments grapple with budget shortfalls brought about by the current recession. For instance, Alaska has increased the severance tax on the value of its oil production and attempted to stimulate future production by allowing a credit against this tax for expenditures on capital items, including drilling rigs, infrastructure, exploration, and facility expansion (Alaska Department of Revenue 2008)."

By Ujjayant Chakravorty, Shelby Gerking, and Andrew Leach

State Tax Policy and Oil Production:
The Role of the Severance Tax and Credits for Drilling Expenses

Questions about the effects of state energy taxes, for example:

- Do state taxes tilt the time path of energy production to the present or to the future?

- Do upstream subsidies for exploration and development work together with downstream taxes on production to influence the levels and time paths of production and tax collections?

- What are the implications of these taxes for the long-term sustainable use of nonrenewable natural resources?

State Tax Policy and Oil Production:
The Role of the Severance Tax and Credits for Drilling Expenses

Key Finding #1:

- "Oil production is closely linked to the size of the reserve base and is relatively insensitive to changes in oil prices. This outcome, which is broadly consistent with experience in the U.S. oil industry over the past 50 years, leads to the conclusion that the severance tax has little effect on production levels (p. 306)."

State Tax Policy and Oil Production:
The Role of the Severance Tax and Credits for Drilling Expenses

Key Finding #2

- "The simulations suggest that a drilling expense credit may cost more than the incremental severance tax revenue obtained, although such credits may be worthwhile concessions if a state's objective is to generate greater support for increasing the severance tax rate (p. 307)."

Additional Research

"Effectiveness of Severance Tax Incentives in the U.S. Oil Industry" (Mitch Kunce, International Tax and Public Finance, 2003)

- "In general, results show that severance tax rate cuts substantially reduce state tax revenue collected, but yield moderate to little change in oil drilling and production activity. This outcome suggests that states should be wary of arguments asserting that large swings in oil field activity can be obtained from changes in severance tax rates."

Additional Research

"State Taxation, Exploration, and Production in the U.S. Oil Industry" (Mitch Kunce et al, Nov 26, 2001)

- "Results of this study suggest that oil production is highly inelastic with respect to changes in production taxes."

Gas and Water Handling Constraints

"While new oil is an issue in maintaining production levels, there are also issues at existing fields, where [Dudley] Platt said facilities expansion may be needed. He said the large facilities are 'maxed out on how much gas they can handle and they're getting close to being maxed out on how much water they can handle. … If they don't expand their facilities to handle that, the oil production will continue to go down.'"

"Alaska Oil Forecast Shaky"
By Kristen Nelson, Petroleum News
Week of November 18, 2007

Gas and Water Handling Constraints

North Slope of Alaska Facility Sharing Study

Prepared for Division of Oil & Gas, Alaska Department of Natural Resources

By Petrotechnical Resources Alaska, May, 2004

"The North Slope processing facilities have specific design capacity limits, indicating the amount of oil, water and gas which can be handled by the facility. If the handling capacity of one of these streams is reached for a given facility, it limits the overall production output from that facility. While some facilities may be producing below capacity for oil, they are often limited due to capacity constraints on total water production or gas production."

Gas and Water Handling Constraints

1989 Revenue Sources Book
Alaska Department of Revenue

"The vast majority of Alaska production will continue to come from the now declining Prudhoe Bay field … The decline in Prudhoe Bay production is now expected to be much more rapid than assumed in our Spring forecast. This reflects a more serious gas handling constraint. As more and more gas is produced with each barrel of oil, the amount of gas which must be re-injected back into the Prudhoe Bay field has increased substantially. Since it is anticipated that there will need to be more production downtime due to field and TAPS maintenance, the gas handling constraint will limit the ability to keep average annual oil production from falling. Installation of additional gas handling equipment, GHAX1 (gas handling and expansion 1), is scheduled to start late in 1990. A second expansion is in the planning stages. Once in place, the ability to re-inject up to 5.1 bcf/day of gas production will slow the rate of decline in oil production."

Gas and Water Handling Constraints

A Production Optimization System for Western Prudhoe Bay Field, Alaska

By D.A. Barnes, K. Humphrey, and L. Muellenberg of BPX America

Paper prepared for presentation at the 65th Annual Technical Conference and Exhibition of the Society of Petroleum Engineers held in New Orleans, LA, Sept 23-26, 1990.

“For almost a decade the Prudhoe Bay field on the North Slope of Alaska has produced at a yearly average offtake rate of 1.5 million stock tank barrels of oil per day. As the reservoir depletes and field gas-oil ratios (GORs) increase, gas handling constraints make it difficult to achieve oil rate targets.”

Gas and Water Handling Constraints

Prudhoe Bay: Development History and Future Potential

By D.J. Szabo, BP Exploration (Alaska) Inc. and K.O. Meyers, ARCO Oil and Gas

Paper prepared for presentation at the SPE 1993 Western Regional Meeting, Anchorage, AK, 26-28 May 1993.

"Prudhoe Bay is seen by many as a mature oil field on an inevitable and irreversible decline … The field's oil production capacity dropped below 1.5 MMSTB/D in 1988 *officially* signaling the start of decline. The onset of decline was a direct result of limited gas handling capacity as opposed to limited oil production capacity."

Gas and Water Handling Constraints

Prudhoe Bay Field: Facility Consolidations Pave the Way for an Economic Future

By K.D. Eager, BP Exploration; M.D. Briscoe, ARCO Alaska; R.A. Bolduc, Exxon

Paper prepared for presentation at the 1998 SPE Annual Technical Conference and Exhibition held in New Orleans, LA, 27-30 Sept 1998.

"The Prudhoe Bay Field on Alaska's North Slope has produced for twenty-one years. Prudhoe's gas and water production rates are at historic highs, but the oil production rate has declined to less than one-half of the peak rate achieved in the 1980s. As a result, significant excess oil treating capacity exists, with water and gas handling capacity constraining the current oil production rate. The owners of the Prudhoe Bay Unit developed a major facility consolidation plan in 1997 designed to rationalize this excess oil treating capacity while preserving existing gas and water handling capacity. The reconfigured facilities are expected to provide sufficient capacity at a lower cost to accommodate projected oil, water and gas production rates over the remaining life of the Prudhoe Bay Field."

Gas and Water Handling Constraints

Prudhoe Bay Field: Facility Consolidations Pave the Way for an Economic Future
By K.D. Eager, BP Exploration; M.D. Briscoe, ARCO Alaska; R.A. Bolduc, Exxon

Paper prepared for presentation at the 1998 SPE Annual Technical Conference and Exhibition held in New Orleans, LA, 27-30 Sept 1998.

(Continued)

"Oil production rates are projected to continue to decline in the future. In developing the field development and management plans for 2000 and beyond, the PBU Working Interest Owners recognize the need to reduce lifting cost commensurate with the decline in oil production to maintain an economic asset for as long as possible. The Prudhoe Bay Facility Optimization Project will play an important role in achieving reduced lifting costs."

Gas and Water Handling Constraints

Optimization of Production from Mature Fields
By P. Wang & K. Aziz of Stanford University and M.L. Litvak of BP, USA
17th World Petroleum Congress, September 1 - 5, 2002, Rio de Janeiro, Brazil

"Oil production in the Prudhoe Bay and Kuparuk River fields is constrained by the gas handling limits of the surface facilities."

2003 Oil and Gas Report (for the period ending December 31, 2002)
Alaska Department of Natural Resources (Tom Irwin, Commissioner)
Division of Oil and Gas (Mark Myers, Director)

"From the beginning of Prudhoe Bay production, dissolved gas and water were separated from the crude oil and injected back into the reservoir. Over time the reservoir's proportion of both gas-and-water to oil increased. Eventually, oil production was constrained by the rate at which the separating plants could process gas and water."

Gas and Water Handling Constraints

Q: Does DNR agree that oil throughput at Prudhoe Bay is constrained by the ability of field operators to process and re-inject associated natural gas?

A: Yes, gas processing is a significant constraint in Prudhoe Bay. While new wells could be drilled with lower GOR's, other high GOR wells have to be shut-in because of the gas processing limitation.

Q: As of the early 1990's, does DNR agree that Prudhoe Bay was past the point where well drilling could stave off a falling oil rate?

A: Yes. The Prudhoe Bay Unit WIO had a very aggressive drilling program in 1986-1992. In addition, a major gas handling expansion (GHX-1) occurred in the late 1980s which helped stem decline. Significant delay in the production plateau would have been difficult.

(Source: Memo from DNR to Senator Paskvan re: "Responses to the 30 questions from September 22, 2011" (January 17, 2012).

Overview of the Gleason Decision

- Market Structure
- The Life of TAPS
- Access To Information

Overview of the Gleason Decision

Market Structure

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The Life of TAPS

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Expanded Basic Petroleum Economics

Course Level: Basic

About The Course:

- Could you answer the following three questions for your next project:
  - What will it cost?
  - What is it worth?
  - Will it earn sufficient profit?
- Before undertaking any project, these questions should be answered.

Source: PetroSkills 2012 Training Guide

Example

- Estimates of drilling cost per well range from $132,907 in Kansas, where wells tend to be shallow, to $3,881,600 in Alaska, where the drilling experience is very different as compared to the lower 48 states.
- Marginal reserve additions from drilling range from 11,051 barrels per well in Kansas to 177,067 barrels per well in Alaska.
- Thus, while drilling a well in Alaska is markedly more expensive than in Kansas, Alaska experiences a greater payoff from these more costly exploration and development efforts.

(Source: "Effectiveness of Severance Tax Incentives in the U.S. Oil Industry," 2003, page 573 – 574)

Will it earn sufficient profit?

"Oil Industry Profitability in Alaska 1969 through 1987"

The oil industry received an estimated $42.6 billion in profit from production and transportation activities in Alaska from 1969 through 1987 … Alaska North Slope (ANS) production contributed $29.1 billion to profit, with $27.8 billion of this amount attributable to Prudhoe Bay and $1.3 billion attributable to Kuparuk. TAPS provided $12.4 billion. Production in Alaska other than ANS production added $1.1 billion in profit.

Shares. The 42.6 billion in after-tax profit that accrued to the oil industry compares to $29.3 billion in State of Alaska receipts from oil industry activities during this period. During the same period, Federal government receipts were $25.8 billion from these activities (page I and II).

(Source: "Oil Industry Profitability in Alaska 1969 through 1987," Prepared for the Department of Revenue, State of Alaska, by Edward Deakin, Distinguished Enterprise Professor and Director, Institute of Petroleum Accounting, University of North Texas, March 15, 1989.)

Will it earn sufficient profit?

"Oil Industry Profitability in Alaska 1969 through 1987"

Additional Benefits of ANS Oil

ANS Producers receive profits from Alaska oil outside of Alaska which provides an additional bonus beyond what it would cost if they had to purchase imported oil. An additional profit of approximately $0.7 billion went to the producers through the operation of the U.S. Department of Energy crude oil entitlement program. Producers are believed to earn additional profit through the refining of ANS crude because, among other things, they have access to a secure source of crude oil. If they did not have the ANS crude, it would be necessary for them to acquire crude from foreign sources.

Others estimate that profits on tanker operations and the trans-Panama shipment activities added between $.25 and $1.00 profit per barrel of ANS crude produced. These additional profits would have been received on the nearly 6 billion barrels of ANS production. These added profits are not included on the $42.6 billion of total oil industry profit in Alaska covered in this report (page 13).

These downstream profit issues are beyond the scope of this project. They do indicate, however, that the producer's economic benefits of Alaska oil production extend beyond the profit obtained within the boundaries of the State of Alaska (p. T-70).

(Source: "Oil Industry Profitability in Alaska 1969 through 1987," Prepared for the Department of Revenue, State of Alaska, by Edward Deakin, Distinguished Enterprise Professor and Director, Institute of Petroleum Accounting, University of North Texas, March 15, 1989.)

Will it earn sufficient profit?

“Oil Industry Profitability in Alaska 1969 through 1987”

Hourly Profit Rate

“Looking at these profits as an hourly earning number may bring the amounts into better perspective. After-tax profits have been earned by the producers at the rate of $463,144 per hour, twenty-four hours per day for each day of the first ten and one-half years of ANS Production (page 19).”

(Source: “Oil Industry Profitability in Alaska 1969 through 1987,” Prepared for the Department of Revenue, State of Alaska by Edward Deakin, Distinguished Enterprise Professor and Director, Institute of Petroleum Accounting, University of North Texas, March 15, 1989.)

Will it earn sufficient profit?

Lord John Browne, Chief Executive, BP

Address to shareholders (April 15, 2004)

- "In periods of high oil prices such as the one we find ourselves in today, the group generates significant 'excess free cash flow' after capital expenditure and dividends. Rather than using this cash to reduce debt … we are committing to return … 100 percent of this excess free cash flow to our investors, for as long as oil prices remain above $20 a barrel, all other things being appropriate (*Sarah Takes on Big Oil*, page 16)."

Will it earn sufficient profit?

"Alaska's role in BP's portfolio is to provide a stable production base and cash flow to fuel growth elsewhere in the business while improving margins and returns."

Sidenote:

"Over the past three years the TAPS Owners and Alyeska have studied a number of potential business efficiency opportunities … Preliminary engineering studies have also confirmed electrifying and automating all 4 pump stations will allow Alyeska to eliminate over 285 full time positions, many of those in field locations where wage and locations premiums are very high. Currently, remote crews at these pump stations require expensive catering, transportation and other costly support services systems. Eliminating these positions translates to an annualized expense savings improvement of over $41mm gross (+16mm net BP) by 2007 over APSC 2003 Base O&M."

(Source: BP, Alaska Business Unit, Mid-Stream Alaska, Trans-Alaska Pipeline Pump Station Electrification, 2004, Page 13)

Will it earn sufficient profit?

Gene Therriault,

Senior Policy Advisor on In-State Energy, Parnell Administration

Email Correspondence, August 2, 2010

"Major producers like ConocoPhillips and BP have reported strong profits from their Alaskan operations under the ACES system. For example, in 2009, ConocoPhillips' Alaska activity accounted for 12% of its worldwide production but 29% of its corporate profits. In addition, the August 1, 2010 edition of Petroleum News recently detailed ConocoPhillips current year earnings and concluded that "ConocoPhillips' exploration and production activities continue to be more profitable in Alaska than across the Lower 48.'"

Will it earn sufficient profit?

BP Prudhoe Bay Royalty Trust (BPT)

"In the past 10 years, BPT has earned a total return of 2,248%. A $5,000 investment just 10 years ago would be worth $117,400 right now … To give you an idea of how strong a return that is, integrated oil giant Chevron returned 231% over the same period. That would have turned $5,000 into $16,550. Not bad, but nowhere near what BP Prudhoe Bay Royalty Trust did.

"And those royalties are on top of capital gains. BPT's share price gained 667% during the past 10 years thanks to rising oil prices, while Chevron's stock price went up only 137%.

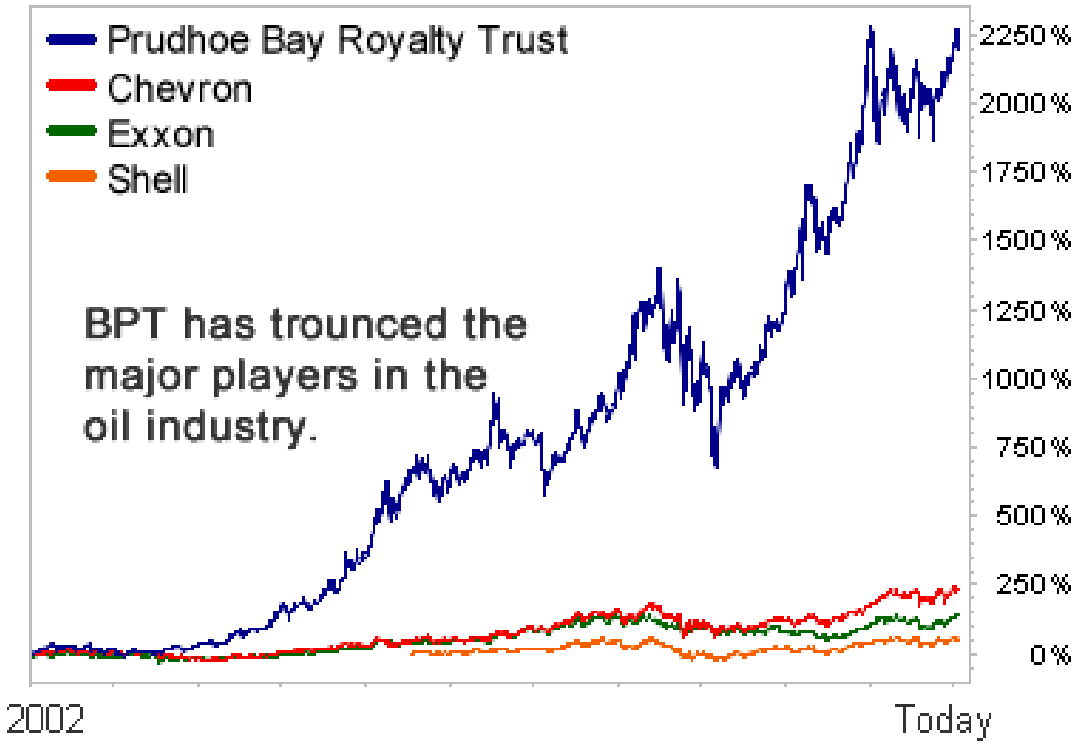
"The thing is, BPT not only beat Chevron... it beat out just about every major oil company over the same period. And that's only part of the equation. Go back a few more years, and the major oil and gas companies aren't even in BPT's league.

"BPT has generated total returns of 5,089% since 1990 -- beating the "big" names in the oil and gas industry. Chevron ... Exxon ... Shell ... you name it."

(Source: Seeking Alpha website, "BP Prudhoe Bay Royalty Trust: Why Worry About This High Yielder?," January 25, 2012)

Will it earn sufficient profit?

BP Prudhoe Bay Royalty Trust (BPT)



(Source: Seeking Alpha website, "BP Prudhoe Bay Royalty Trust: Why Worry About This High Yielder?," January 25, 2012)

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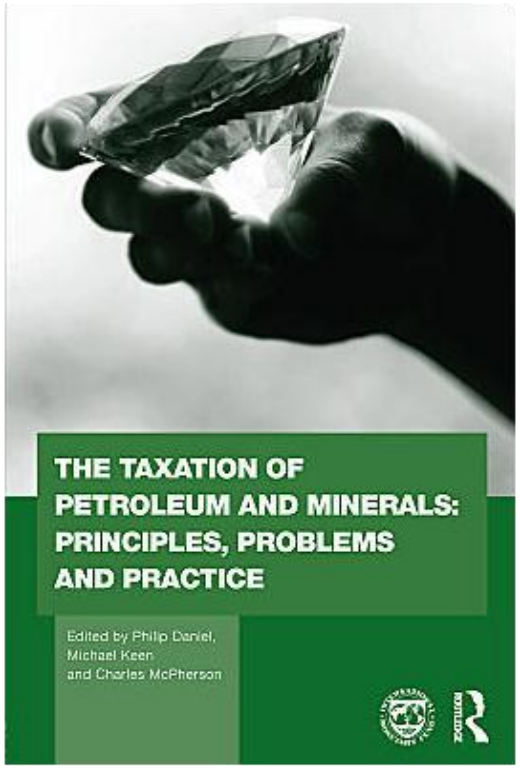
Department Of Revenue's Facts to Begin the Conversation

- Oil Prices Began to Climb to All-Time Highs Starting Mid-2000s
- TAPS Throughput Continues Steady Decline
- Other Oil Producing Regions Enjoying Production and Employment Booms
- Competition is High – Many Other Areas To Invest Around the World

Source: Senate Resources Committee (February 10, 2012)

Oil Prices Began to Climb to All-Time Highs Starting Mid-2000s



Chapter 7: Evaluating fiscal regimes for resource projects: An example from oil development

"The unprecedented rises in the internationally traded prices of crude oil and natural gas (petroleum) between 2002 and 2008, and the sudden fall after July of 2008, have concentrated attention once again on how petroleum revenues are shared between owners of the resource in the ground (usually governments) and the companies that extract the petroleum (page 187)."

Oil Prices Began to Climb to All-Time Highs Starting Mid-2000s

Fiscal Regimes in a Volatile Oil Price Era: What Options Exist for Balancing the Interest of the Resource Country and Investor Company?

By Humphrey Onyeukwu, SPE, Centre for Energy, Petroleum, Mineral Law and Policy, University of Dundee

Paper presented at the CPS/SPE International Oil and Gas Conference, Beijing, China, June 2010

"The challenge of a fiscal policy in a volatile price oil era is ensuring a high share of value is secured for the Government. At the same time, the fiscal policy strives to encourage the exploration of these valuable resources without harming the commercial interest of the oil companies. Price volatility fundamentally alters the sharing formula; it is therefore imperative for a correct balance to be achieved between the competing state interests and the oil companies. The question becomes how equilibrium can be achieved in a petroleum fiscal system design, which guarantees a suitable government take and avoids the negative effect of instability and re-negotiation of fiscal terms."

TAPS Throughput Continues Steady Decline

Revenue Sources Book (October, 1988)

Alaska Department of Revenue

"It is important to emphasize that the North Slope producers, while not agreeing on the exact date, have concluded that North Slope production will commence to decline in either FY 89 or FY 90."

TAPS Throughput Continues Steady Decline

Revenue Sources Book (Fall 1989)
Alaska Department of Revenue

"The fall in oil production means that the inevitable decline in the huge Prudhoe Bay field has started sooner than we predicted ... This forecast assumes that production from the Prudhoe Bay field will continue to fall steadily, and will drop to less than half its present level in less than 10 years."

"Some observers may believe that exploration will discover another Prudhoe Bay. Prudhoe Bay is the largest oil field in North America, and finding such a 'supergiant' is extremely rare."

"The State of Alaska is standing on a precipice. Only a combination of budget cuts, more efficient programs, and new revenues will keep the State from falling a long way ..."

"The decline in production from the Prudhoe Bay field is a central issue for Alaska ... The decline in Prudhoe Bay production is now expected to be much more rapid than assumed in our Spring forecast."

TAPS Throughput Continues Steady Decline

Revenue Sources Book (Spring 1992)

Alaska Department of Revenue

"The long-term revenue outlook is dominated by the depletion of petroleum reserves of the Prudhoe Bay oil field ... Despite the start of the irreversible decline at the Prudhoe Bay field this year, continued success in reservoir management in all fields will hold statewide production decline throughout fiscal year 1995 to less than 9% total (3% per year).”

TAPS Throughput Continues Steady Decline

Revenue Sources Book (Spring 1994)

Alaska Department of Revenue

"The Prudhoe Bay field, which accounts for two-thirds of Alaska statewide production, is in irreversible decline."

TAPS Throughput Continues Steady Decline

With Prudhoe Bay in Decline, What's Next for Alaska?

By James M. Davis (Senior Vice President for Exploration and Land) & Jerry R. Pollock (Manager, Prudhoe Bay Engineering) of ARCO Alaska, Inc.

Oil & Gas Journal, August 3, 1992

"By any definition, Prudhoe Bay is declining and will continue to decline…

"To accountants, Prudhoe decline began during 1988 when the field was no longer able to make its maximum allowable rate of 1.5 million b/d of oil. To engineers, the decline began long before that …

"Unfortunately, adding more wells can't keep the oil production rate up forever. We're already past the point where drilling can stave off a falling oil rate. Oil reserves are finite. …

"As the field matures, the production facilities reach their maximum capacities to handle produced water and gas. Wells with falling oil rates and increasing produced water or gas volumes have to be shut-in. Total field oil production drops."

TAPS Throughput Continues Steady Decline

Hearing before the Committee on Energy and Natural Resources, United States Senate

New Developments in Upstream Oil and Gas Technologies: Testimony by Kevin Banks, Director, Division of Oil and Gas, Alaska Department of Natural Resources (May 10, 2011)

"With the exception of development of heavy oil resources known to exist around the Prudhoe Bay, Kuparuk, and Milne Point fields, and potential resource plays (like the Bakken in North Dakota) that may exist on the North Slope on State controlled lands, the natural field declines cannot be replaced without access to production from Federal lands and the OCS. There are no known conventional resources on State or Native lands that are likely sufficient to replace the decline in the existing production rates."

TAPS Throughput Continues Steady Decline

Senate Resources Committee, March 1, 2012

Testimony by Scott Jepsen, Vice President, External Affairs, ConocoPhillips Alaska

CO-CHAIR PASKVAN asked if Alaskans should expect to see 1 million barrels a day from state lands in conventional oil with the $5 billion investment over the next 10 years.

MR. JEPSEN said the 1 million barrels a day is a good aspirational goal, but he didn't think they could get there. It would probably take some other types of technologies than what is in the state right now. He hoped shale oil pans out and Great Bear plus some offshore help. State lands have potential, but he didn't know where they would see the upside in terms of getting to that 1 million barrels a day.

(Source: Draft Minutes, SEN RES Committee, March 1, 2012, BASIS website)

Other Oil Producing Regions Enjoying Production and Employment Booms

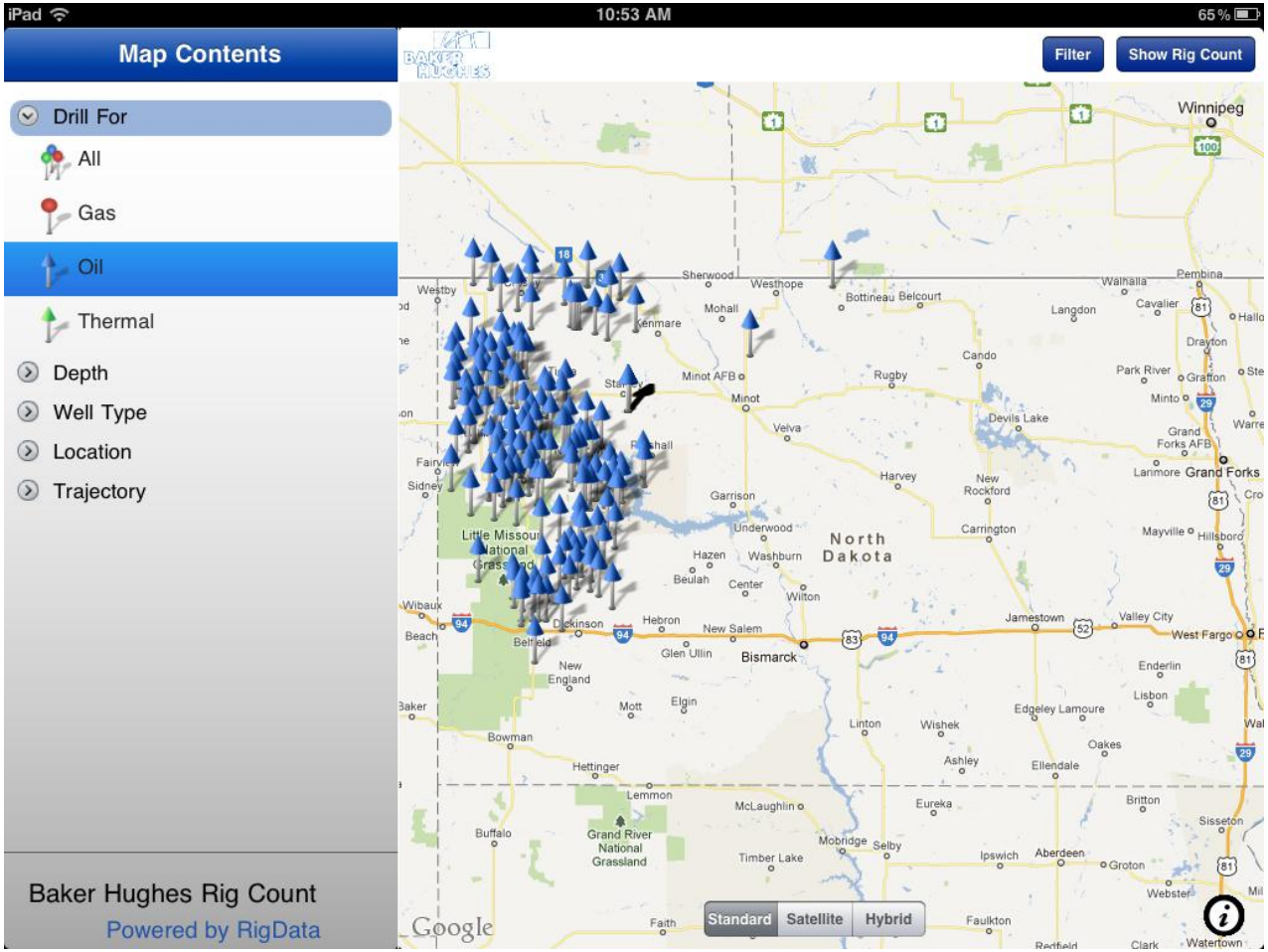
Resurging North American Oil Production and the Death of the Peak Oil Hypothesis

"The transfer of technology that caused the surge in natural gas production is transforming the outlook for oil production in the U.S. The unrelenting increase in oil rig count has been driven by two major forces: the sustained, high price of the commodity and the promise of improved oil production using the technology that has transformed the gas sector.

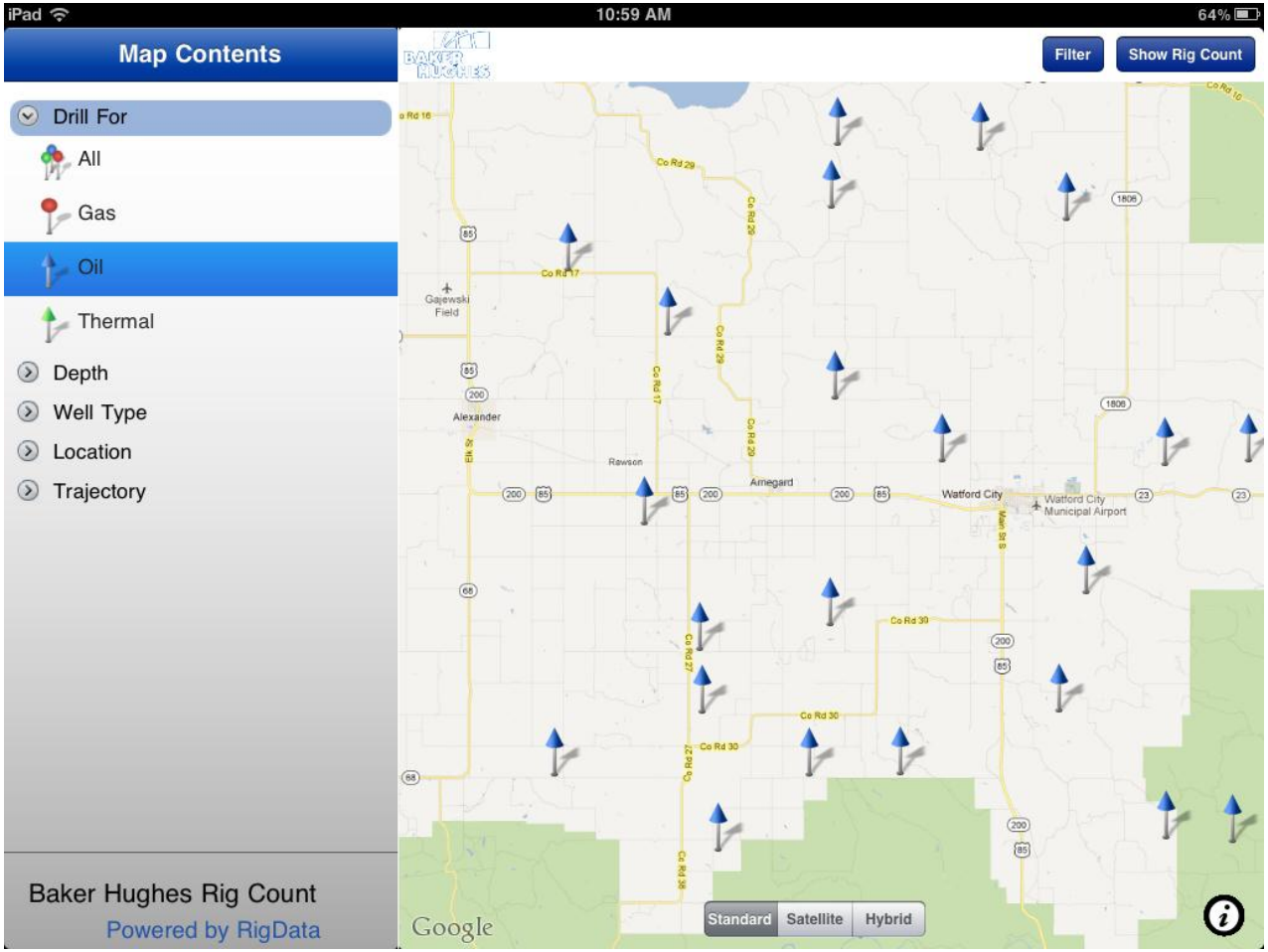
"Advances in the use of horizontal drilling and hydraulic fracturing have unlocked vast reserves of hydrocarbons originally trapped in highly dense shale rocks. The two shale oil plays that have benefited most from this transformation so far are the Bakken and Eagle Ford."

(Source: Citi Investment Research & Analysis, 15 February 2012
https://www.citigroupgeo.com/pdf/SEUNHGJJ.pdf?source=email_rt_mc&ifp=0)

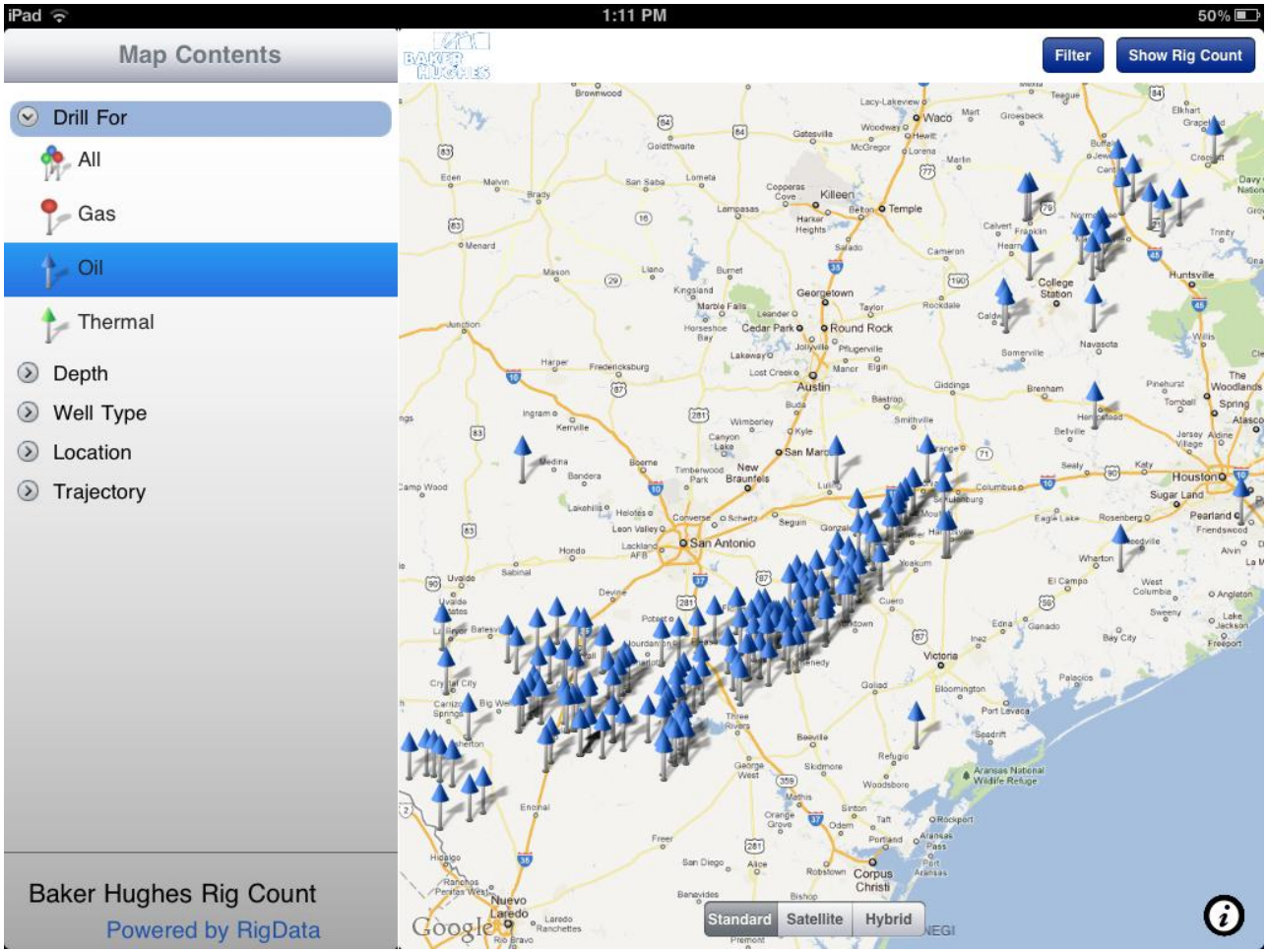
Baker Hughes Rig Count
Bakken, North Dakota



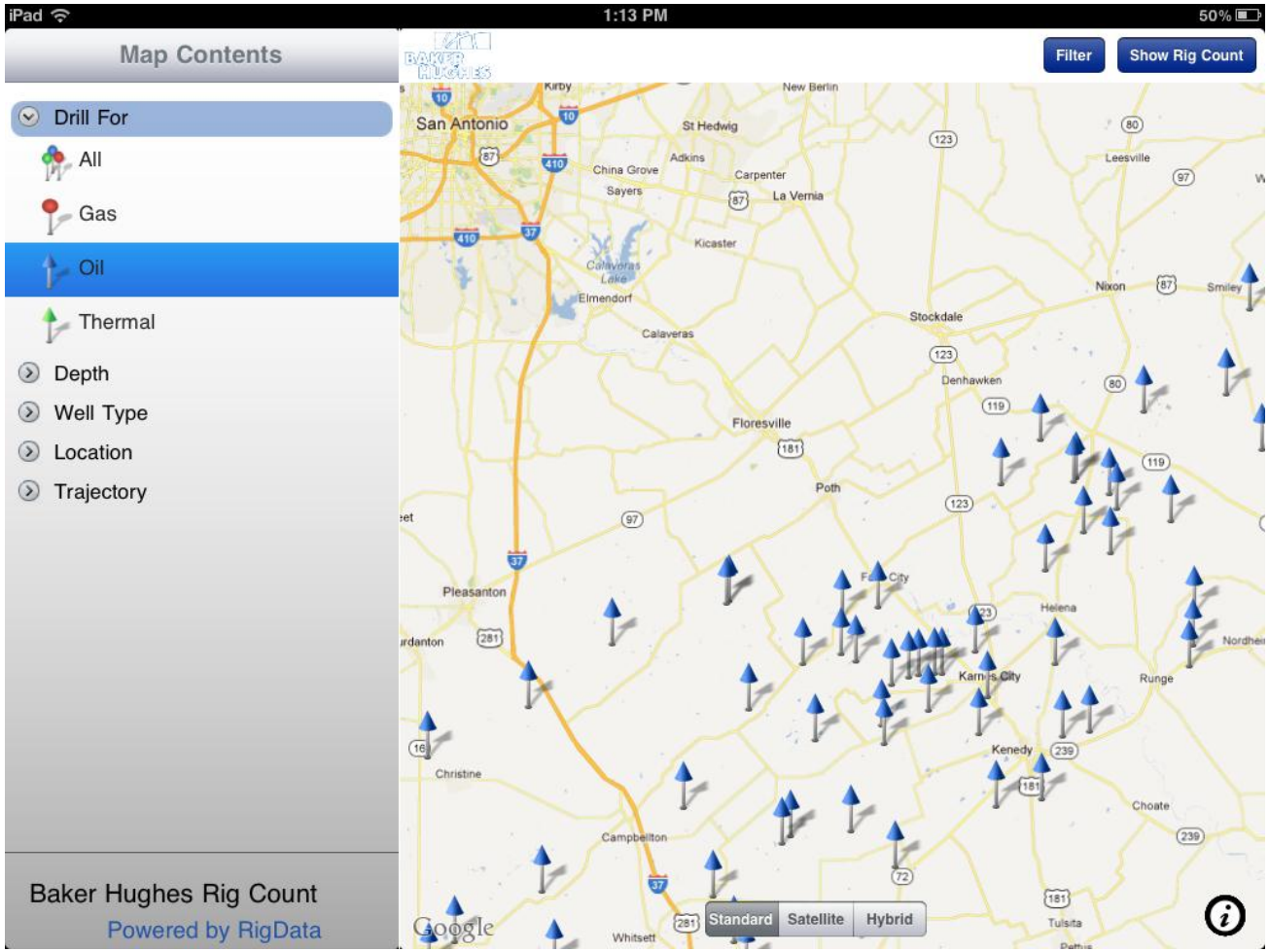
Baker Hughes Rig Count
Bakken, North Dakota



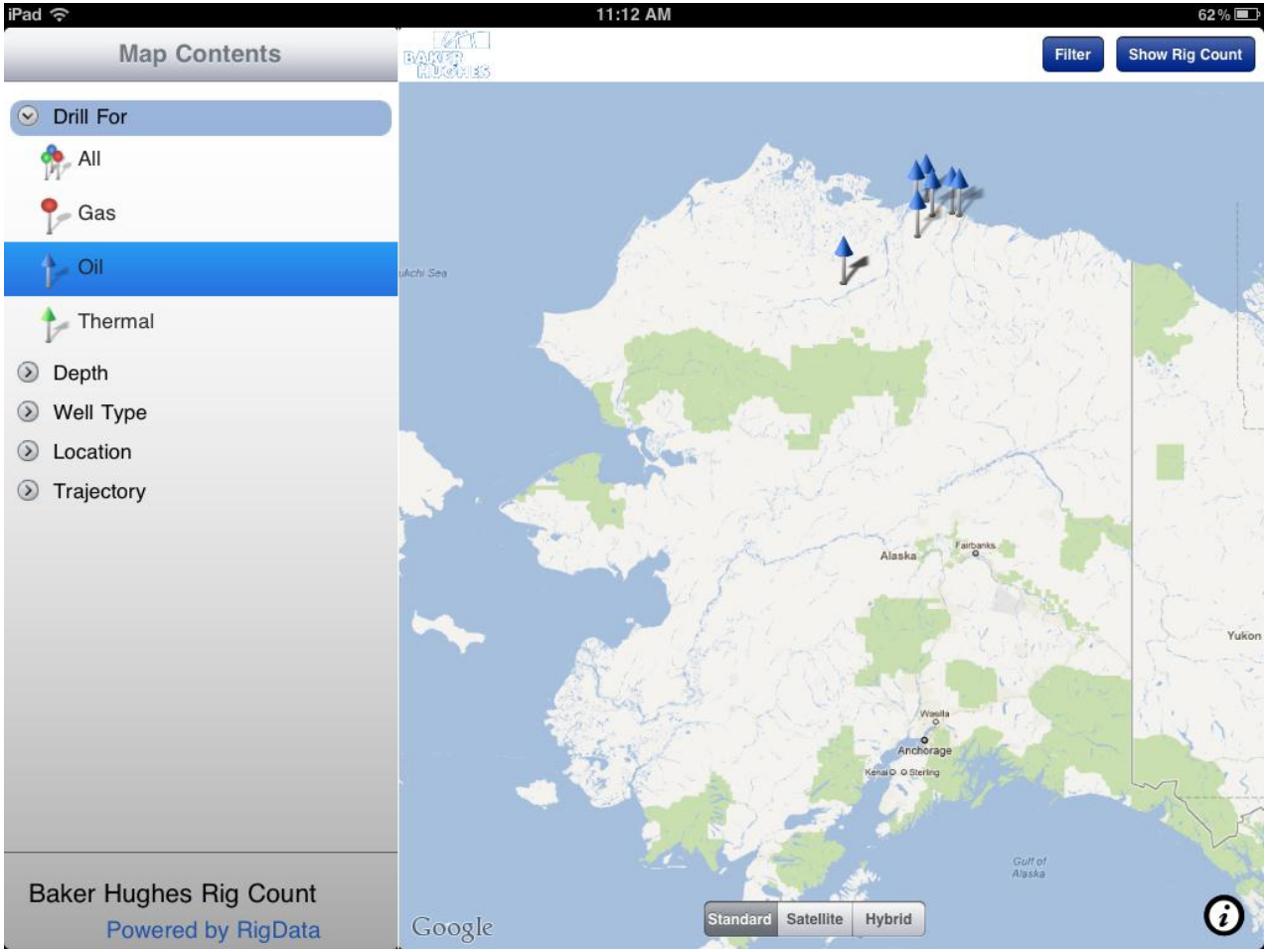
Baker Hughes Rig Count
Eagle Ford, Texas



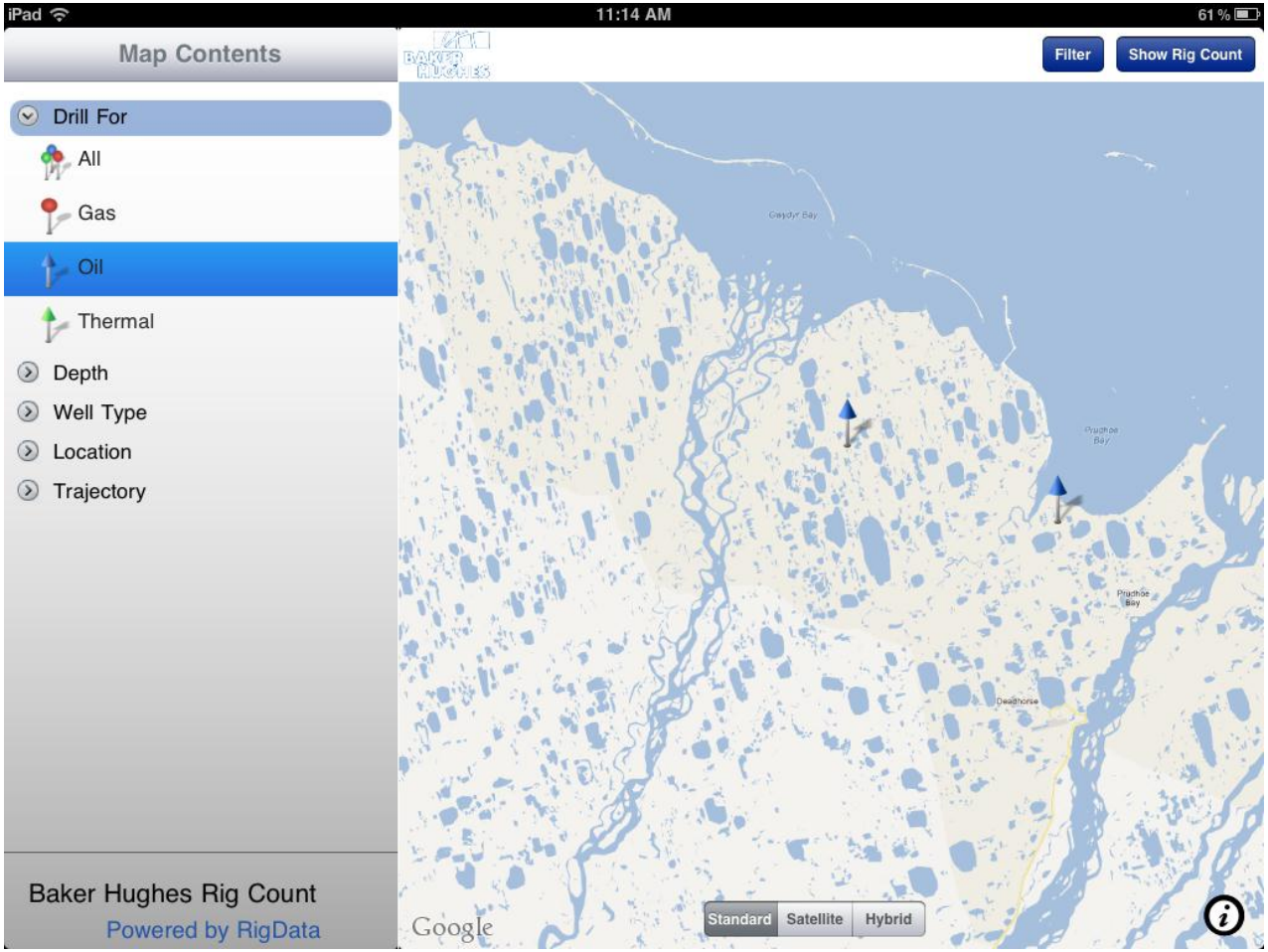
Baker Hughes Rig Count
Eagle Ford, Texas



Baker Hughes Rig Count
Alaska North Slope



Baker Hughes Rig Count
Alaska North Slope



Other Oil Producing Regions Enjoying Production and Employment Booms

Alaska Economic Trends: Alaska's Oil Industry
September, 2008

"Dramatic improvements in technology in the last decade have had a powerful effect on employment levels.

"Examples include the widespread use of horizontal drilling, ultra extended-reach drilling, 3-D and 4-D seismic surveys, drill bit sensors and other advancements that reduced the number of wells that need to be drilled (page 6)."

Other Oil Producing Regions Enjoying Production and Employment Booms

Alaska Economic Trends: Alaska's Oil Industry
September, 2008

"According to the Federal Reserve Bank of Dallas, the national oil and gas industry was the leader in productivity gains throughout the 1990s and continues to be an above-average performer. In other words, the oil industry has been able to perform more work using fewer workers (page 6)."

Other Oil Producing Regions Enjoying Production and Employment Booms

Alaska Economic Trends: Alaska's Oil Industry September, 2008

How does Alaska compare to other oil-producing states?

"As far as the oil industry's importance to the economies of different states, there's little doubt Alaska ranks first. However, a person wouldn't guess that by looking at the size of Alaska's oil industry work force

"Alaska produced 15 percent of the nation's domestic oil supply in 2007 but employed only 3 percent of the U.S. oil and gas work force … (page 10)."

Other Oil Producing Regions Enjoying Production and Employment Booms

How does Alaska compare to other oil-producing states? (cont)

"There are a host of reasons that explain Alaska's much-smaller oil industry work force, in light of its tremendous production.

"One big reason is simply that Alaska's oil fields enjoy large economies of scale. Prudhoe Bay is the largest oil field in the nation and doesn't need a huge work force to produce its oil …

"In Texas, Oklahoma, Wyoming and other oil-producing states, some oil is produced from very small fields. There are 400,000 marginal fields or stripper wells operating in the U.S. and a stripper well produces 10 barrels of oil or less per day. In many of the states, there are literally thousands of families and small companies engaged in producing oil – something nearly totally absent in Alaska."

Other Oil Producing Regions Enjoying Production and Employment Booms

Technology advances (see slide 62) lead to more drilling and more jobs in the new, unconventional (i.e., shale) oil plays in North Dakota and Texas.

At the same time, technology advances (see slides 69 and 70) lead to fewer wells and fewer jobs in the mature, conventional oil plays on Alaska's North Slope.

Competition is High – Many Other Areas To Invest Around the World

- ANS is a world class basin
- Vertical Integration of BP, ConocoPhillips, and ExxonMobile
- Transition from majors only to mid-majors and independents
- Growth of NOCs limits “areas to invest”
- Concept of immobile capital

CSSB 192(RES) Overview

- Intro: Alaska is an Owner State
- Summary of DOR Reports
- Lessons Learned
- Basic Petroleum Economics
- DOR's "Facts To Begin the Conversation"
- **CSSB 192(RES): Rationale and Overview**
- Optimism for Alaska's Future

CSSB 192(RES)
Rationale and Overview

- Preserves Industry-Friendly Components of ACES
- Reduces the Rate and Cap of Progressivity
- Rewards Increased Production
- Establishes a Gross Minimum Tax
- Separates oil and natural gas for purposes of calculating the progressivity portion of the production tax
- Creates an Oil Information System

CSSB 192(RES)

Preserves Industry-Friendly Components of ACES

- Preserves Deductions of Capital Expenditures, Operating Expenditures, and Transportation Costs (i.e., net profits tax)
- Preserves Tax Credits
- Preserves Royalty Rate
- Preserves Royalty Modification

CSSB 192(RES)

Reduces the Rate and Cap of Progressivity

- Retains the original trigger of $30 in Production Tax Value (PTV); at which point the progressive tax rate is calculated at .35% per dollar increase in PTV up to 50% ($101.43);

- At 50% ($101.43), the CSSB 192 adds a second trigger on the progressive tax rate calculation that lowers the progressive tax rate to .1% on PTV up to 60% ($201.43);

- Adds a statutory maximum tax rate of 60% under the production tax statutes.

CSSB 192(RES)

Rewards Increased Production

- Companies that increase their North Slope production levels from one year to the next will earn an allowance on the oil they produce above the prior year.
- The allowance reduces their Production Tax Value (or PTV) by $10 for the new barrels of oil produced. This allowance should not be confused with a tax credit or a lowering of tax rates.
- It is a reduction in the PTV used to calculate production tax.

CSSB 192(RES)

Establishes a Gross Minimum Tax

- This provision of the legislation will establish a production tax floor of 10% of the gross value of oil at the point of production for legacy fields in Alaska. The floor would apply only to fields which have already produced a billion barrels of oil and are still producing 100,000 barrels a day on average.
- This provision is intended to alleviate concerns that the current floor does not adequately protect the state when oil prices are low. In fact, at prices as low as $70, the state may take in more with a 10% gross floor than it would with ACES.
- As consultants have told us, ACES needs to be durable in a wide range of price environments. This provision helps achieve that goal and protects the state at the downside.

CSSB 192(RES)

Separates oil and natural gas for purposes of calculating the progressivity portion of the production tax

- This legislation separates oil and natural gas for purposes of calculating the progressivity portion of the production tax.
- Under current law, the tax rate is based on the combined BTU value of oil and gas. However, oil and gas can, and do, have vastly different values on a BTU basis. Currently, a BTU of oil is worth much more than a BTU of gas. Accordingly, once a major gas sale starts, overlaying the existing oil production, the BTU value of the combined oil and gas would be much lower than it was for oil alone.
- This legislation removes the dilution effect by having progressivity calculated distinctly for oil and gas. This will result in no reduction in oil taxes from a major gas sale.

CSSB 192(RES)

Creates an Oil Information System

- Concerns have been raised about oil and gas information that is not available to legislative policy-makers and the public. While much of the information is confidential under law, there is a considerable amount that is public, but it is scattered among several agencies and can, at times, be difficult to find.
- This provision in law will begin the process of making information more available to the policy-makers, public, and oil and gas companies who may be seeking to do business in Alaska's oil fields.
- Alaska Oil and Gas Commission (AOGCC) will be required to develop an electronic Petroleum Information Management System that will contain public information currently gathered by the commission, as well as the Departments of Revenue, Natural Resources and Labor & Workforce Development.
- The legislation directs the departments that have control over the various aspects of the information to provide what is not confidential to the commission in a form suitable for distribution.

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Optimism for Alaska's Future

- 7 – 8 billion barrels of oil (plus heavy, shale, OCS, NPR-A, ANWR)
- ANS is worth more now than it was in 1977
- Spending Forecast is Up: Above and Below Ground Infrastructure Rebuilt
- Cathy Foerster, AOGCC: ANS is Healthy
- DNR Ad: "Alaska: We're Open for Business"
- North Slope Booms

CSSB 192(RES) Review

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Questions?