Oil Resources: Economic Challenges and Opportunities

Senate Resources Committee
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Background

- Testifying on my own behalf
  - Not representing a client or being paid
  - Bearing my own expenses
- My background
  - Corporate executive (1984 – 1990)
  - Attorney
    - Thirty five years total (full time oil)
    - Been part of regional, national and global law firms
    - During my career, have advised major oil companies, mid-majors, small independents, industrial consumers

Overview

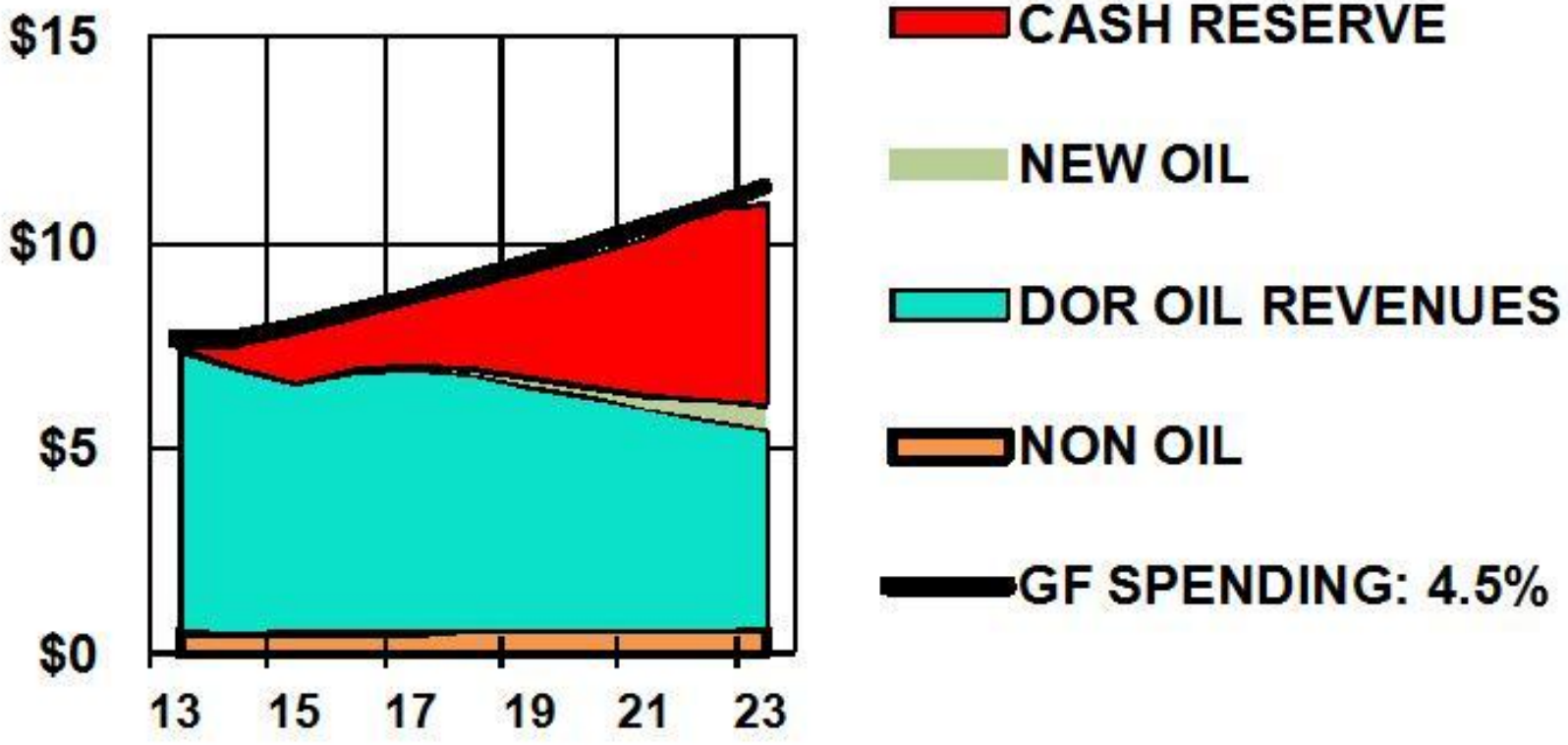
Purpose: Provide an overview of where Alaska is currently, what the opportunities are and how to move toward them

- Why do I care
- Understanding the global oil & gas industry
- What is happening in Alaska – and why
- Where do we go from here

Why Do I Care?

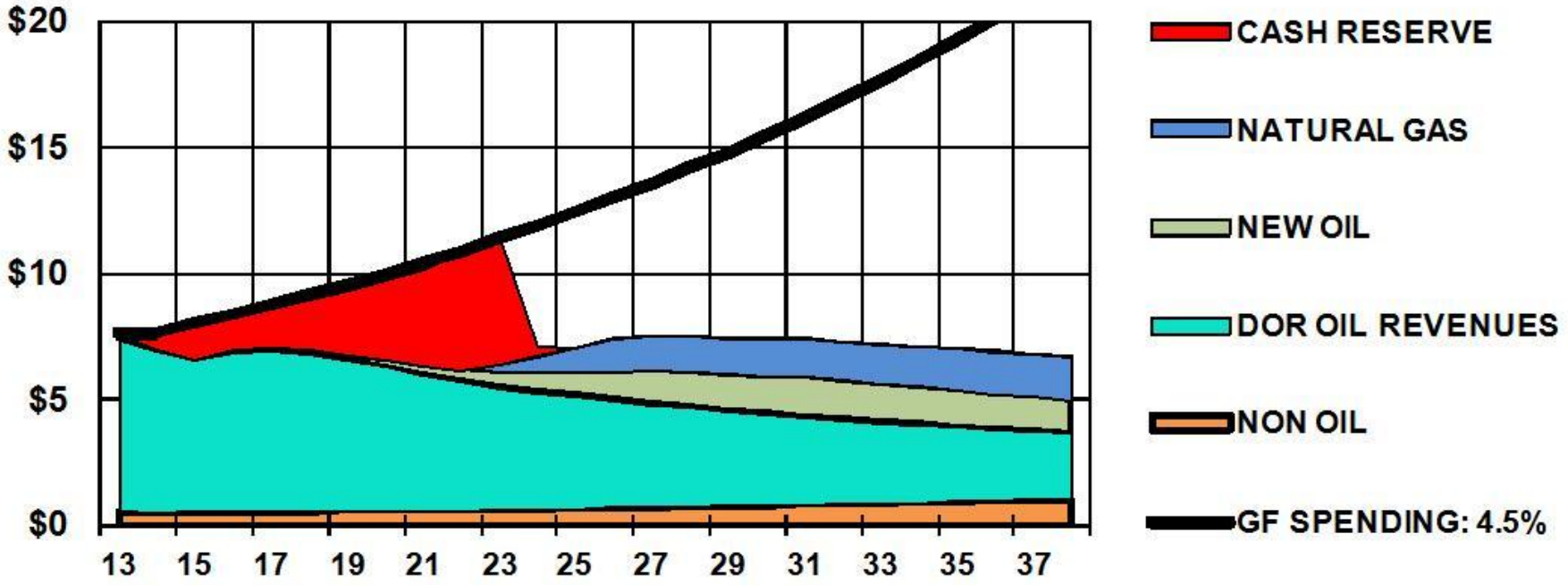
- Part of the Alaska economy: experiencing the decline in activity
  - Not as many oil & gas-related transactions and related issues
- Very concerned about where Alaska is headed on its current course
  - UAA's Institute of Social and Economic Research, *"Maximum Sustainable Yield: FY 2014 Update"* (January 2013)

ALASKA 10-YEAR FISCAL PLAN



"In its 10-year fiscal plan, the state Office of Management and Budget (OMB) projects that spending the cash reserves might fill this gap until 2023 …. ***But what happens after 2023***?"

LOOKING BEYOND THE 10-YEAR HORIZON



"Reasonable assumptions about potential new revenue sources suggest ***we do not have enough cash in reserves to avoid a severe fiscal crunch soon after 2023, and with that fiscal crisis will come an economic crash.*** "

Why Do I Care?

- Increased production alone doesn't solve the problem
- Will come back to that curve later, when talking about the issues affecting Alaska's competitiveness for investment

Understanding the Global Industry

- Useful to break the modern industry into four eras
- Pre-oil embargo (before 1973)
  - Significant access by major oil companies (the so-called "Seven Sisters") to global opportunities (other than Communist Bloc), but identified opportunities relatively limited
  - Some, but very limited activity by non-majors outside of the US

Understanding the Global Industry

- Oil embargo to end of the Soviet era (1973 – early 1990's)
  - Significantly reduced access for both majors and others to opportunities outside of the West
  - Increased emphasis on the development of opportunities in the West (e.g., North Sea, GOM, Alaska)

Understanding the Global Industry

- Post-Soviet era (early 1990's – early 2000's)
  - Steadily increased access for both majors and independents to opportunities beyond the West
  - As access has increased, so has the level of global competition among nations for oil investment
- The technology era (mid 2000's -)
  - Technology has always been a factor, but has steadily increased access to new opportunities for both majors and independents
  - Examples: deep water and shale

Understanding the Global Industry

- How do companies decide among projects?
- A number of factors are involved (Fraser Institute, *Global Petroleum Survey 2012*)
  - Commercial environment
  - Regulatory climate
  - Geopolitical risk

Understanding the Global Industry

- Each category has several subfactors
- Commercial environment
  - Fiscal terms
  - Taxation regime
  - Trade barriers
  - Quality of infrastructure
  - Labor availability
  - Corruption

Understanding the Global Industry

- Regulatory climate
  - The cost of regulatory compliance
  - Uncertainty regarding the administration, interpretation, and enforcement of regulations
  - Uncertainty concerning the basis for and/or anticipated changes in environmental regulations
  - Labor regulations, employment agreements, and local hiring requirements
  - Regulatory duplication and inconsistencies
  - Legal system fairness and transparency

Understanding the Global Industry

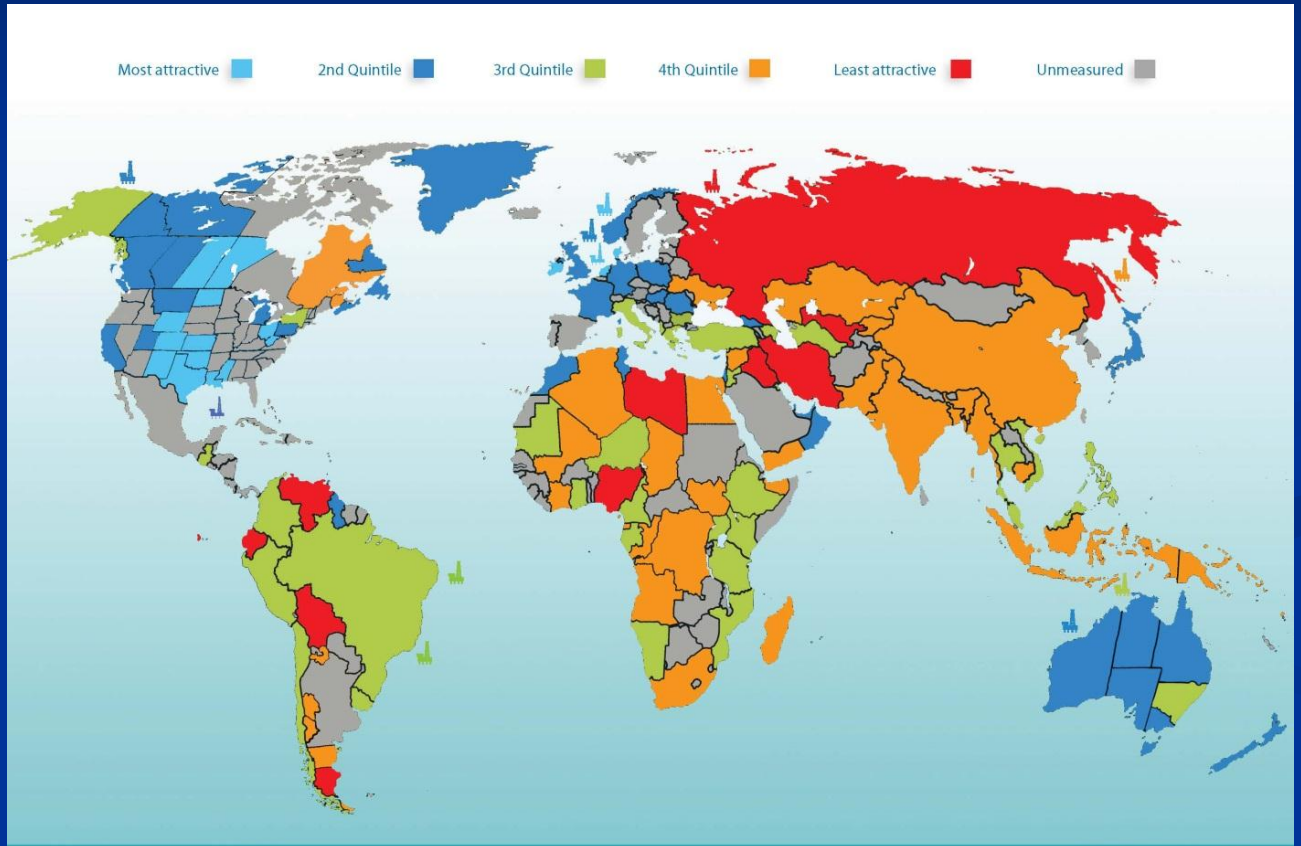


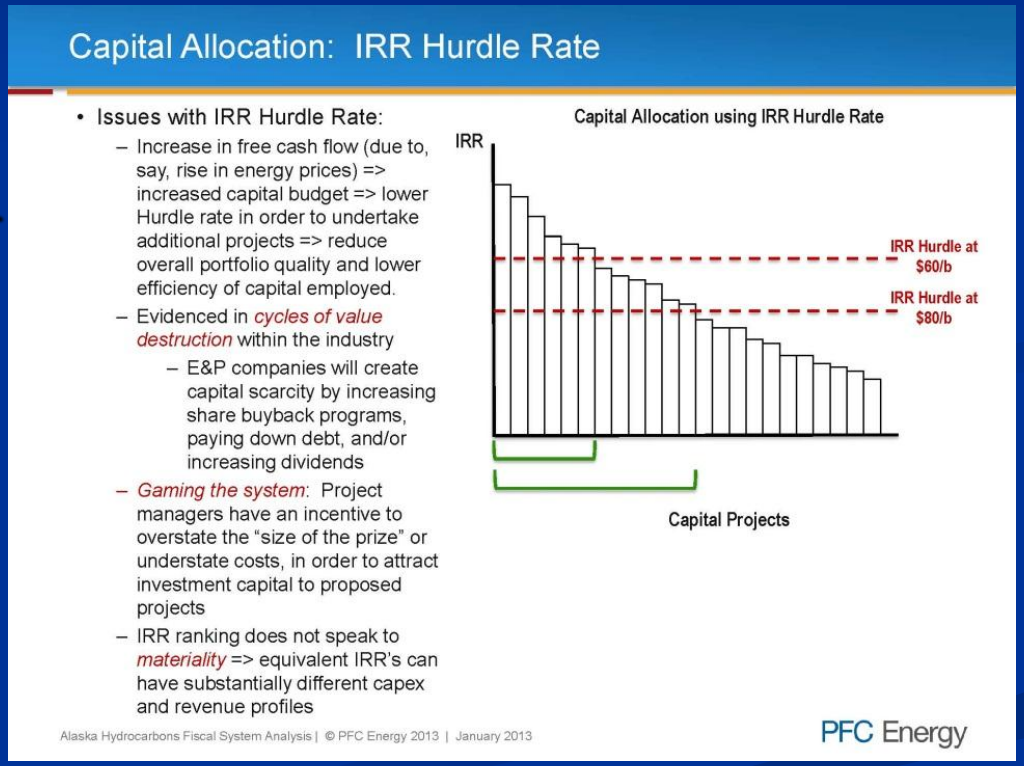
Figure 4: **2012 GLOBAL INVESTMENT CLIMATE** for petroleum upstream development

Understanding the Global Industry

- But there are other factors as well
  - Size of potential reserves ("materiality")
  - Size of required investment
  - Sense of strategic importance
  - Capital availability (debt, dividends, buybacks)
- No one factor is determinative, but ultimately economics are the key driver
  - Projects are reduced to some measure of economic performance and then compared

Understanding the Global Industry

- PFC 1-31-2013 Presentation before the Special Committee
- A fair representation of what is involved in evaluating projects – some effort is made to incorporate the various factors into the economics



What is happening in Alaska

- What is the historical context for Alaska
  - Large scale Alaska investment occurred largely during the era between the 1973 Oil Embargo and the fall of the Soviet Union
  - Limited competition for capital; focus on Western projects

What is happening in Alaska

- Indeed, Alaska is relatively lucky

> *Large Arctic oil and natural gas fields are particularly crucial with respect to future oil and natural gas development because the cost of developing oil and natural gas fields in the Arctic is so high that large fields are initially necessary to pay for the infrastructure required to later develop the smaller oil and natural gas deposits. For example…* ***[w]ithout the Prudhoe Bay Field, it is unlikely that the smaller Alaska North Slope oil fields would have been developed.***
>
> Energy Information Administration, *Arctic Oil and Natural Gas Potential* (Oct. 19, 2009)

What is happening in Alaska

- Alaska has not fared well in capital competition beyond Prudhoe Bay and Kuparuk during post-Soviet era
- Reasons
  - Even before taking into account fiscal terms, Alaska is a challenged environment
  - Remote; high cost; extreme environmental conditions

What is happening in Alaska

- Alaska's situation is consistent with global reality

  "[As of 2009 … and still] 15 large Arctic oil and natural gas fields are awaiting development. Most were discovered in the 1970s and 1980s. ***Thirteen of the undeveloped fields are located in North America, where oil and natural gas field development is governed by market-based economics, with fields only being developed if and when they are expected to generate sufficient profits.*** *Of the 17 large Arctic fields located in North America, only 3 have been so-developed, all located in Alaska, around the Prudhoe Bay Field complex."*

  Energy Information Administration, *Arctic Oil and Natural Gas Potential* (Oct. 19, 2009)

What is happening in Alaska

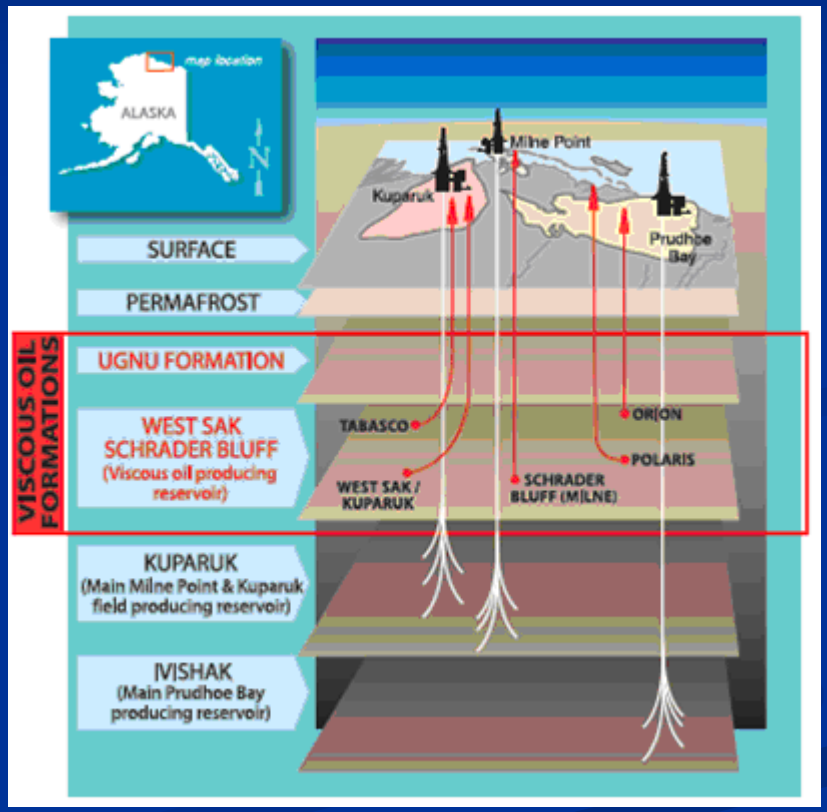
- Where Alaska has been successful is in attracting capital to Prudhoe and Kuparuk
  - Focus has been on increasing recovery rates
  - Prudhoe was originally predicted at 40% recovery
  - Through significant investment, current projections are 60%

- Frankly, Alaska also has been fortunate because of the companies involved

> ***The high cost of doing business in the Arctic suggests that only the world's largest oil companies, most likely as partners in joint venture projects, have the financial, technical, and managerial strength to accomplish the costly, long-lead-time projects dictated by Arctic conditions.***
>
> Energy Information Administration, Arctic Oil and Natural Gas Potential (Oct. 19, 2009)

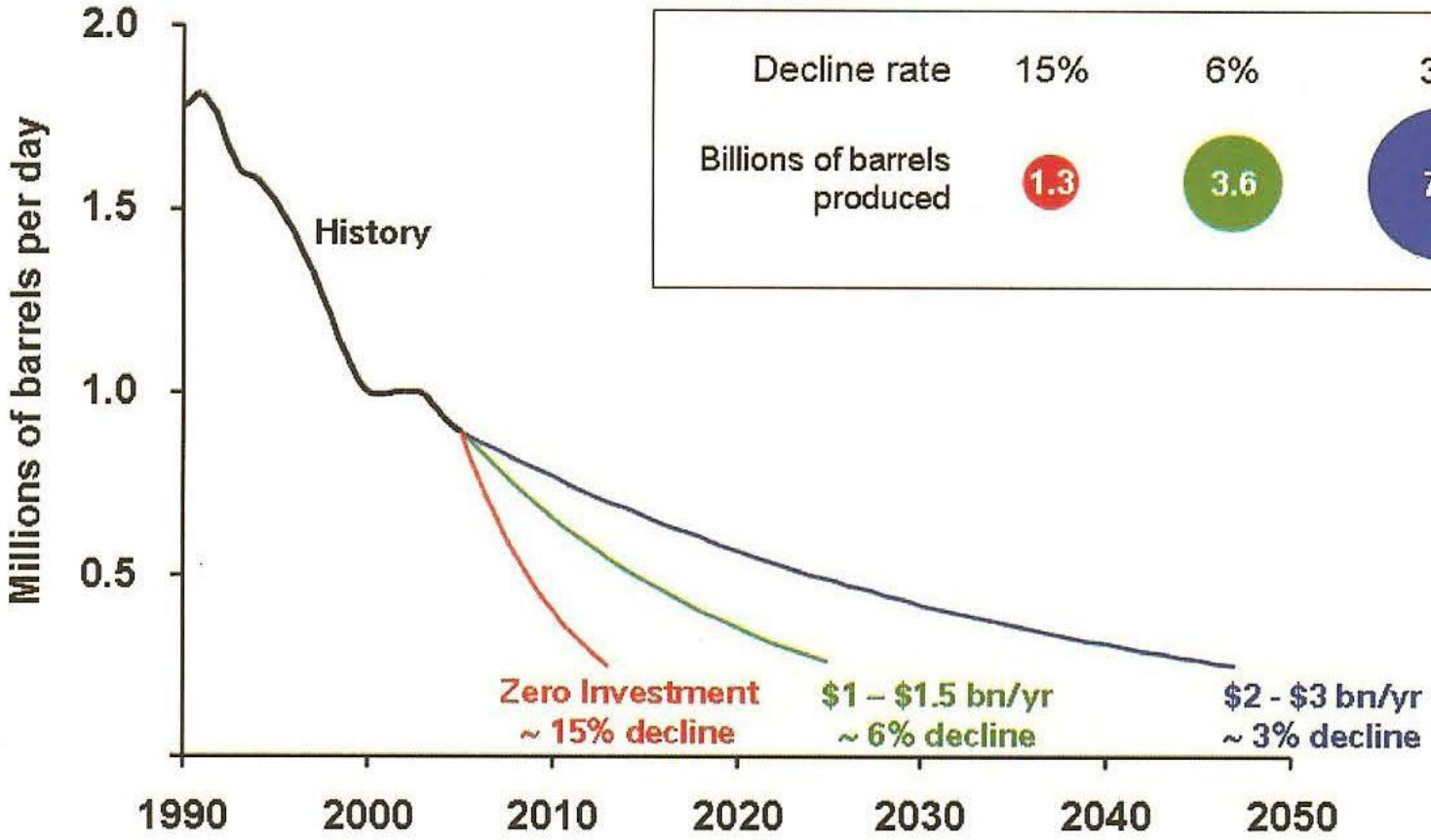
What is happening in Alaska

- There is significant remaining potential in Alaska, even in existing areas
- From *EconOne*: Viscous and Heavy Oil (Includes All Schrader/West Sak and Ugnu Reservoirs in the Kuparuk River, Prudhoe Bay, Milne Point and Nikaitchuq Units, Not Just PAs or Areas Under Development)
  - Total In-Place Resource: 24 - 27 Billion Bbls
  - Economically Recoverable: 3.6 - 5.6 Billion Bbls (at 15%)
- Satellites and recovery rates



What is happening in Alaska

- But it requires investment…



What is happening in Alaska

- Commissioner Dan Sullivan

*"The petroleum industry has to ratchet up Alaska investments in **new exploration and development** to at least $4 billion a year if the decline in oil production is to be reversed, state Commissioner of Natural Resources Dan Sullivan says.*

***'We need $4 billion minimum, and we're not even close to that now,'** Sullivan told the Resource Development Council in Anchorage Sept. 15. RDC is natural resource development advocacy group. The number could be higher, too.*

The industry is now spending about $2.5 billion a year in capital investment, according to the state Department of Revenue, but most of that is related to facility upgrades in existing fields and not in new drilling or developments that add new production."

Alaska-Journal-of-Commerce, September 22, 2011

What is happening in Alaska

- …and that is not happening

Capital Spending

	Millions of Dollars			
	2012 Budget	**2011**	2010	2009
Capital Expenditures and Investments				
E&P				
United States—Alaska	$ 900	**775**	730	810
United States—Lower 48	4,800	**3,880**	1,855	2,664
International	7,600	**7,350**	5,908	5,425
	13,300	**12,005**	8,493	8,899
Midstream	-	**17**	3	5
R&M				
United States	1,000	**768**	790	1,299
International	200	**226**	266	427
	1,200	**994**	1,056	1,726
LUKOIL Investment	-	-	-	-
Chemicals	-	-	-	-
Emerging Businesses	100	**30**	27	97
Corporate and Other	200	**220**	182	134
	$ 14,800	**13,266**	9,761	10,861
United States	$ 7,000	**5,679**	3,576	4,921
International	7,800	**7,587**	6,185	5,940
	$ 14,800	**13,266**	9,761	10,861

What is happening in Alaska

Capital Spending

Capital Expenditures and Investments

	Millions of Dollars			
	2009 Budget	**2008**	2007	2006
E&P				
United States—Alaska	$ 832	**1,414**	666	820
United States—Lower 48	2,668	**3,836**	3,122	2,008
International	5,959	**11,206**	6,147	6,685
	9,459	**16,456**	9,935	9,513
Midstream	7	**4**	5	4
R&M				
United States	1,409	**1,643**	1,146	1,597
International	577	**626**	240	1,419
	1,986	**2,269**	1,386	3,016
LUKOIL Investment	—	**—**	—	2,715
Chemicals	—	**—**	—	—
Emerging Businesses	100	**156**	257	83
Corporate and Other	150	**214**	208	265
	$ 11,702	**19,099**	11,791	15,596
United States	$ 5,076	**7,111**	5,225	4,735
International	6,626	**11,988**	6,566	10,861
	$ 11,702	**19,099**	11,791	15,596

Where do go from here …

- The best tool that Alaska has is fiscal policy
  - Can't change environment, remoteness, can only have a limited effect on cost
  - Can try to affect, but can't control federal actions
  - ***But*** can affect the economics
- Important elements of fiscal policy
  - Competitiveness
  - Durability
  - Neutrality
  - Simplicity/Predictability
  - Alignment

Where do we go from here …

- Competitiveness
  - Competitive with alternative investments
- Durability
  - ***No*** prospect of "bait and switch"
- Neutrality
  - Government not trying to pick "winners"
  - Can't outguess technology and investment dynamics
  - Law of unintended consequences (undermines durability)

Where do we go from here …

- Simplicity/predictability
  - Avoid "surprises" (e.g., regulations to follow, need for interpretation)
- Alignment
  - Alaska needs to remain aligned with its investors

Where do we go from here …

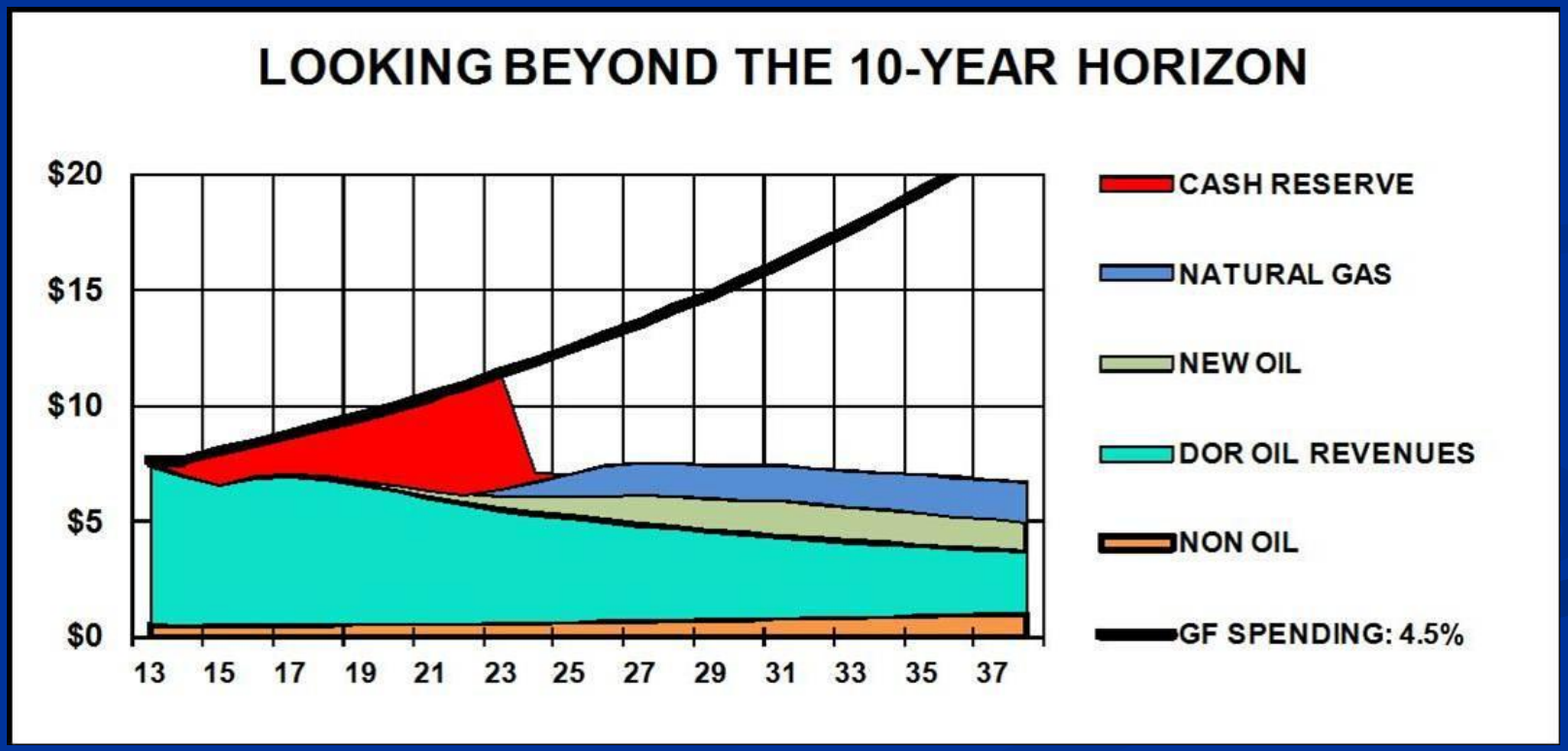
- Alignment
  - In all fairness, Alaska does not have a good mechanism for remaining aligned with investors
  - Not that important during the height of Prudhoe and Kuparuk, and relatively low tax rates – investment took care of itself
  - But alignment is increasingly critical to maintain and attract new investment – especially at the levels suggested by Commissioner Sullivan

Where do we go from here …

- Alignment (con't)
  - Best approach in the world in my experience is Norway
  - ***Not*** Statoil (an operating oil company), but Petoro
- Petoro
  - Co-invests alongside industry: sees the same opportunities and challenges as industry – able to help inform the state
  - Helps identify and maintain focus on local opportunities that make economic sense
  - Helps maintain other criteria: competitiveness, durability , neutrality and simplicity
  - ***And***, brings additional capital to the development of resources
- Suggest this Committee include as part of its review

Where do we go from here …

- Durability
  - Involves more than just tax or royalty policy; necessarily involves overall fiscal policy



Where do we go from here …

- Dealing with spending and the fiscal gap is key to attracting long-term investment
  - Resolving tax rates might attract short term investment
  - Investors can see the same thing as ISER, however; unless the spending and the fiscal gap is resolved, long-term investment (i.e., big projects) will continue to look elsewhere
  - Alaska's history is that each time the state has needed more revenue, the state has changed the tax structure
- Looking at even best case investment and production levels (see graph at p. 23), investors will not believe that increased production alone will close the gap
- As a result, from the standpoint of significant long-term investment, ***dealing with this issue is as important as dealing with current tax rates***

Conclusion

- There are significant opportunities, especially in existing fields
- The opportunities are significantly challenged, however, by global competition for capital

> *The bottom line for Arctic oil and natural gas potential is that high costs, high risks, and lengthy lead-times can all serve to deter their development in preference to the development of less challenging oil and natural gas resources elsewhere in the world. … while the Arctic has the potential to be a more important source of global oil and natural gas production sometime in the future; the timing of a significant expansion in Arctic production is difficult to predict.*
>
> Energy Information Administration, *Arctic Oil and Natural Gas Potential* (Oct. 19, 2009)

Conclusion

- The key lever available to Alaska for attracting investment is its fiscal policy
- While dealing with tax rates is important, it alone isn't sufficient to attract significant, long term investment
  - State needs to align with investors
  - Address the coming fiscal gap now