Arresting TAPS Throughput Decline & Oil Tax Reform

TAPS Throughput Committee

Tuesday, January 22, 2013

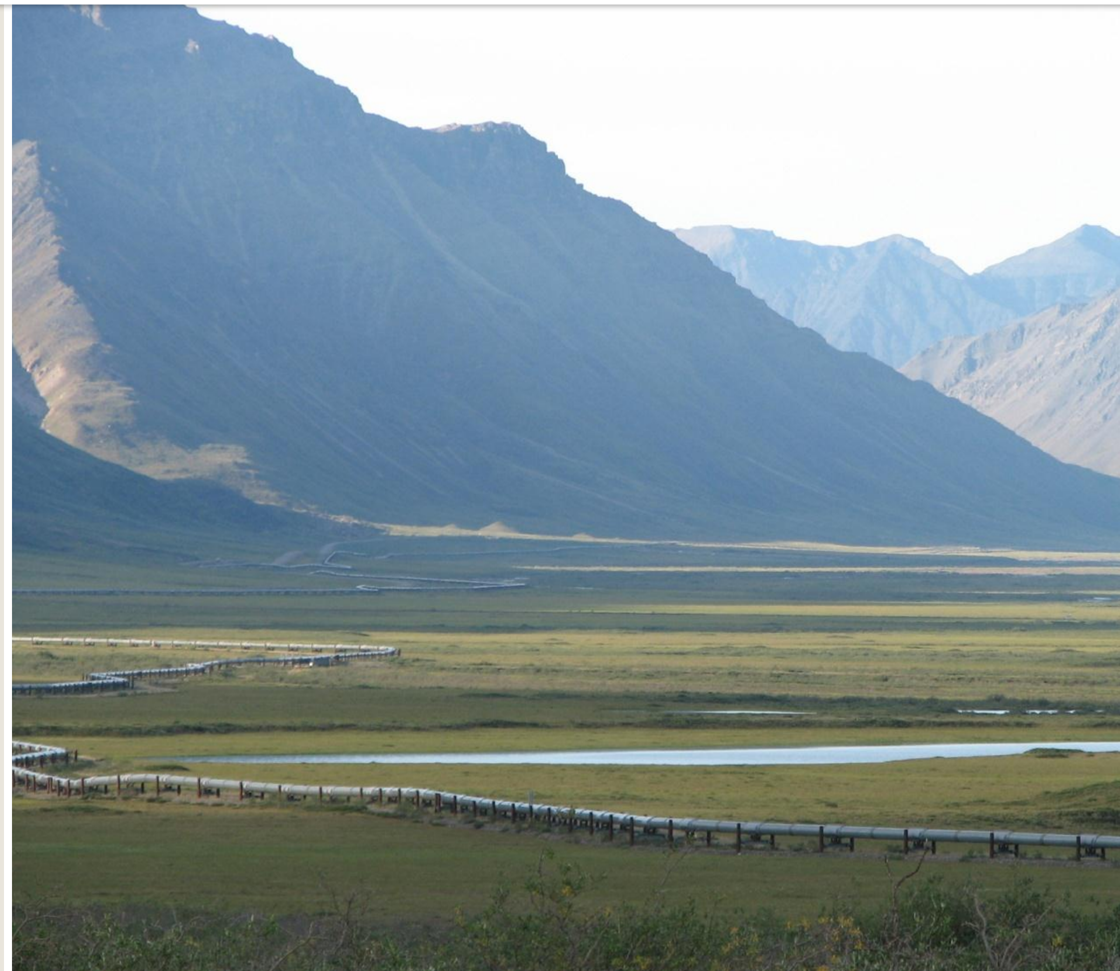
Juneau, Alaska

Dan Sullivan, Commissioner

Alaska Department of Natural Resources

Bryan Butcher, Commissioner

Alaska Department of Revenue



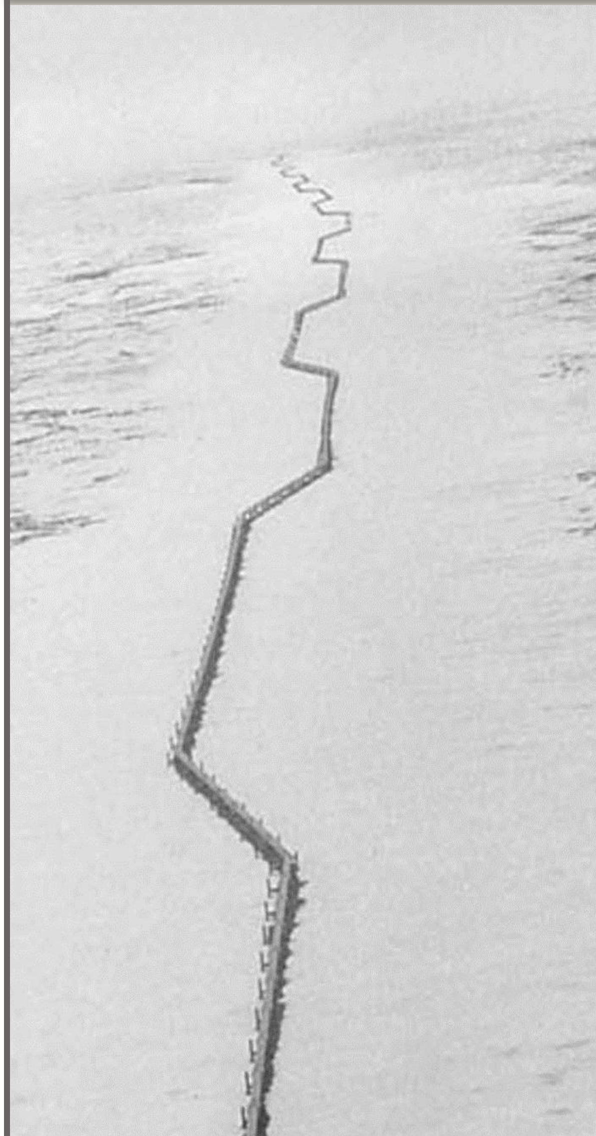
TAPS

- A Critical State & National Energy Asset -

- The Trans Alaska Pipeline, 11 pump stations, several hundred miles of feeder pipelines, and the Valdez Marine Terminal constitute the Trans-Alaska Pipeline System (TAPS).
- At 800 miles long, the Trans Alaska Pipeline is one of the longest pipelines in the world; it crosses more than 500 rivers and streams and three mountain ranges as it carries Alaska's oil from Prudhoe Bay to Valdez.
- The U.S. Congress was instrumental in the approval and rapid development of TAPS. Congress approved construction of the pipeline with the Trans Alaska Pipeline Authorization Act of 1973.
- The principle focus of this Act is as relevant today as it was in 1973: *"the early development and delivery of oil and gas from Alaska's North Slope to domestic markets is in the national interest because of growing domestic shortages and increasing dependence upon insecure foreign sources."*

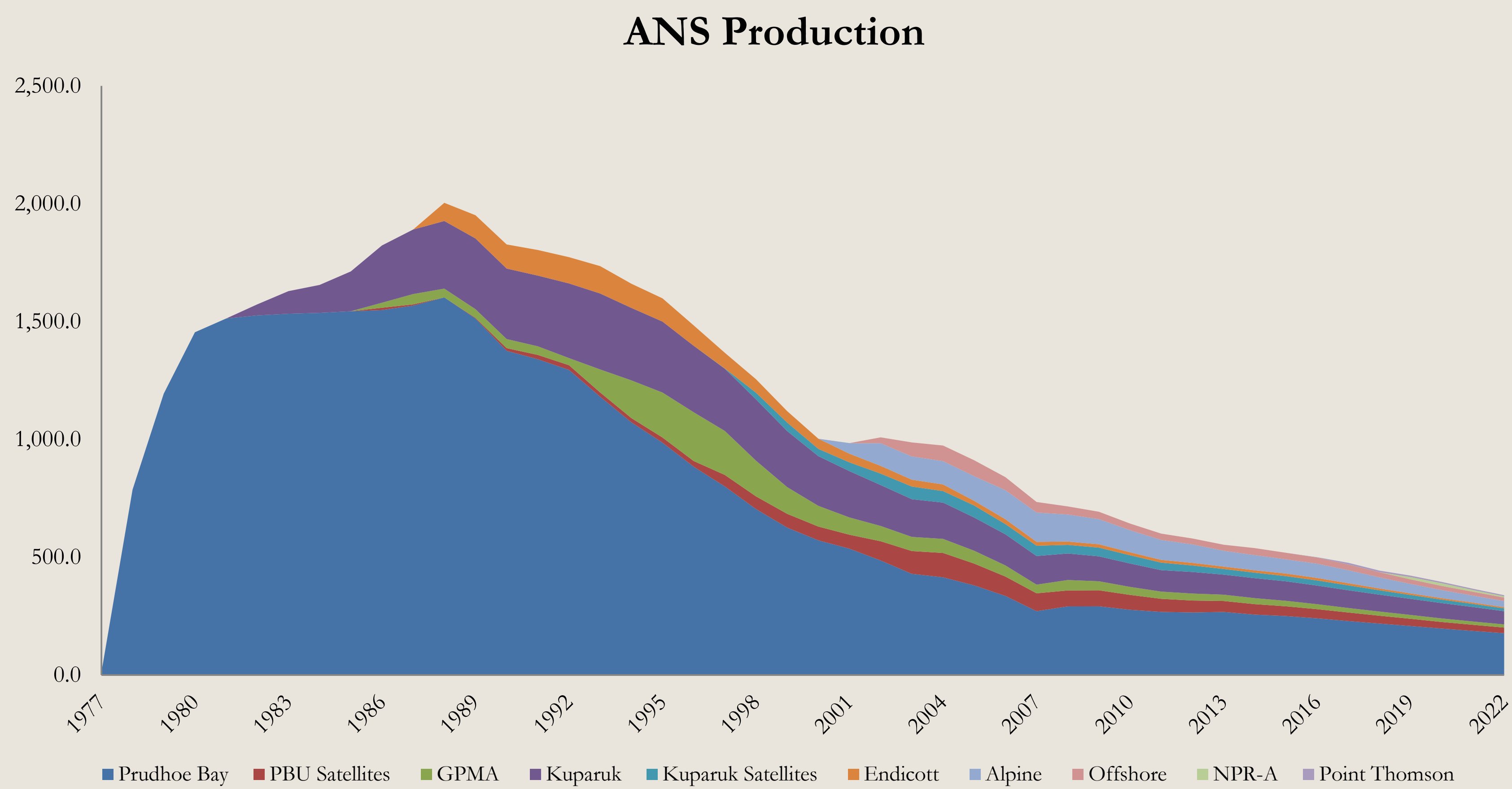
TAPS

- A Critical State & National Energy Asset -



- TAPS has transported over 16.3 billion barrels of oil and natural gas liquids since June of 1977. Production peaked at 2.2 million barrels per day in the late 1980s, representing 25% of U.S. domestic production
- Since its peak, however, throughput has steadily declined; today, TAPS is 2/3 empty and declining at an average of 6% per year
- TAPS throughput decline threatens economic disruption and the very existence of our pipeline
- We must encourage industry to invest in exploration and development of conventional and unconventional resources on state and federal land, onshore and offshore
- TAPS has plenty of capacity for increased throughput
- Most near-term critical economic issue facing the state
- Less oil in the pipeline year after year takes away revenue from future generations—the ultimate giveaway
- Reconfiguration, 1.2 million barrels/day

Oil Tax Reform
- Production History -



Source: Alaska Department of Revenue Fall 2012 Revenue Sources Book: http://www.tax.alaska.gov/programs/documentviewer/viewer.aspx?2682f

TAPS

- Throughput Decline is an Urgent Problem -

- TAPS throughput decline is the MOST URGENT issue facing the State's economic future
- January 2011 TAPS shutdown

Petroleum News, February 27, 2011:
"Jan. shutdown puts TAPS close to brink:

Alyeska executives describe efforts to prevent freezing in pipeline after pump station oil leak in era of low oil throughput"

WSJ, May 11, 2011:

"Shrinking Oil Supplies Put Alaskan Pipeline at Risk"

"Now, dwindling oil production along Alaska's northern edge means the pipeline carries less than one-third the volume it once did—and the crude takes five times as long to get to its destination.

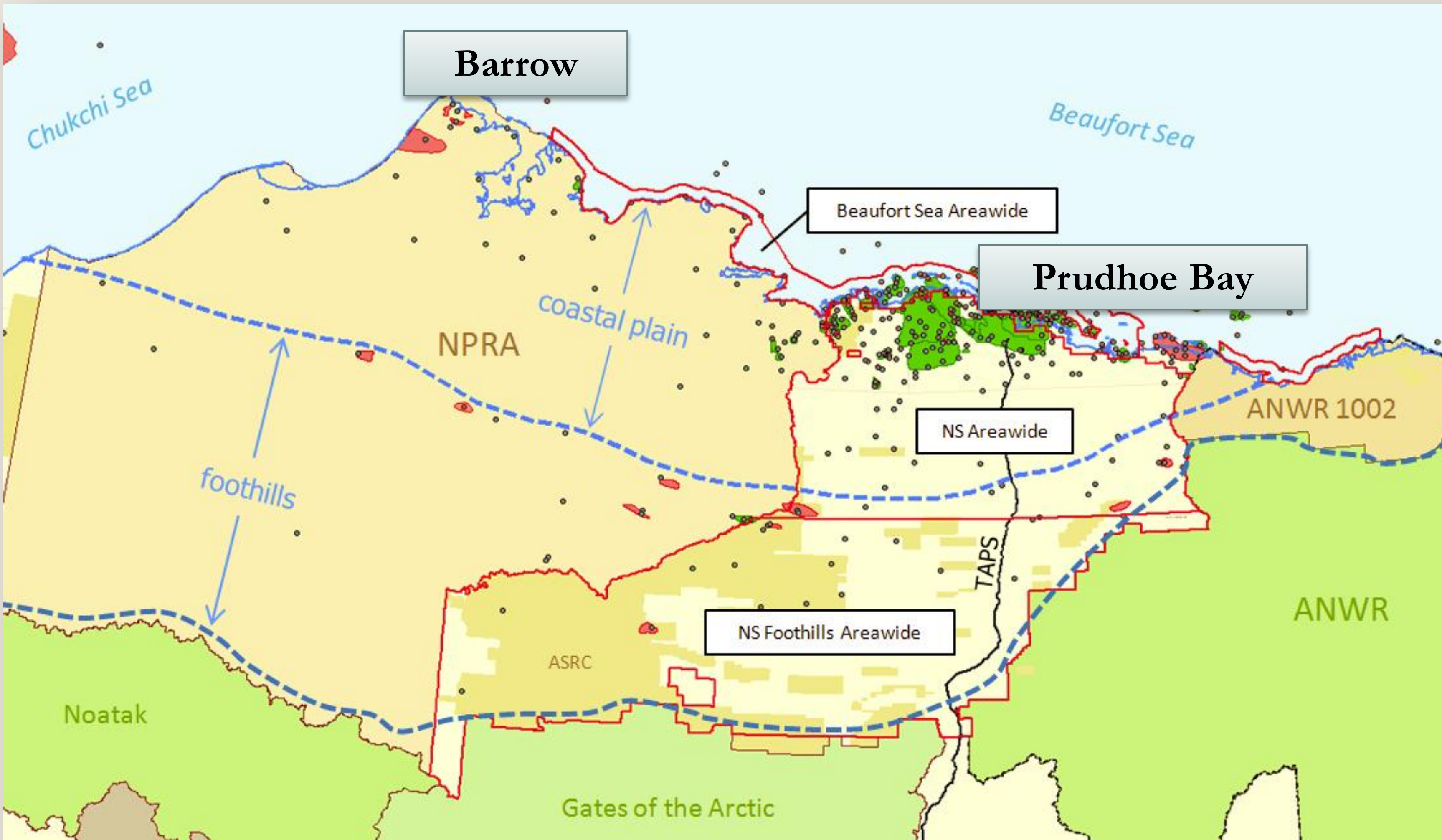
That leisurely flow means the oil is above ground longer and more exposed to Alaska's frigid weather; the crude sometimes arrives chilled to 40 degrees. As the flow and temperature continue to drop, experts say the risks of a clog or corrosion increase, as do the odds of ruptures and spills."

Alaska's North Slope Oil & Gas Potential

- USGS estimates that Alaska's North Slope has more oil than any other Arctic nation
  - **OIL:** Est. 40 billion barrels of conventional oil *(USGS & BOEMRE)*
  - **GAS:** Est. over 200 trillion cubic feet of conventional natural gas *(USGS)*
- Alaska has world-class unconventional resources, including tens of billions of barrels of heavy oil, shale oil, and viscous oil, and hundreds of trillions of cubic feet of shale gas, tight gas, and gas hydrates
  - Positive methane hydrate test production

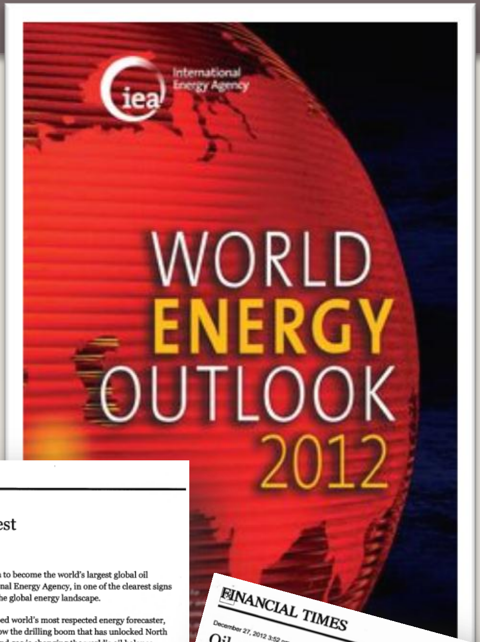
Compared to most hydrocarbon basins, Alaska is relatively underexplored, with 500 exploration wells on the North Slope, compared to Wyoming's 19,000.

Alaska's North Slope Oil & Gas Potential



U.S. Energy Renaissance

- Global and U.S. hydrocarbon boom
- IEA World Energy Outlook 2012 – U.S. to overtake Saudi Arabia and Russia to become the world's largest global oil producer by the second half of this decade.
- **Financial Times, November 12, 2012 –**
  "U.S. set to become biggest oil producer"
- **Financial Times, December 27, 2012 –**
  "Oil and gas – hey big spenders"
  - 2012 - $600 billion on exploration and production in oil and gas industry
  - 2013 projected - $650 billion on exploration and production in oil and gas industry



FINANCIAL TIMES

November 12, 2012 10:02 am

US set to become biggest oil producer

By Guy Chazan and Ed Crooks

The US will overtake Saudi Arabia and Russia to become the world's largest global oil producer by 2017, according to the International Energy Agency, in one of the clearest signs yet of how the shale revolution is redrawing the global energy landscape.

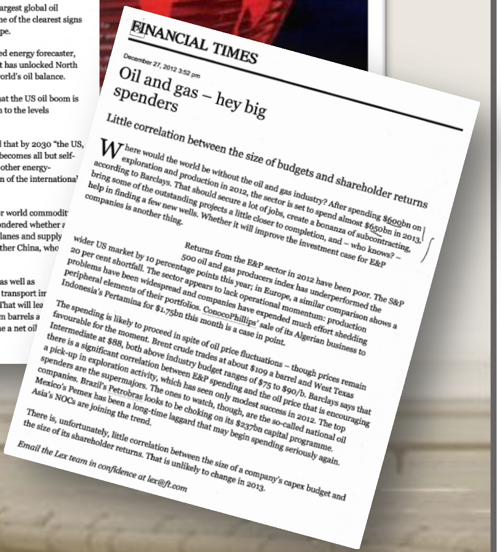
This marks the first time the IEA, the developed world's most respected energy forecaster, has made such a prediction. It underscores how the drilling boom that has unlocked North America's vast reserves of hard-to-get-at oil and gas is changing the world's oil balance.

However, other analysts have warned that the US oil boom is still in its infancy, and continued growth to the levels predicted by the IEA cannot be guaranteed.

In its yearly world energy outlook, published on Monday, the IEA said that by 2030 "the US, which currently imports around 20 per cent of its total energy needs, becomes all but self-sufficient in net terms – a dramatic reversal of the trend seen in most other energy-importing countries". It said that partly as a result of this, the direction of the international oil trade would pivot towards Asia.

If realised, the IEA's prediction would have significant implications for world commodit markets and the broader geopolitics of energy. Some analysts have wondered whether a that was energy independent would still guard the world's critical sea lanes and supply routes in two decades' time – and if it withdrew from such a role, whether China, who reliance on Middle East crude imports was growing, would replace it.

The increase in US domestic production – of biofuels such as ethanol as well as unconventional "tight" oil – comes as new fuel-efficiency measures in transport im the first Obama administration are set to reduce oil demand sharply. That will lea fall in oil imports into the US, which the IEA says will plunge from 10m barrels a b/d in ten years' time. The agency says that North America will become a net oil about 2035.



FINANCIAL TIMES

December 27, 2012 3:52 pm

Oil and gas – hey big spenders

Little correlation between the size of budgets and shareholder returns

Where would the world be without the oil and gas industry? After spending $600bn on exploration and production in 2012, the sector is set to spend almost $650bn in 2013, according to Barclays. That should secure a lot of jobs, create a bonanza of subcontracting, bring some of the outstanding projects a little closer to completion, and – who knows? – help in finding a few new wells. Whether it will improve the investment case for E&P companies is another thing.

Returns from the E&P sector in 2012 have been poor. The S&P 500 oil and gas producers index has underperformed the wider US market by 10 percentage points this year; in Europe, a similar comparison shows a 20 per cent shortfall. The sector appears to lack operational momentum: production problems have been widespread and companies have expended much effort shedding peripheral elements of their portfolios. ConocoPhillips' sale of its Algerian business to Indonesia's Pertamina for $1.75bn this month is a case in point.

The spending is likely to proceed in spite of oil price fluctuations – though prices remain favourable for the moment. Brent crude trades at about $109 a barrel and West Texas Intermediate at $88, both above industry budget ranges of $75 to $90/b. Barclays says that there is a significant correlation between E&P spending and the oil price that is encouraging a pick-up in exploration activity, which has seen only modest success in 2012. The top spenders are the supermajors. The ones to watch, though, are the so-called national oil companies. Brazil's Petrobras looks to be choking on its $237bn capital programme. Mexico's Pemex has been a long-time laggard that may begin spending seriously again. Asia's NOCs are joining the trend.

There is, unfortunately, little correlation between the size of a company's capex budget and the size of its shareholder returns. That is unlikely to change in 2013.

Email the Lex team in confidence at lex@ft.com

Other Basins have Turned Decline Around

THE INDEPENDENT

North Sea set to create 50,000 new jobs as investment soars

Tom Bawden

Monday, 14 January 2013

North Sea employment is set to boom this year. Up to 50,000 new jobs are expected in
Britain's oil and gas ind

The jobs bonanza will
support-services staff
North Sea to nearly ha

"There's been a lot of
at the moment," said
behind the research. "
their life. At the same
have made it economi
he added.

Further down the line,
35,000 jobs in the nex
Institute of Directors.

The expansion has bee
set to be ploughed int
be the biggest creator
the North Sea for a de
Shetland Isles, that wil

The surge in investme
Sea development, pro
Energy and Climate Ch

Although North Sea p
output was 4.5m barr
2m barrels. On the do
to compete for emplo
more than twice the na

"The expansion has been spurred by record-breaking levels of investment, with about £40bn set to be ploughed into North Sea production in the next three years…"

"The surge in investment comes after the government relaxed the tax regime around North Sea development, prompting a record-breaking licensing round when the Department of Energy and Climate Change awarded 167 new licenses on 330 blocks last October."

"Budget 2012: North Sea oil tax reforms 'to lead to £50bn investment':
An extra £50bn could be pumped into the North Sea oil and gas industry thanks to a new package of tax reforms."

Budget 2012: North Sea oil tax reforms 'to lead to £50bn investment'

An extra £50bn could be pumped into the North Sea oil and gas industry thanks to a new package of tax reforms.

The Budget was a "turning point" for industry relations with the Treasury. Photo: Rex Features

By Emily Gosden

10:11PM GMT 21 Mar 2012

Industry body Oil & Gas UK said the Chancellor's promise of certainty on decommissioning tax relief and new tax breaks on small and deepwater fields would stimulate tens of billions of pounds of additional investment.

The Budget was a "turning point" for industry relations with the Treasury after outrage at the surprise tax rise in last year's Budget, Oil & Gas UK said. The measure means more than 2bn barrels of the UK's oil and gas reserves that would otherwise have been left in the ground will now eventually be recovered at no net cost to the Exchequer.

The Treasury estimates that the reforms could actually boost its coffers by £1bn over the next five years, due to tax on projects that would not otherwise have gone ahead.

The Chancellor confirmed that he would draw up a contract with the industry to permanently guarantee levels of tax relief on the £30bn bill for decommissioning old infrastructure, a move that Oil & Gas UK said could stimulate up to £40bn investment during the lifetime of the North Sea basin. Anxiety over whether rates might be cut has blocked some deals.

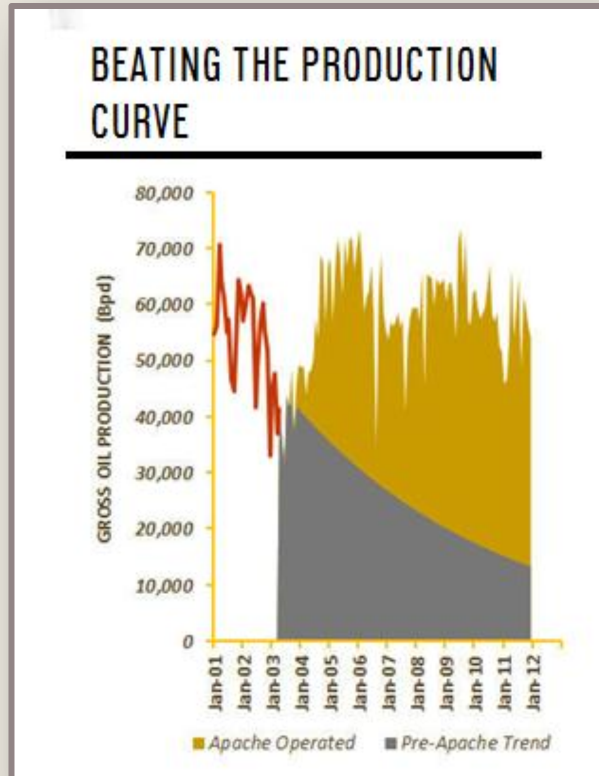
The Chancellor unveiled new 'field allowances', doubling tax breaks for developing smaller fields and introducing a £3bn allowance for some deepwater fields with significant reserves in the new exploration frontier West of Shetland. The allowances should see £10bn extra investment, the industry body said.

Malcolm Webb, Oil & Gas UK's chief executive, said the Budget was a "turning point for the UK's oil and gas industry" toward "a more stable future fostered by constructive collaboration between government and industry".

Other Basins have Turned Decline Around

Apache Corporation: Forties Field Acquisition

- Field discovered in early 1970s by BP; purchased by Apache in 2003
- Contains estimated 4.2 to 5.0 billion barrels of oil in place
- Production peaked at over 500,000 Bpd, but by 2003, had declined to 40,000-45,000 Bpd
- Apache has "beaten the curve" by adding reserves, production, and value
- Have returned over 400% of their original 2003 investment



Data from www.apachecorp.com

SECURE ALASKA'S FUTURE—*OIL*

- ***Secure Alaska's Future—Oil*** is the State's comprehensive strategy to increase TAPS throughput to one million barrels a day

   I. Enhance Alaska's global competitiveness and investment climate

   II. Ensure the permitting process is structured and efficient

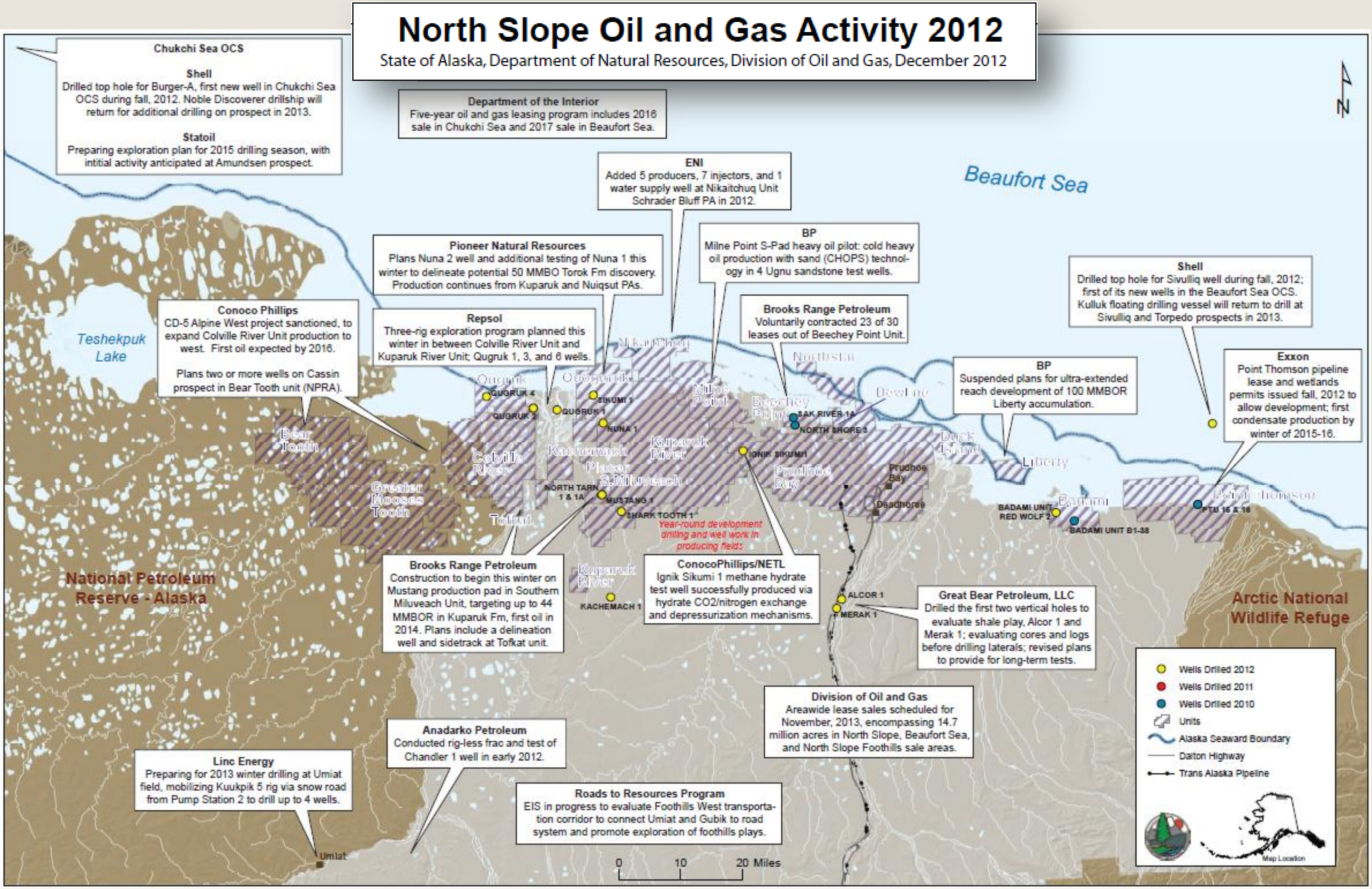
   III. Facilitate and incentivize the next phases of North Slope development

   IV. Promote Alaska's resources and positive investment climate to world markets

- **Governor Parnell's 2013 State of the State: *"Our problem is not below the ground. Our problem is above the ground."***
   - The missing piece is meaningful tax reform
   - "Our state's prosperity has always rested on natural resources. Tonight, that foundation is at risk, not because we are running out of oil, but because we are running behind the competition."

SECURE ALASKA'S FUTURE: *OIL*

- NORTH SLOPE RECENT & PROPOSED ACTIVITY FOR OIL & GAS -

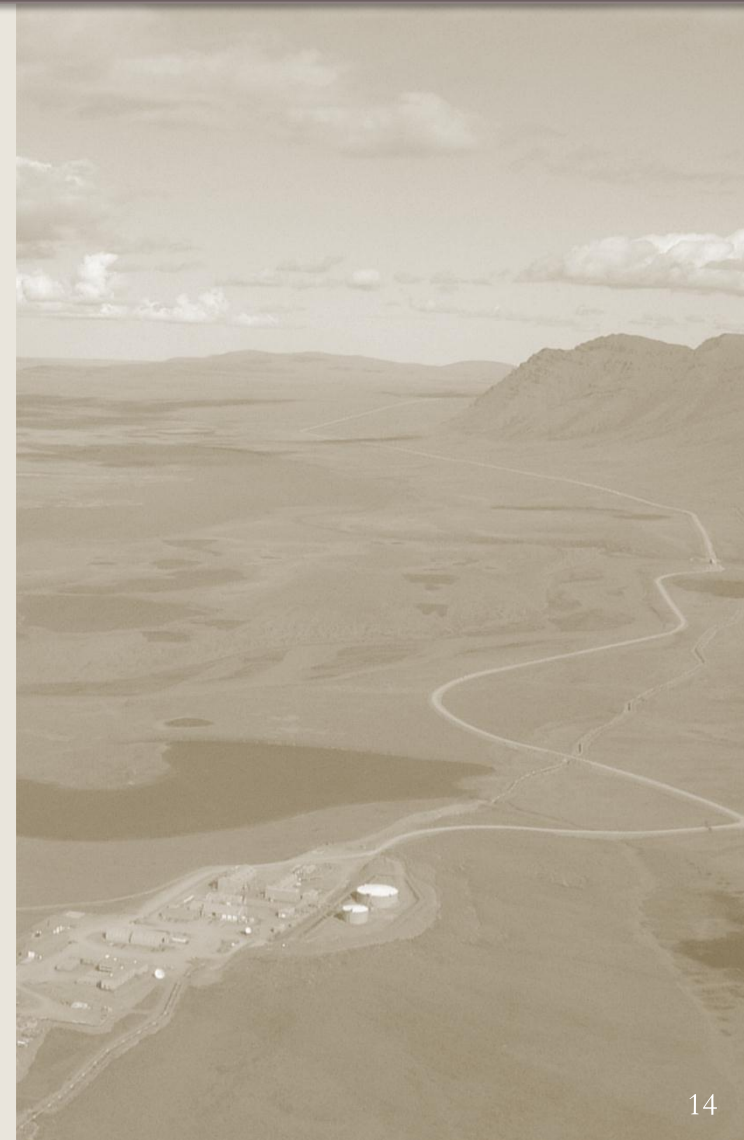


Oil Tax Reform
- Principles -

- Governor reiterated his principles:
  - Tax reform must be fair to Alaskans
  - Encourage new production
  - Simple so that it restores balance to the system
  - Durable for the long-term
- Integrated team – DOR and DNR
- Consultants - EconOne

Oil Tax Reform
- The Process -

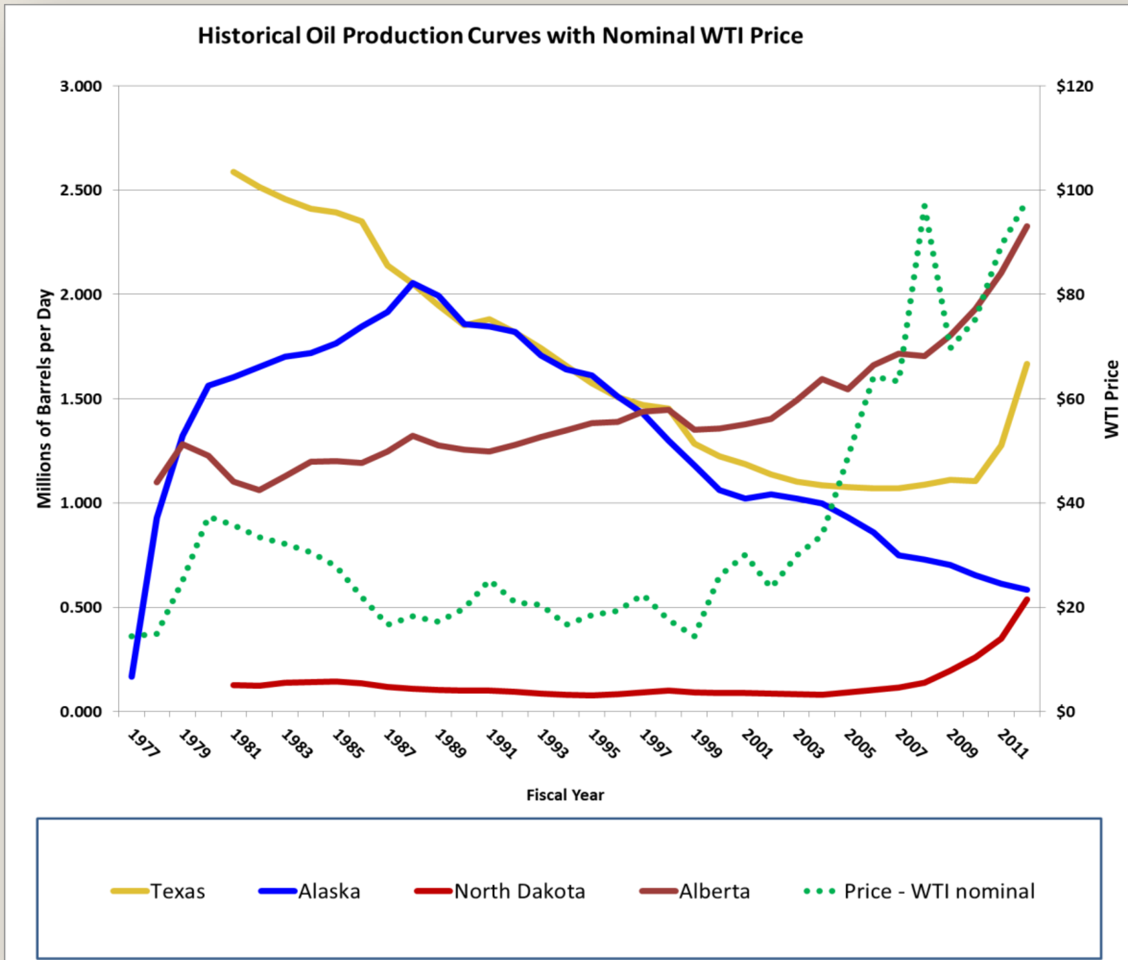
- The team reviewed previous work by both the Legislature and the Administration
- Identified problems with the current tax system
  - Declining Production
  - Competitive Environment
  - Progressivity
  - Tax Credits
- Coordinated effort to understand impacts of production decline on TAPS/Revenues



Other Basins have Turned Decline Around

- Historical Oil Production -

How Did Our Competition Fare When Prices Spiked?



COMPARING ALASKA

- Consultants have compared Alaska to other opportunities using detailed models and analyzing a variety of financial metrics.
- The following example is for a 50 million barrel development in Alaska and comparable developments in the Lower-48, Canada and United Kingdom North Sea.
  - Developed by a new entrant to the State.
  - Compares net present value (NPV) per barrel of oil equivalent discounted 12%

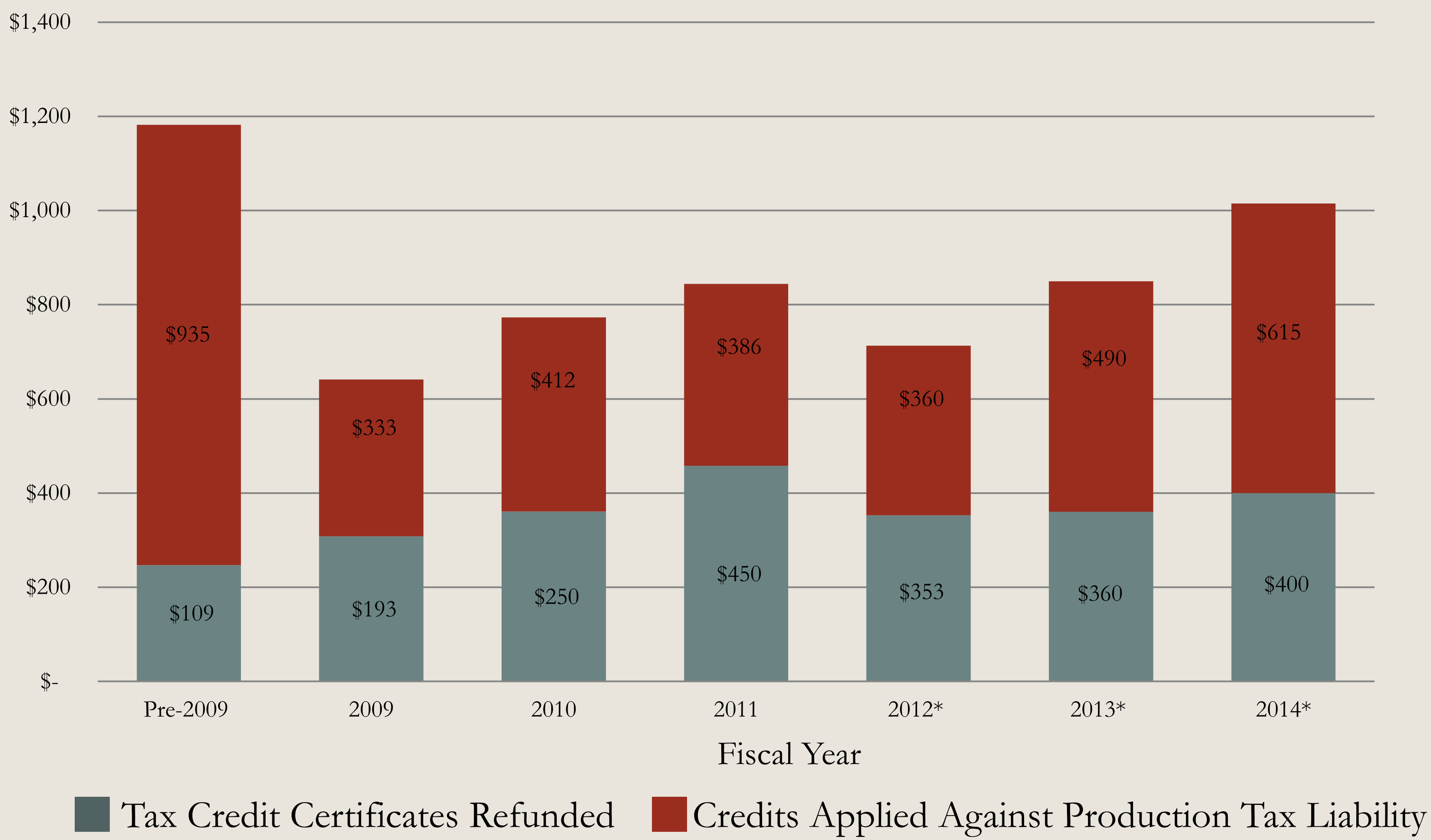
West Coast ANS Prices	NPV-12% ACES (Current)	NPV-12% Average L48 Unconventional	NPV-12% Norway	NPV-12% UK Post-1993 with Brownfield
$70	$1.78	$.11	-$.81	$2.74
$90	$3.47	$3.66	$1.29	$6.43
$100	$4.07	$5.53	$2.34	$8.25
$110	$4.86	$7.84	$3.39	$10.06

Example: ***at $100 a barrel, a company would earn $4.07 in Alaska but $5.53 in the Lower 48 and $8.25 in the U.K. North Sea.***

Oil Tax Reform
- Progressivity-

- Progressivity is complicated and unpredictable, both for the state and investors
  - Tax rate increases by .4% for every $1 per barrel that the production tax value (price minus transportation costs minus lease expenditures) exceeds $30/barrel up to $92.50 per barrel, then .1% until the total tax rate equals 75%
  - Calculated Monthly
- High marginal tax rates

Oil Tax Reform
- Production Tax Credits -



*Estimated pending final true-ups

** Fall 2012 Revenue Sources Forecast

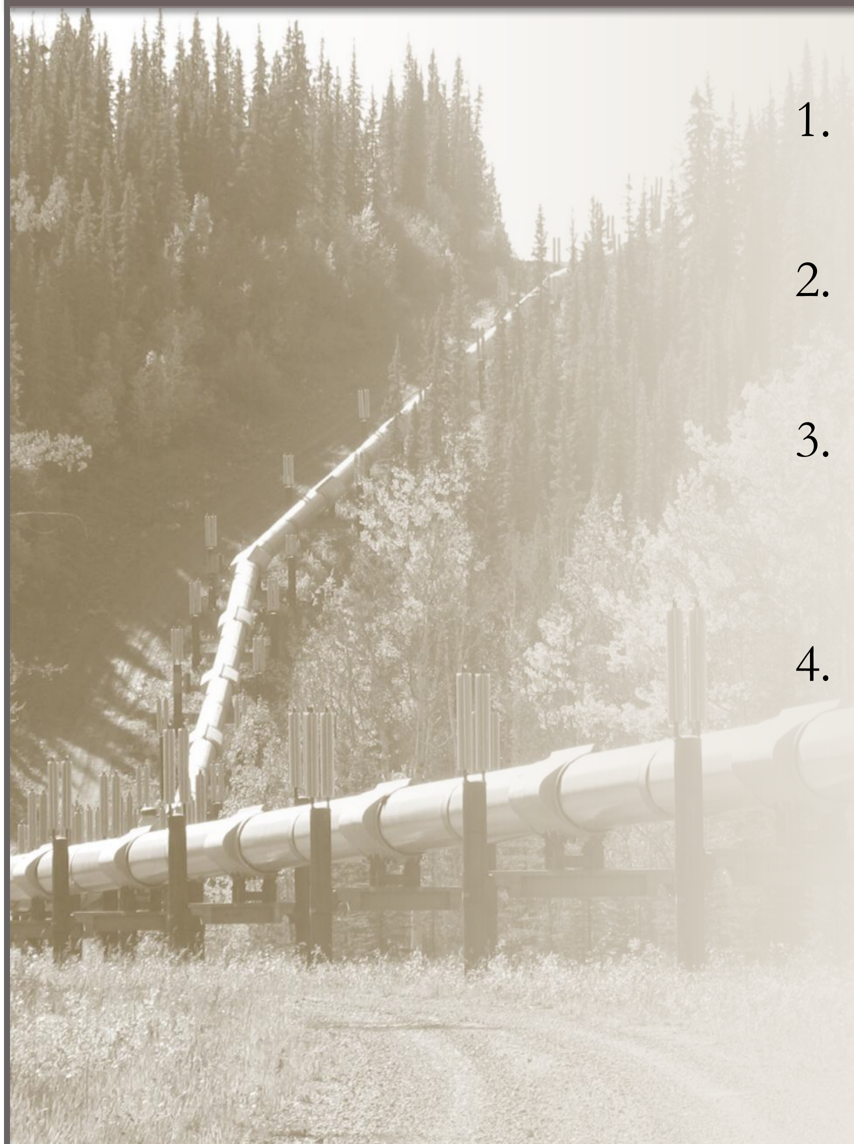
Source: Alaska Department of Revenue

Oil Tax Reform
- TAPS Tariffs—Work to Date-

- Identified growing concern in DOR and DNR that TAPS tariffs in our revenue modeling did not dynamically link throughput with tariff rates or capture any added capex or opex spending for low-throughput mitigation measures
- Current work **NOT** designed to find the optimal low-flow mitigation option or forecast specific operational outcomes and exact tariffs

- Preliminary Observations:
  - Low flow mitigation capital and operating expenditures could increase tariffs by as much as $1 (18%) per barrel by 2019 and as much as $2.50 (33%)per barrel in 2022
  - Assuming price, production and tariff provided in the Fall 2012 Revenue Sources Book, a $1 increase in the TAPS tariff will decrease state oil and gas revenue by an average of $110 million

Oil Tax Reform
- The Proposal: Highlights -



1. Eliminate Progressivity and Credits Based on Capital Expenditures
2. Reform remaining credits to be carried forward to when there is production
3. Establish a “Gross Revenue Exclusion” for newer units and new participating areas in existing units (NEW OIL)
4. Hold Cook Inlet and Middle Earth Harmless