

01/21/13
OVERVIEW:
DEPARTMENT
OF NATURAL
RESOURCES

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DEPARTMENT OF NATURAL
RESOURCES</SUBJECT><COMM>HRES28</COMM></TARGET>

Linda Hay

From: Linda Hay
Sent: Saturday, January 19, 2013 10:06 AM
To: HRES Members & Staff
Subject: Resources Comm. 1.21.13
Attachments: Sullivan_DNR Update_House Resources_1-21-13.pdf

Good Morning - Attached is the presentation from DNR for Monday's meeting. Commissioner Dan Sullivan will do the entire presentation and the following Deputy Commissioners and Directors will be in the audience:

Dep. Comm. Joe Balash
Dep. Comm. Ed Fogels
Division of Ag Director - Franci Havemeister
Division of Forestry Director - Chris Maisch
Division of Geological & Geophysical Surveys Director - Bob Swenson
Division of Mining, Land & Water Director - Brent Goodrum
Division of Parks & Outdoor Recreation Director - Ben Ellis
Division of Support Services Director - Jean Davis
Legislative Liaison - Esther Tempel

Documents will be posted in BASIS first thing Monday morning. Please feel free to contact me with any questions. Rep. Feige will chair the meeting on Monday.

Have a Great Weekend
lh

*Linda Hay
House Resources Committee Aide
Representative Eric Feige
House Resources Co-Chair
State Capitol Room 126
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State of ALASKA

Department of Natural Resources



House Resources Committee

DNR Overview

January 21, 2013

Commissioner Dan Sullivan

Alaska Department of Natural Resources

www.dnr.alaska.gov

OUTLINE



PART I: Introduction

PART II: Looking Back on 2012

PART III: 2013 Legislative Session & Beyond

PART I



Introduction

STATE of ALASKA

- DEPARTMENT OF NATURAL RESOURCES -

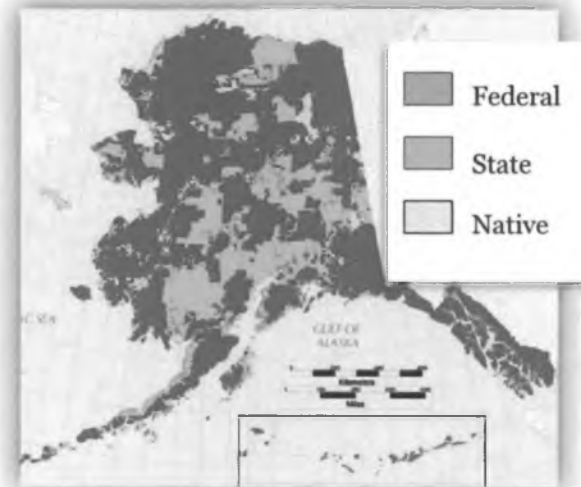


Land Base

- 586,412 square miles—more than twice the size of Texas
- Is larger than all but 18 sovereign nations
- Has more coastline than all other U.S. states combined
- Has more than 3 million lakes and half of the world's glaciers
- Has approximately 40% of the nation's freshwater supply
- Is the least densely populated U.S. state

Land Ownership

- *Federal Land*: more than 200 million acres
- *State Land*: Approx. 100 million acres of uplands, 60 million acres of tidelands, shore lands, and submerged lands, and 40,000 miles of coastline
- *Native Corporation Land*: 44 million acres



STATE of ALASKA

- ALASKA AS A STOREHOUSE: OIL & GAS -

North Slope

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

Cook Inlet

USGS estimates that significant undiscovered volumes of hydrocarbons remain to be found in the Cook Inlet:

- 19 trillion cubic feet of natural gas
- 600 million barrels of oil
- 46 million barrels of natural gas liquids



STATE *of* ALASKA

- ALASKA AS A STOREHOUSE: MINERALS -



The State of Alaska Ranks in the *Top Ten in the World* for Important Minerals, Including:

- **Coal:** 17% of the world's coal; *2nd most in the world*
- **Copper:** 6% of the world's copper; *3rd most in the world*
- **Lead:** 2% of the world's lead; *6th most in the world*
- **Gold:** 3% of the world's gold; *7th most in the world*
- **Zinc:** 3% of the world's zinc; *8th most in the world*
- **Silver:** 2% of the world's silver; *8th most in the world*

USGS estimates

According to the USGS, Alaska has over 70 occurrences of Rare Earth Elements (REE).

DNR DIVISIONS & OFFICES

- KEY 2012 ACCOMPLISHMENTS -

1. Division of Agriculture (DoA)

- Franci Havemeister, Director
- Promotes and encourages development of an agriculture industry in Alaska
- Key Accomplishments:
 - Strong advocacy throughout the state for the Alaska Grown program
 - Added restaurants, stores, and farmers' markets to the Alaska Grown network
 - Deepened DNR coordination and cooperation with the farming community



2. Division of Forestry (DoF)

- Chris Maisch, Director
- Serves Alaskans through forest management and wildland fire protection
- Key Accomplishments:
 - Responded to late-season wildfires in Dillingham and the Mat-Su Valley
 - Provided assistance to Municipality of Anchorage in response to extreme wind and rain events and to the Mat-Su Borough in response to flooding
 - Played a major role in providing firefighting assistance to the lower 48
 - Held a successful Tok Wildland Fire Academy
 - Finished final report for Governor's Alaska Timber Jobs Task Force per AO 258
 - Sold 18,786,000 board feet of lumber to 34 Alaskan businesses
 - Provided direct and indirect support to over 80 woody biomass projects

DNR DIVISIONS & OFFICES

- KEY 2012 ACCOMPLISHMENTS -

3. Division of Geological & Geophysical Surveys (DGGS)

- Bob Swenson, Director
- Determines the potential of Alaskan land for production of metals, minerals, fuels, and geothermal resources, the locations and supplies of groundwater and construction material, and the potential geologic hazards to buildings, roads, bridges, and other installations
- Key Accomplishments:
 - 2nd year of implementing statewide strategic and critical minerals assessment
 - Completed 7 major field programs in geologic mapping and analysis, including Cook Inlet petroleum systems and Ray Mountains' strategic minerals
 - Published 27 new geologic maps and reports related to geologic analysis of natural resources and geologic hazards
 - Finalized and published major new reports and data sets on Energy Resources for local use, LiDAR data on transportation corridors in Alaska, geochemical data from minerals resources, coastal geologic hazards, and earthquake hazards
 - Hosted 507 visits from industry and academia to the Geologic Materials Center
 - Co-hosted the 2nd Annual Alaska Strategic and Critical Minerals Summit



DNR DIVISIONS & OFFICES

- KEY 2012 ACCOMPLISHMENTS -

4. Mining Land and Water

- Brent Goodrum, Director
- Provides for the appropriate use and management of Alaska's state owned land and water, aiming toward maximum use consistent with the public interest
- Key Accomplishments:
 - In 18 months, reduced permit backlog by 38.2%
 - Modernized process for issuing Land Use Permits
 - Modified several statutes to create permitting efficiencies
 - Reviewed nearly 30% more Annual Placer Mining Applications than CY2011
 - Issued 45% more Temporary Water Use Applications than CY2011

5. Oil & Gas

- Bill Barron, Director
- Responsible for the leasing of state lands for oil, gas, and geothermal exploration
- Key Accomplishments:
 - Conducted two successful oil and gas lease sales: Cook Inlet and North Slope/North Slope Foothills/Beaufort Sea
 - Incentivized exploration and drilling as part of lease and unit applications
 - Continued strong advocacy to promote new investment and responsible development of Alaska's oil and gas resources
 - Approved Point Thomson POD



DNR DIVISIONS & OFFICES

- KEY 2012 ACCOMPLISHMENTS -

6. Parks & Outdoor Recreation

- Ben Ellis, Director
- Provides outdoor recreation opportunities and conserves and interprets natural, cultural, and historic resources for the use, enjoyment, and welfare of the people
- Key Accomplishments:
 - Lower Chatanika SRS was reinstated into active management thanks to local and legislative support
 - 3 new public use cabins in Southeast (2 Eagle Beach SRA, 1 Juneau Channel Islands SMP); PUC occupancy increased 9% and overnight camping increased 3%
 - 4 “Arts in the Parks” events statewide
 - National honors, including: Joe McCullough, National Boating Safety Educator of the Year, and Judy Bittner, National Partners in Conservation Award

7. Support Services

- Jean Davis, Director
- Provides client-focused, efficient and cost-effective financial, budget, procurement, human resource, information technology and recording services to DNR and the public
- Key Accomplishments:
 - Launched “eRecording” to simplify and accelerate recording process
 - Installed IBM Business Process Management servers and software as part of permitting reform initiative



DNR DIVISIONS & OFFICES

- KEY 2012 ACCOMPLISHMENTS -

Gas Pipeline Project Office

- Eric Hatleberg, Acting Director
- Monitors efforts by the Alaska Pipeline Project (APP) to design, develop, construct and operate a 48-inch natural gas pipeline to commercialize North Slope natural gas
- Key Accomplishments:
 - Facilitated project alignment between the North Slope producers, Alaska Pipeline Project, and TransCanada for a LNG project
 - Monitored project development progress and reimbursable expenditures to ensure the terms of the AGIA license are being met
 - Worked closely with AGDC to maintain good communication, ensure efficient use of state funds, and avoid duplication of effort
 - Supported the effort to reach out to potential LNG customers by describing the advantages of Alaska resource development and our interest in forming strong global partnerships



DNR DIVISIONS & OFFICES

- KEY 2012 ACCOMPLISHMENTS -

State Pipeline Coordinator's Office

- Mike Thompson, State Pipeline Coordinator
- Issues leases of state land for pipeline rights-of-ways and implements the state's policy set forth in Alaska Statute (AS) 38.35.010 concerning the development, use, and control of a pipeline transportation system within the state
- Key Accomplishments:
 - Issued Right-of-Way Lease for the Point Thomson Export Pipeline
 - Led a cooperative effort between DNR and the Bureau of Land Management to ensure consistency between the State Right-of-Way Lease and the Federal Right-of-Way Grant for the proposed Alaska Stand Alone Gas Pipeline project
 - Received a record number of right-of-way applications in a single year, including four new North Slope LNG pipeline right-of-way applications, the Trans-Foreland oil pipeline application in Cook Inlet and three TAPS right-of-way amendments for major projects

Office of Project Management & Permitting

- Tom Crafford, Director
- Coordinates the review of larger scale projects in the state
- Key Accomplishments:
 - Coordinated state participation for Pt. Thomson EIS through to completion and issuance of a ROD and Army Corps of Engineers 404 permit
 - Coordinated State review and comments on numerous resource development projects

PART II



Looking Back on 2012:

1. Secure Alaska's Future: *Oil*
2. Commercializing North Slope Gas
3. Comparative Advantages of Alaska LNG
4. Secure Alaska's Future: *Strategic & Critical Minerals*
5. Permitting Reform
6. Sustainable Development

1. SECURE ALASKA'S FUTURE: *OIL*

- ONE MILLION BARRELS/DAY: ARRESTING TAPS THROUGHPUT DECLINE -



- 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 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

1. SECURE ALASKA'S FUTURE: OIL

- FOUR-PART PLAN -

Objective:

*The State of Alaska's
Comprehensive Strategy
to Increase TAPS
Throughput to One
Million Barrels/Day*



- I. Increase production by making Alaska more competitive
- II. Ensure the permitting process is structured and efficient
- III. Facilitate and incentivize the next phase of North Slope development
- IV. Promote Alaska's resources and positive investment climate to world markets

1. SECURE ALASKA'S FUTURE: OIL

- COOK INLET, NORTH SLOPE, & BEAUFORT SEA LEASE SALES -

Cook Inlet, 2011 & 2012 Lease Sales

- In June 2011, the state received the highest number of Cook Inlet lease sale bids in 28 years, totaling over \$11 million
 - Total tracts sold: 108
 - Total high bonus bids: \$10,986,826.20
- In May 2012, Cook Inlet lease sale bids totaled more than \$6.8 million
 - Total tracts sold: 44
 - Total high bonus bids: \$6,865,835



NS & Beaufort Sea, 2011 & 2012 Lease Sales

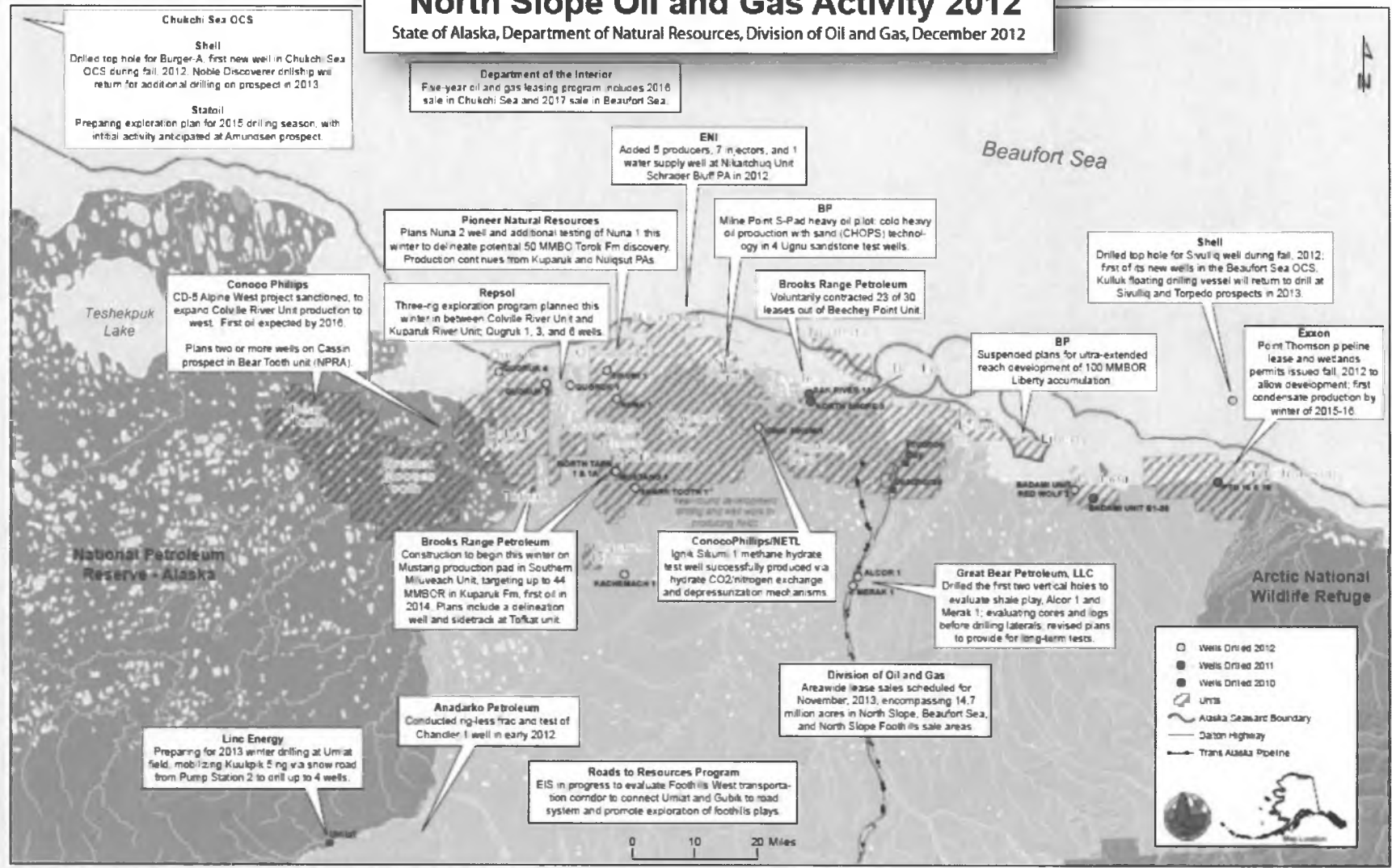
- In December 2011, the Division of Oil and Gas received more than 300 bids from more than 15 bidders, totaling more than \$21 million, signifying one of the most successful sales in recent Alaska history
 - Total tracts sold: 239
 - Total high bonus bids: \$18,712,945.98
- In November 2012, bids for all areas totaled more than \$14 million with tracts sold in the Foothills area for the first time since 2009
 - Total tracts sold : 122
 - Total high bonus bids: \$14,240,333.73
- State needs billions of dollars in new investment to meet the Governor's one-million-barrels-a-day goal

1. SECURE ALASKA'S FUTURE: OIL

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

North Slope Oil and Gas Activity 2012

State of Alaska, Department of Natural Resources, Division of Oil and Gas, December 2012



Chukchi Sea OCS
Shell
 Drilled top hole for Burger-A, first new well in Chukchi Sea OCS during fall, 2012. Noble Discoverer drillship will return for additional drilling on prospect in 2013.
 Statoil
 Preparing exploration plan for 2015 drilling season, with initial activity anticipated at Amundsen prospect.

Department of the Interior
 Five-year oil and gas leasing program includes 2016 sale in Chukchi Sea and 2017 sale in Beaufort Sea.

ENI
 Added 5 producers, 7 injectors, and 1 water supply well at Nikaatchuq Unit Schraeder BuFF PA in 2012.

Pioneer Natural Resources
 Plans Nuna 2 well and additional testing of Nuna 1 this winter to delineate potential 50 MMBO. Torok Fm discovery. Production continues from Kuparuk and Nuiqsut PAs.

BP
 Milne Point S-Pad heavy oil pilot: cold heavy oil production with sand (CHOPS) technology in 4 Ugnu sandstone test wells.

Shell
 Drilled top hole for Sivulliq well during fall, 2012. First of its new wells in the Beaufort Sea OCS. Kulluk floating drilling vessel will return to drill at Sivulliq and Torpedo prospects in 2013.

Conoco Phillips
 CD-5 Alpine West project sanctioned, to expand Colville River Unit production to west. First oil expected by 2016.
 Plans two or more wells on Cassin prospect in Bear Tooth unit (NPRA).

Repsol
 Three-rig exploration program planned this winter in between Colville River Unit and Kuparuk River Unit; Dugruk 1, 3, and 6 wells.

Brooks Range Petroleum
 Voluntarily contracted 23 of 30 leases out of Beechey Point Unit.

BP
 Suspended plans for ultra-extended reach development of 100 MMBOR Liberty accumulation.

Exxon
 Point Thomson pipeline lease and wetlands permits issued fall, 2012 to allow development; first condensate production by winter of 2015-16.

Brooks Range Petroleum
 Construction to begin this winter on Mustang production pad in Southern Miluweach Unit, targeting up to 44 MMBOR in Kuparuk Fm, first oil in 2014. Plans include a completion well and sidetrack at Toklar unit.

ConocoPhillips/NETL
 Ignik Sikumi, 1 methane hydrate test well successfully produced via hydrate CO2/nitrogen exchange and depressurization mechanisms.

Great Bear Petroleum, LLC
 Drilled the first two vertical holes to evaluate shale play, Alcor 1 and Merak 1; evaluating cores and logs before drilling laterals; revised plans to provide for long-term tests.

Division of Oil and Gas
 Areawide lease sales scheduled for November, 2013, encompassing 14.7 million acres in North Slope, Beaufort Sea, and North Slope Foothills sale areas.

Line Energy
 Preparing for 2013 winter drilling at Umiat field, mobilizing Kuukpak 5 rig via snow road from Pump Station 2 to drill up to 4 wells.

Anadarko Petroleum
 Conducted rig-less frac and test of Chandler 1 well in early 2012.

Roads to Resources Program
 EIS in progress to evaluate Foothills West transportation corridor to connect Umiat and Gubik to road system and promote exploration of foothills plays.

Legend

- Wells Drilled 2012
- Wells Drilled 2011
- Wells Drilled 2010
- Units
- Alaska Geoword Boundary
- Dalton Highway
- Trans-Alaska Pipeline

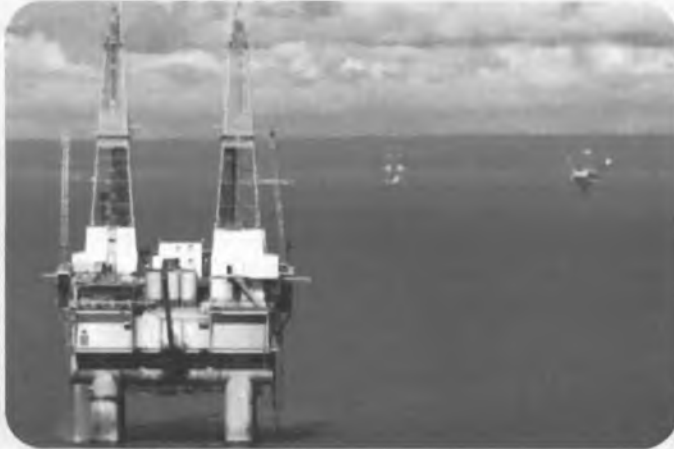
1. SECURE ALASKA'S FUTURE: OIL

- NEXT PHASES & NEW AREAS OF EXPLORATION FOR OIL & GAS -

- Shale oil exploration – ongoing
 - July 31st conference in Anchorage on Shale Oil
- Shell finally was able to drill its first exploratory wells in the Beaufort and Chukchi Seas
- Record of federal permitting delays should be a continued source of concern for the State
- Eastern North Slope open, PT settled
 - PT permits issued by the State and the Corps of Engineers
- Linc Energy drilling operations at Umiat are moving forward
- New players, operators and exploration on state land
 - Shell, Repsol, Brooks Range, Great Bear, Savant
 - Exxon Mobil, Conoco Phillips
- These developments, while positive, are just scratching the surface of our overall potential

1. SECURE ALASKA'S FUTURE: OIL

- COOK INLET OIL & GAS ACTIVITY -



WSJ Article, August 27, 2011:

***“New Energy Estimate Breathes Life
Into a Declining Alaskan Oil Field”***

- Legislative tax and investment incentives are working
- New players investing: Apache, Hilcorp, Armstrong, Linc, Buccaneer, Nordaq
- Hundreds of millions invested
- Significant exploration and development activity: 10-15 new oil and gas wells, one geothermal exploration well, two jack-up rigs, and companies shooting 3-D seismic over large areas of the basin
- 3 new gas supply contracts with utilities
- New gas storage project
- State continues to focus on safe, responsible development and operations
- Competitive price for gas relative to lower 48 markets

****Testifying next week on details of present and
future challenges and opportunities in Cook Inlet***

2. COMMERCIALIZING NORTH SLOPE GAS - 2012 STATE OF THE STATE AND BENCHMARKS-

Key principles for any project

- Gas to address Alaska's in-state needs for abundant supplies of low-cost energy and economic growth
- Gas that will maximize the value of the state's massive resource base through high-volume and export markets
- A project that incentivizes exploration and investment in continued oil and gas development

Governor's Roadmap to Gasline

1. Resolve Point Thomson
2. Align during the first quarter of 2012
3. Two projects—under AGIA and AGDC—complete discussions by third quarter of 2012 determining what potential exists to consolidate projects
4. Harden numbers on an Alaska LNG project by the third quarter of 2012, and identify a pipeline project and associated work schedule
5. If milestones are met, the 2013 Legislature takes up gas tax legislation designed to move the project forward

2. COMMERCIALIZING NORTH SLOPE GAS

- SIGNIFICANT PROGRESS -

ExxonMobil

ConocoPhillips



March 30, 2012

Governor Sean Parnell
550 West 7th Avenue, Suite 1700
Anchorage, Alaska 99501

Dear Governor Parnell,

Our three corporations, collectively and individually, value our relationship with Alaska and believe that its citizens across the state, as well as our shareholders around the world, share a common interest in responsible resource development. We write today to inform you of our progress in working together on the next generation of North Slope resource development.

Alaska's vast North Slope holds over 35 trillion cubic feet of discovered natural gas. To date, this gas has been used to enhance North Slope oil production, adding several billion barrels to Prudhoe and Kuparuk recoveries. However, under the right business climate, the full commercial potential of this world-class resource can be unlocked. North Slope gas commercialization will bring new job opportunities, increased state revenues, reliable in-state energy supplies and new exploration opportunities, which will benefit Alaska's economy. North Slope oil and gas. This will be key toward reaching your goal of 1 million barrels per day through the Trans-Alaska Pipeline System.

Serious discussions between our companies have taken place along with the Alaska Pipeline Project (APP) parties who are aligned on a structured, stewardable and transparent approach to commercialize North Slope natural gas resources within an AGIA framework. As a result of the rapidly evolving global market, large-scale liquefied natural gas (LNG) exports from south-central Alaska will be assessed as an alternative to gas line exports to broadening market access, a south-central Alaska LNG approach with in-state energy demand and needs. We are now working on commercialization project concept selection, which would include an assessment of major project components including in-state global LNG trends, and LNG tidewater site locations, among others.

Commercializing Alaska natural gas resources will not be easy. Issues that must be resolved, and we cannot do it alone. Unprecedented capital for gas development will require competitive and stable financing in Alaska first be established. Appropriately structured, stable financing will create new opportunities around the world, and will play a pivotal role in making Alaska competitive in the global market and unlocking the economic potential of North Slope resources.

Point Thomson is an excellent example of a challenged, world-class resource. With approximately 25% of known North Slope natural gas, Point Thomson development is an important element in consideration of North Slope gas commercialization. However, economic models must span decades into an uncertain future to estimate economic returns. Your Administration has taken the lead in forging a Point Thomson settlement that will bring long-term resources, revenues and jobs to help Alaska's economy. With settlement now finalized, our companies are moving forward, as participating co-venturers, with the initial development phase at Point Thomson with confidence that North Slope gas development will ultimately bring the Point Thomson resource to market.

We agree the next generation of North Slope resource development is achievable, working together with the APP parties, as well as with the State of Alaska. Thank you for your leadership and your confidence in us to take on these challenges. We join you in a vision of prosperity and promise. There is much work to do and opportunities yet to discover.

Sincerely,

Rex Tillerson *Jim Mulva* *Bob Dudley*

Rex Tillerson

Jim Mulva

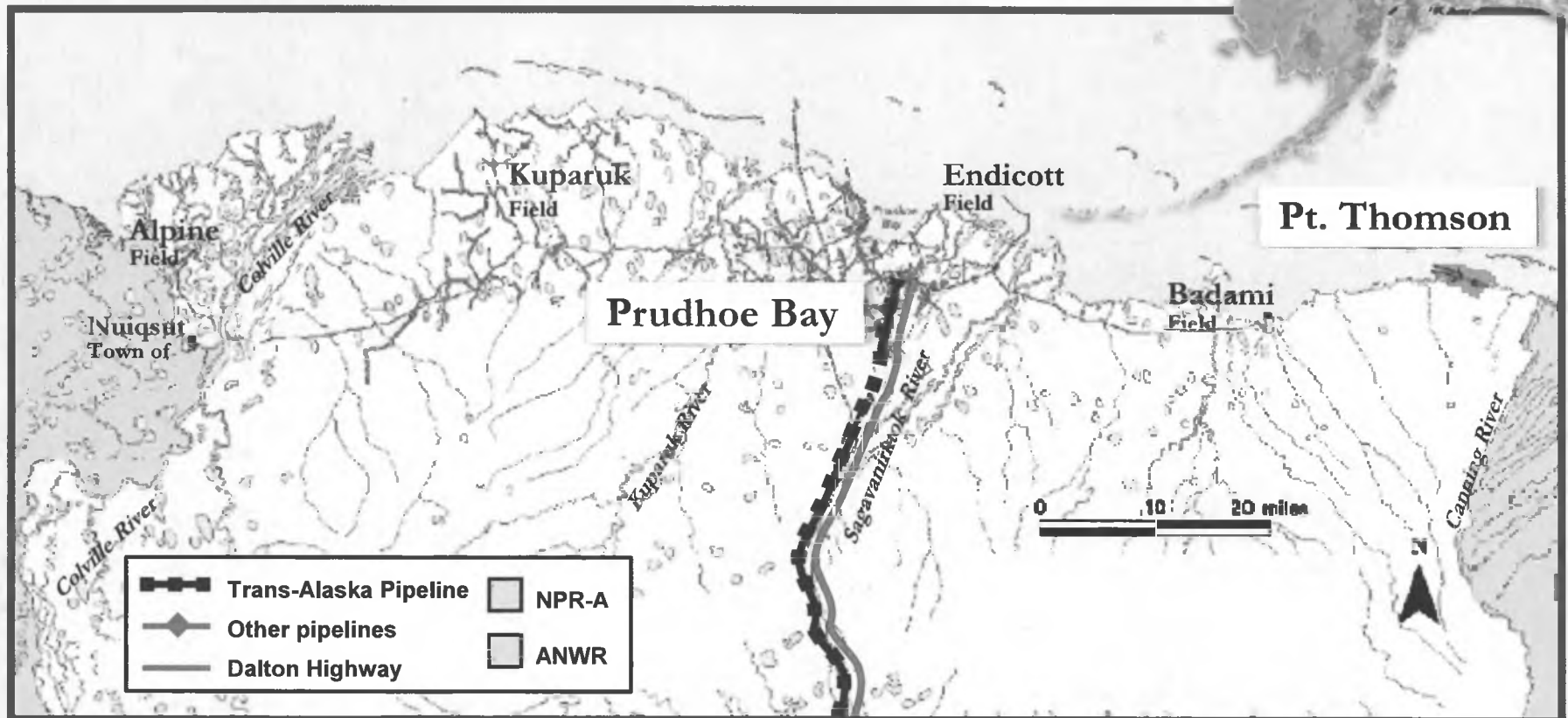
Bob Dudley

Serious discussions between our companies have taken place over the past several months, along with the Alaska Pipeline Project (APP) parties who are supporting the AGIA License. We have aligned on a structured, stewardable and transparent approach with the aim to commercialize North Slope natural gas resources within an AGIA framework. As a result of the rapidly evolving global market, large-scale liquefied natural gas (LNG) exports from south-central Alaska will be assessed as an alternative to gas line exports through Alberta. In addition to broadening market access, a south-central Alaska LNG approach could more closely align with in-state energy demand and needs. We are now working together on the gas commercialization project concept selection, which would include an associated timeline and an assessment of major project components including in-state pipeline routes and capacities, global LNG trends, and LNG tidewater site locations, among others.

2. COMMERCIALIZING NORTH SLOPE GAS

- POINT THOMSON -

Area of
Detail



2. COMMERCIALIZING NORTH SLOPE GAS - SIGNIFICANT PROGRESS -

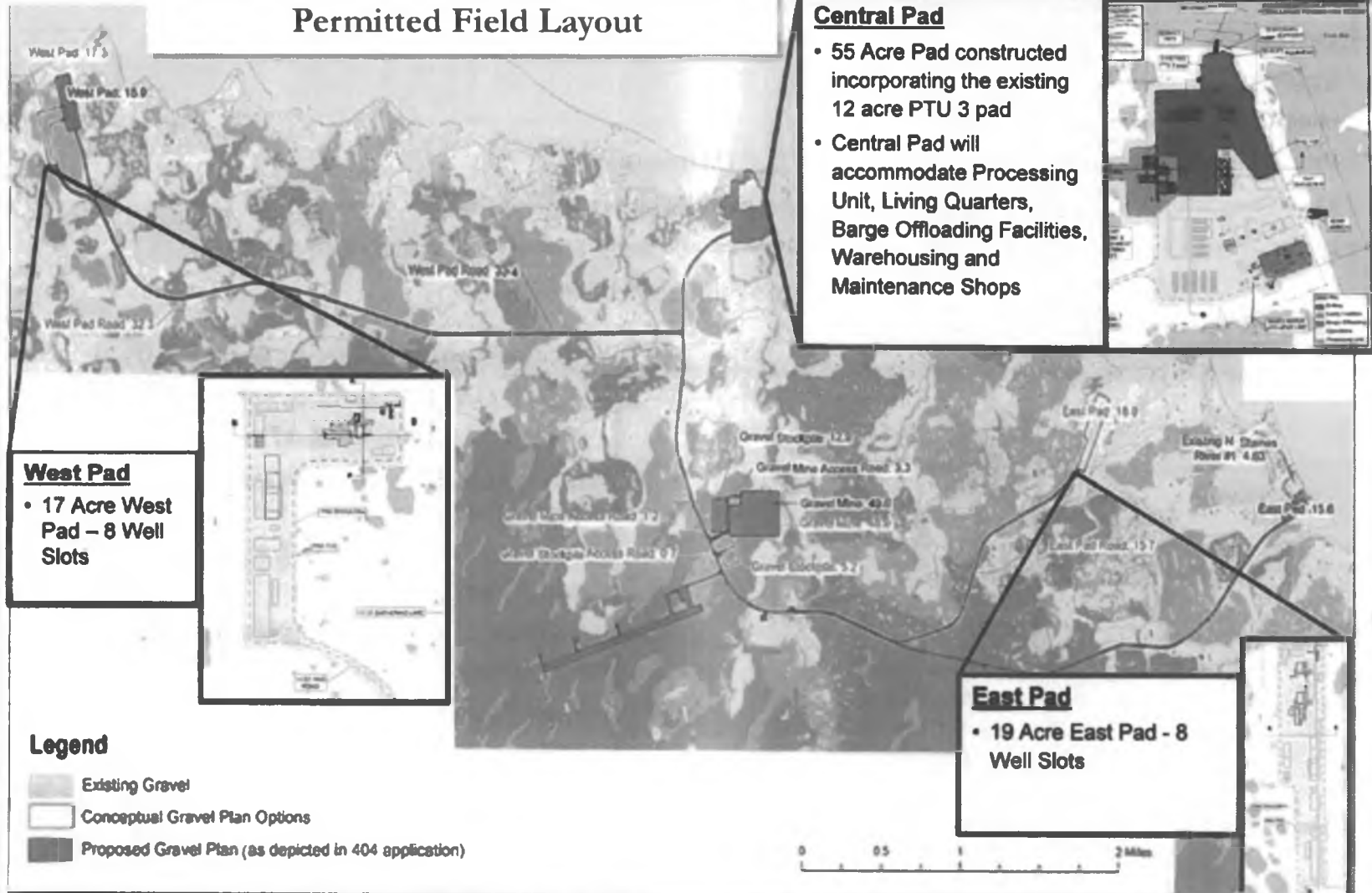
- Point Thomson is a multi-billion dollar project
- Beginning construction now
- Producing Point Thomson liquid condensate into TAPS as part of Phase 1
- Big prize – gas commercialization for LNG
- Significant portion of infrastructure being built for Phase 1 is applicable to a gas line or LNG project
- Three phases of development in 2012:
explaining/defending settlement; permitting; and getting to work



2. COMMERCIALIZING NORTH SLOPE GAS

- SIGNIFICANT PROGRESS -

Permitted Field Layout



Source: ExxonMobil update to DNR and AOGCC, October 2012

2. COMMERCIALIZING NORTH SLOPE GAS - SIGNIFICANT PROGRESS -

The State of Alaska has made significant progress on commercializing North Slope gas

- Much of the upstream infrastructure is in place
- There is a renewed focus from key stakeholders on monetizing the massive reserves of North Slope gas
- Hundreds of millions of dollars have been spent on critical engineering and environmental regulatory and commercial work required for a gas project

FT: Oil Groups Agree on \$40bn Alaska Gas Project

"ExxonMobil, BP and ConocoPhillips have reached agreement with the state of Alaska to take a significant step forward on a \$40bn-plus project to export liquefied natural gas to Asia, resolving a long-running lease dispute that had been holding up progress.

In a joint letter, the chief executives of the three companies said they were "aligned" on a plan to develop the huge gas reserves of Alaska's North Slope, which until now have been stranded without a route to market." - Financial Times, 3/30/12

WSJ: Alaska, Gas Firms Clear Way For Pipeline

*Point Thomson settlement
"...paves the way for a pipeline project to ship natural gas from the North Slope, unleashing the state's massive gas reserves." - WSJ, 3/30/12*



2. COMMERCIALIZING NORTH SLOPE GAS - SIGNIFICANT PROGRESS -

ExxonMobil

ConocoPhillips



TransCanada

October 1, 2012

Governor Sean Parnell
550 West 7th Avenue, Suite 1790
Anchorage, Alaska 99501

Dear Governor Parnell:

On March 30, 2012, ExxonMobil, ConocoPhillips and BP working together on the next generation of North Slope resource development. Since that time, the three producer companies and TransCanada, through its participation in the Alaska Pipeline Project (APP), have maintained momentum and executed important early work to select leading concepts for a potential project. We are writing to update you on the progress that has been made to date.

We established an integrated team, depicted on Attachment 1, consisting of over 200 professionals to date to progress this project. We have leveraged the respective talents and experience to advance a collective effort to refine and understand the opportunities and challenges associated with the development of liquefied natural gas (LNG) exports from Southcentral Alaska.

Our companies bring together specific expertise in Arctic operations and in LNG plant design and operation. Since our joint work on the Denali Project upon more than \$700 million in past work by our collective efforts, we have made a significant contribution through AGIA. As a result, our work on an LNG project has brought us to a new level of understanding. Specifically, the focus of our work includes:

- Developing a design basis for the pipeline, including permafrost
- Investigating multiple ways to remove and dispose of CO₂ and other contaminants
- Assessing use of existing and addition of new Prudhoe Bay field facilities
- Mapping multiple pipeline routing variations
- Assessing multiple pipeline sizes
- Providing for at least five in-state gas off-take points
- Completing preliminary geohazard and marine analysis of 22 LNG site locations
- Developing a design basis for the required LNG tanker fleet
- Evaluating multiple LNG process design alternatives
- Confirming a range of gas blends from the Prudhoe Bay and Point Thomson fields can generate a marketable LNG product

We have narrowed the broad range of alternative development concepts and assessed major project components, including the gas pipeline, gas treatment to remove CO₂ and other impurities, natural gas liquefaction, LNG storage, and marine terminal facilities as described on Attachment 2. Individually,

Governor Sean Parnell

- 2 -

October 1, 2012

each of these components would represent a world-class project. Combined, they result in a mega-project of unprecedented scale and challenge; up to 1.7 million tons of steel, a peak construction workforce of up to 15,000, a permanent workforce of over 1,000 in Alaska, and an estimated total cost in today's dollars of \$45 to \$65+ billion.

Additional attachments:

On March 30, 2012, ExxonMobil, ConocoPhillips and BP submitted a letter informing you of progress in working together on the next generation of North Slope resource development. Since that time, the three producer companies and TransCanada, through its participation in the Alaska Pipeline Project (APP), have maintained momentum and executed important early work to select leading concepts for a potential project. We are writing to update you on the progress that has been made to date.

We have narrowed the broad range of alternative development concepts and assessed major project components, including the gas pipeline, gas treatment to remove CO₂ and other impurities, natural gas liquefaction, LNG storage, and marine terminal facilities as described on Attachment 2. Individually, each of these components would represent a world-class project. Combined, they result in a mega-project of unprecedented scale and challenge; up to 1.7 million tons of steel, a peak construction workforce of up to 15,000, a permanent workforce of over 1,000 in Alaska, and an estimated total cost in today's dollars of \$45 to \$65+ billion.

Alaska's North Slope natural gas resources must compete in the global energy markets in order to deliver state revenues, in-state energy supplies, new job opportunities and other economic benefits to Alaskans. While North Slope gas commercialization is challenging, working together, we can maintain the momentum toward our shared vision for Alaska. We will continue to keep you advised of our progress and stand committed to work with the State to responsibly develop its considerable resources.

Sincerely,

Randy Broles
ExxonMobil
Production Company

Trond-Erik Johansen
ConocoPhillips Alaska, Inc.

Jeffery Mingé
BP Exploration Alaska

Tony Palmer
TransCanada

Attachments

2. COMMERCIALIZING NORTH SLOPE GAS - SIGNIFICANT PROGRESS -

The companies 3Q announcement attracted significant national and international press.

WSJ: Natural Gas Glut Pushes Export

"The long-awaited effort is expected to have a significant impact not just on Alaska and its economy, but also on U.S. construction and manufacturing companies that would supply steel and other materials for an 800-mile pipeline and the plant that would convert the gas into liquid for export on tankers." - WSJ, 10/4/12

The Globe and Mail: Alaska plan intensifies gas race to Asia

"A massive new proposal to export natural gas from Alaska brings a major competitor into the race to carry North American gas to Asia, and adds pressure on Canadian export projects to build quickly or risk losing out..."

It is notable for the stature of its backers—BP PLC, Exxon Mobil Corp., ConocoPhillips Co. and TransCanada Corp., which have now joined forces after dueling for years over separate gas pipeline projects—and for its scale." - Globe and Mail, 10/4/12



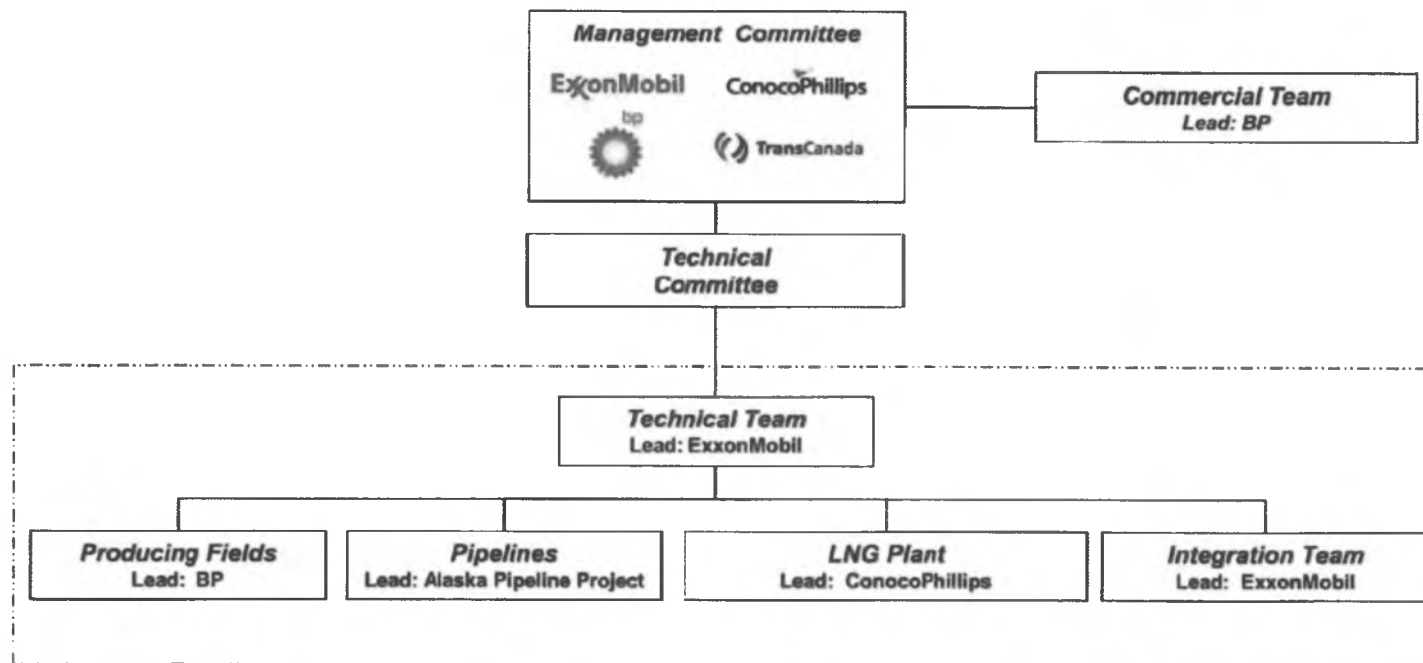
Photo: Getty Images courtesy of WSJ

2. COMMERCIALIZING NORTH SLOPE GAS

- SIGNIFICANT PROGRESS -

Attachment 1

Southcentral Alaska LNG – Integrated Team



Multimillion Dollar, Four-Company Effort – 125+ Employees, 100+ Contractors

- Joint work commenced March 31, 2012 after completion of the Pt. Thomson Settlement / joint work agreements
- Cooperative effort among the leading North Slope producers and a leading North American pipeline company
- Identified potentially viable LNG project options to monetize ANS natural gas
- Used company strengths, shared information / expertise; built upon past efforts, sought out new ideas

2. COMMERCIALIZING NORTH SLOPE GAS

- SIGNIFICANT PROGRESS -

Attachment 2

Alaska Southcentral LNG – Project Concept Description

Liquefaction Plant

- Capacity: 15 – 18 million tonnes per annum (MTA)
3 trains (5-6 MTA / train)
- Potential areas: 22 sites assessed in Cook Inlet, Prince William Sound and other Southcentral sites
- Footprint: 400 - 500 acres
- Peak Workforce: 3,500 - 5,000 people
- Required Steel: 100,000-150,000 tons



Producing Fields

- ~35 TCF discovered North Slope resource
- Additional exploration potential
- Anchored by Prudhoe Bay and Pt. Thomson with ~20 years supply available
- Use of existing and new North Slope facilities
- Confirmed range of gas blends from PBU/PTU can generate marketable LNG product
- Peak Workforce: 500 – 1,500 people



Storage / Loading

- LNG Storage Tanks, Terminal
- Dock; 1 - 2 Jetties
- Design based on 15- 20 tankers
- Peak Workforce: 1,000-1,500 people



Pipeline

- Large diameter: 42"- 48" operating at >2,000 psi
- Capacity: 3 - 3.5 billion cubic feet per day
- Length: ~800 miles (similar to TAPS)
- Peak Workforce: 3,500 - 5,000 people
- Required Steel: 600,000 - 1,200,000 tons
- State off-take: ~5 points, 300-350 million cubic feet per day, based on demand



Gas Treating

- Located at North Slope or Southcentral LNG site
- Remove CO₂ and other gases and dispose / use
- Footprint: 150 - 250 acres
- Peak Workforce: 500 - 2,000 people
- Required Steel: 250,000 - 300,000 tons
- Among largest in world

Estimated Total Cost: \$45 – \$65+ Billion

Peak Construction Workforce: 9,000 – 15,000 jobs

Operations Workforce: ~1000 jobs in Alaska

Descriptions and costs are preliminary in nature and subject to change. Cost range excludes inflation.

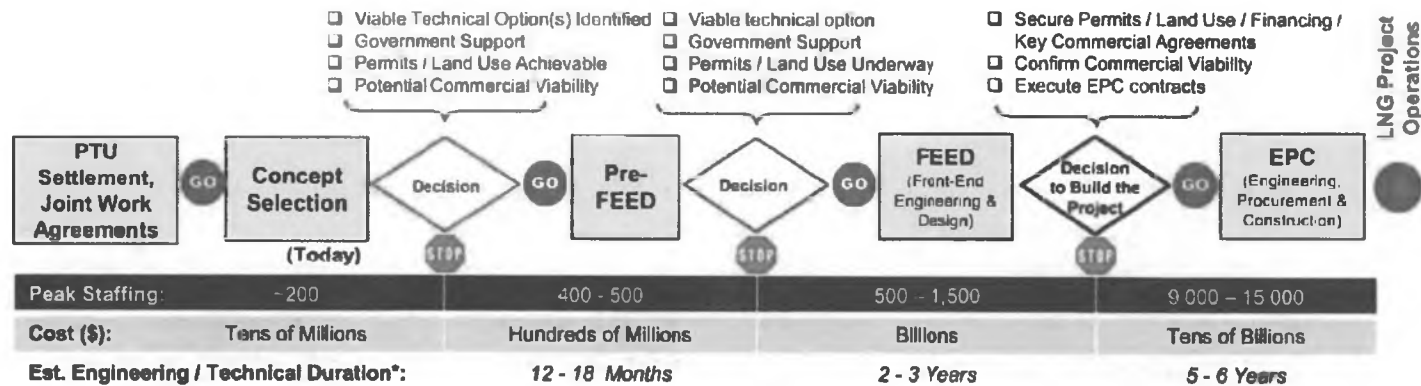
2. COMMERCIALIZING NORTH SLOPE GAS

- SIGNIFICANT PROGRESS -

Attachment 3

Southcentral Alaska LNG – Work Plans / Key Decision Points

Requirements to Take Next Step:



Activities	Evaluate: <ul style="list-style-type: none"> • Range of technically viable options for major project components • Business Structure • In-state gas / export LNG demand 	Progress: <ul style="list-style-type: none"> • Preliminary engineering to refine concept • Business structure • Financing plan 	Complete: <ul style="list-style-type: none"> • Front-end engineering & design • Major contract preparation • Business structure • Financing arrangements 	Execute: <ul style="list-style-type: none"> • Final engineering • Financing • Procurement • Fabricate / Logistics / Construct • Prepare for Operations 	
	Solicit Interest of Others		Solicit Interest of Others		
	Establish Government Support and Advance Regulatory Issues: <ul style="list-style-type: none"> • Competitive oil tax environment; predictable / durable LNG project fiscal terms; AGIA Issues • Assure ability to secure regulatory approvals / permits / land use • Environmental activities / Technical data collection • Stakeholder engagement • File DOE Export License 		Advance Gov't / Reg. Issues: <ul style="list-style-type: none"> • Key permit / land use approvals • Stakeholder engagement • Secure DOE Export License 		Complete Gov't / Reg. Issues: <ul style="list-style-type: none"> • Secure remaining construction / operating permits • Stakeholder engagement
		Start individual gas / LNG sales / shipping efforts	Execute individual gas / LNG sales / shipping agreements	Implement business structure & agreements	
	Screen commercial viability	Assess commercial viability	Confirm commercial viability	Commission / start-up	

* NOTE: Duration of various phases may be extended by protracted resolution of fiscal terms, permitting and regulatory delays, legal challenges, changes in commodity market outlook, time to secure long-term LNG contracts, labor shortages, material & equipment availability, weather, etc.

3. COMPARATIVE ADVANTAGES OF AK LNG

- HUGE GAS RESOURCE BASE -

- The North Slope of Alaska is estimated to have over 200 trillion cubic feet of conventional gas
- Conventional gas is not controversial—unconventional gas in the Lower 48 U.S. states remains controversial
- 35 trillion cubic feet of known reserves
- Prudhoe Bay reinjects 8 billion cubic feet of gas per day, which is enough to meet Canada's daily gas needs
- These numbers do not include the trillions of cubic feet of shale gas, tight gas, and gas hydrates estimated for the North Slope
- This is an almost inexhaustible supply of gas with new technology
- North Slope gas is “wet” gas with a high energy content (BTU value)
- An Alaska LNG project has complete certainty of supply; not all other projects do



3. COMPARATIVE ADVANTAGES OF AK LNG

- CO-LOCATED WITH EXISTING OIL & GAS INFRASTRUCTURE -

- Existing oil and gas infrastructure on the North Slope can be utilized for a large-scale LNG project
- The route for a large-scale LNG project would be the same or similar to the existing Trans-Alaska Oil Pipeline route, which will save on costs and have a limited impact on the environment



3. COMPARATIVE ADVANTAGES OF AK LNG

- EXCEPTIONAL RECORD OF RELIABILITY -

- Alaska has a longstanding tradition of reliably exporting LNG to Asia
 - Alaska has been exporting LNG to Japan for over 40 years
 - Alaska has transported 2.5 trillion cubic feet of gas to Asia (the majority to Japan) over this time
 - Alaska has never missed a LNG cargo shipment to Asia
- Alaska is the only place in the United States exporting LNG
- Alaska does not use gas supplies for political purposes

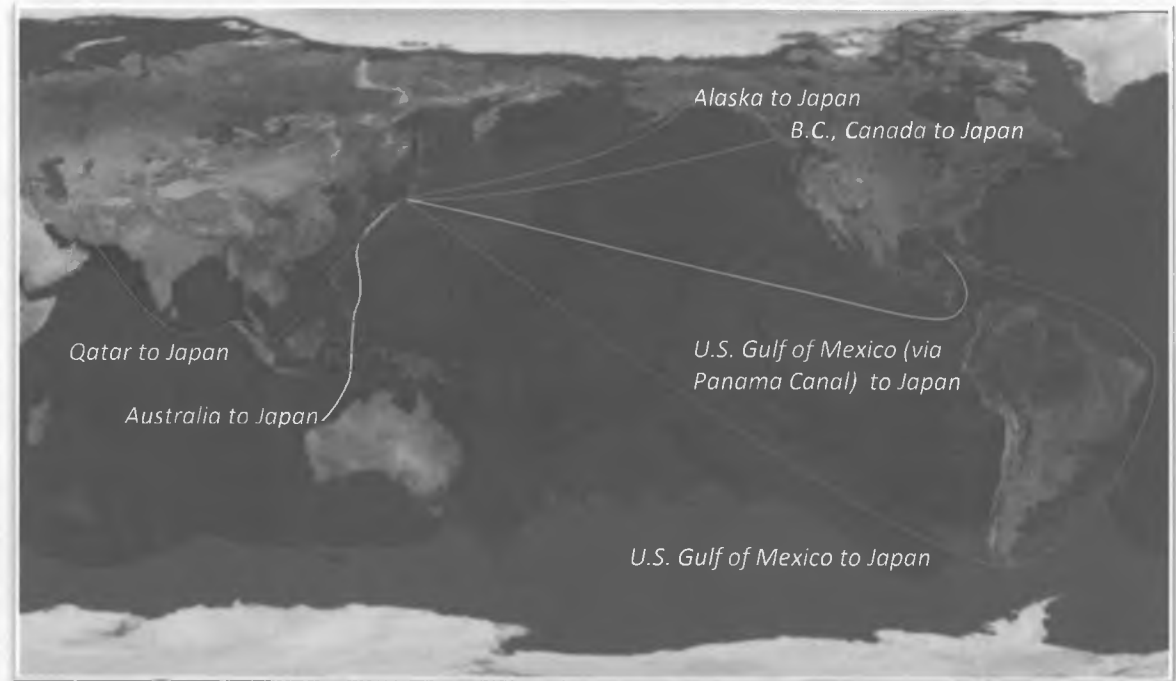


LNG tanker at the Kenai, Alaska LNG marine export terminal.
Photo from ConocoPhillips, "The Kenai LNG Plant Celebrates 10 Years"

3. COMPARATIVE ADVANTAGES OF AK LNG

- GEOGRAPHIC PROXIMITY, POLITICAL/LEGAL STABILITY,
& COST COMPETITIVENESS -

- Close proximity to Japan
- Avoids strategic shipping choke points that other sources of LNG must traverse
- Benefits from American legal and political stability and the rule of law
- No looming conflicts in the region
- Proximity/shipping costs are very low
- Use of existing infrastructure and pipeline routes reduces costs



- Cold weather efficiencies significantly decrease processing costs compared to warmer climates

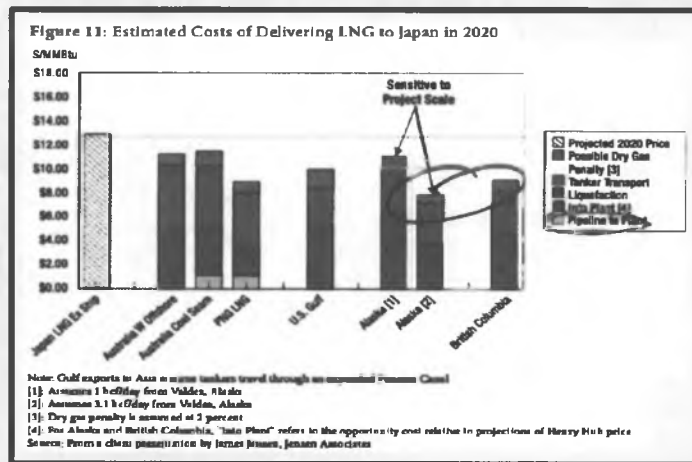
3. COMPARATIVE ADVANTAGES OF AK LNG

- COST COMPETITIVE COMPARED TO OTHER GLOBAL LNG PROJECTS -

Recent Studies To Support Competitiveness

Brookings Institution (2012), the public policy organization, published a policy brief that discussed the strong competitive position of a potential, large-scale Alaska LNG to Asia project.

- Alaskan exports may prove to be a source of strong competition at the margin for U.S. LNG in the Pacific Basin. An Alaska project may be one of the least costly alternatives for delivering LNG to Japan in 2020



Wood Mackenzie (2011), the global research and consulting firm, completed a study for the State of Alaska to evaluate the economic competitiveness of Alaskan LNG exports relative to other projects.

- Alaskan LNG exports would be competitive and could generate between \$220 and \$419 billion
- Alaskan LNG exports have a delivered cost structure *below* \$10/MMBtu
- Most competing Australian projects and proposed North American LNG exports yet to secure Final Investment Decision are expected to deliver LNG to Asia at a cost of \$10-\$12/MMBtu under current gas price assumptions

3. COMPARATIVE ADVANTAGES OF AK LNG

-WORLD-CLASS BUSINESSES & LNG PRODUCERS CURRENTLY OPERATING -

- World-class businesses and LNG producers have already invested billions of dollars on LNG studies and oil and gas infrastructure in Alaska
- Companies are working closely together/integrating efforts
- Highly trained workforce in Alaska can ensure competitive labor costs
- Strong oil and gas service support industry already in place

3. COMPARATIVE ADVANTAGES OF AK LNG

- SIGNIFICANT PROGRESS ON EXPORT LICENSE AND OTHER REGULATORY MATTERS -

- Existing Alaska LNG export facility has a U.S. Department of Energy export license and has been reliably exporting LNG to Asia for over 40 years
- Not part of Lower 48 shale debate and controversy
 - Stranded gas—no effect on national gas market in the Lower 48 U.S. states
 - Large LNG Alaska project will get more gas to Americans, not less
- First Nation and Native land claim issues have already been resolved
- Previous and upcoming Environmental Impact Statements (EIS)—Yukon Pacific/AGDC
- Federal Energy Regulatory Commission (FERC) filing/resource reports
- State regulatory approvals are in place to produce and transport gas



3. COMPARATIVE ADVANTAGES OF AK LNG - SIGNIFICANT PROGRESS ON EXPORT LICENSE AND OTHER REGULATORY MATTERS -

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Federal Register
Vol. 53, No. 10
Friday, January 15, 1988

Presidential Documents

Title 3—
The President

Presidential Finding of January 12, 1988
Presidential Finding Concerning Alaska Natural Gas

This Administration has been dedicated to encouraging free trade and to removing regulatory impediments that inhibit the development of our Nation's natural resources. Proven natural gas reserves in the Prudhoe Bay area of Alaska's North Slope represent approximately 18 percent of total U.S. gas reserves. In addition, undiscovered, recoverable supplies of natural gas from Alaska's North Slope may exceed 100 trillion cubic feet. There is no doubt the development of Alaska's natural gas resources will ensure a secure and abundant supply of energy for the United States.

Accordingly, I find that exports of Alaska natural gas in quantities in excess of 1,000 Mcf per day will not diminish the total quantity or quality nor increase the total price of energy available to the United States.

Section 12 of the Alaska Natural Gas Transportation Act (16 U.S.C. 1710) requires me to find exportation "will not diminish the total quantity or quality nor increase the total price of energy available to the United States." In order to make this finding, it has been necessary to assess the relationship of Alaska natural gas to the U.S. energy market.

There exist adequate, secure, reasonably priced supplies of natural gas to meet the demand of American consumers for the foreseeable future. This demand can be met by lower-cost production and already-approved Canadian imports. If necessary, this demand also can be met at lower delivered energy cost by coal, oil, imported liquefied natural gas (LNG), natural gas from Mexico, and other energy sources.

Given these facts, exports of Alaska natural gas would represent a judgment by the market that the energy demands of American consumers can be met adequately from other sources at comparable or lower prices. Exports of Alaska natural gas would not diminish the total quantity or quality of energy available to U.S. consumers because world energy resources would be increased and other more efficient supplies would thus be available. Finally, exports would not increase the price of energy available to consumers since increased availability of secure energy sources tends to stabilize or lower energy prices.

Accordingly, I find that exports of Alaska natural gas in quantities in excess of 1,000 Mcf per day will not diminish the total quantity or quality nor increase the total price of energy available to the United States.

This finding removes the Section 12 regulatory impediment to Alaskan natural gas exports in a manner that allows any private party to develop this resource and sets up competition for this purpose. It is my belief that removal of this impediment to private sector development of Alaska's vast natural gas resources, using private sector resources with no government subsidy, will benefit our entire Nation.

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Federal Register / Vol. 53, No. 10 / Friday, January 15, 1988 / Presidential Documents

This finding represents a determination that the effects of exports of Alaska natural gas on American consumers would comply with the market criteria of Section 12 in the context of current and projected future energy markets and that such exports would be consistent with our comprehensive energy policy. It does not assess the merits or feasibility of a particular project, but rather lets the marketplace undertake a realistic consideration of various options concerning Alaska natural gas. The operation of market forces is the best guarantee that Alaska natural gas will be developed efficiently and that there is an incentive to find additional reserves.

I do not believe that the completion of the Alaska Natural Gas Pipeline will create any barriers to the private sector's development of the "prebuild" portion of the pipeline.

Ronald Reagan

THE WHITE HOUSE
Washington, January 12, 1988

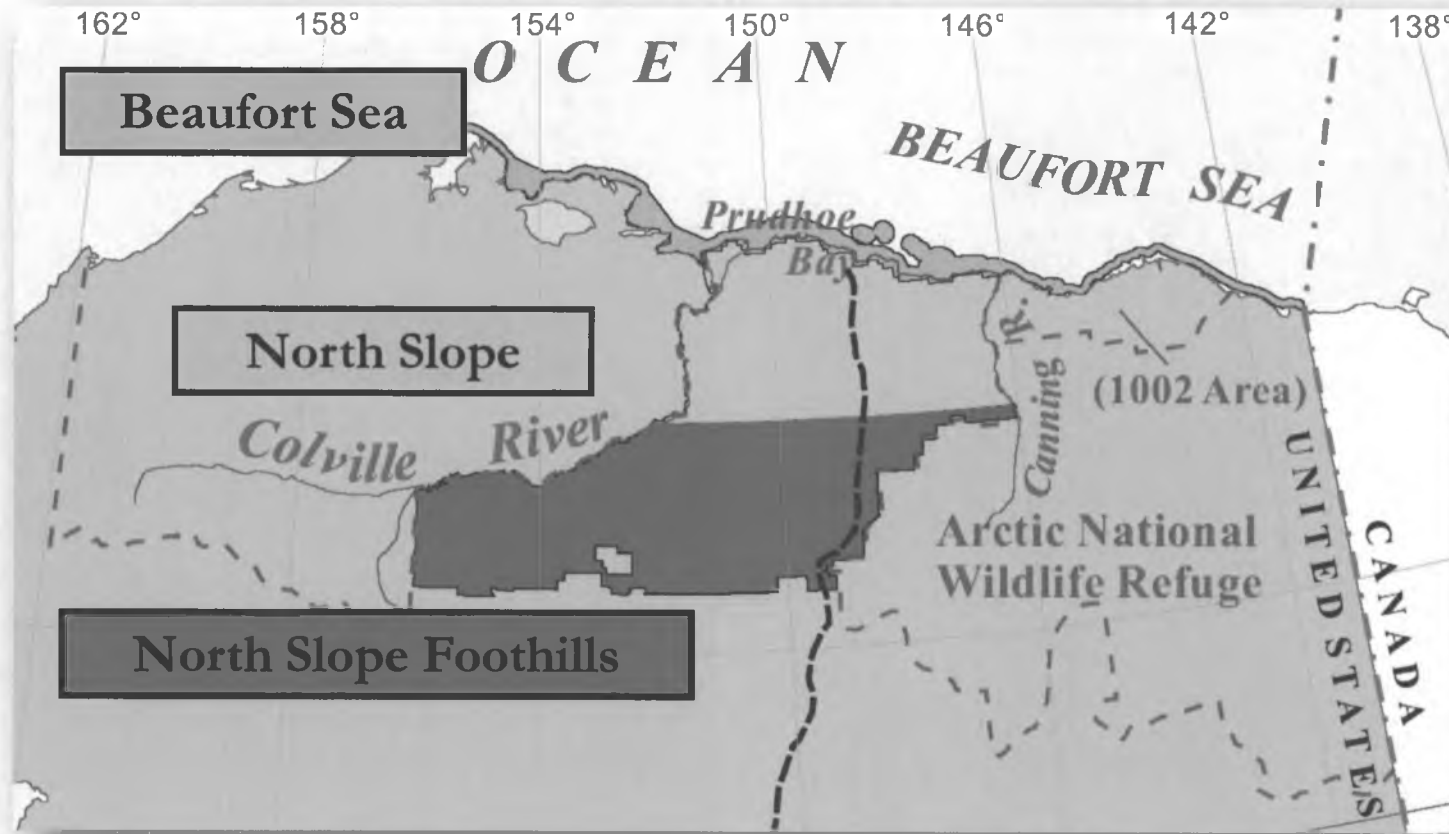
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Presidential Finding of January 12, 1988, set a strong precedent that may still be applicable today.

3. COMPARATIVE ADVANTAGES OF AK LNG

- DOWNSTREAM AND UPSTREAM
INVESTMENT OPPORTUNITIES -

**North Slope, North Slope Foothills, and Beaufort Sea
Areawide Oil and Gas Lease Sales—November 7, 2012**



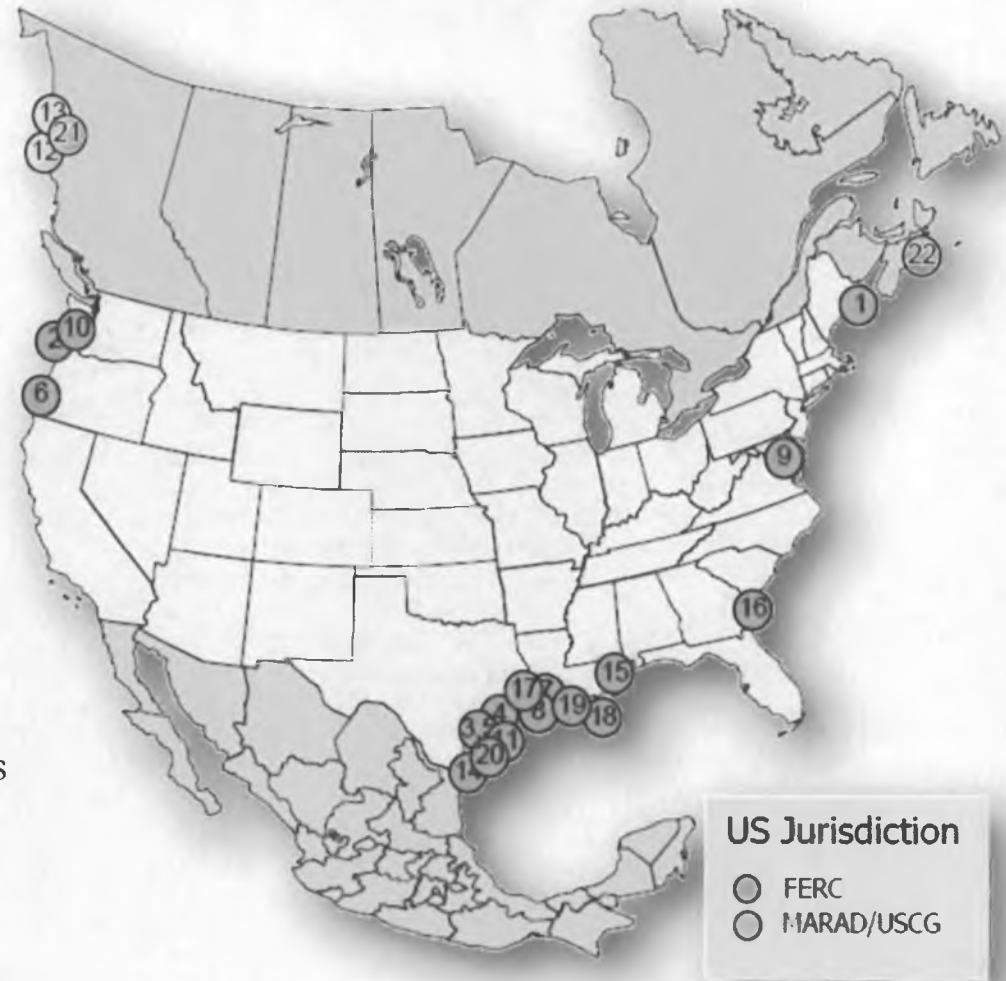
3. COMPARATIVE ADVANTAGES OF AK LNG - OTHER PROJECTS OR REGIMES IN COMPARISON -

Western Canada/British Columbia

- Resource-risk
- First Nations land claim issues unresolved
 - “First Nations across Canada attempt to stall Northern Gateway, Kitimat, Enbridge,” Petroleum News, December 2, 2012

Lower 48

- Shale gas controversy
- Regulatory issues and gas export limits
- Export infrastructure constraints



North American LNG Import/Export proposed terminals,
U.S. Federal Energy Regulatory Commission

3. COMPARATIVE ADVANTAGES OF AK LNG - OTHER PROJECTS OR REGIMES IN COMPARISON -

Australia

- Cost overruns e.g., Gorgon
 - “Chevron’s Gorgon project cost up 40% to \$52 billion,” MarketWatch, *Wall Street Journal*, December 6, 2012
- Skyrocketing labor costs
 - “Price Crunch Looms for Australian LNG,” *Wall Street Journal*, September 24, 2012

Russian Arctic

- Resource-risk
- Reliability
- Political and legal stability

Qatar

- Political and legal stability
- Regional politics and lack of security

Other US/Alaska Benefits

- U.S.-Korea Free Trade Agreement (FTA)
- No Committee on Foreign Investment in the United States (CFIUS) issues

4. SECURE ALASKA'S FUTURE: *STRATEGIC & CRITICAL MINERALS*

Objective:

To highlight Alaska's potential for exploration, development, and processing of strategic and critical minerals, including Rare Earth Elements (REEs)



“Secure Alaska’s Future: Strategic Minerals” is a comprehensive strategy that will:

- I. Undertake a statewide assessment of Alaska’s strategic mineral potential—millions budgeted for this project
- II. Provide support for the development of known or highly prospective strategic mineral occurrences throughout Alaska through infrastructure partnerships and incentives
- III. Improve the structure and efficiency of permitting processes in order to expedite mineral development, including strategic minerals
- IV. Deepen partnership and cooperation with the federal government, local governments, Native corporations, and other potential new entrants to encourage domestic exploration, development, and processing of REEs and other strategic minerals
- V. Attract new investment and markets for Alaska’s abundant mineral resources

4. SECURE ALASKA'S FUTURE: STRATEGIC & CRITICAL MINERALS - RECENT MINING ACTIVITY -



In 2011, the gross mineral production value from Alaska totaled \$3.8 billion, up 16% since 2010.

Mineral ore production had an export value of \$1.8 billion in 2011, nearly 40% of Alaska's total exports.

- **Producing Mines in Alaska**

- ***Red Dog:*** one of the world's largest zinc mines, produced over 555k tons of zinc and 78k tons of lead in 2011
- ***Greens Creek:*** among the world's top 10 silver mines, produced over 9.48 million ounces of silver, 56k ounces of gold, and 73k tons of zinc in 2011
- ***Pogo:*** produced 356k ounces of gold in 2011
- ***Fort Knox:*** produced 289.8k ounces of gold in 2011
- ***Usibelli:*** produced a record 2.2 million tons of low sulfur coal in 2011, exporting half of its production
- ***Nixon Fork:*** gold and copper mine re-opened in 2011 and still in pre-commercial production phases
- ***Kensington:*** 2011 was first year of production for this new gold mine—produced 88,420 ounces of gold

4. SECURE ALASKA'S FUTURE: STRATEGIC & CRITICAL MINERALS - RECENT MINING ACTIVITY -



In 2011, mineral exploration investment in Alaska totaled \$365 million - accounting for about one-third of the total spent on exploration in the U.S.

- **Advanced exploration projects include:**
 - ***Pebble:*** ~ 80.6 billion pounds of copper, 107.4 million ounces of gold, and 5.6 billion pounds of molybdenum
 - ***Bokan Mountain:*** enriched in yttrium, dysprosium, and critical heavy Rare Earth Elements
 - ***Donlin:*** ~ 42.3 million ounces of gold
 - ***Money Knob:*** ~20.6 million ounces of gold
 - ***Niblack:*** ~7.3 million tons of polymetallic (copper, gold, silver, and zinc) volcanogenic massive sulfide project
- 30 exploration projects spent over \$1 million in 2011
- \$2.8 billion has been spent on mineral exploration in Alaska since 1981

4. SECURE ALASKA'S FUTURE: *STRATEGIC & CRITICAL MINERALS* - STATEWIDE ASSESSMENT & OUTREACH -

- State is undergoing a statewide assessment for strategic and critical minerals - \$3M designated in FY13 budget
 - One of largest undertakings in the country
 - Looking to work with other public and private groups
 - Information will be made available to public
- Held first “Alaska Strategic & Critical Minerals Summit” in Fairbanks in 2011. The event had:
 - Huge turnout
 - Very favorable national press



4. SECURE ALASKA'S FUTURE: STRATEGIC & CRITICAL MINERALS - STATEWIDE ASSESSMENT & OUTREACH -

- Held second annual “Alaska Strategic & Critical Minerals Summit” in Fairbanks on November 30, 2012, at the Fairbanks Princess Riverside Lodge
- Speakers included:
 - State and Federal Government Officials and a representative from Japan Oil, Gas and Metals National Corporation (JOGMEC)
 - University of Alaska
 - Native Corporation leaders
 - Private Industry



4. SECURE ALASKA'S FUTURE: STRATEGIC & CRITICAL MINERALS - SUMMIT, NOVEMBER 30, 2012, FAIRBANKS, AK -

OPENING REMARKS

Welcome Remarks: Mayor Jerry Cleworth, City of Fairbanks, and Mayor Luke Hopkins, Fairbanks North Star Borough

Day's Overview: Dan Sullivan, Commissioner, Alaska Department of Natural Resources

MORNING ADDRESS

Honorable U.S. Senator Lisa Murkowski, Ranking Member, U.S. Senate Committee on Energy and Natural Resources

PRESENTATIONS: Investigating Alaska's Strategic Mineral Potential

Bob Swenson, State Geologist and Director of the Division of Geological and Geophysical Surveys, Alaska Department of Natural Resources

Larry Meinert, Mineral Resources Program Director, U.S. Geological Survey

Curtis Freeman, Avalon Development Corporation

PRESENTATIONS: Access to Alaska's Lands and Resources

Honorable Alaska Senator John Coghill, Alaska Senate Majority Leader

Ed Fogels, Deputy Commissioner, Alaska Department of Natural Resources

Ethan Schutt, CIRI

Matt Ganley, Bering Straits Regional Corporation

Lance Miller, NANA Regional Corporation

KEYNOTE ADDRESS

Michael Silver, President and Chairman of the Board, American Elements

PRESENTATIONS: Strategic Minerals – National Policy and Global Security

Dan McGroarty, President, American Resources Policy Network

Hiroyuki Katayama, Assistant General Manager, Japan Oil, Gas and Metals Corporation (Vancouver Office)

PRESENTATIONS: Project Research, Development and Financing

Susan Bell, Commissioner, Alaska Department of Commerce, Economic Development & Community Affairs

Mark Myers, Vice Chancellor of Research, University of Alaska Fairbanks

Ken Collison, Chief Operating Officer, Ucore Rare Metals

Mark Davis, Alaska Industrial Development & Export Authority

PRESENTATIONS: Regulatory and Stakeholder Issues

Tom Crafford, Alaska Department of Natural Resources

Karl Hanneman, Alaska General Manager, Livengood Project, Tower Hill Mines Inc.

Mary Sattler, Donlin Gold

Lorna Shaw, Chair, Greater Fairbanks Chamber of Commerce

CLOSING REMARKS

The Honorable Lieutenant Governor Mead Treadwell

RECEPTION AND INVESTOR NETWORKING AT THE MUSEUM OF THE NORTH

5. STATEWIDE PERMITTING REFORM

Objective:

Improve the State of Alaska's permitting processes in order to advance the public interest by ensuring projects are permitted in a timely, predictable and efficient manner while safeguarding the environment.

DNR has been working with a team from DNR, DEC, ADF&G, and LAW to develop and advance strategies that aim to:

- I. Improve agencies' internal permitting structure to create a more efficient, timely, and certain process
- II. Enhance coordination within different state departments and with different entities and stakeholders throughout the state
- III. Seek input from the public about the permitting process including input from municipalities, industry and non-governmental organizations
- IV. Improve coordination between the state and the federal government—federal permitting issues have a strong influence on state projects
- V. Anticipate and plan for permitting the next phases of resource development, e.g. the Shale Oil Task Force



5. STATEWIDE PERMITTING REFORM

- SIGNIFICANT PROGRESS MADE -

- In FY12, the Legislature provided approximately \$2.7 million in operating funds for the Division of Mining, Land & Water to create efficiency, timeliness and certainty in the permitting process
- We are utilizing capital funding from FY12 (\$2.5M for the Unified Permit Project and Document Management) to focus on business management software and services
- In FY13, the Legislature approved the continuation of FY12 operating funds as part of the ongoing base for permitting and an additional \$950.0 to cover increased personnel costs and fill vacant positions focused on permitting
 - FY13 capital budget included \$3.3M to continue work on the Unified Permit Project, including the continuation of IT strategies and Business Process Management
- We have filled 31 of 36 new/vacant positions
- We reclassified and updated over 50 position descriptions
- Since the beginning of FY12, the backlog has been reduced by 38.2% (1,015 authorizations)
- We have conducted public meetings statewide for input on state permitting processes
- We are evaluating internal processes to identify and fix inefficiencies



5. STATEWIDE PERMITTING REFORM

- SIGNIFICANT PROGRESS MADE -

Statutory Changes – HB361

- The Division of Mining, Land and Water has identified over 30 statutory changes that would help reduce applicant costs, create efficiencies, reduce redundancies, and reduce opportunities for legal challenges
- During the 2012 Legislative session, the Governor introduced HB 361, which included the highest priority changes related to leasing and disposal programs that would help reduce the permitting burden on the applicant and free more time for staff to work on processing applications
- The Legislature passed HB 361 and it has been signed by the Governor



5. STATEWIDE PERMITTING REFORM

- OTHER EFFORTS TO CREATE EFFICIENCIES -



- Contributing to the Department/State's Permit Efficiency Task Force
- Evaluating how to improve coordination with other state and federal agencies
- Continuing to evaluate organizational changes in the division (*function of process improvement*)
- Hired a business analyst to help lead our staff through process evaluations and changes
- Broader statewide focus underway
- DNR, including the DMLW and DOG, continues to evaluate our statutes and regulations to look for additional modifications to improve permitting efficiency, certainty and timeliness

6. SUSTAINABLE DEVELOPMENT

- ROBUST ENVIRONMENTAL STANDARDS -

- Responsible resource development and protecting the environment go hand in hand
- We all must be leaders in this regard
- In Alaska, our efforts to protect the environment and wildlife have been successful. For example:
 - When debating the development of the Trans-Alaska Pipeline System (TAPS), many predicted that oil and gas development would decimate caribou herds
 - These predictions have not come true
 - In fact, caribou have thrived over the past 35 years. The Central Arctic caribou herd, which occupies summer ranges surrounding Prudhoe Bay—the largest oil field in North America—has grown from 5,000 in 1975 to over 70,000 today

Because of efforts taken by federal, state, and local governments and the energy industry, oil and gas development in Alaska is conducted in a safe and responsible manner with standards that exceed most other jurisdictions in the world.



6. SUSTAINABLE DEVELOPMENT

- ROBUST ENVIRONMENTAL STANDARDS -

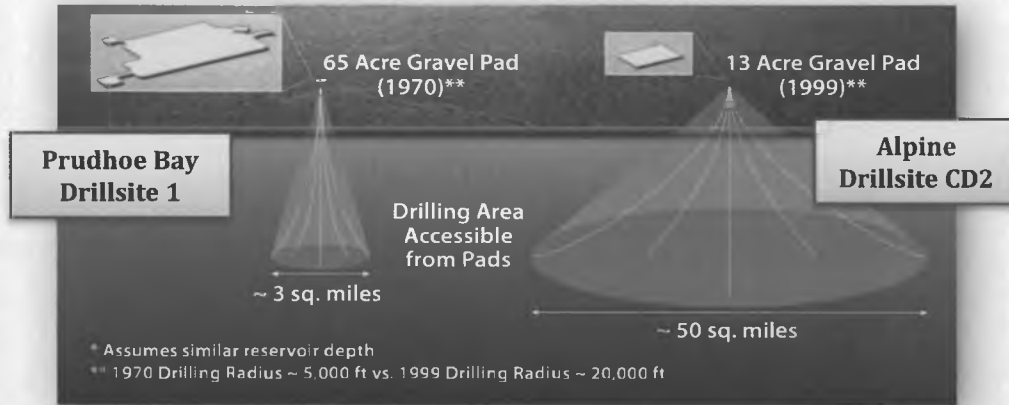
Oil and gas development in Alaska is conducted in a safe and responsible manner with some of the most stringent standards in the world

- “No impact exploration”
- No operations can be conducted within one mile of polar bear dens
- The state will not lease acreage in sensitive areas
- The state encourages the unitization of leases
- Whenever possible, onshore pipelines are buried to minimize impacts on wildlife – if pipelines are built above ground, they are elevated so caribou can migrate
- Alaska mandates that operators use the best available technology for oil discharge containment, storage, transfer, and cleanup
- Nearly 50 years of operations in Cook Inlet have coexisted with world-class fisheries



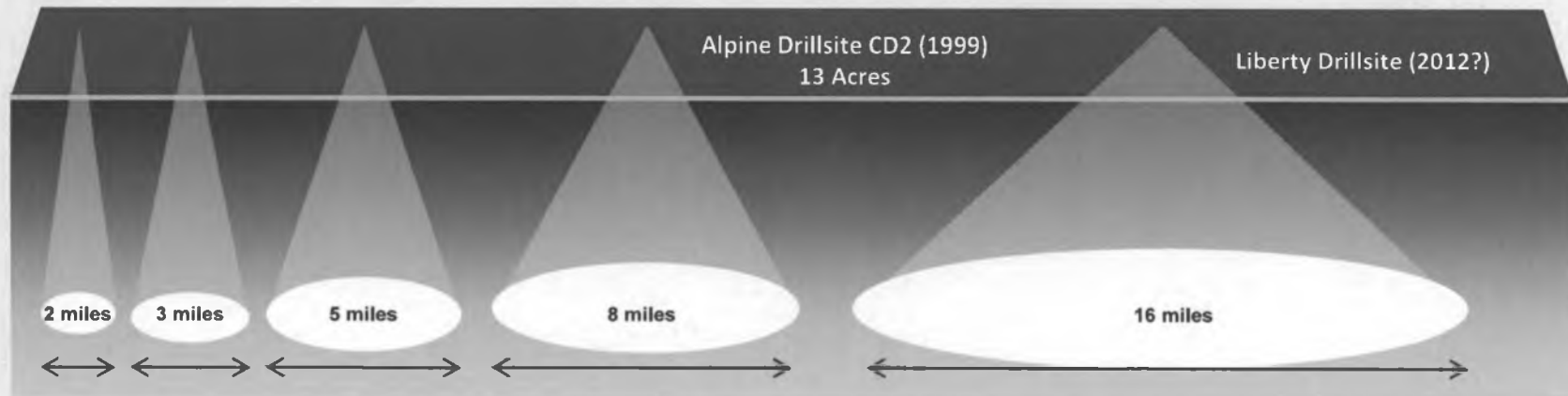
6. SUSTAINABLE DEVELOPMENT

- ADVANCES IN EXPLORATION & DRILLING TECHNOLOGY -



- In 30 years, surface footprint requirements have been dramatically reduced. At the Alpine field, 54 wells have been drilled from one 13-acre pad
- Wells can also reach a much larger radius – from 3 sq. miles in 1970 to 50 sq. miles in 1999 and, perhaps, 100 sq. miles in 2012

Prudhoe Bay Drillsite 1 (1970)	Kuparuk Drillsite 2B (1980)	Kuparuk Drillsite 3H (1985)
65 Acres	24 Acres	11 Acres



PART III



2013 Legislative Session & Beyond

LEGISLATIVE SESSION & BEYOND

- OIL TAX REFORM -

- The Governor has been encouraged by the consensus that has emerged over the past year
- Alaska should be in the forefront of this American energy renaissance rather than watch oil production continue to ebb
- Alaskans agree that something needs to be done
- Implementing comprehensive plan—tax reform remains key

Core Principles of Tax Reform:

- Must be fair to Alaskans
- Encourage new production
- Simple so that it restores balance to the system
- Durable for the long term

Status quo favored by some is unfair to Alaskans and unacceptable.

LEGISLATIVE SESSION & BEYOND

- OTHER EFFORTS -

Gas Commercialization

- Governor's new benchmarks in 2013 State of the State
- We will work to accelerate gas line development because of our urgent need for in-state energy
- The window of opportunity to sell Alaska LNG to Asian markets will not be open indefinitely
- Global competition is fierce
- Continued work on demand-pull

Permitting Reform

- Progress has been made but we will again pursue significant legislative efforts to create efficiencies by streamlining processes, reduce redundancies, and reduce opportunities for legal challenges
- Introduction by Governor of HB 77 builds on our comprehensive reform efforts; critical to state's future

Promoting the State

- Mineral Exploration Roundup Conference, Vancouver, January 28-31, 2013
- North American Prospect Expo, Houston, February 5-8, 2013
- "Alaska Grown" produce
- Alaska State Parks hosting "Arts in the Parks" throughout the summer
- Example: *Oil & Gas Journal* feature on Alaska

CONCLUSION

There is cause for optimism, but a lot of work left to do.

Partnership with all Alaskan stakeholders is key.



ALASKA

Envisioning a Bright New Era



Alaska is on the path to a new petroleum boom aided by a state government determined to make it, once again, a giant in the world's oil and gas industry. Explorers of all sizes are rediscovering the massive potential of the U.S.'s only arctic state.

This special report has been produced by Star Communications for distribution with *Oil & Gas Journal*

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The sleeping giant awakens

Ambitious targets, industry revival driven by reforms

Before the Gulf of Mexico and the shale gas revolution, Alaska rode high as a giant of the North American oil and gas industry.

In the late 1980s, more than 2 million barrels of oil flowed south every day through the Trans Alaska Pipeline System (TAPS), supplying the US with 25% of its oil needs.

The Alaska oil boom began to fade in the 1990s, and today the flow of oil through TAPS has ebbed to less than 600,000 barrels of oil per day.

But the sleeping giant is stirring thanks to a combination of forces that have put the United States' only arctic state on the path to a new energy boom.

Alaska's state taxes on onshore oil production - the highest in North America - are undergoing a reform effort to remove what many petroleum companies regard as the biggest barrier to new investment and production.

These moves have coincided with the recognition that Alaska's oil and gas potential is still greater than most other places around the world.

The re-rating of Alaska is highlighted by Shell's determination to drill in arctic waters off the north coast. Shell has already invested \$5 billion before sinking the first exploration well.

Alaska's place within an OECD country has also elevated it in global assessments. Unlike many of the big-oil destinations to emerge over the past 20 years, Alaska has a predictable fiscal and legal regime.

The shift towards a more positive investment climate has already led to a breakthrough in a potential new LNG

project based on multi-TcF reserves at Point Thomson and the legacy oil fields on the North Slope.

The project partners hope to capitalise on Alaska's proximity to Asia and build on the state's impeccable record as a



"We're going out of our way to let the world know that Alaska is interested in doing business with them and growing our economy in the process."

SEAN PARNELL, Governor

supplier of cargoes from the Kenai LNG plant since 1969.

Signs of the coming boom in Alaska's energy industry can be seen in a revival already underway in the state's traditional petroleum hotspots - the Cook Inlet in the south and the North Slope in the arctic.

A new wave of companies has entered the Cook Inlet over the past two years, reflected in high levels of bidding in recent annual oil and gas lease sales.

On the North Slope, explorers are racing to establish positions onshore and offshore. Prudhoe Bay, North America's largest oil field with almost 17 billion barrels already produced, is now being seen as just the beginning. The United States Geological Survey (USGS) and the U.S. Bureau of Ocean Energy Management collectively place a mean estimate of 40 billion barrels of oil still technically recoverable from the North Slope and in waters off Alaska's northern coast, along with 207 TcF of gas, not including shale gas and other unconventional sources such as viscous oil, heavy oil and gas hydrates.

These are big numbers that befit what is still one of the biggest and most exciting frontiers for the world's petroleum industry.



Offshore oil and gas production in the Cook Inlet

Alaska facing up to critical need for change

The declining flow of oil through TAPS is much more than a symbol of Alaska's economic health.

With no state income tax, sales tax or property taxes, the Alaskan administration relies almost exclusively on taxes charged to the oil and gas industry. In the year to 30 June 2011, taxes on the petroleum industry generated \$7 billion, or 92% of the state budget.

Alaska's public finances are in enviable health today, with a triple A rating, a budget reserve of \$20 billion and another \$40 billion parked in the Alaska Permanent Fund Corporation, a sovereign wealth fund established in 1980.

High oil prices of recent years have helped to insulate the state from the full effects of a long-term decline in production that has averaged about 5 percent per annum.

But with no short or medium term prospects of a reversal in the downward trend, the long-term outlook for Alaska's public finances is ringing alarm bells for the state's administrators.

The declining flow of oil through TAPS is also creating technical and potential environmental safety issues for the operator, Alyeska Pipeline Service Company.

These critical financial and technical issues led Alaska's Governor, Sean Parnell, to announce in March 2011 a goal to

rebuild the flow through TAPS to one million barrels of oil per day over the next 10 years.

Parnell says it will take a broad range of stakeholders to achieve the target, but government can take a leading role by

"We have to make it more attractive for the billions of dollars of investment we will require to get to that target of one million barrels per day."

DAN SULLIVAN, Commissioner DNR



doing business with them and growing our economy in the process."

Parnell is also actively encouraging the Obama Administration to follow the state's lead in creating a better investment climate for energy companies on Federal lands, which occupy around half of Alaska's land area, and in Federal waters on the outer continental shelf.

He argues that Alaska still has a key role to play

in creating energy security for the United States. The state continues to produce about 11% of the nation's oil needs, and has the potential to increase this dramatically.

Obama has supported Alaska's energy revival by establishing an inter-agency working group to improve coordination between the federal agencies that are responsible for authorizing onshore and offshore work by Shell, Statoil and others companies planning to drill in the Arctic.

Tax reform

Alaska's Commissioner of the Department of Natural Resources, Dan Sullivan, leads the administration's efforts to achieve the target of one million barrels per day.

He says the administration is "very focused" on achieving its ambitious target.

improving the tax and regulatory regime.

Tax cuts for oil and gas producers were passed last year by Alaska's House of Representatives, but were subsequently blocked by the state Senate.

Parnell says changing the tax regime is still his top priority, despite the barriers put up by the Senate.

"We have the public much better educated than they were a year and a half ago, and they see the connection between taxing and revenue for the state. Taxing more means less production and less revenue for the state of Alaska. It means less money for schools and everything else."

He says Alaska is actively working to develop its vast resources for the benefit of its people. "To do that, we recognise that we need to be more competitive. And we're going out of our way to let the world know that Alaska is interested in

"We believe it is achievable given the sheer size of the resources in the North Slope region. We are also benefiting from a shift in investment back to OECD countries. If you look around at countries with that combination of resource potential and stable political/legal systems, Alaska is probably the best place in the world right now."

Sullivan, who served in federal government from 2006 to 2009 as Assistant Secretary of State for Economic, Energy and Business Affairs, is leading his department's work on a multi-pronged strategy that begins with enhancing Alaska's global competitiveness and investment climate.

He says it is imperative that Alaska creates the right investment climate and cost structure. "We have to make it more attractive for the billions of dollars of investment we will require to get to that target of one million barrels per day."

"That will be principally through tax reform, but it's also through infrastructure development. We have invested significant amounts on improving our transport infrastructure, including maintaining the road to Prudhoe Bay."

Sullivan says Alaska already has very favorable and competitive tax rules that applied to the front end of projects, such as generous tax credits for exploration costs.

"Where we need to be more competitive is at the production end, particularly at times of higher oil prices."

The tax reforms so far envisioned include replacing a single marginal tax rate on oil production, which is currently one of the highest in the world, with a progressive tax similar to bracketed tax rates on personal income.

The reforms are also targeted at promoting infield drilling by existing producers, which is seen as the best way to get more oil into TAPS in the short term.

Sullivan says the state administration is focused on getting a tax reform package through the legislature as soon as possible.

"We have to succeed with this. It's critical for the investment climate and the future of the state."

Alaska's Commissioner of the Department of Revenue, Bryan Butcher, says the high cost of working in Alaska's remote areas, combined with the state's high taxes, has made other destinations more attractive for petroleum companies.

"Our resources are far greater than North Dakota and Texas. We have larger resources than a lot of the areas that are booming right now, but we're not getting the development they are getting. We can't



Petro Star refinery at the North Pole



Aiviq towing Shell's Kulluk



Oooguruk Drill Site in the Beaufort Sea



Prudhoe Bay Oil Fields

do anything about the remoteness, but we can do something to bring taxes down to a reasonable level."

Butcher says the state had become complacent in the past about attracting investment because of the huge size of the Prudhoe Bay and Kuparuk fields.

We have to compare ourselves to every other state and country and ask 'how do we stack up?'

"That's what this administration is doing, and looking at what we need to do to still get Alaska's fair share but also allow private industry to function at a profit that is competitive with elsewhere."

In addition to the ongoing effort on tax reform, he and Commissioner Sullivan have embarked on a comprehensive campaign – in the Lower 48 and around the world – to pitch Alaska and encourage new investment.

Permitting

The second key strategy for attracting energy investment is an overhaul of the petroleum permitting system in Alaska, which Sullivan says had changed little since the birth of Alaska's energy industry in the 1960s.

"We are reforming our state-wide permitting system, which is a really important issue. My agency has hired 35 new people and trained them as part of our larger effort to make our permitting much more efficient, timely and certain."

"We have passed through the legislature reforms that get rid of duplication and we have also invested in new technology so that permits can move more quickly."

Sullivan says the state is also working closely with the Federal Government on improving the handling of permits on Federal lands, which includes some of Alaska's most prospective areas.

Next phase

A third key strategy is clearing a path for the next phase of oil and gas development on the North Slope. The first phase was the discovery and development of Prudhoe Bay and neighbouring Kuparuk field, which are the largest and second largest oil fields in North America respectively.

These have dominated the North Slope for decades, but attention is now turning to dozens of nearby fields that are small by Alaska's standards, but would be moderate to large discoveries anywhere else.

Sullivan points out that the US Geological Survey in its last assessment of

the North Slope said there were dozens of smaller conventional pools.

"They define smaller as anywhere between 30 million and 300 million barrels. Now a lot of people would think 300 million barrels is not so small, but for Alaska that's small, and there are dozens of them."

The state is also encouraging development of unconventional plays, including shale oil, viscous oil and heavy oil. A new



"Our resources are far greater than North Dakota and Texas. We have larger resources than a lot of the areas that are booming right now"

BRYAN BUTCHER, Commissioner DOR

shale oil play in Alaska is beginning to emerge with investors like Riverstone and service companies like Halliburton focusing on the huge potential of shale oil in Alaska. To prepare for the different regulatory challenges of unconventional energy, Sullivan's department has set up a shale gas taskforce. In addition, Sullivan and his

staff has held a series of meetings with their counterparts in North Dakota.

The next phase of North Slope development is expected to rely heavily on smaller, more nimble companies outside the ranks of the supermajors. As experience in the North Sea has shown, independents can generate new waves of development activity in mature regions by exploiting the opportunities considered too small by the oil majors.

Texas-based Pioneer Natural Resources has led the charge with the discovery and rapid development of its near-shore Oooguruk oil field, about 250 km south-east of Barrow. The field represented the first production by an independent operator on the North Slope.

Brooks Range Petroleum is another independent securing a long-term presence on the North Slope with the recent discovery of the Mustang oil field on the southwestern boundary of the Kuparuk River. The Anchorage-based explorer has recently announced plans to bring the 40 million barrels field into production as early as 2014 at a rate of up to 14,000 barrels per day.

A climate for success:

- » Regular leasing opportunities
- » Exploration incentives
- » Strong support industry
- » Stable jurisdiction

Prospects for growth:

- » Vast untapped conventional resources
- » Promising unconventional plays
- » Momentum on LNG exports
- » Unique project financing options

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ANNUAL LEASE SALE SCHEDULE
North Slope: Fall | Cook Inlet: Spring

LEARN MORE about Alaska's investment climate, hydrocarbon potential, and leasing program: <http://dog.dnr.alaska.gov> or (907)269-8800.

Big frontier, even bigger opportunities

Onshore, offshore, diverse resource mix spur demand for acreage

Alaska has a reputation as a big frontier for mineral and energy resources, but the size and richness of its natural endowment is still hard to grasp.

The US Geological Survey (USGS) estimated in 2008 that Alaska's North Slope has more oil than any other Arctic nation, with a mean estimated resource of 36 billion barrels of oil and natural gas liquids.

North Slope gas resources are also among the largest in the Arctic circle, with an estimated resource of 221 trillion cubic feet.

More recently, the USGS has increased the estimate of undiscovered, technically recoverable oil on the North Slope to 40 billion barrels.

These figures do not include potentially tens of billions of barrels in unconventional resources, including heavy and viscous oil, shale oil and tight gas.

The USGS has also made big estimates for untapped resources in the Cook Inlet area, where Alaska's oil and gas industry began with the discovery of oil at Swanson River in the late 1950s.

Mean recoverable oil resources are estimated at 600 million barrels, with 13.7 Tcf of conventional gas and 5.3 Tcf of unconventional gas.

While these figures are dwarfed by the North Slope estimates, the Cook Inlet on the south coast of Alaska is easily accessible and is well south of the Arctic circle.

The Cook Inlet also offers a much more attractive tax regime than the North Slope, with no production tax on oil and tax credits of up to \$25 million on the first three exploration wells.

North Slope activity

The USGS studies suggest that explorers have still only scratched the surface of Alaska's petroleum potential, despite the production of almost 17 billion barrels of oil already from the North Slope. The high likelihood of undiscovered resources

TAPS Operating excellence



Proposals to construct the Trans-Alaska Pipeline System (TAPS) were fiercely opposed by environmental groups in the early 1970s. Approval was finally granted in 1973 by a special act of the US Congress.

Opponents predicted many adverse consequences, including the decimation of caribou herds.

In fact, caribou have thrived over the past 35 years. The Central Arctic caribou herd, which occupies summer ranges surrounding Prudhoe Bay, has grown from 5,000 in 1975 to over 70,000 today.

The growth of the caribou herd is one of many environmental success stories for TAPS, which is operated by Alyeska Pipeline Service Company.

Alyeska's chief executive officer, Thomas Barrett, says the company's two major accomplishments are the safe movement of 17 billion barrels of oil and the validation of the environmental protection built into TAPS.

"It's a fabulous piece of infrastructure that withstood a major earthquake in 2002 and has withstood wildfires. We're constantly making it safer and even more efficient."

Alyeska last year received an award from the Association of Environmental and Engineering Geologists for engineering and operating excellence.

is also borne out by the light amount of exploration activity. Only 500 wells have been drilled in the history of exploration on the North Slope. By comparison, the much smaller area of Wyoming has been subject to 19,000 wells.

The biggest news on the North Slope was the start this year of Shell's drilling program on the outer continental shelf, almost five years after it was awarded acreage in the Beaufort and Chukchi Seas.

The campaign did not make as much progress as Shell had hoped for because of delays with certification of a purpose-built spill containment vessel, but the supermajor was able to complete a number of top holes ahead of its return next season.

Shell's campaign has attracted global interest and is being closely watched by its major competitors on the outer continental shelf, Statoil and ConocoPhillips. Statoil - an Arctic specialist - was next in the queue to drill, but recently deferred plans for exploration wells until at least 2014. ConocoPhillips continues to work towards drilling in 2014.

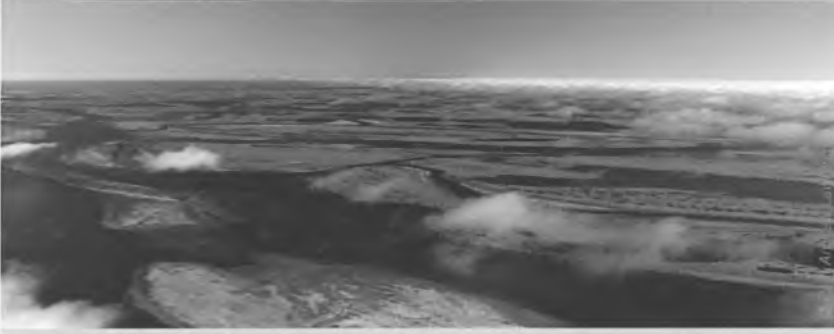
Onshore, activity on the North Slope is surging ahead, as reflected in the success of recent lease sales.

ConocoPhillips, which is already Alaska's largest oil producer through its interests in Prudhoe Bay, Kuparuk and Alpine fields, has staked out new positions onshore as it heads west into the National Petroleum Reserve - Alaska (NPR-A).

ConocoPhillips was the first company to explore in the NPR-A in 2008. It is set to become the first producer when it develops the CD5 satellite of the Alpine field. Production is expected to reach up to 18,000 barrels of oil per day when output begins in 2015.

The onshore lease sale also attracted new players such as Royale Energy, which is targeting conventional oil and a potential shale oil play.

Spanish energy giant Repsol is another new arrival. The company bid aggressively



Colville River on the North Slope, separating NPR-A from the Alpine oil field

in the 2010 onshore lease sale for 500,000 acres and followed up quickly with plans for a campaign of up to 15 exploration wells. Only three wells were drilled before a blowout at its Qugruk 2 cost it the rest of the drilling season. Smaller companies are playing a major role in the revival of the onshore North Slope, including Pioneer Natural Resources and home-grown independent Brooks Range Petroleum.

Other independents are looking closely at new ways to commercialize the region's many undeveloped discoveries, including the Umiat heavy oil field. Discovered in 1946, the Umiat has an estimated 70 million barrels of oil, but the high gravity of the crude has defeated previous production efforts.

Cook Inlet renaissance

Two years ago, the Cook Inlet was near dormant in terms of exploration activity. Since then, the entry of Apache Corporation and other newcomers has revitalized the region, with up to 15 exploration wells expected over the next year.

Hilcorp Energy, Linc Energy, NordAq, Cook Inlet Energy and Armstrong Oil & Gas are other newcomers boosting investment in exploration and development.

Apache's acquisition of about 800,000 acres is seen as highly positive for the Cook Inlet, given the company's enviable exploration record and its keen eye for opportunities around the globe.

The company's exploration leaders believe there is still as much oil to be found in the Cook Inlet as has been produced in the 55 years since the first discovery.

The company has begun a large campaign of 3D seismic surveys both onshore and offshore, featuring the use of new wireless technology that avoids the need to clear seismic lines through forest and other vegetation.

Hilcorp is major new entrant to the Cook Inlet. The privately owned company specializes in working over existing assets and applying new engineering to boost production.

Earlier this year, Hilcorp bought 165,000 acres from Chevron and is set to become

the largest producer in the Cook Inlet region with a buy out of Marathon Oil.

Hilcorp President Greg Lalicker reportedly told the Anchorage Chamber of Commerce the company would invest more than \$500 million in the Cook Inlet by the end of 2014, when it plans to achieve production of 25,000 barrels of oil per day.

Alaska's own shale gale on the way

Alaska's potential shale resources rival those driving the "shale gale" in the Lower 48 states.

The USGS has assessed mean potential shale resources on the North Slope of 940 million barrels of oil, 262 million barrels of natural gas liquids and 42 Tcf of gas.

The good news in the USGS assessment for Governor Sean Parnell is the best shale potential sits within Cretaceous and Triassic rocks beneath state lands.

Development of unconventional resources is already moving ahead, with Alaska-based independent Great Bear Petroleum drilling the first shale oil well in August on leases immediately south of Prudhoe Bay. The program is designed to tap directly into the oil-rich shales that have sourced the giant 20+ billion barrel Prudhoe Bay field.

North Slope exploration wells are usually drilled in winter on ice pads but Great Bear worked in summer by using previously built gravel pads adjacent to the Dalton Highway.

The company has formed a partnership with Halliburton and is working towards first production as early as next year.

LOOKING FORWARD

Arctic Slope Regional Corporation relies on the teachings of our ancestors, using our Iñupiaq values as our guide, to impart a prosperous heritage to future generations.

Our values are the cornerstone of our success as a community partner and as a company.



Native corporations part of Alaska's energy revival

Vision, diversification and resources create shareholder value

Alaska's native corporations play a major role in the business of petroleum exploration and production. The state's 13 native corporations were created in 1971 by an Act of US Congress to settle the claims of Alaska's traditional landowners. Today, native corporations own about 11% of Alaska's land area.

This includes some of the most petroleum prospective land in the state, which makes native corporations frequent partners with petroleum companies in exploration and development.

Native corporations were set up as for-profit companies with a mandate to develop businesses that could generate ongoing dividends to their native shareholders.

Native corporations have become spectacular success stories. A number of them operate engineering, drilling and petroleum service companies that provide essential support to the upstream industry, including the world's largest oil companies.

The Arctic Slope Regional Corporation (ASRC), which represents the business interests of its 11,000 Inupiat Eskimo shareholders, has been the largest locally owned and operated business in Alaska for almost two decades. It has 10,000 employees worldwide and revenues of more than \$2.5 billion in 2011.



Doyon Drilling Rig 16 in Prudhoe Bay

ASRC has four main divisions in energy services, petroleum refining and marketing, government services and construction industries.

ASRC Energy Services has emerged as one of Alaska's largest oilfield service providers. The skills developed in serving the oil and gas industry on the North Slope are now being exported to projects in the Gulf of Mexico, Russia and Canada.

ASRC Energy Services was also selected recently as the lead engineer on a new refinery on the Fort Berthold Indian Reservation in western North Dakota.

Native corporations are also moving increasingly into the exploration business in their own right.

Doyon, Limited, a Fairbanks-based native corporation with 18,600 shareholders, recently approved plans to spend \$37 million on oil and gas exploration within Doyon's lands and nearby State lands.

Doyon is the largest private landholder in the state with 12.5 million acres in Interior Alaska, spread across an area the size of France.

Doyon President and CEO, Aaron Schutt, says recent government incentives and changes in oil production taxes in frontier basins had encouraged Doyon to step up its petroleum exploration activity.

"In the next five to ten years I would really like to see us make an oil and gas discovery in Interior Alaska. That would be a game changer for us and why we are aggressively pursuing that goal."

"But because oil and gas exploration is very risky, we have aggressive growth plans as well for our service companies and government contracting. These will see us grow outside of Alaska, as well as in the Cook Inlet and the North Slope where we have operated for 30 years."

Schutt says Interior Alaska has been overlooked by petroleum explorers, with industry attention focused on the north and south coastal areas.

"There are multiple basins with potential for large, giant-sized oil fields that have never had wells drilled. That includes the Yukon Flats and the Nenana Basin, where the US Geological Survey has confirmed the existence of excellent oil source rock and deep basins."

"That would be an enormous shot in the arm for the state economy to have

"In the next five to ten years I would really like to see us make an oil and gas discovery in Interior Alaska. That would be a game changer for us and why we are aggressively pursuing that goal."

AARON SCHUTT, President & CEO, DOYON

production on that scale happen off the North Slope or the Cook Inlet."

Doyon's exploration plans focus on the Nenana Basin and the Yukon Flats.

The Nenana Basin was explored by Arco, Unocal and others in the 1960s and 1970s, with seismic surveys and two shallow wildcat wells.

Doyon conducted seismic surveys of its own in 2005 and drilled one well in 2009, with more seismic following in 2012, the first deep test of an Interior basin. It failed to make a commercial discovery, but yielded valuable data about the geology of the basin.

Schutt says Doyon is now seeking partners to explore over 400,000 acres in the basin. The corporation will submit permits for drilling at one location in summer 2013 and is looking to permit two other locations.

In the Yukon Flats, Doyon conducted a seismic survey in 2010. Geochemical surveys over the last two years have demonstrated a widespread surface expression of



CIRI's Fire Island Wind turbines

oil. Doyon plans a 3D seismic survey for 2013. Prior to Doyon's recent efforts, exploration has not occurred in the area since the 1980s, when Exxon conducted large 2D seismic surveys.

"They were very excited about the results but literally finished the program the day the Exxon Valdez ran aground. That distracted them for many, many years and no-one has been back in the Yukon Flats since then," Schutt says.

CIRI is another native corporation exploring for petroleum resources. The Anchorage-based company is owned by 7,600 Alaska Native shareholders who have ties to the Cook Inlet region.

CIRI President and Chief Executive Officer, Margaret Brown, says "we see energy becoming a core business segment, rather than just a passive royalty interest."

In the Cook Inlet we have just announced a large exploration agreement with Apache and we also have a relationship with Hilcorp. Additionally, we have what looks like a commercial discovery on our property on the Kenai Peninsula with a company called NordAq. And so we have every hope that we will have additional production coming off our land."

"We have royalty interest in those lands, but we are also looking for ways to become a more active participant, either by taking working interest in some of our leases or other mechanisms to support the industry here."



Through its subsidiary Stone Horn Ridge, CIRI is developing an underground coal gasification (UCG) project that is scheduled to begin commercial operations as soon as 2015.

The project is sited on remote CIRI land selected because its geology and groundwater conditions minimize environmental risk.

CIRI's core drilling programs have confirmed significant commercial coal reserves that can support safe, clean and economic UCG development.

The initial project will provide synthetic gas (syngas) that can be used to generate electricity. The project will also process syngas for use as a feedstock for clean liquid fuels, fertilizer and other petrochemical projects.

CIRI is also a leading developer of renewable energy, having just commissioned Alaska's first wind power generation project on Fire Island just west of Anchorage.

CIRI operates the project through its wholly owned subsidiary Fire Island Wind. The first phase of the project includes

"We see energy becoming a core business segment, rather than just a passive royalty interest."

MARGARET BROWN, President & CEO, CIRI

11 wind turbines capable of producing a total of 17.6 megawatts of electricity, which is enough to power more than 6,000 homes. A second phase could see the addition of 22 wind turbines.

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Frontiers no barrier for Alaska's transport operators

Investment, inter-modal logistics and infrastructure connect to resources

Alaska is a vast frontier more than twice the area of Texas, but size and remoteness have never been hurdles for the state's infrastructure operators.

The \$8 billion Trans Alaska Pipeline System (TAPS) is one of the world's largest pieces of infrastructure and indicative of what Alaskans can achieve when necessity calls.

The state's transport network is another innovative response to the geographic and climatic demands of the state.

Inter-modal connections of water, road and rail make it possible to transport heavy goods, construction equipment, chemicals and drilling supplies at any time of year from the lower 48 states to the North Slope.

Equipment and supplies can also be shipped direct to Prudhoe Bay in the openwater season from about July to October.

The state-owned Alaska Railroad Corporation (ARRC) is the backbone of the state's freight and passenger network.

The corporation operates a 470-mile railroad running from the southern ports of Seward and Whittier through Anchorage to Fairbanks, the largest city in the state's interior.

Alaska's rail network is connected to the Lower 48 states by sea barges. Rail cars roll onto the sea barges at Seattle and roll off at Whittier. The multi-level barges also carry shipping containers and road trucks.

ARRC's Vice President, Business Development, Dale Wade, says the sea and rail arrangement "is a very cost effective way of moving traffic. We have rail from the Lower 48 to Alaska, we just float part of the way."

When rail cars reach the end of the line at Fairbanks, goods are loaded onto surface carriers to complete the journey by road to Prudhoe Bay.

The ease of switching between transport modes and the cost efficiency of Alaska's rail network creates some interesting customer behaviours.

For example, road trucks have a clear run up the Alaska Highway to Fairbanks, but between 50 and 60 trucks each night roll onto ARRC flat cars and are freighted by rail instead.

"The cost per ton favors rail, especially in the summer season when the road is heavy with tourist traffic. Truck drivers can get there faster by road, but they can't get there more economically than going by railroad," Wade says.

ARRC plays a key role in moving goods and materials for the oil and gas industry, as well as taking its products to market. One of the railroads' biggest customers is Flint Hills Resources, which produces jet fuel at its North Pole refinery (near Fairbanks) from crude oil travelling down

TAPS to Valdez. Flint Hills' jet fuel is freighted by ARRC to Anchorage airport.

Wade says one of ARRC's key mandates is to support state-wide economic development. This means it is involved in a number of projects to expand the rail network, particularly where these support the development of Alaska's resource industry.

ARRC recently received approvals to develop a 30 to 45 mile extension of the rail network to Port MacKenzie, which is located opposite Anchorage on the western bank of the Cook Inlet's Knik Arm.

The extension will connect the small existing facilities of Port MacKenzie with minerals projects in the Alaskan interior and pave the way for bulk commodity exports. This could include a major increase in coal exports to Russia and Asia from the Usibelli coal mine near Healy in the mountains of the Alaska Range.

ARRC is also extending the northern limits of its network by building a bridge across Tanana River. The project is funded by the Department of Defence, which has military installations in the area. The project is also seen as a possible first step in a longer-term vision to connect Alaska's rail network to western Canada.

Development of transport infrastructure is one of the top priorities of the Parnell administration.

The FY 2013 budget allocated more than \$1.6 billion in funding for transportation infrastructure projects across the state.

This spending includes \$1.4 billion for state-wide highway and aviation projects and \$550 million for state-funded marine transportation projects such as ferries, docks and harbors.

Infrastructure spending includes the Roads to Resources initiative, which was recently allocated \$28.5 million to improve access for communities and resource explorers to fish, timber, minerals and petroleum resources.



Train transporting gravel

© Peter Bradley



Trans Alaska Oil Pipeline through the Brooks Range of Alaska

The largest component of Roads to Resources is a further \$10 million for environmental assessment work and evaluation of routes from the Dalton Highway to Umiat. The project has already received \$25 million in previous years.

The road would provide access to oil and gas resources along the northwestern foothills of the Brooks Range.

Public funds have also been allocated for development of all-season access roads to the Ambler district on the southern margin of the Brooks Range, which is highly prospective for copper deposits. Funding is also being provided for a road to Tanana in concert with the development work by ARRC.

The development of Alaska's transport infrastructure is also taking place at the Ted Stevens Anchorage International Airport. The airport is vital to the oil and gas industry, with most of the North Slope's fly-in, fly-out workers commuting through Ted Stevens every two weeks from their homes in Anchorage or the lower 48 states.

The airport this year began developing a new master plan that will look at how its services and facilities will need to grow over the next 10 years to meet the needs of users.

Anchorage airport is much more than a transport centre for Alaska's communities and local industry. It has become one of the busiest airports in the world in terms of cargo throughput because of its

"We have rail from the Lower 48 to Alaska, we just float part of the way."

DALE WADE, VP Business Development, ARRC



proximity to North America, Asia and Europe. The airport claims to be within 9.5 hours flying time of 90% of the developed world.

On the North Slope, air transport services were boosted recently with the opening of the Deadhorse Aviation Centre (DAC), owned by Offshore Support Services, Fairweather and the Kaktovik Inupiat Corporation. DAC is designed to provide oil companies and their suppliers with a safe and efficient aviation command center for onshore and offshore operations.

The centre is located at the Federal Aviation Authority-approved Deadhorse

Airport, with access to the Dalton Highway and the ocean. Facilities include terminal and hangar facilities, logistics support, staging and storage, office space

and accommodations for sleeping and dining. The 21,000-square-foot aircraft hangar can accommodate two to three large helicopters or smaller fixed-wing aircraft.

CENTRAL ALASKA Continental Rift Basins

1.8 million acres (730,000 hectares) in large contiguous blocks

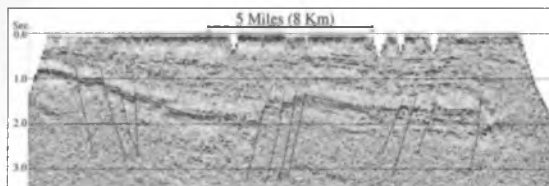
- Majority working interest and operator positions available
- Multiple giant field possibilities; two basins, multiple sub-basins
- Conventional oil and gas
- Nearby roads, rail and other infrastructure, including Trans Alaska Pipeline System
- Data room with recent and heritage seismic, drilling, other geophysics, and surface geochem
- Ongoing exploration programs, including seismic and drilling
- New State exploration rebates up to 80% of drill costs and 75% for seismic
- New lower State production tax rates for these basins

For more information and data displays, go to doyonoil.com

Contact:
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Fairbanks, Alaska USA
Phone: 907-459-2039
Email: meryj@doyon.com



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Environmental protection, a condition “sine qua non”

“No impact” standards, new technology and collaboration safeguard the environment

Alaska’s state administration is leaving no stone unturned on its bid to attract new investment in oil and gas exploration, but one area it will not compromise is protection of the environment.

Commissioner of the Department of Natural Resources, Dan Sullivan, says he makes no apology for the costs of meeting Alaska’s world-class environmental standards.

“For projects in Alaska, there are inherent costs of doing business because of the remoteness of the location, the arctic climate, and the fact that we have probably the highest environmental standards of any hydrocarbon basin in the world.”

“We’re very proud of that, and we tell businesses if you don’t want to abide by those standards, if your company does not have a commitment internally, we don’t want you up here.”

Sullivan says this hard-line approach is a deterrent to some companies, but he believes the size and abundance of Alaska’s exploration opportunities is more than adequate compensation.

The environmental debate has raged in Alaska since the discovery of the Prudhoe Bay oil field on the North Slope in 1968.

“Our efforts to develop resources on the North Slope while also protecting the environment and wildlife have been successful. We have a great record, with the one horrible exception of the Exxon Valdez, which was due to human error.”

The Cook Inlet on the south central coast is further proof the success of Alaska’s environmental standards. Oil and gas producers have successfully co-existed with world-class fisheries in the Cook Inlet for almost 50 years.

Alaska’s environmental standards are based on a philosophy of “no impact” exploration. No activity is allowed within one mile of polar bear dens, and leases are not

Port of Adak Reopens to serve oil industry



Drilling in the Arctic means much more than one or two drillships. Large flotillas of support vessels are required to comply with unprecedented safety and environmental safeguards.

To meet growing demand from the oil industry for port services and logistics, Aleut Corporation has teamed up with Offshore Systems, Inc. (OSI) to re-open Port of Adak, the westernmost port in the Aleutian Island chain.

The local native corporation bought the Adak settlement and its impressive transport infrastructure from the US government in 1997. Adak was a former Navy and Coastguard base that closed after the Cold War.

Anchorage-based OSI is an experienced operator of port services and logistics for the oil industry and is confident Port of Adak can attract new business.

The port has 2,750 lineal feet of deep-draft berthing space and is ice-free year-round. Services include a modern, high capacity fueling system, electrical power, crane support and fresh water.

Port Adak’s airport is one of its competitive biggest advantages, with two paved runways that can accommodate 737 aircraft.

granted in environmentally sensitive areas.

The “no impact” approach means on-shore exploration drilling is allowed only in winter. Heavy equipment is brought out to remote sites on ice roads and drilling rigs are assembled on ice pads.

When the ice melts, there is no trace of the pad remains. The only visible sign of drilling activity is an eight-by-eight foot well house that will remain on location because the well is part of a field under development and will one day produce oil.

In short, it is possible to explore for oil on the North Slope and leave no visible footprint.

Development and production also have stringent standards, with the state mandating the use of the best available technology for oil discharge containment, storage, transfer, and cleanup. Even rainwater is not permitted to run off gravel drill pads on the surrounding tundra.

Onshore pipelines must be buried where possible to minimize impacts on wildlife, and if pipelines are built above ground, they must be elevated so caribou can migrate.

Commissioner Sullivan says Alaska’s stringent environmental standards have forced innovation on the oil and gas industry and led to new technologies that have had enormous environmental and financial benefits.

“Many of the horizontal drilling techniques that are now used all over the world were developed by operators in Alaska to meet our environmental standards.”

Advances in horizontal and multi-lateral drilling technology over the past 30 years have led to a dramatic reduction in the surface footprint of drilling.

For example, 54 wells have been drilled at the Alpine field from a single pad of only 13-acres.

Technology also allows much greater reach below ground. In the 1970s, wells



Central Arctic caribou herd is thriving

from one pad could span only three square miles. By 1999, this had increased to 50 square miles, while up to 100 square miles is now possible.

Sullivan says the development debate has not kept up with these advances and the benefits they have created for the environment.

He says new drilling technology also allows a more a cost-effective way to develop remaining oil.

“Extended-reach horizontal drilling means that today, the same level of production can be achieved with fewer wells. It also means that more complicated stratigraphic plays can be developed.”

The use of extended, directional drilling to minimize environmental impact is a feature of Pioneer Natural Resources’ Oooguruk near-shore field.

The project consists of three main components – an offshore drill site, an onshore production support facility, and a system of flowlines, power cables, and

communications cables connecting the onshore and offshore facilities.

The offshore drill site is a four-metre high artificial gravel island about five miles from the shoreline that covers an area of only six acres. The drill rig has been specially modified to allow close spaced drilling of a large number of production and injection wells from the small pad.

State and federal governments are not the only guardians of Alaska’s environment. Native corporations, which represent the traditional owners of Alaskan land, arguably have a greater interest in its protection than any other stakeholder.

Rex Rock is the President and Chief Executive Officer of the Arctic Slope Regional Corporation (ASRC), Alaska’s largest native corporation.

He says ASRC is a partner to the energy industry, but also understands its own communities on the North Slope are on the front line of development and carry some of the highest risks with respect to food security.

“We recognize that Arctic resource development has a global impact. With that in mind, we do not want to become sideline observers to development that occurs in our region. We need to be a part of it.”

He said native corporations can work successfully with petroleum companies to achieve development that benefits all parties.

“An example of a successful collaboration and the building of trust is spelled out in the story of CD-5. This satellite field will be the first commercial production from National Petroleum Reserve in Alaska, on lands owned by Kuukpik and ASRC.”

“It took time, but Kuukpik, the Native Village of Nuiqsut, the City of Nuiqsut, ASRC, the North Slope Borough and ConocoPhillips finally came to an agreement on how best to mitigate impacts to the community and environment of the CD-5 development.”

He said it was encouraging to have such a diverse stakeholder group come together and reach an agreement.

“The project was originally denied (federal approval). However, due to the alignment of all the parties on the




“We do not want to become sideline observers to development that occurs in our region. We need to be a part of it”

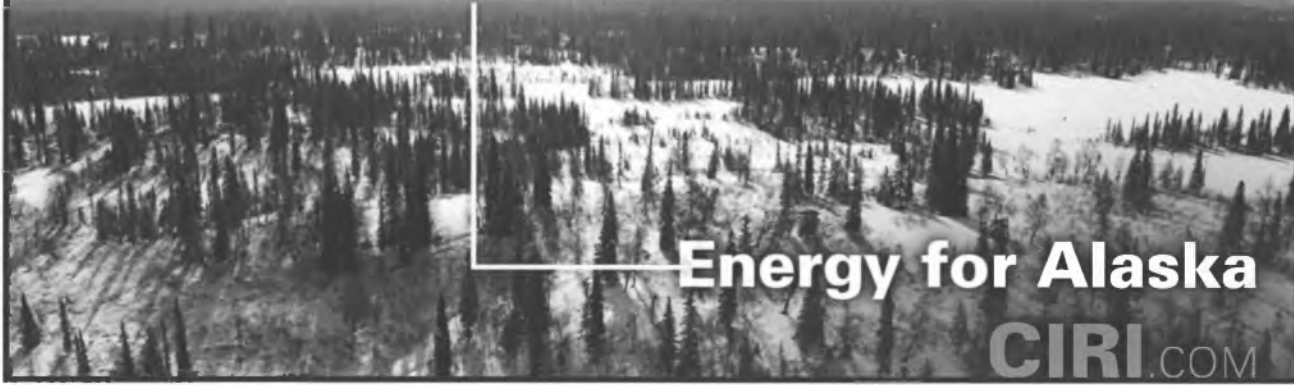
ROCK A. REX SR., President & CEO, ASRC

proposed development, we were all able to work together for the reversal of the Army Corps of Engineers’ decision to deny the project and finally win approval for the CD-5 development,” Rock says.

ASRC is one of many stakeholders that will ensure Alaska’s environment remains protected, despite the growing interest in the region from petroleum companies around the world and increased pressure for exploration and development.



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Energy for Alaska

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Alaska's new era on the way

Determination, development, LNG potential's pledge for the future

The future potential of Alaska's petroleum industry looks brighter than at any time since the discovery of the Prudhoe Bay field in 1968.

While the declining flow of oil through the Trans Alaska Pipeline System (TAPS) is causing headaches and a worrying decline in state revenue, all the signs suggest a turnaround is inevitable in the medium to-long term.

Exploration activity onshore on the North Slope is surging ahead, with new fields already being discovered. Exploration for shale gas and other unconventional resources is moving ahead rapidly. The economics of bringing old fields into production are also being re-examined under the promise of a more favourable tax regime.

Lower production taxes on the North Slope are still not law, but the Parnell Administration is working hard to convince skeptics in the state's Senate that Alaska cannot afford to not be more tax competitive.

Even without a new tax regime, TAPS is guaranteed new volumes from the Point Thomson field following a breakthrough in the stand-off between the state and the field's partners — ExxonMobil, ConocoPhillips and BP.

Point Thomson, 60 miles east of Prudhoe Bay, is Alaska's largest undeveloped petroleum field, with 8 TcF of gas and hundreds of millions of barrels of oil and condensate.

The field is equivalent to 25% of all the gas reserves on the North Slope and development of the project is key to realizing the gas potential of the entire region.

The settlement of the dispute announced in April by Governor Parnell includes a commitment from the Point Thomson partners to begin initial liquids production of 10,000 barrels a day by 2016.

While this is small scale, the settlement also includes a commitment to build a new common carrier pipeline from Point Thomson to Prudhoe Bay with a capacity of 70,000 barrels per day.



A prosperous future must hold a positive outlook for all

That sort of production would make a meaningful contribution to refilling TAPS, and is indicative of the potential the Point Thomson partners see for the eastern end of the North Slope.

In the central and western areas of the North Slope, exploration programs by ConocoPhillips, Repsol and a growing number of independents hold promise of additional volumes in the short to medium term.

Looking further ahead, the huge exploration investments by Shell, ConocoPhillips, Statoil and others in the Chukchi and Beaufort Seas point to a new golden age for Alaskan oil production.

There are no certainties in the exploration game, but assessments by the USGS suggest huge potential rewards on the outer continental shelf and minimal risks. A number of supermajors are backing that view with multi-billion dollar exploration budgets.

Another bright spot in Alaska's petroleum future is this year's real progress in monetising the vast gas reserves of the North Slope.

The construction of TAPS in the 1970s created a vital linkage between the North Slope's giant oil fields and global markets.

The region's gas reserves are still stranded 35 years later, but the Point Thomson partners and TransCanada have aligned for the

first time to develop plans to export their gas as LNG to Asia. The dimensions of the proposed LNG project are staggering. In a project update released in October, the partners estimated a development cost as high as \$65+ billion.

This would cover the cost of constructing a gas pipeline alongside TAPS to bring up to three billion cubic feet of gas every day from the North Slope to a LNG plant somewhere on the southcentral coast.

The three-train LNG plant would produce between 15 million and 18 million tonnes of LNG per annum, ranking it as one of the largest projects of its kind in the world.

According to the partners in a 1 October letter to Governor Parnell, the proposal represents "a megaproject of unprecedented scale and challenge; up to 1.7 million tons of steel, a peak construction workforce of up to 15,000 and a permanent workforce of over 1,000 in Alaska."

These figures are adding to the buzz that has developed in 2012 around Alaska and its petroleum industry. There are still many hurdles to clear, but the industry has momentum as well as the support of the vast majority of Alaska's communities, including Alaskan natives. A bright new era looks inevitable.

Alaska General Data

Official name: State of Alaska, USA

Nick name: The Last Frontier

Statehood: 49th State, 3 Jan. 1959

Capital: Juneau (-1 CST)

Largest city: Anchorage (-2 CST)

Governor: Sean Parnell (R), 2009

Native Corporations: 13

ANCSA: Established 1971

Population: 722,718 (July 2011 est.)

Total Area: 1,717,853 km² / 663,267 mi²

Land area: 1,481,346 km² / 571,951 mi²

Water Area: 236,507 km² / 91,316 mi²

Coastline: 10,686 km / 6,640 mi

Languages: English (*official*), Native (22), mostly belonging to Eskimo-Aleut and Na-Dene language families

Climate: Arctic in the north; subarctic in the interior; continental subarctic in the northwest; subarctic oceanic in the southwest; subarctic oceanic in the south central; mid-latitude oceanic in the southeast

Location and Geography: Northwest extremity of the North American continent, bordering Canada to the east, Arctic Ocean to the North, Pacific Ocean to the west and south, Russia further west across the Bering Strait

Land Ownership: 60% Federal, 28% State, 11% Native, 1% Private

Economy

GDP: \$49 billion (2010)

GDP per capita: \$63,424 (2010)

Real growth rate: 1.9% (2010)

Inflation rate: 1.8% (2010)

Alaska Permanent Fund: \$40 billion

Rating: Triple A

Main industries: Oil, gas, mining, fishing, forestry, tourism, government services, military, food processing

Natural resources: Oil, gas, coal, precious and base metals, timber, water

Exports: \$5.2 billion (2011 est.)

Export commodities: Seafood, petroleum, primary/precious metal, forestry products

Imports*: \$18.26 billion (January 2011 est.)

Import commodities: Capital equipment, petroleum, foodstuffs

* includes imports to the US

Energy Overview

ALASKA RESOURCE ASSESSMENTS* (*undiscovered, technically recoverable*)

	Mean Oil Est.	Mean Gas Est.
Onshore Arctic:	15.9 billion bbl	99 tcf
Offshore Arctic:	23.8 billion bbl	108 tcf
Interior basins:	234 million bbl	5.5 tcf
Upper Cook Inlet:	599 million bbl	19 tcf
Other Southern Alaska:	2.9 billion bbl	23.5 tcf
TOTAL:	43 billion bbl	255 tcf

* excludes shale oil, shale gas, methane hydrates and CBM

PRODUCTION

Total crude oil production:	209 million bbl (2011)
North Slope:	562,000 bpd (2011) 591,000 bpd (2010)
Cook Inlet:	10,000 bpd (2011) 10,000 bpd (2010)
Share of US total production:	11%
North Slope exploratory wells to date:	500 (2012)
North Slope Shale Potential - OIL:	Up to 2 billion bbl (2011 est.)
North Slope Shale Potential - GAS:	Up to 80 trillion cf (2011 est.)
North Slope Coal Potential:	3.5 trillion metric tons (2011 est.)

TAPS

Throughput to date:	16.3 billion bbl	Length: 800 mi / 1,287 km
Construction time:	3 years, 2 months	Diameter: 48 inches / 1.2 m

Sources: DNR, US Census Bureau, US Department of Commerce, Northrim Bank, Office of Trade and Industry Information, Statista, USGS, Institute for Energy Research, US Energy Information Administration (EIA), TAPS

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Alaska Gasline Development Corporation (AGDC)
www.agdc.us



StarCommunications

www.star-communications.us



Northstar is the first Arctic offshore field connected to shore by pipeline. Northstar oil flows into Alaska's main pipeline through a subsea pipeline. Northstar was developed by Bechtel and owned by Arctic Slope Regional Corporation. Production started in 2001. (Photo ©BP)