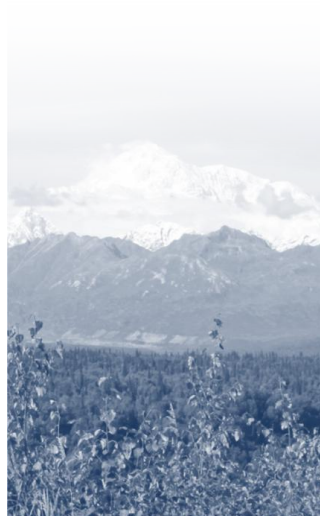




State of *ALASKA*

Department of Natural Resources



Senate Resources Committee

DNR Overview
January 25, 2012

Commissioner Daniel S. Sullivan
Alaska Department of Natural Resources
www.dnr.alaska.gov

AGENDA



PART I: DNR Overview

PART II: Looking Back on 2011-A Promising Year

PART III: 2012 Opportunities & Challenges

Part I



DNR OVERVIEW

State of Alaska

Department of Natural Resources



Article 8, Section 1 of the Alaska Constitution provides:

- *"It is the policy of the State to encourage the settlement of its land and the development of its resources by making them available for maximum use consistent with the public interest."*

DNR Mission Statement:

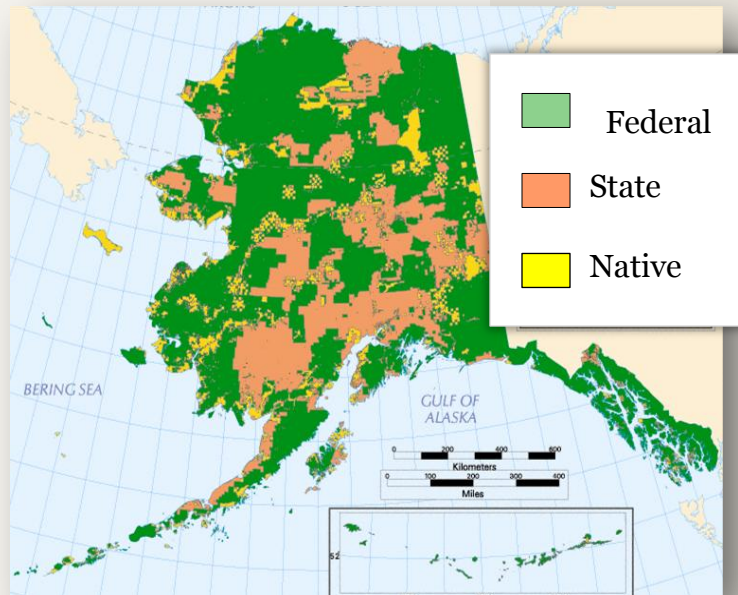
- *Responsibly develop Alaska's resources by making them available for maximum use and benefit consistent with the public interest.*

DNR Core Services:

1. Foster responsible commercial development and use of state land and natural resources, consistent with the public interest, for long-term wealth and employment
2. Provide access to state lands for public and private use, settlement, and recreation
3. Ensure sufficient data acquisition and assessment of land and resources to foster responsible resource development
4. Mitigate threat to the public from natural hazards by providing comprehensive fire protection services on state, private, and municipal lands, and through identifying significant geological hazards

State of Alaska

Department of Natural Resources



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

DNR:

- Manages one of the largest portfolios of oil, gas, minerals, renewable resources, water, and land in the world
- Manages all oil and gas fields on state land, including two of the largest oil and gas fields in North America
- Oversees all activities that occur on state land

State of Alaska

DNR Has 7 Divisions



1. Division of Agriculture (DoA)

- Franci Havemeister, Director
- Promotes and encourages development of an agriculture industry in Alaska

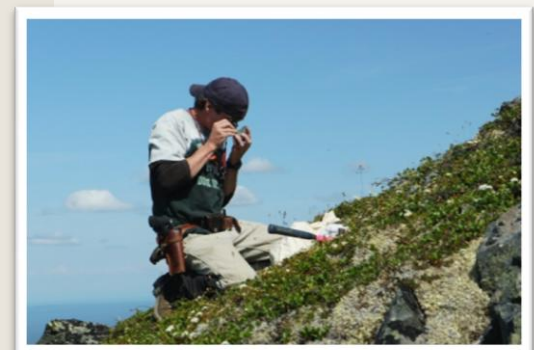
2. Division of Forestry (DoF)

- Chris Maisch, Director
- Serves Alaskans through forest management and wildland fire protection



3. Division of Geological & Geophysical Surveys (DGGGS)

- 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



State of Alaska

DNR Has 7 Divisions



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

5. **Oil & Gas**

- Bill Barron, Director
- Responsible for the leasing of state lands for oil, gas, and geothermal exploration

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

7. **Support Services**

- Jean Davis, Director
- Provides client-focused, efficient and cost-effective financial, budget, procurement, information technology and recording services to DNR and the public



State of Alaska

DNR Offices



- **Gas Pipeline Project Office**

- Kurt Gibson, 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

- **Office of Project Management & Permitting**

- Tom Crafford, Director
- Coordinates the review of larger scale projects in the state

- **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



Alaska *as a* Storehouse

Hydrocarbons



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. 236 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

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
- In June 2011, the State of Alaska received the highest number of Cook Inlet lease sale bids in 28 years, totaling more than \$11 million

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



Alaska as a Storehouse

Strategic & Critical 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).

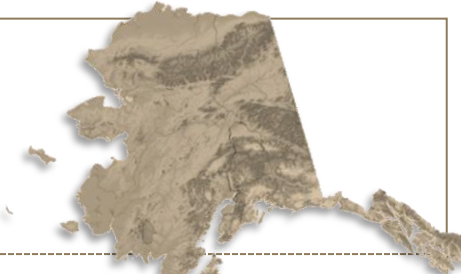
Part II



LOOKING BACK ON 2011—
A Promising Year

TAPS

Arresting 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
- Today, TAPS is producing ~ 600,000 barrels per day, representing about 12% of U.S. domestic production
- The State of Alaska is actively seeking investment 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
- Federal officials are interested in making this a national priority

Declining oil through TAPS is the most critical economic issue facing our state.



Secure Alaska's Future: *Oil*

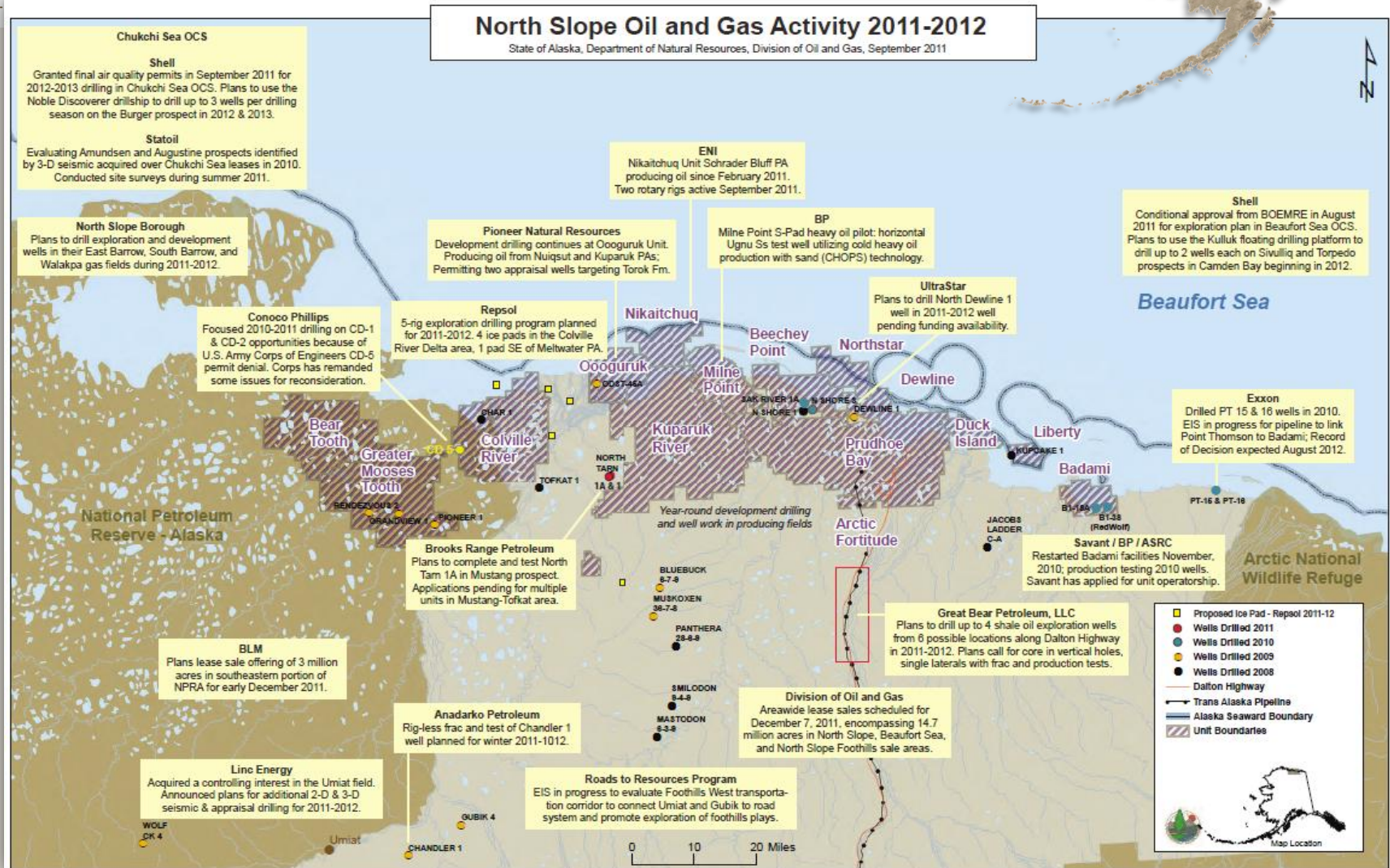


*The State of Alaska's
Comprehensive
Strategy to Increase
TAPS Throughput to
One Million
Barrels/Day*

- I. Enhance Alaska's global competitiveness and investment climate
- II. Ensure the permitting process is structured and efficient
- III. Facilitate and incentivize the next phases of North Slope development
- IV. Unlock Alaska's full resource development potential through partnerships with key stakeholders
- V. Promote Alaska's resources and positive investment climate to world markets



North Slope *Recent & Proposed Activity*

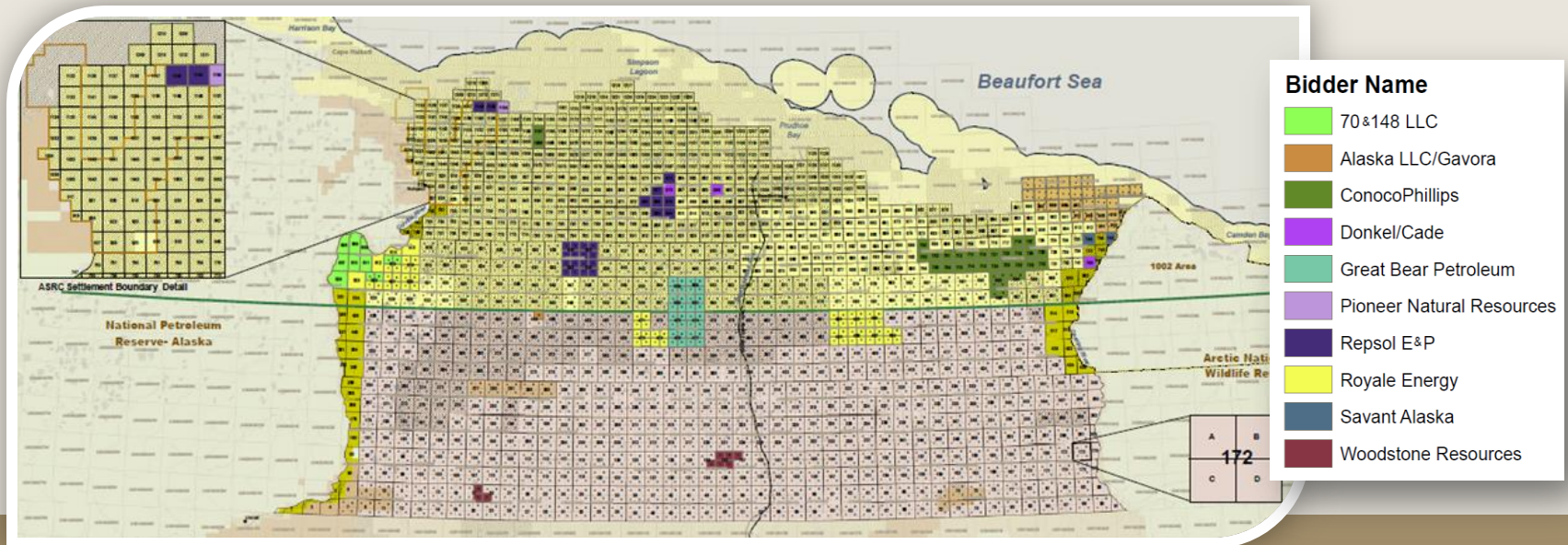


NS & Beaufort Sea

December Lease Sale



- Nearly \$21 million from various companies and investors
- Included new players targeting shale oil
- Attracted world-class companies such as Shell, ConocoPhillips, and Repsol, who are staking out new positions on state land
- New exploration means jobs now and new production for decades to come
- State needs billions of dollars in new investment to meet the Governor's one-million-barrels-a-day goal



Cook Inlet Renaissance



In June 2011, the State of Alaska received the highest number of Cook Inlet lease sale bids in 28 years, totaling more than \$11 million.

Cook Inlet Estimates

Significant undiscovered volumes of hydrocarbons remain to be found in the Cook Inlet (USGS):

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

Cook Inlet Lease Sale Results

- In June 2011, the State of Alaska received the highest number of Cook Inlet lease sale bids in 28 years, totaling more than \$11 million
- Total tracts sold: 109
- Total high bonus bids: \$11,125,063.80

Cook Inlet Renaissance



*Wall Street Journal,
August 27, 2011:
"New Energy
Estimate Breathes
Life Into a Declining
Alaskan Oil Field"*

Recent Cook Inlet Activity

- New players investing: Apache, Hilcorp, Armstrong, Linc, Buccaneer, Nordaq, Escopeda
- Significant exploration activity: 8 new exploration wells, one jack-up rig (and one—*possibly two*—on the way), 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

Strategic & Critical Minerals

Recent Mining Activity



The value of mineral production from Alaska totaled an estimated \$2.9 billion in 2009 and \$3.1 billion in 2010.

- Alaska has six lode producing mines, including one of the world's largest zinc mines, the world's 5th largest silver mine, and 4 major gold mines
- **Red Dog:** one of the world's largest zinc mines, produced over 593k tons of zinc, 121k tons of lead, and 6.7 million ounces of silver in 2010
- **Greens Creek:** world's 5th largest silver mine, produced over 7.2 million ounces of silver, 68k ounces of gold, and 75k tons of zinc in 2010
- **Pogo:** produced 383k ounces of gold in 2010
- **Fort Knox:** produced 350k ounces of gold in 2010
- **Usibelli:** produced over 2 million tons of low sulfur coal in 2010
- Two new gold mines came online in 2010: Kensington and Nixon Fork

Strategic & Critical Minerals

Recent Mining Activity

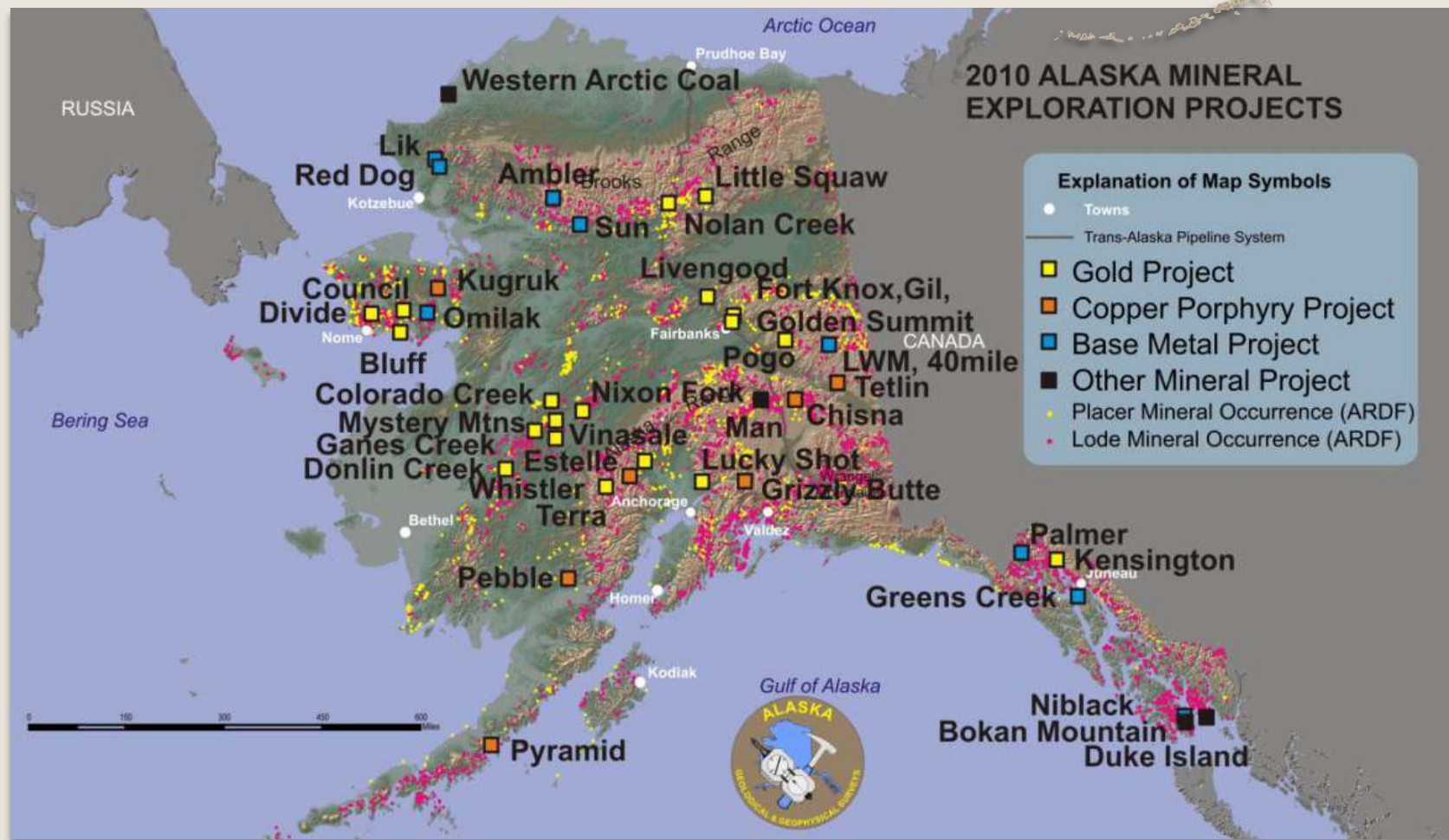


In 2010, mineral exploration investment in Alaska totaled \$264 million - accounting for about one-third of the total spent on exploration in the U.S.

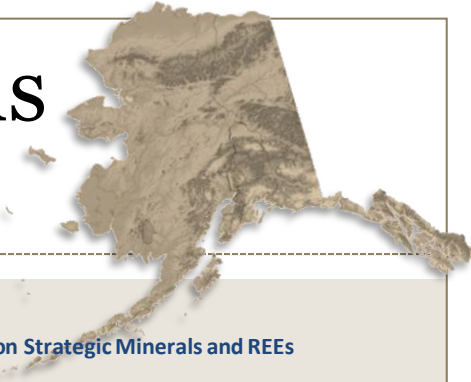
- **Advanced exploration projects:**
 - **Pebble:** ~ 80.6 billion pounds of copper, 107.4 million ounces of gold, and 5.6 billion pounds of molybdenum
 - **Bokan Mountain:** enriched in yttrium, dysprosium, and critical heavy Rare Earth Elements
 - **Donlin:** ~ 42.3 million ounces of gold
 - **Money Knob:** ~20.6 million ounces of gold
 - **Niblack:** ~7.3 million tons of polymetallic (copper, gold, silver, and zinc) volcanogenic massive sulfide project
- 34 exploration projects spent over \$1 million in 2010
- 2011 Nome offshore mineral (gold) lease sale received over \$7.6 million in winning bids for 84 tracts on approximately 24,000 acres

Strategic & Critical Minerals

Recent Mining Activity



Alaska Strategic & Critical Minerals Summit, *Fairbanks, 9-30-11*



OPENING REMARKS

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

Day's Overview: Dan Sullivan, *Commissioner, DNR*

PRESENTATIONS: Strategic Minerals—A Global Perspective

General Joe Ralston, *Vice Chairman of The Cohen Group and Former NATO Commander/Supreme Allied Commander, Europe*

Jeff Doebrich, *Acting Program Coordinator, U.S. Geological Survey, Mineral Resources Program*

Jonathan Price, *State Geologist and Director, Nevada Bureau of Mines and Geology*

Jack Lifton, *Founding Principal of Technology Metals Research, LLC, and Consultant, Author, and Lecturer*

KEYNOTE ADDRESS

The Honorable Governor Sean Parnell

Networking Break & Press Conference

LUNCHEON ADDRESS

Honorable U.S. Senator Lisa Murkowski

PRESENTATIONS: Alaska's Strategic Mineral Wealth and Potential

Bob Swenson, *DGGS, DNR*

Dwight Bradley, *Research Geologist, U.S. Geological Survey, Minerals Program, Alaska Science Center*

Jim Barker, *Alaska Project Manager, Ucore Rare Metals, and Former Physical Science Supervisor with the U.S. Bureau of Mines*

PRESENTATIONS: University of Alaska Research on Strategic Minerals and REEs

The Honorable Lieutenant Governor Mead Treadwell

Mark Myers, *Vice Chancellor of Research, UAF*

Dan White, *Associate Vice Chancellor of Research, UAF*

Rajive Ganguli, *Department Chair, Mining & Geological Engineering, UAF*

AFTERNOON ADDRESS

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

ROUNDTABLE DISCUSSION: Moving Forward on Strategic Mineral Exploration, Development, and Processing in Alaska

Moderator: Dan Sullivan, *Commissioner, DNR*

The Honorable U.S. Representative Don Young

Susan Bell, *Commissioner, Alaska Department of Commerce, Community, and Economic Development, and Vice-Chair of AIDEA*

Steve Borell, *Executive Director, Alaska Miners Association*

Jim McKenzie, *President and CEO, Ucore Rare Metals*

Ken Peak, *President, Contango Ore*

Curtis Freeman, *President, Avalon Development*

Matt Ganley, *Vice President, Resources and External Affairs, Bering Straits Native Corporation*

Closing Remarks: Ed Fogels, *Deputy Commissioner, DNR*

Reception and Investor Networking at the *Museum of the North*

VIDEO ADDRESS: The Honorable U.S. Senator Mark Begich

Agriculture

2011 Overview of Accomplishments



Division continues to be very busy promoting and encouraging development of the agriculture industry in Alaska

- Worked to increase the demand for Alaska grown products
- Explored new marketing ventures to promote Alaska Grown program
- Formed partnership with commerce for agricultural tourism
- Provided support and promotion to 33 Farmers Markets throughout the state, which continue to grow in popularity
- Continued to update the division's long-range plan
- Excited about a burgeoning peony export program in Alaska
- ARLF continues to revolve and is successful
- Sold 202 acres of state agricultural land this year, which is a good figure

Farm to School Program

- Developed a "School Garden Food Safety" Guidelines
- Completed a product feasibility study and local product recipe book
- Contributed to the national movement
- Worked with 55% of school districts statewide



Parks & Outdoor Rec.

2011 Overview of Accomplishments



Serves the Alaska public through outdoor recreation, educational programming, and access to public lands

- Provided direct public service through a highly successful volunteer program—in 2011, 462 volunteers collectively donated nearly 70,000 hours to support state parks
- Instituted new initiatives to increase visitation and interest: “Arts in the Parks” and “First Day Hike”
- Built new public use cabins statewide
- Oversaw successful grant programs that support community efforts in historic preservation, recreation and trails
- Provided research necessary to support state’s claims to submerged lands under navigable waters and for right-of-ways on historic trails across federal lands



The Alaska Boating safety program is a model for the U.S.

- 299 classes taught in 2011=6,570 students
- Since its inception, 19 kids’ lives have been saved as a result of the “kids don’t float” life jacket loaner program

Timber Resources

Alaska has 17% of the nation's forest land



- The Governor's initiative to double the size of the Southeast State Forest (first est. in 2010) was successful with the help of the legislature (*now approx. 50,000 acres total*)
- Alaska Timber Jobs Task Force was established by Administrative Order 258 to advise the Governor on specific actions he can take to grow and revitalize the state's timber industry
 - An example would be the increased use of woody biomass for space heating in schools and other public buildings (*Tok and Delta*)
- 69 individual timber sales statewide, totaling 30.9 million board feet –on target for local job creation and community support
- Director Maisch is now a member of the National Assoc. of State Foresters (NASF) Executive Board



Wildland Fires

2011 Season & Wildland Fire Academy



2011 Wildfire Season

- Between April 1 and Sept. 12, there were *511 fires*
 - 365 were 1 acre or less
 - Largest: 54,217 acres (East Volkmar DAS)
 - 373 were human-caused (25,234.8 acres)
 - 138 were lightening-caused (267, 783 acres)
- Payroll for Alaskan EFF (mostly rural-based) crews in 2011 was \$7.7 million, which contributes to local communities
- Air tankers were deployed to Lower-48 for 3 months



Wildland Fire Academy

- 2011 Interior Wildland Fire Academy was held in Tok on June 11th; 33 graduates came from across Alaska

Less Hostile Federal Government in 2011?



- In 2011, we saw signs that the federal government was finally starting to back away from its hard-line, anti-development policies in Alaska
- We are actively involved in ongoing engagement with federal agencies
- We are still frustrated by mixed messages and delay tactics; progress feels like 2 steps forward, 1 step back
- CD-5
 - Fed 2010 decision was a shocker; since then, the permit has been pending
 - Permit was finally approved this fall, with an alternative that supports the best interests of the state
- EIS for Point Thomson
 - Recently issued by Corps of Engineers
 - Places emphasis on ANWR's proximity to the project and implies that the state should manage its adjacent lands as if they are part of the refuge
 - This is a serious overreach and an attempt by the USFWS to regulate oil and gas activities on state lands



Part III



2012

OPPORTUNITIES & CHALLENGES

Building on 2011 Progress

It Was a Good Year for Alaskans



- Progress and achievements in 2011 are good news for Alaskans
- We are a resource development state—when this sector of the economy thrives, so do most others
- The framers of the Alaska Constitution knew the state’s resource wealth would play a critical role in spurring private sector activity and so enshrined the policy of making Alaska’s natural resources ***“available for maximum use”*** in Article 8, Section 1



TAPS Throughput Decline

An Urgent Issue



- Alaska has many opportunities, in large measure due to our abundant natural resource wealth
- **But we still face significant challenges**
 - *We must arrest TAPS throughput decline*
 - This is an urgent issue
 - Governor Parnell has laid out an aggressive 5-part strategy to increase production
 - Oil production is booming in other hydrocarbon basins, but not here
 - *We must make Alaska more competitive, especially through meaningful tax reform*



Commercializing NS Gas

Comparative Advantages of AK LNG

- Huge conventional resources next to existing infrastructure
- Massive resource potential: area is underexplored; unconventional resources
- Liquid-rich gas
- Longstanding tradition of exporting to Asia—40 years of LNG exports to Japan
- Stable investment and political climate
- Geo-strategic portfolio diversification
- World-class businesses already investing
- Trained workforce
- Close proximity to markets
- Cost competitive



Changes in market demand has led the State of Alaska to shift its focus to exporting LNG to Asia

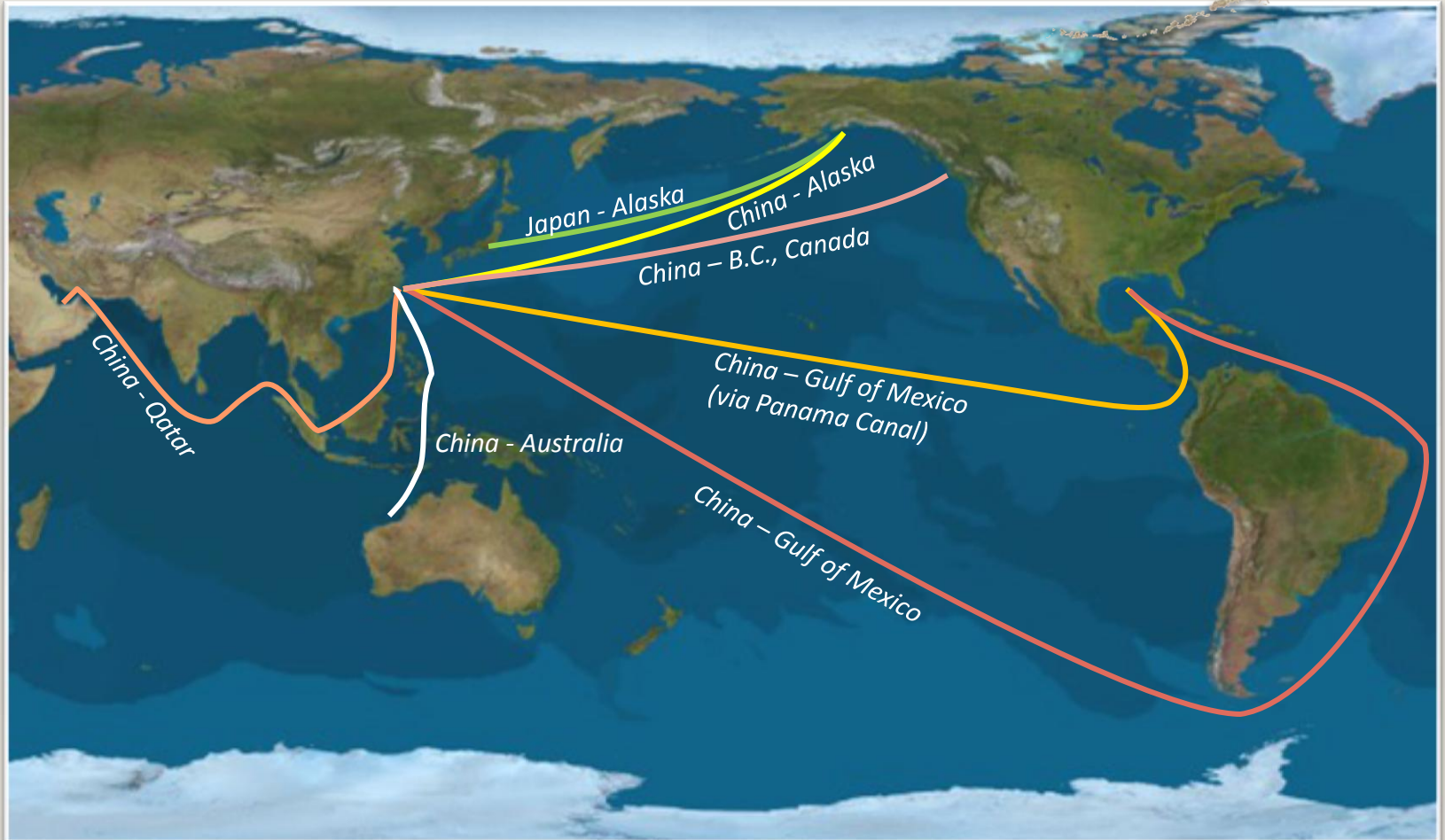
“Alaska eyes LNG pipeline to Pacific Rim” Financial Times, 11/6/11

“If market demand for gas has truly shifted from the Lower 48 to Pacific Rim markets, then the state of Alaska should be ready to shift along with that. And we are.”
– Gov. Parnell, 10/2/11



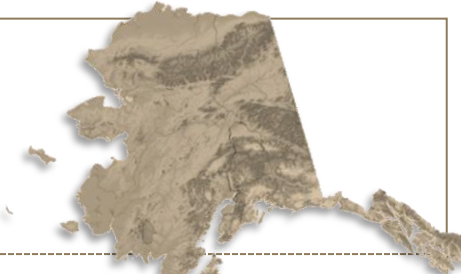
Commercializing NS Gas

Proximity of Alaska LNG to Asia



Commercializing NS Gas

Key Principles & Roadmap



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



Responsible Development

Striking a Balance



- *We must continue to encourage resource development while safeguarding the environment*
 - The State of Alaska has an exceptional record of responsibly developing our resources while protecting the environment
 - Oil and gas development in Alaska is conducted in a safe and responsible manner with some of the most stringent standards in the world



Striking the balance is not always easy, but the state has a proven record of doing it well



In Conclusion



- Many challenges and opportunities
- Opportunities far outweigh the challenges, in large measure due to our abundant natural resource wealth
- Partnerships are key: public, stakeholders, legislature, private sector, Administration

Thank you