

ALASKA GAS OPPORTUNITIES

**LNG PRODUCER-
CONSUMER
CONFERENCE**

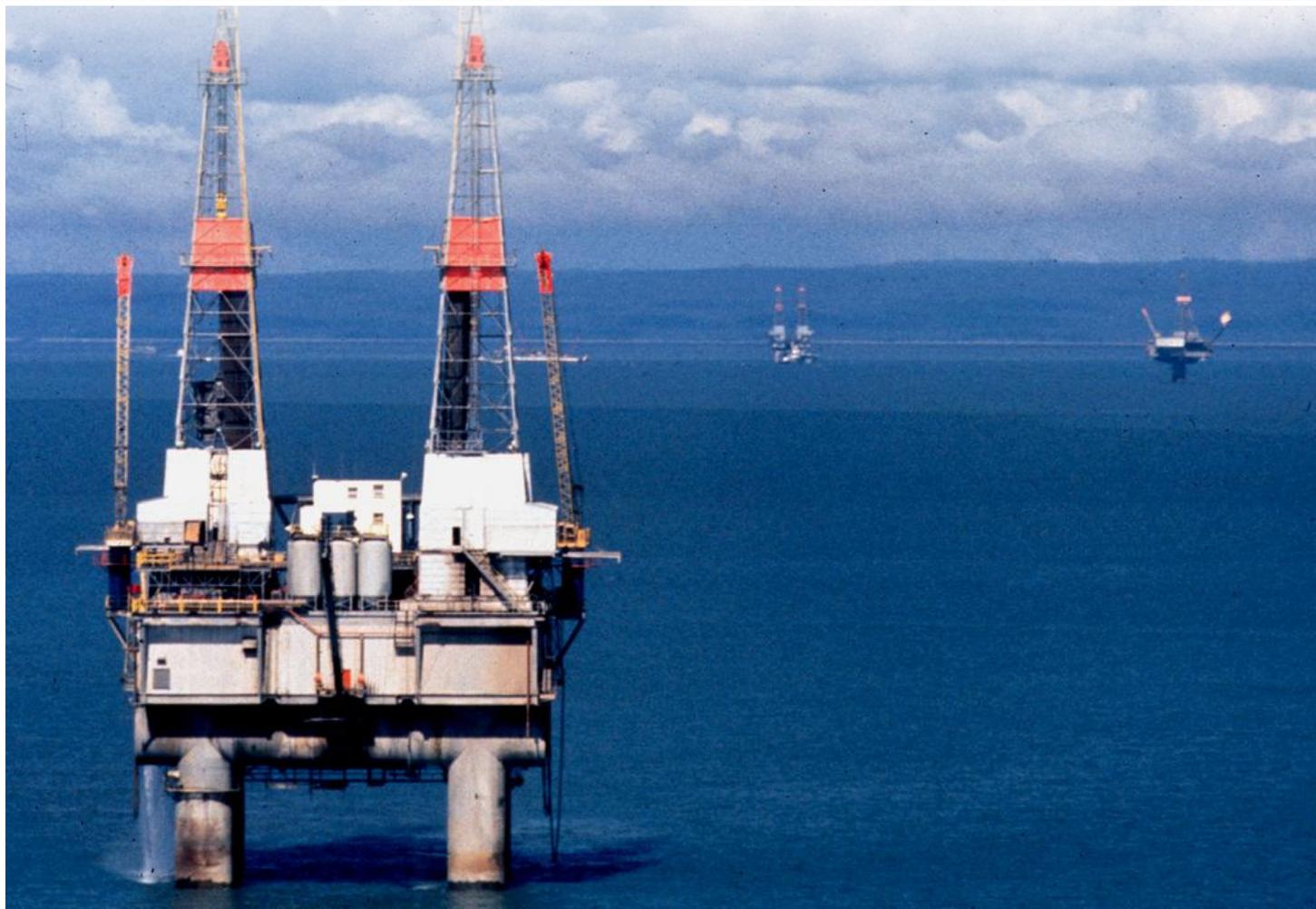
Tokyo, Japan

September 19, 2012

**Commissioner
Daniel S. Sullivan**

Alaska Department of
Natural Resources

www.dnr.alaska.gov





OUTLINE

PART I:

Introduction to Alaska and its Enormous
Resource Basin

PART II:

Progress on Gas Commercialization/LNG

PART III:

Why Alaska? Comparative Advantages Over
Other Possible Sources of LNG Supply

CONCLUSION



PART I

Introduction to *Alaska* and its Enormous Resource Basin

STATE *of* ALASKA

Land Base

- Largest U.S. State—encompasses 586,412 square miles, which is approximately 4 times the size of Japan
- 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
- Is the least densely populated U.S. state



Alaska Department of Natural Resources

- 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



ALASKA'S MASSIVE HYDROCARBON BASINS

North Slope

U.S. Geological Survey estimates that Alaska's North Slope and Arctic Outer Continental Shelf has more oil than any other Arctic nation

- **OIL:** Estimated 40 billion barrels of conventional oil
- **GAS:** Estimated over 200 trillion cubic feet of conventional natural gas

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

- Mean estimated onshore gas hydrate resource is 590 trillion cubic feet gas-in-place

Cook Inlet

U.S. Geological Survey 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



A topographical map of Alaska, showing its rugged terrain and coastline, positioned in the upper left quadrant of the slide.

PART II

Progress on Gas Commercialization/LNG

COMMERCIALIZING NORTH SLOPE GAS

- STATE-BACKED EFFORTS & SIGNIFICANT STATE FINANCIAL RESOURCES -

The State of Alaska is leading two state-backed efforts to commercialize Alaska's abundant North Slope gas resources

The State of Alaska has significant financial assets to assist with these two efforts

1. Alaska Pipeline Project (APP)

- Private-sector led
- State funding and reimbursements up to \$500 million as an initial investment

2. Alaska Gasline Development Corporation (AGDC)

- State funded
- Led by State of Alaska corporation (AGDC) whose mission is to commercialize North Slope gas resources

- Alaska owns royalty gas—12.5% to 20%—as part of the state's oil and gas leases to companies
- Alaska has the largest sovereign wealth fund in the United States—the Alaska Permanent Fund Corporation: \$40 billion
- Alaska has a budget reserve of \$20 billion
- Alaska has a retirement fund worth \$18 billion
- Alaska is triple-A rated

COMMERCIALIZING NORTH SLOPE GAS

- SIGNIFICANT PROGRESS -

Governor Parnell's Roadmap to Gasline

1. Resolve Point Thomson—25% of known gas reserves on Alaska's North Slope
2. Producers align during the first quarter of 2012 on an LNG project to tidewater
3. Two projects—under APP 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

Wall Street Journal: 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

Financial Times: 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

COMMERCIALIZING NORTH SLOPE GAS - SIGNIFICANT PROGRESS -



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 and 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.

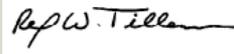
Serious discussions between our companies have taken place along with the Alaska Pipeline Project (APP) parties who are supporting the AGIA License. We have aligned on a structured, stewardable and transparent approach with the aim to commercialize North Slope natural gas resources within an AGIA framework. 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 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. Unresolved issues that must be resolved, and we cannot do it alone. Unprecedented capital for gas development will require competitive and stable fiscal policies in Alaska first be established. Appropriately structured, stable fiscal policies 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

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 assessment of major project components including in-state pipeline routes and capacities, global LNG trends, and LNG tidewater site locations, among others.

A topographical map of Alaska, showing the state's outline and internal terrain features, positioned on the left side of the slide.

PART III

Why Alaska? Comparative Advantages Over Other Possible Sources of LNG Supply

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



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



EXCEPTIONAL RECORD *of* RELIABILITY

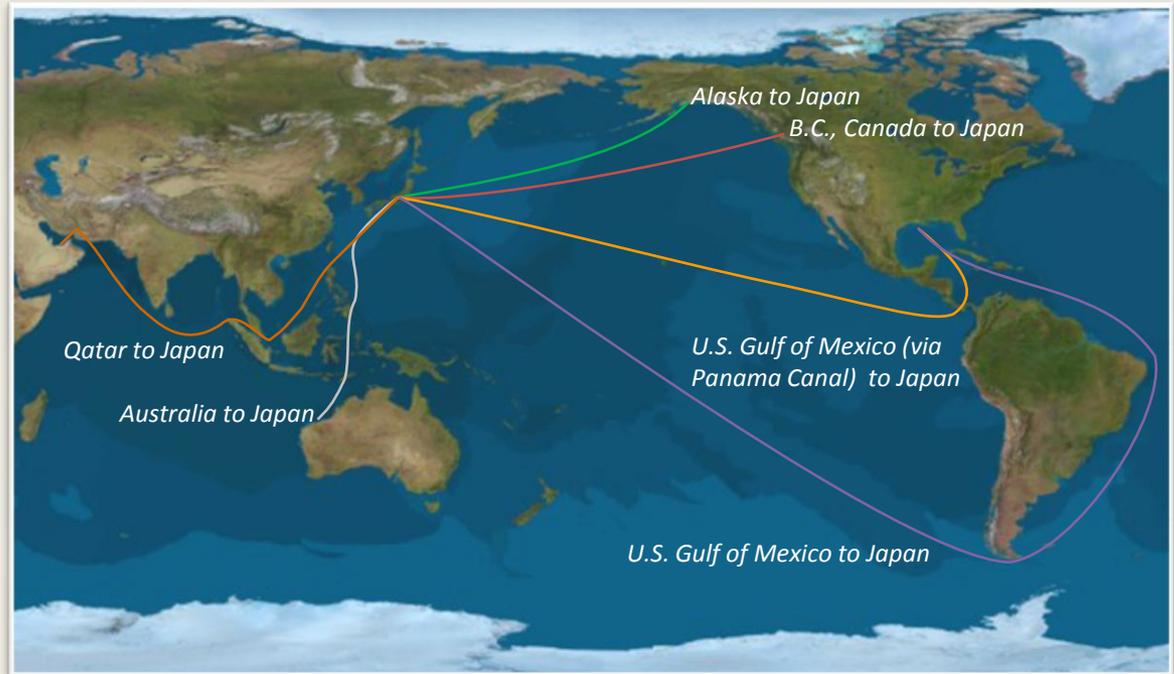
- Alaska has a longstanding tradition of reliably exporting LNG to Asia
 - Alaska has been exporting LNG to Japan for over 40 years
 - Alaska has transported 2.5 trillion cubic feet of gas to Asia (the majority to Japan) over this time
 - Alaska has never missed a LNG cargo shipment to Asia
- Alaska 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 40 years."

GEOGRAPHIC PROXIMITY, POLITICAL/LLEGAL 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



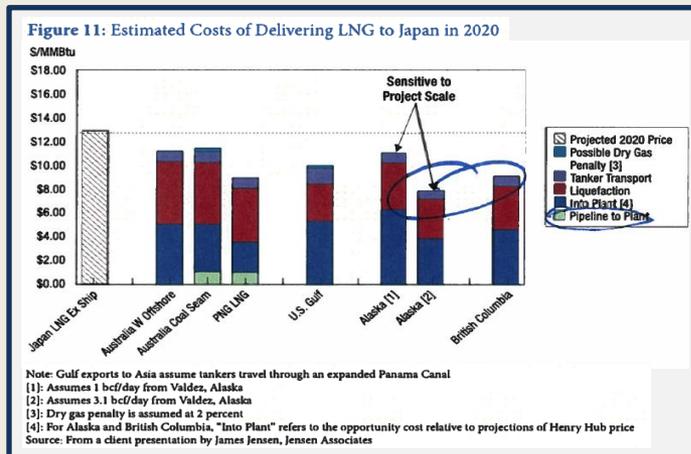
- Cold weather efficiencies significantly decrease processing costs compared to warmer climates

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

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

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



SIGNIFICANT PROGRESS *on* EXPORT LICENSE and OTHER REGULATORY MATTERS

989

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 15 percent of total U.S. gas reserves. In addition, undiscovered, recoverable supplies of natural gas in Alaska's North Slope may exceed 100 trillion cubic feet. There is no doubt the development of Alaska's natural gas resources is essential to ensuring adequate supplies of energy for the Nation.

...including oil from the

...Alaska natural gas can be exported to nations other than Canada or Mexico. Section 12 of the Alaska Natural Gas Transportation Act (15 U.S.C. 719j) 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-48 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.

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.

1000 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 Transportation Act will diminish the total quantity or quality of energy available to the Nation. This Administration supports the removal of regulatory barriers to the private sector's development of Alaska's natural gas resources. In particular, I want to reaffirm our support of the "prebuild" portion of the program guarantees.

Ronald Reagan

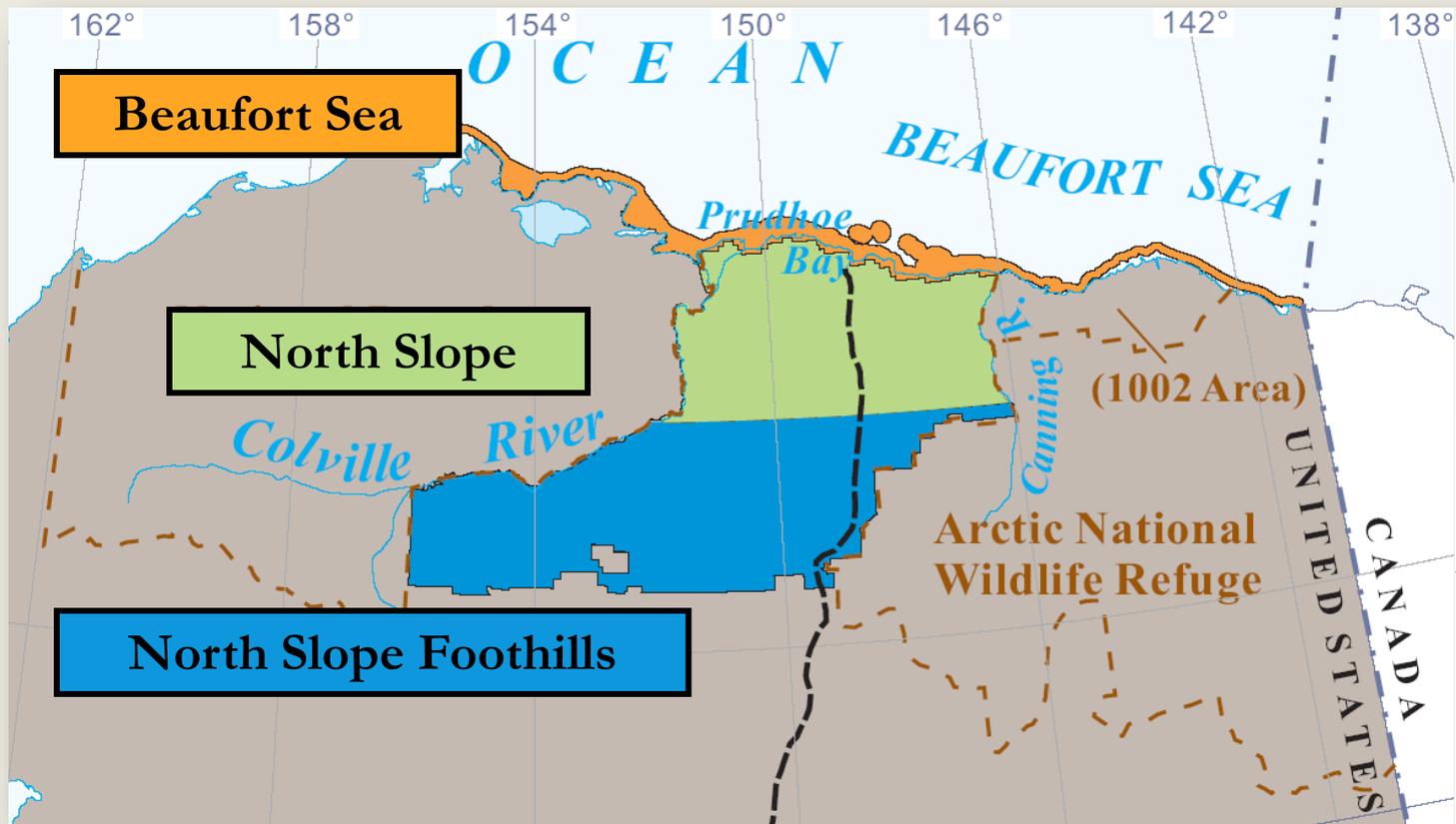
THE WHITE HOUSE,
Washington, January 12, 1988.

[FR Doc. 88-008
Filed 1-13-88; 2:30 pm]
Billing code 2950-CO-M

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

DOWNSTREAM *and* UPSTREAM INVESTMENT OPPORTUNITIES

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



CONCLUSION

- Alaska has a huge resource basin in close proximity to Japan and the strongest reliability record for industry
- Portfolio diversification
- Alaska LNG increases security of supply for Japan

Center for Strategic & International Studies (CSIS) Report: *“The U.S.-Japan Alliance: Anchoring Stability in Asia”* - August 2012

- Core Findings and Recommendations:
 - U.S. & Japan should be natural resource allies
 - U.S. should provide Japan with a constant supply of LNG
 - Interest in expanding Alaska/Japan LNG trade is increasing due to “Japan’s need to increase and diversify its sources of LNG imports”

