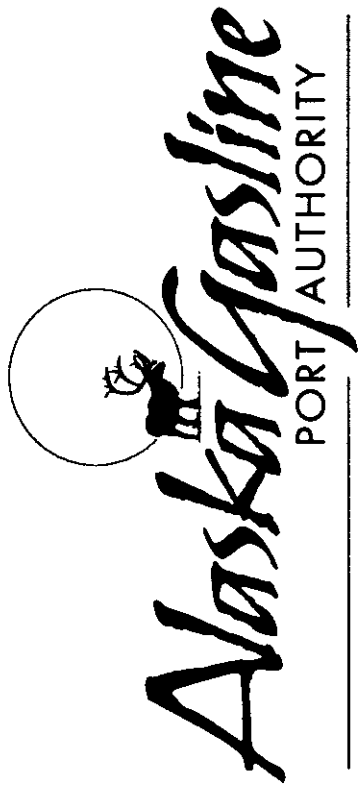


**4/7/09**

**UPDATE:  
ALL-ALASKA  
GASLINE**



# **All-Alaska Gasline Update**

**Senate Resources**

*April 7, 2009*

***<http://www.allalaskagasline.com>***

## Continued Support from the State



- Legislative intent language in AGIA (July 23,2008)
  - calls for the continued advancement of the All-Alaska/LNG project within the AGIA framework
  - adopted overwhelmingly: 58-1
  - "It is the intent of the legislature that an AGIA license will enable and encourage an All Alaska gas line/liquefied natural gas (LNG) project within the TransCanada project."
  
- Governor Palin's Administrative Order No. 242 (August 20,2008)
  - directs State agencies to assist the development of the LNG project
  - "I...direct [DNR and DOR] to assist entities...in pursuing development of an economically and technically viable liquefied natural gas (LNG) project in this state, such as the project envisioned by the Alaska Gasline Port Authority."

## Interest from Hawaii / West Coast



- We continue to work with the Office of Hawaiian Affairs to bring Alaskan LNG to Hawaii
  
- Alaska Federation of Natives: Resolution No. 08-42 (October 2008) adopted in support of LNG project within AGIA to benefit rural Alaska and Hawaii
  
- Oregon LNG Projects
  - Bradwood LNG
  - Oregon LNG
  - Jordan Cove LNG
  
- Sempra LNG

## Port Authority Project Advancement



- The Port Authority, Mitsubishi Corporation and Sempra LNG, continue to advance the development of the All-Alaska Gasline/LNG project
  - Mitsubishi
    - Japan's largest trading company with a wide range of business activities
    - Strong experience in LNG projects (handles approximately half of Japan's LNG imports)
  - Sempra LNG
    - Owns the only LNG receiving terminal on the West Coast
    - Subsidiary of Sempra Energy, one of the largest traders of natural gas in North America

## Focus on AGIA Open Season



- Our focus is to position our project for TransCanada's open season targeted for July 2010
- As part of the AGIA process, TransCanada committed to build a pipeline to Valdez – if sufficient gas volumes are committed – either on a standalone basis or in conjunction with a pipeline into Canada
- The Port Authority along with Mitsubishi and Sempra LNG have met with TransCanada to discuss the open season
- We continue to work with TransCanada as we seek to coordinate our efforts

## Focus on AGIA Open Season (continued)



- We intend to participate, either directly or through prospective gas shippers, in TransCanada's Open Season
- We are planning significant technical, environmental and other development work for the LNG terminal
- Our objective: to develop a project that provides a highly attractive economic proposition for the North Slope producers and the State of Alaska

## Committed to Meeting Alaska's Gas Needs



- We believe our project will maximize ANS gas wellhead value by exporting LNG out of Alaska to reach global markets, including the U.S. and Asia
- However, we have always been committed to prioritizing the needs of Alaska's domestic gas consumers. Indeed, we believe that our project provides the best opportunity to maximize in-State access to our North Slope gas resources
- We will continue to work in cooperation with ANGDA on meeting this important goal

## Market Developments Favor an LNG Project



- Recent market developments have underscored the importance of the All-Alaska/LNG project as the most attractive option to monetize Alaska's gas.
- Lower 48 and Canada have experienced significant increases in production
  - shale gas has been at the forefront of increases in "non-conventional" gas production.
  - Navigant Consulting and ICF Consulting have recently estimated America's potential gas resources at about 2,000 tcf.
    - That's 100 years worth of U.S. natural gas demand.
    - "That's 50 percent more gas than the current proven reserves of Russia and twice as much as the proven reserves in Iran. Put into oil terms, that 2,200 Tcf of gas is the equivalent of one-and-a-half Saudi Arabia's." [1]
- In Canada BC shale gas is a "game changer," with projected production of 5.3 bcf/d within 10 years. [2]
- The gas market in the Lower 48 has dramatically changed. The viability and need for the LNG option has never been greater from Alaska's perspective.

[1] Energy Tribune (1/12/2009) <[energytribune.com/articles.cfm?aid=1055](http://energytribune.com/articles.cfm?aid=1055)>

[2] Calgary Herald (1/11/2009) <[calgaryherald.com/business/Lure/116250/story.html](http://calgaryherald.com/business/Lure/116250/story.html)>

## Market Developments Favor an LNG Project Cont'd. . .



Porter Bennett, president and CEO of Bentek Energy, a consultancy firm specializing in energy market research says: (3/29/09)

**“You’ve got to recognize that there is at least the possibility that the Lower 48 supply situation will make the absorption of Alaska gas difficult. That might argue for maintaining the opportunity to export Alaska gas as LNG, to leave open the option of exporting the gas to foreign markets such as Asia”.**

**“You’ve got to explore both options . . . recognizing all the while that the market may work against you”.**

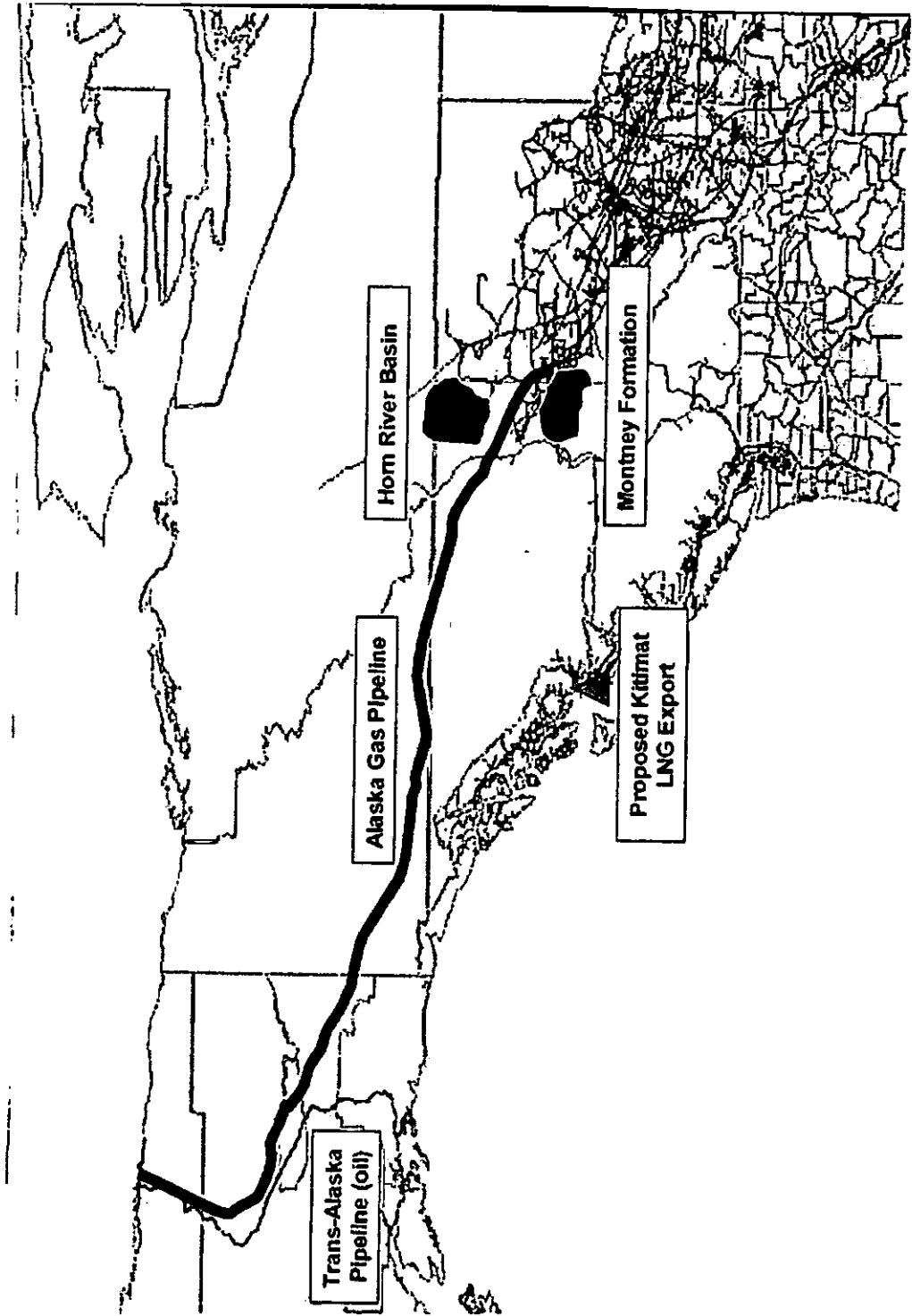
Petroleum News (3/29/2009) <[www.petroleumnews.com/pntruncate/961088981.shtml](http://www.petroleumnews.com/pntruncate/961088981.shtml)>

## Recent Open Seasons



### Recent Successful Binding Open Seasons for Shale Gas Plays:

- 1. Haynesville Shale (Texas) 1/28/09
  - Length: 178 miles
  - Volume: 2 bcf/d
  - Cost: \$1 billion
  - Operation date: 2011
- 2. Horn River Shale (B.C.) 2/26/09
  - Length: 96.31 miles (36")
  - Volume: 378 mcf
  - Cost: \$340 million
  - Operation date: 2011
- 3. Montney (B.C.) 2/26/09
  - Length: 48.47 miles
  - Volume: 1.1 bcf/d
  - Cost: \$250 million
  - Operation date: 2014

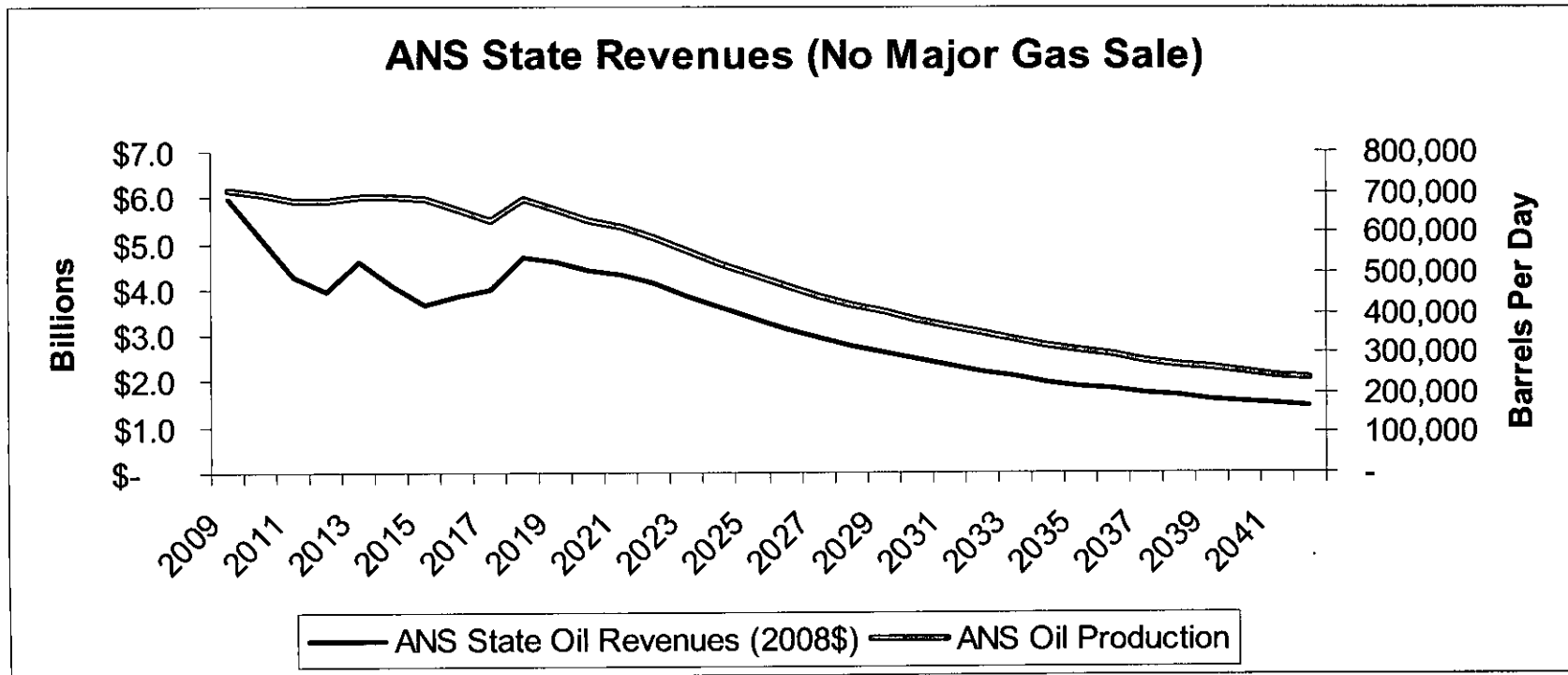


## Alaska's Competition is Not Waiting



- The market changes are being acted upon by our competition
- Kitimat LNG, previously conceived as an LNG import terminal, has recently reversed their project from an LNG receiving terminal and now intends to develop an LNG export project
- Kitimat LNG will target the growing, premium LNG markets in Asia, and has partnered with Mitsubishi to try to satisfy Asian demand for North American gas
- The window of opportunity is here for Alaska to maximize the value of its gas. Our competition is not waiting!

## Consequence of No Major Gas Sale



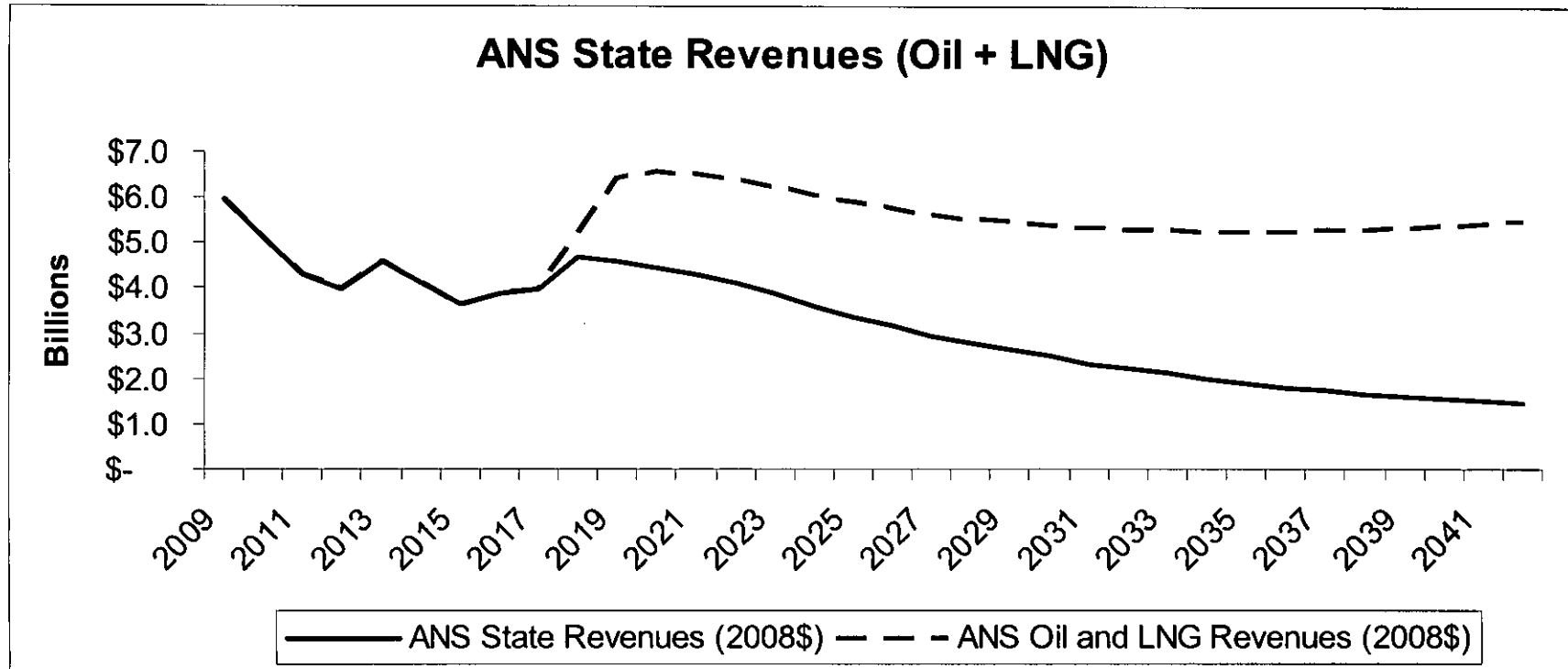
Includes ANS Royalty, Production Taxes, Property Taxes, Income Taxes, Etc.

### Major Assumptions

DOR Fall 2007 Production Forecast (2008 Projections Past 2018 Not Available)

DOR Fall 2008 Price Forecast and Tax Assumptions

## Consequences of No Major Gas Sale



- A 3 train LNG project offsets declining ANS oil production
- Although different oil price assumptions change the magnitude of state collections, they do not reverse the downward trend in production and thus falling State revenues from oil
- The State must have a major gas sale (LNG or Canadian project) to offset declines in North Slope oil production in the coming decades or the next generation will not enjoy the same level of prosperity

## Best In-State Option for Alaska



### *Reasons The Port Authority All-Alaska LNG Project Remains The Best In-State Option For All Alaska*

- 1. **KNOWN GAS SUPPLY.** It begins at the North Slope where currently 8.4 billion cubic feet of gas is reinjected into the field each day. There is sufficient gas for the Project today without additional exploration and development.
- 2. **KNOWN ROUTE.** The gas line route is parallel to the existing Trans Alaska Pipeline System (TAPS) route from the North Slope to Valdez. This route has already received 3 Federal Environmental Impact Studies (two by TAPS owners, one by Yukon Pacific Corporation).
- 3. **NO LIMIT ON VOLUME.** Since the Port Authority Project is within AGIA, it is not limited by volume restriction for projects outside AGIA that can not transport more than 500 million cubic feet of gas/day.

## Best In-State Option for Alaska continued . . .



- 4. **PIPELINE COMPANY IN PLACE.** Since the Port Authority Project is within AGIA, TransCanada Alaska has committed to hold an open season for customers to Valdez, independent of a Canadian line, targeted for July, 2010. TransCanada is already working on the cost estimates for the pipeline to Valdez.
- 5. **CHEAPER GAS TO ALASKANS.** With the world markets' interest in LNG from Alaska, there will be a larger volume in the pipe, and therefore, the cost to Alaska's consumers would be cheaper.
- 6. **SPUR LINE TO SOUTHCENTRAL.** Through the Alaska Natural Gas Development Authority's work on a spur line from Glennallen to the south central gas grid in Palmer, gas from this Project would be able to flow to the Mat Su Valley, Anchorage and the Kenai Peninsula through the existing gas grid.

## Best In-State Option for Alaska continued . . .



- 7. **REVENUES TO ALASKA'S TREASURY.** With the high volume of gas in this project it is projected to bring hundreds of million of dollars each year into the state coffers through royalties, severance and corporate income taxes resulting from this Project to help offset the declining revenues from the annual reduced flow of oil through TAPS.
- 8. **MARKET PARTICIPATION.** The Port Authority is working on the Project in conjunction with two industry giants, Mitsubishi Corporation and Sempra LNG, indicating the strong market interest in LNG from Alaska.
- 9. **PROJECT CONTROL AND BENEFITS REMAIN IN ALASKA.** Alaska would have complete control over all aspects of this Project. Alaskans would benefit from lower energy prices and the long term post-construction jobs for generations to come.

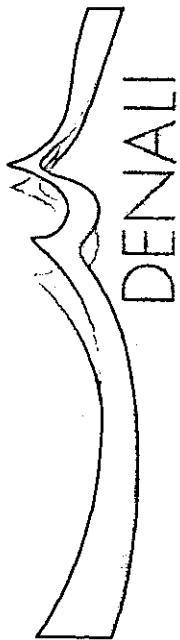
## Best In-State Option for Alaska continued . . .



- 10. **MARKET OPTIONALITY.** Over the last several years significant developments of shale gas in both Canada and the L 48 has many energy consultants now referring to the L 48 as being "awash in natural gas". In fact some companies are now turning their LNG receiving terminals into LNG export terminals citing the surplus gas from shale gas development in the L 48 as the reason. They are seeking the export of their LNG to the premium Asian markets. Alaska has a 40 year successful relationship with selling LNG to the Asian market which that market is anxious to continue. Additionally, Alaska's LNG could also supply the energy needs of the state of Hawaii.

Thank you



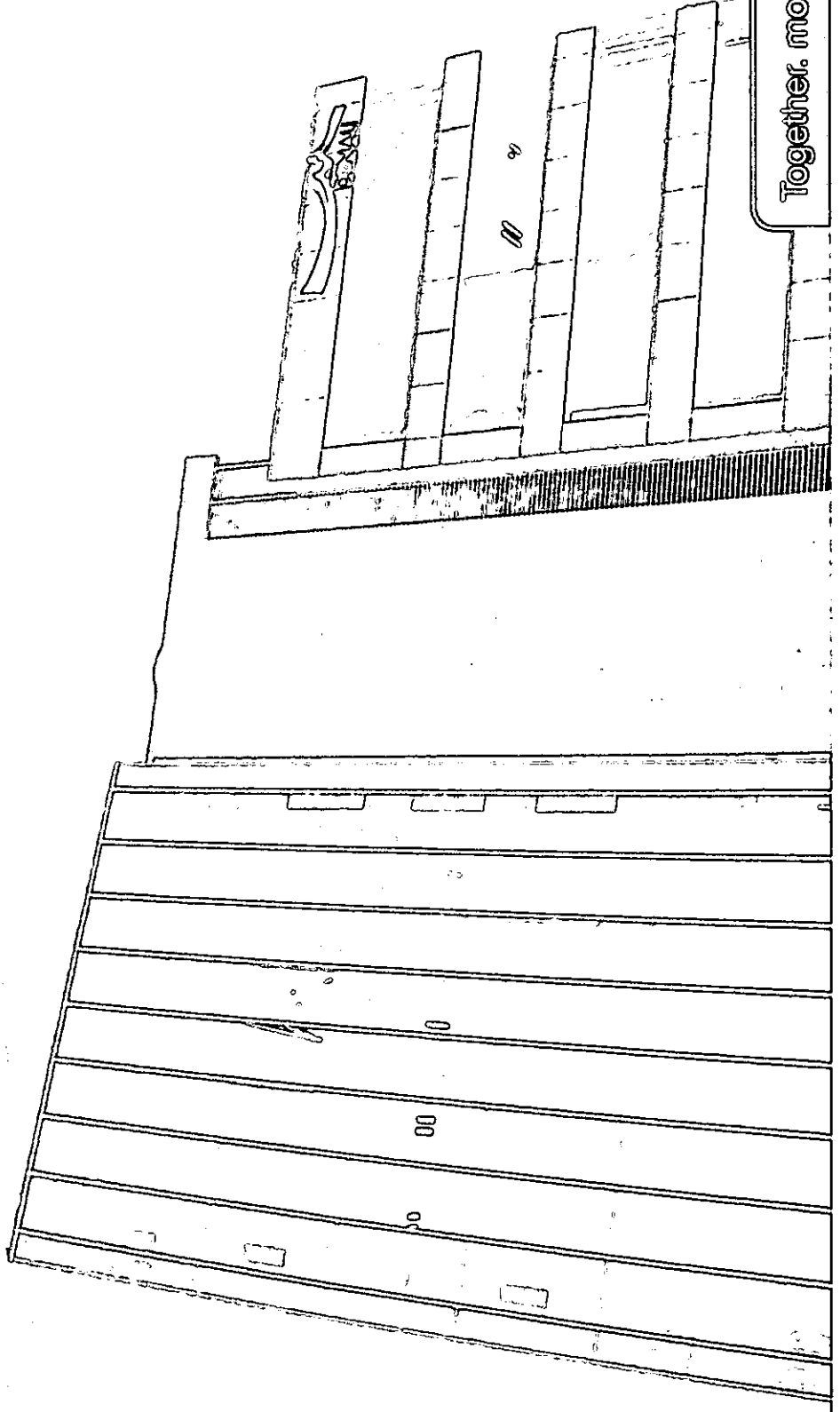


the alaska gas pipeline

Alaska State Legislature

Senate Resources Committee

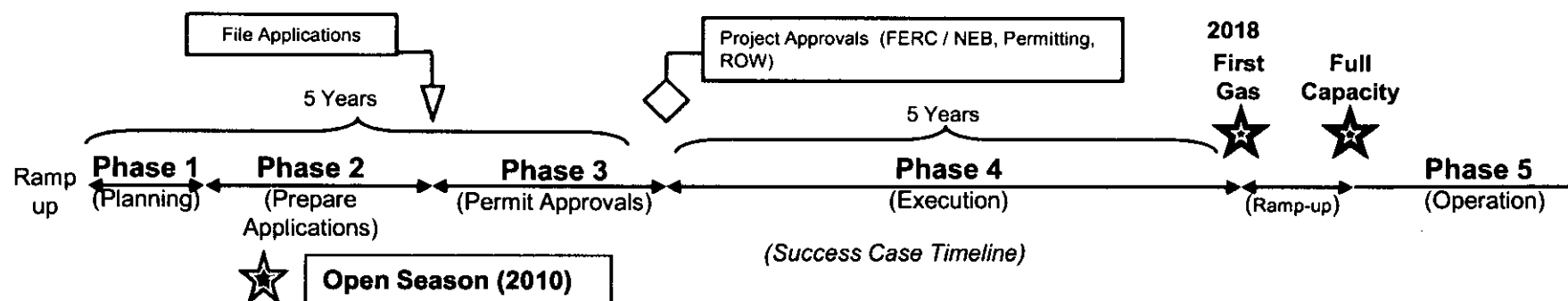
April 7th, 2009



Together. moving. energy.



# Denali – On track for success



- Denali organization in place. Open season in 2010
- Denali believes there will be a place for Alaska gas in the North American market
  - Alaska gas is a key part of the President's energy plan
  - Natural gas is the fuel of choice – viewed as the bridge to renewables
  - Anticipate the US and World economies and natural gas demand will have recovered in the next 9 to 10 years.
- The economy has not changed our focus



## Denali Project Description

- Gas Treatment Plant (GTP) at Prudhoe Bay
  - Remove CO<sub>2</sub>, dehydrate, compress and chill the gas
- Buried, large diameter, high pressure (~2,500 psi) pipeline
- Compressor stations every 100 to 200 miles at >40,000 hp each
- About 2,000 miles to Alberta, requiring (~2-3 million tons of steel)
- Possibly another 1,500 miles to US markets (~2 million tons of steel)
- ~4bcfd to North American consumers (6-8% US daily consumption)

Denali will be the largest private energy project in North America, and will require world-class project execution skills





## Denali Terms of Service

- Denali is an Open Access pipeline – *It's the law*
  - *“People have open access to the pipeline, not just the producers.”*  
(FERC testimony to Joint AGIA Committee, June 16, 2008)
- Distance sensitive transportation rates for local use
- Design will provide for efficient expandability
- Solicit shippers every two years regarding expansion
- Will provide at least five offtake points within Alaska
- Will provide offtake points in Canada if warranted



## Regulatory Frameworks – Canada and U.S.

### Canada

- Two regulatory frameworks are available in Canada:
  - Northern Pipeline Act (NPA) – established more than 3 decades ago; available exclusively to one party
  - National Energy Board Act – a modern, non-exclusive process that is open for use by any project proponent
- Denali will use the modern-day National Energy Board (NEB) process. No significant advantage to pursue project outside NEB framework

### U.S.

- The Federal Energy Regulatory Commission (FERC) is responsible for authorizing the project
- The Alaska Gasline Inducement Act (AGIA) is not an exclusive license to build a pipeline. Denali does not need AGIA to move forward



# Denali Progress – Key Accomplishments



*Spent ~\$55 million in 2008*

- Project Team mobilized
- Established Anchorage Headquarters
- Established Canadian Headquarters
- FERC pre-filing request approved
- Filed Right of Way on federal lands with Bureau of Land Management
- Successful 2008 summer field program
- Community outreach meetings in Alaska and Canada
- Established Archeology Technician program with UAF
- Member of AK DOL workforce development task force
- Met with Alaska, U.S. and Canadian government officials
- Awarded contracts for multi-million dollar Gas Treatment Plant and Pipeline preliminary engineering



## FERC Pre-filing and BLM Right of Way Application

### FERC Pre-filing:

- Enables Denali and FERC to exchange information and coordinate work activities cooperatively and efficiently
- Ensures a timely application development and review process
- The FERC requested that Denali pre-file due to project size and complexity

### BLM Right of Way Application:

- Initiated formal ROW process with Bureau of Land Management (BLM)
- Enables direct BLM involvement in Denali's planning process
- One third of Denali's 730 mile pipeline route in Alaska crosses land under BLM jurisdiction



## 2008 Work

### Summer Field Work

- Outstanding safety record
- Tok field office
- Surveyed over 200 miles of wetlands
- Investigated 70 archeological sites
- Shot over 1700 miles of ortho-photography
- Shot 730 miles of "immersive" video
- Investigated 538 potential stream/river crossings
- Performed route reconnaissance
- Identified contaminated sites
- As many as 80 people in the field



### Engineering Progressed

- Route optimizations
- Technical studies
- Environmental assessments
- Cost estimates and schedules
- Plan project execution
- ~100 people engaged



# Who's Been Working with Denali?



## \$55 million spent in 2008



# Two Major Engineering Contracts Awarded

**Fluor / WorleyParsons  
ARCTIC SOLUTIONS**  
A JOINT VENTURE

## Fluor WorleyParsons Arctic Solutions (Gas Treatment Plant)

- Major elements include technical studies, design basis, execution planning, cost estimating, and schedule development
- Arctic Solutions has significant arctic and North Slope experience, strong capability in the design and construction of mega projects in Alaska.



## Bechtel (Mainline – pipeline and compressor stations)

- Major elements include engineering, design basis development, cost estimating, scheduling, procurement planning and infrastructure and logistics assessments
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## 2009 Plans Focused on Open Season

- Broader work program will result in updated cost estimate – essential for open season
- Awarded Gas Treatment Plant contract - preliminary engineering underway
- Awarded Contract for Alaska to Alberta Mainline – preliminary engineering underway
- Ongoing work with DNR, FERC, NEB, OFC
- Continue to meet FERC pre-filing requirements and engage FERC 3<sup>rd</sup> Party Contractor
- Work with AK DOTPF on infrastructure requirements
- Field work program in Canada, minimal program in Alaska
- Workforce Development (UAF, AKDOL, survey crew training)
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## Denali is the only project proponent that . . .

- Has decades of Alaskan and Canadian construction and operational experience
- Has the desire and experience to construct and operate the Gas Treatment Plant (GTP)
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*Denali is moving forward with confidence in uncertain economic times*



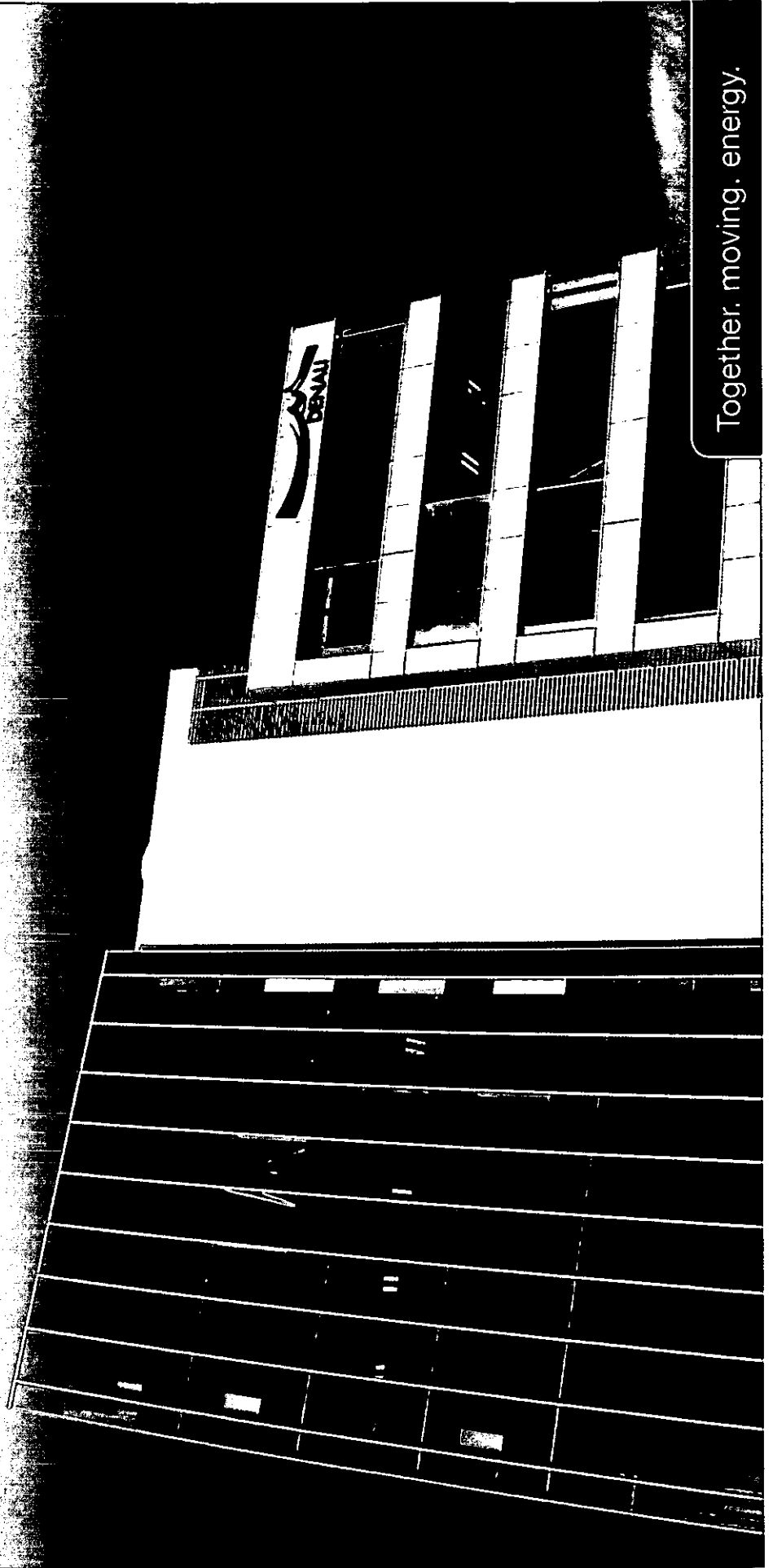
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the alaska gas pipeline

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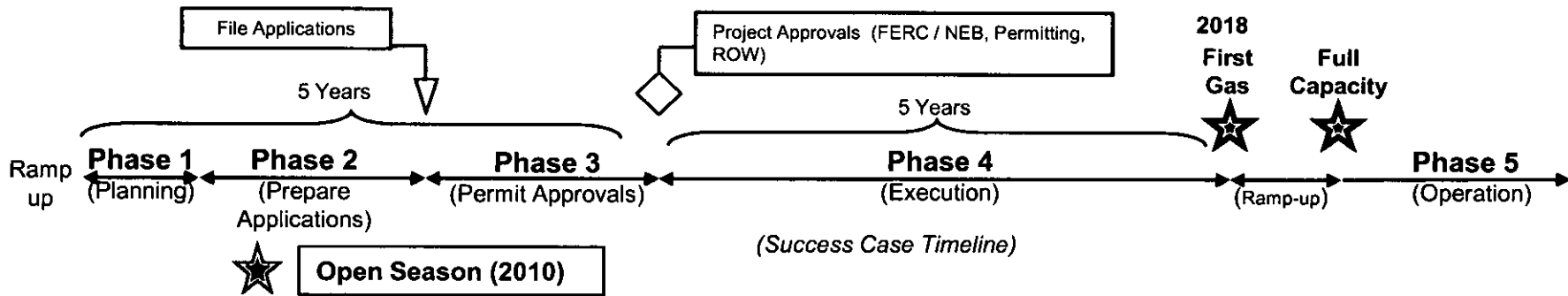
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