

ALASKA LEGISLATURE COMMITTEE FILES 2007-2008 HRLS 12327

# Natural Gas

- Will support ***in-state gas distribution*** efforts, including gas to Southcentral Alaska
- Will provide for ***at least 5 Alaskan offtake points, including Fairbanks***
- Other offtake points as appropriate

- Denali – The Alaska Gas Pipeline proposed route
- Potential Alaska Offtake Points

Beaufort Sea

McKenzie Bay

Proposed Route

Yukon Territory  
Alaska

Kenai  
Fairbanks  
Anchorage  
Valdez  
Glenne Valley

Bering Sea

Gulf of Alaska

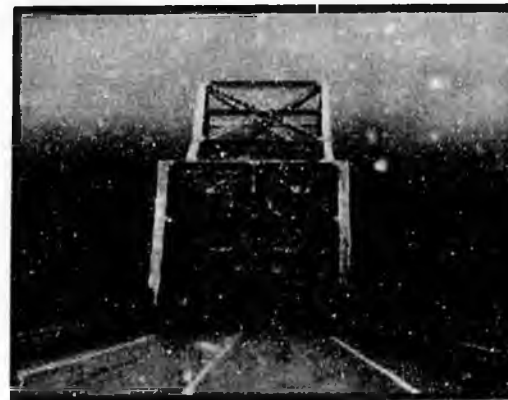


DENALI

the alaska gas pipeline

# Infrastructure Upgrade Studies

- Roads
  - e.g. Richardson, Dalton, Haines, Elliot, & Alaska Highways
- Bridges
  - e.g. Steese, Glenn, Parks, Haines Highways
- Ports
  - e.g. Port of Haines



# Denali Terms of Service

- Denali will be an open access pipeline
- Rates will be distance-sensitive for local use
- Project design will provide for efficient expandability
- Denali plans to solicit customers for interest in expansion every two years
- Flexibility to use existing or new infrastructure out of Alberta

## 2008 Work



### Additional Work

- Perform route optimizations
- Conduct technical studies
- Make environmental assessments
- Prepare cost estimates & schedules
- Plan project execution

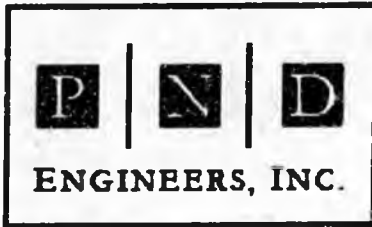
### Summer Field Work

- Wetland delineation
- Investigate archeological sites
- Identify previously impacted sites
- Investigate physical characteristics of stream crossing locations
- Collect technical data (geotechnical, hydrology, etc.)
- Perform route reconnaissance
- Shoot ortho-photography for alternative routes & logistics planning



# Who's Working with Denali right now?

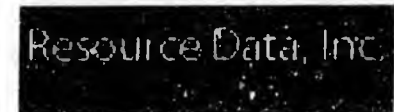
\$40 million to be spent on Summer Field Work.



**CH2MHILL**



Tanana Chiefs Conference



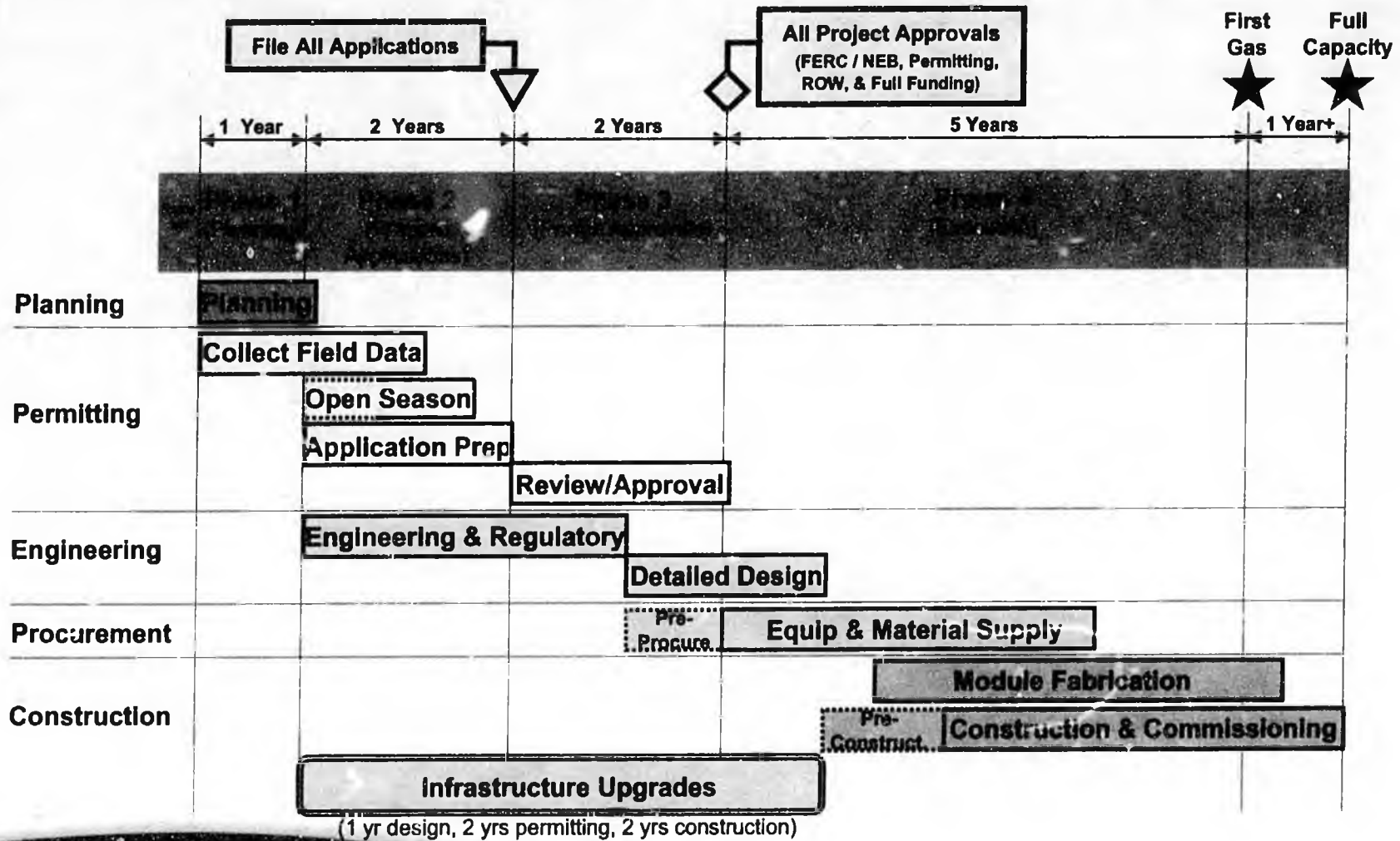
**Hawk**  
CONSULTANTS LLC



"from Barra to Barrow"  
Chumis Cultural Resources

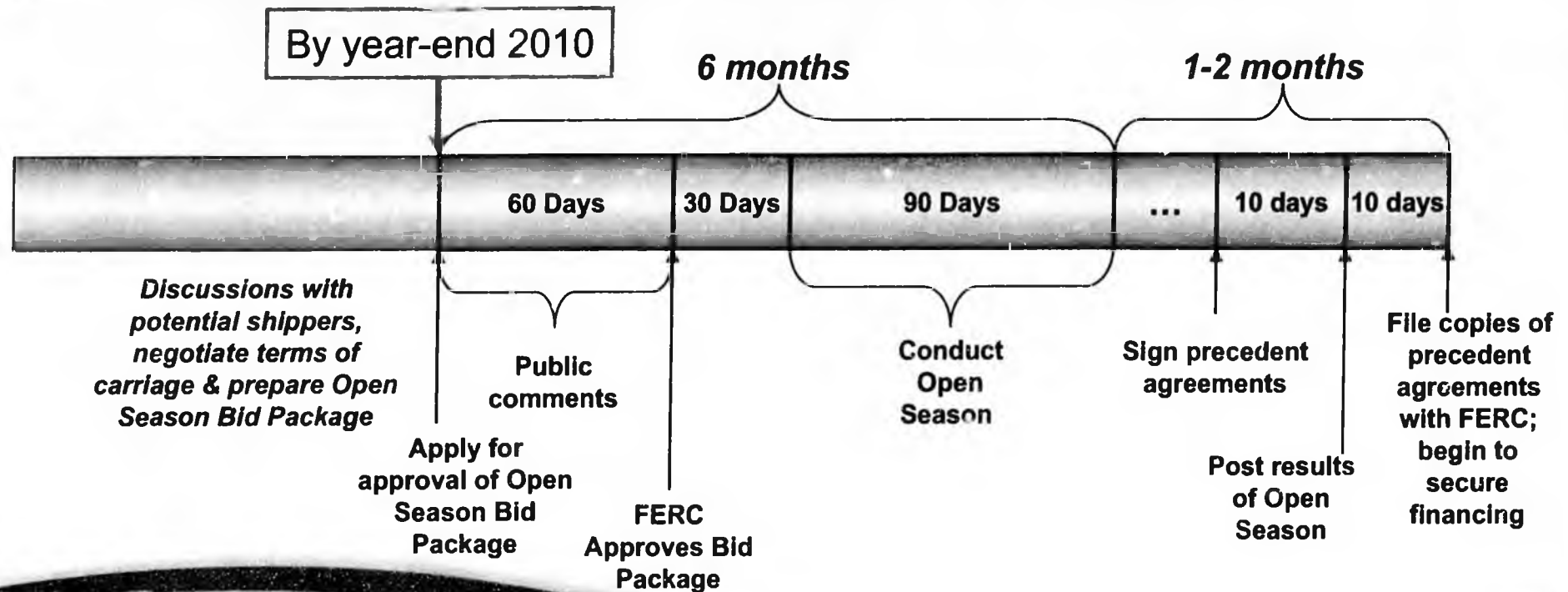


# Success Case Project Timeline



# Open Season

- Formal process regulated by the FERC in the US (NEB in Canada)
- Pipeline company seeks customers to make long term firm transportation commitments to the project
- These contracts obligate customer to pay costs whether or not they ship or even own gas
- These contracts give banks the necessary confidence to lend money to the pipeline company



## BP & ConocoPhillips: Technical and Financial Strength

- Combined Pipeline experience
  - More than **50,000 miles** of oil & gas pipelines
- Solid technical capabilities
  - **Proven leaders** in pipeline technology development
  - Proven track record in the **arctic**
  - Proven ability to deliver challenging **world-class projects**
- Strong balance sheets
  - **More than \$300 billion** of combined market capitalization
  - Provide **financial strength** to support construction

# Denali Progress Continues . . .

- ◆ April 8 – Denali announced
- ◆ May 1 – Alaska summer field work permit applications filed
- ◆ May 27 – Alaska field crews mobilized
- ◆ May 31 – More than 20,000 person-hours worked
- ◆ June 12 – Denali president announced
- ◆ June 16 – FERC pre-filing request submitted
- ◆ June 19 - Tok field office opening
- ◆ June 25 – FERC approves pre-filing request

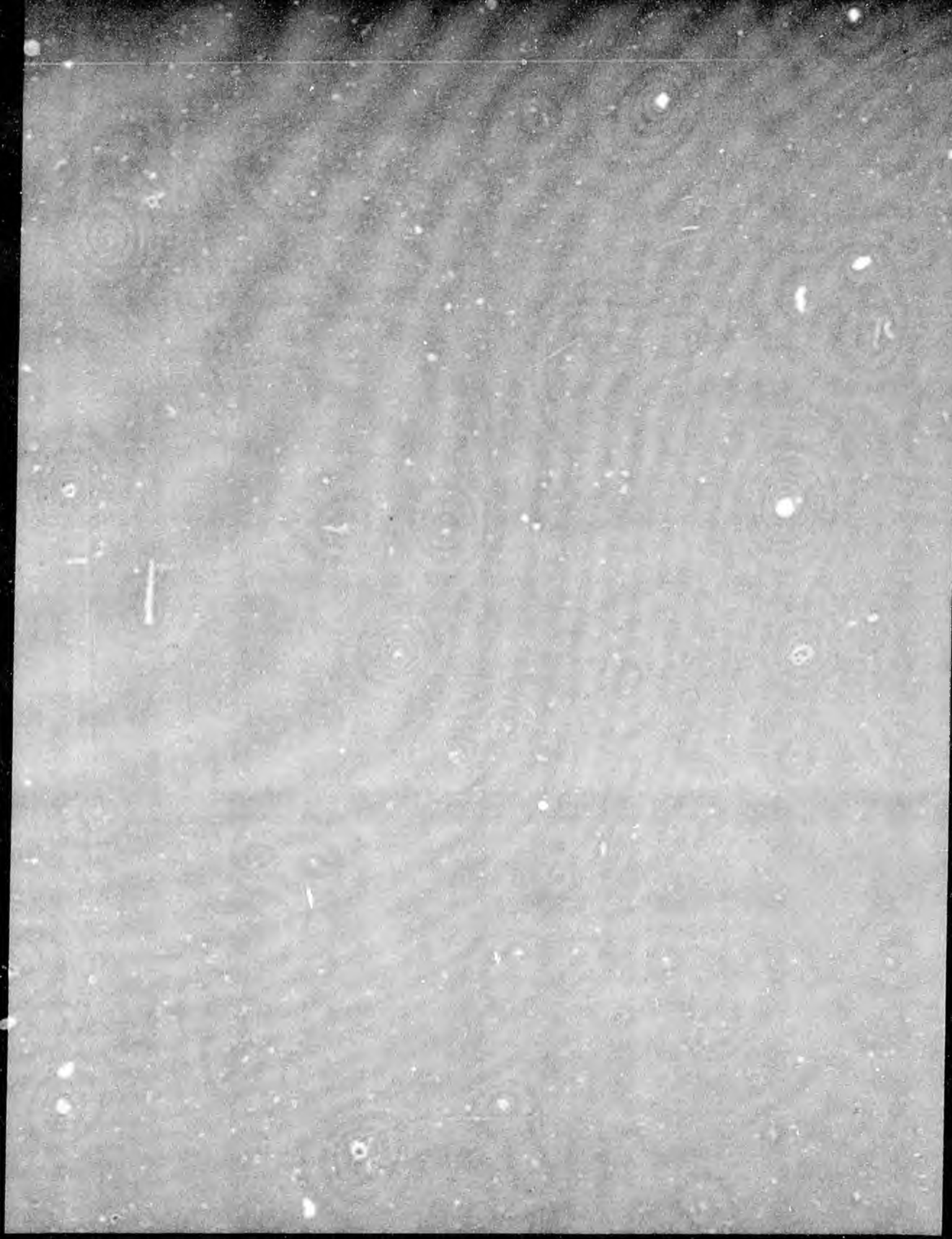
ConocoPhillips

TOGETHER..  
moving. energy.



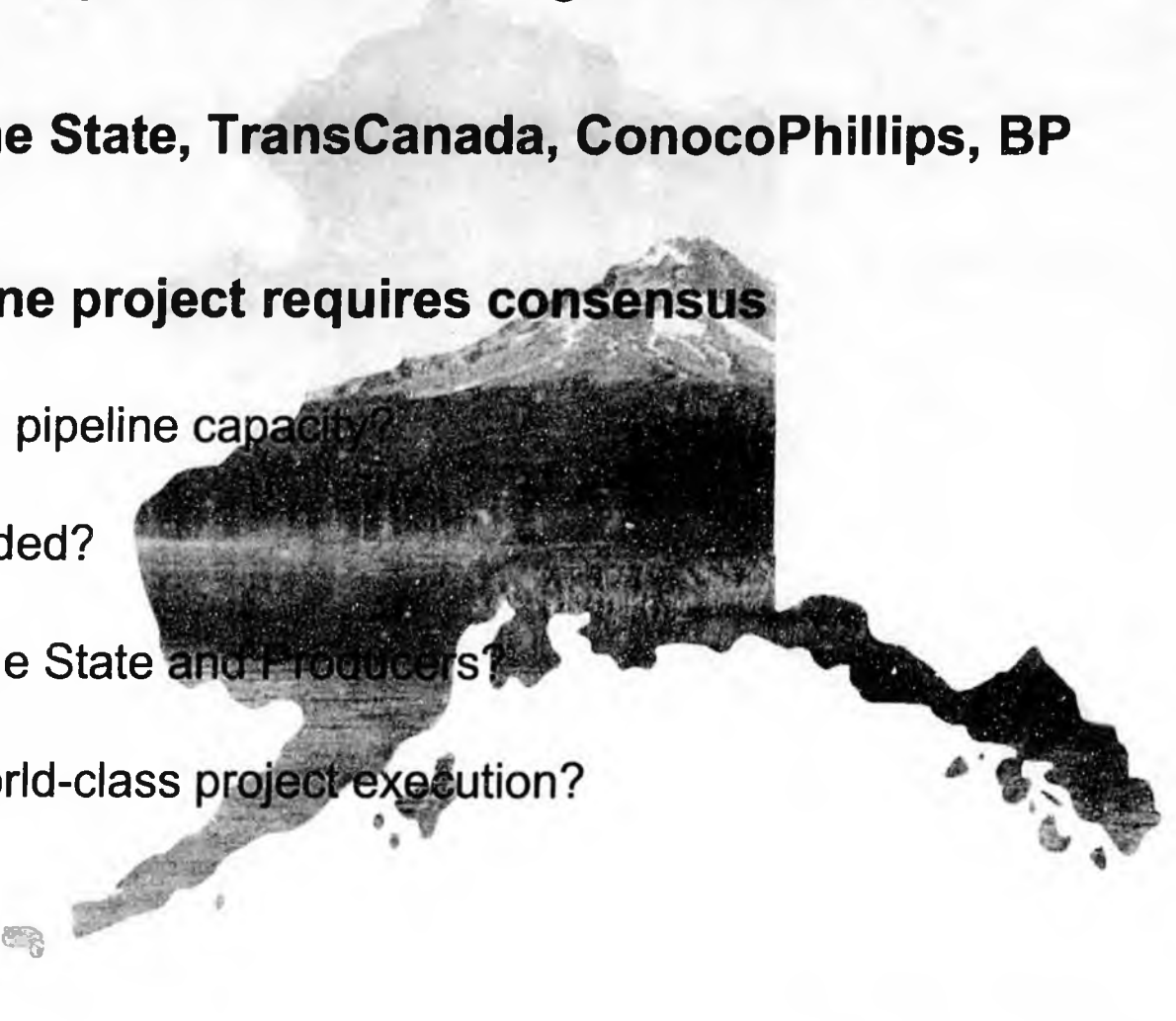
DENALI  
the alaska gas pipeline

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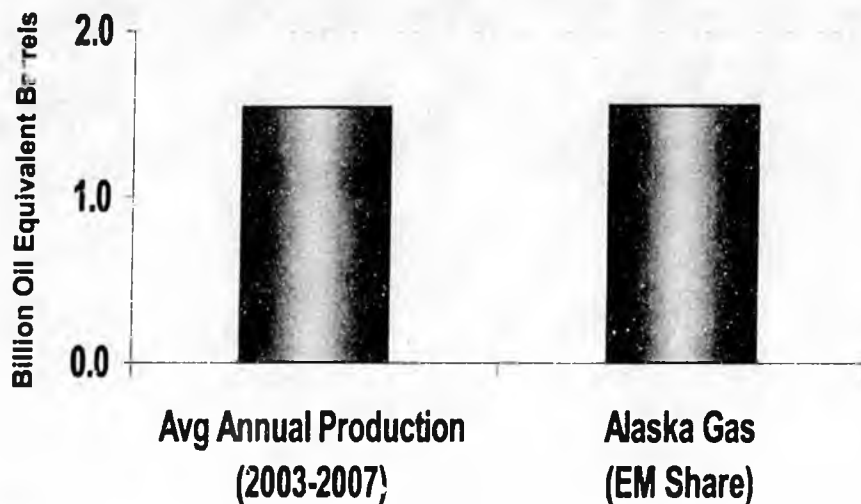
## ***ExxonMobil Committed and Ready to Work***

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- **Committed to the development of Alaska's gas resources**
  - **Ready to work with the State, TransCanada, ConocoPhillips, BP**
  - **Successful gas pipeline project requires consensus**
    - What is the right initial pipeline capacity?
    - How much gas is needed?
    - What is the value to the State and Producers?
    - What is needed for world-class project execution?
- 

# Motivated to Develop Alaska Gas

## ALASKA GAS RESERVES ADDITION



## ACTIVITIES

- 2001-02: Producer Pipeline Study
- 2003-06: SGDA Application / Contract
- 2007-08: AGIA Engagement
- 2008: Commitment to Develop PTU; Fairbanks Natural Gas Sale

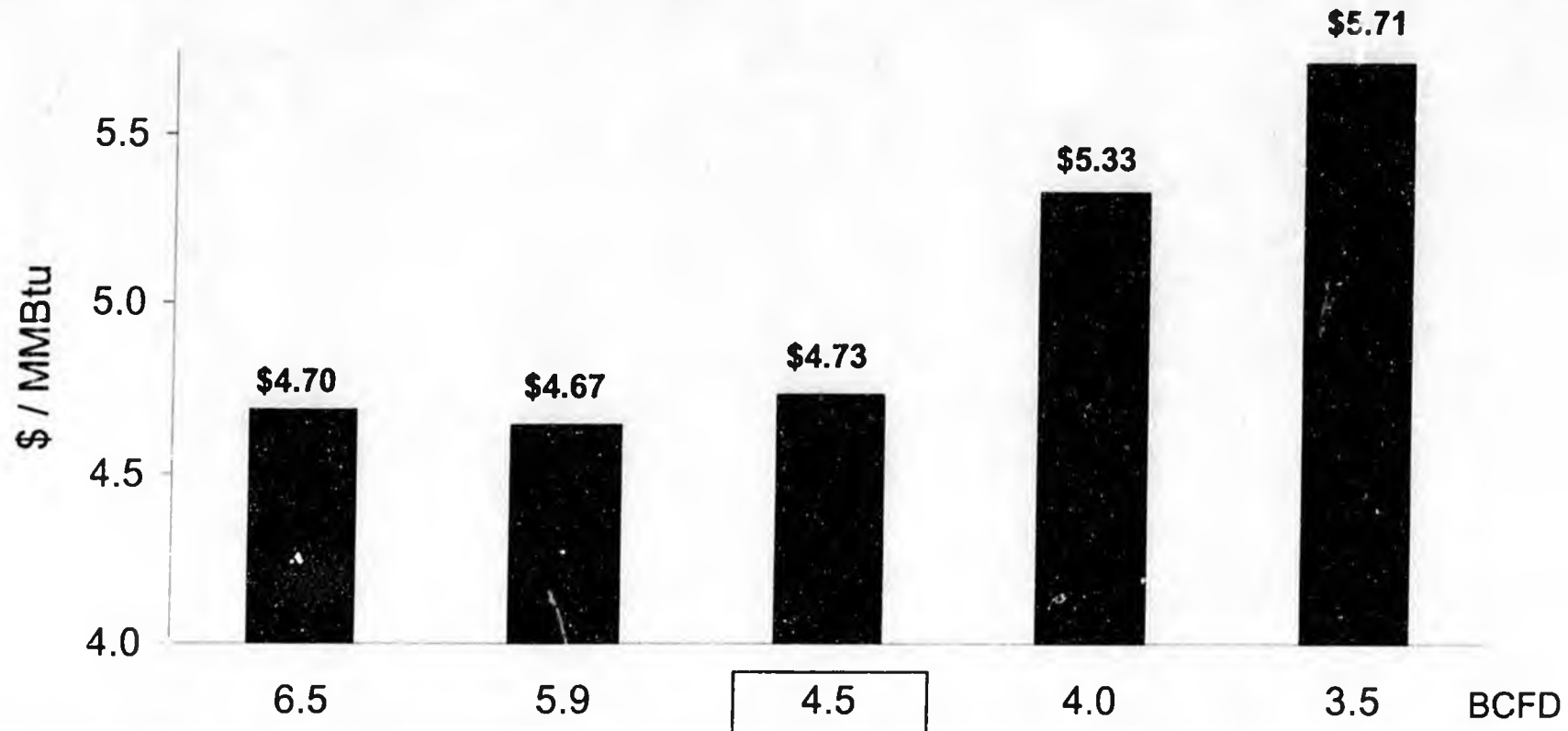
## IMPACTS

- *Proved reserves – Replaces a full year of our worldwide production*
- *Production – Doubles our U.S. gas production*

**KEY MEASURES OF  
COMPANY SUCCESS AND  
SHAREHOLDER VALUE**

## 4.5 BCFD Balances Tariff, Revenue and Resources

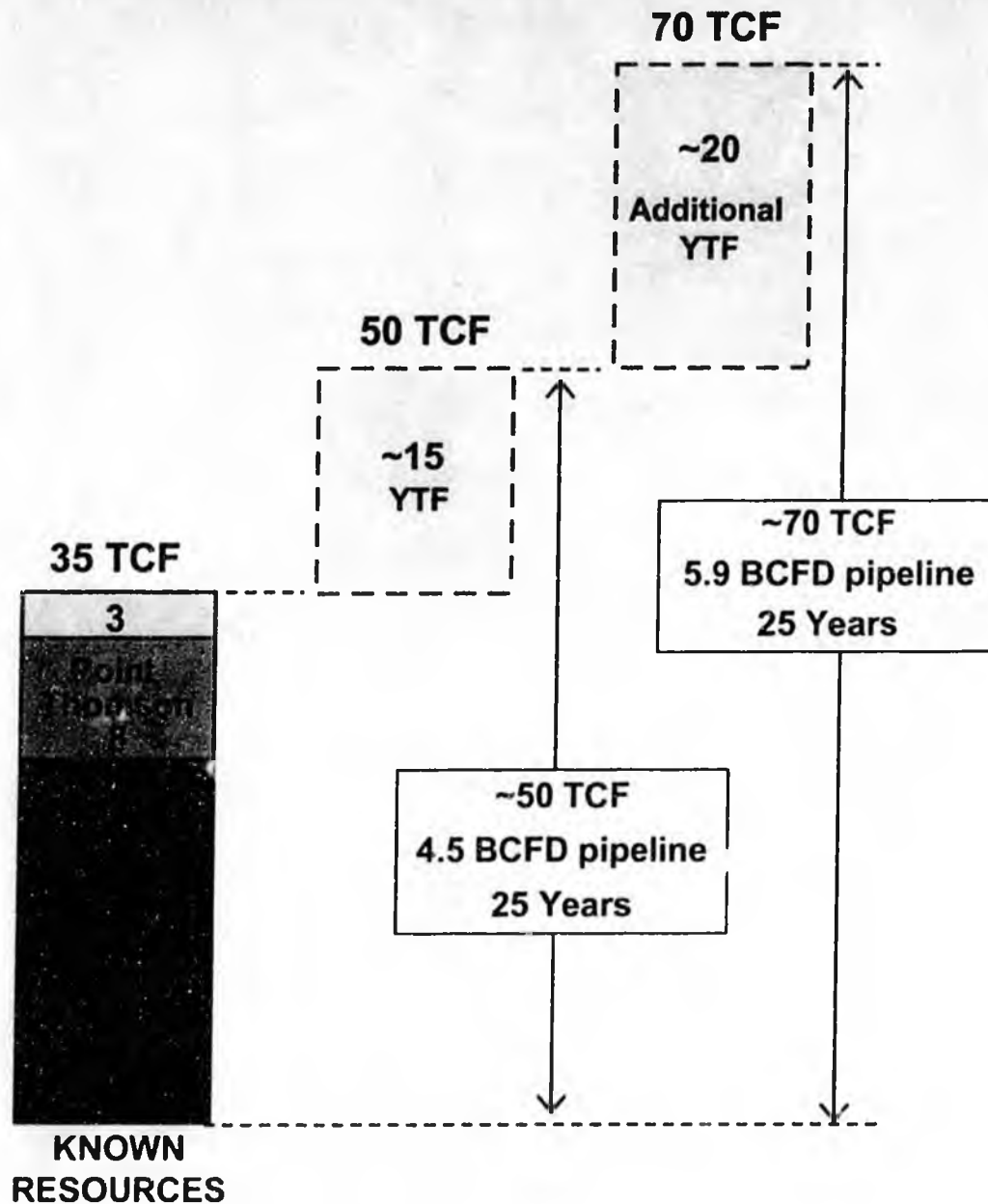
### TARIFF - ALASKA TO ALBERTA



<b>Impact to State</b> (NPV <sub>5</sub> - Billions)	\$66.1	\$60.7	\$51.6
		-\$5.4	-\$14.5

Source: Black and Veatch

## Critical Elements – Point Thomson / Open Access



- **If PTU not available:**

- Increases tariff
- Threatens FT / financing
- Increases reliance on YTF

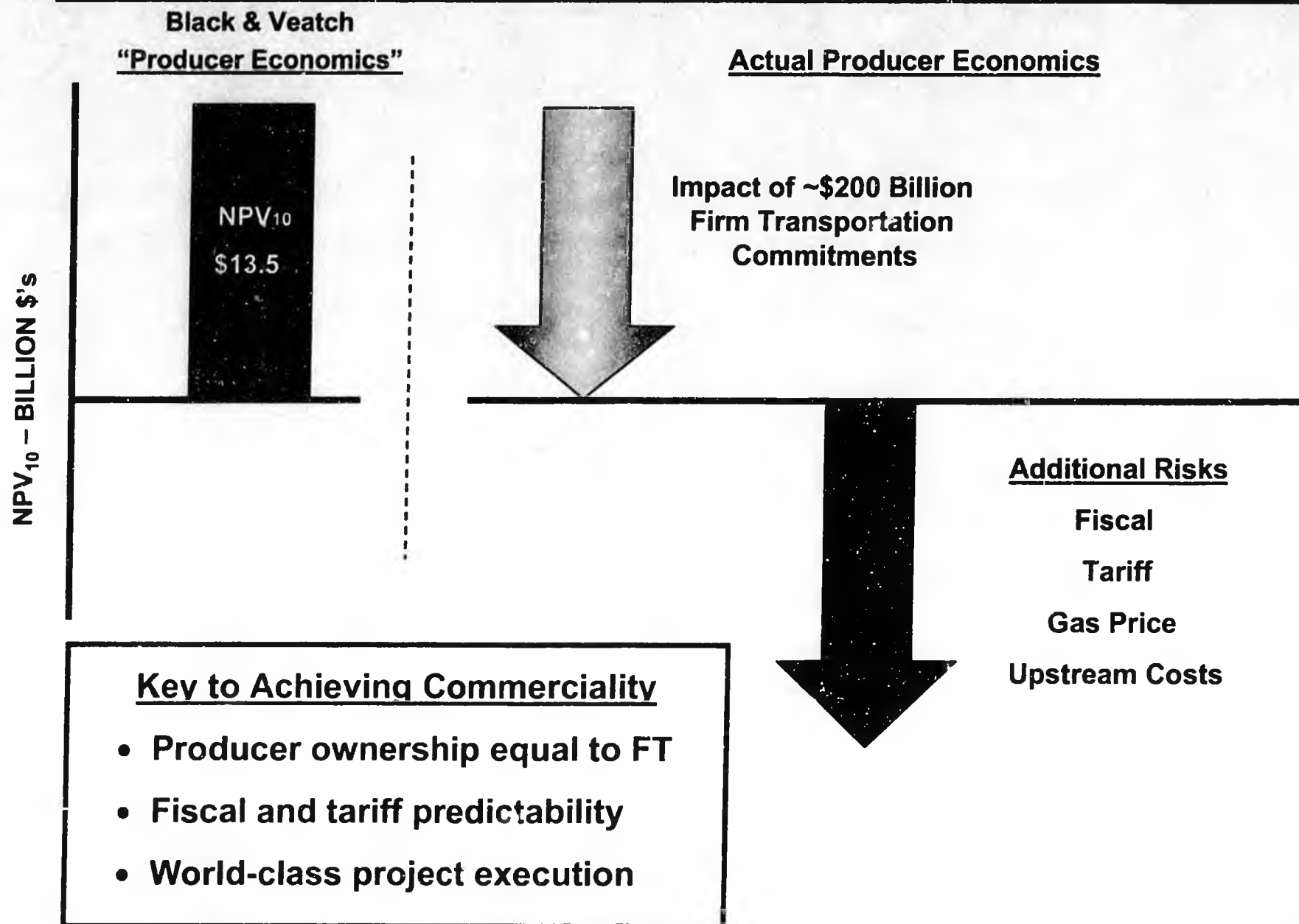
- **Open access**

- Significant capacity for YTF gas
- Additional capacity available to explorers through low cost expansions
- U.S. and Canadian regulations ensure open access
- Open to discuss further assurances with State

YTF – Yet-to-Find

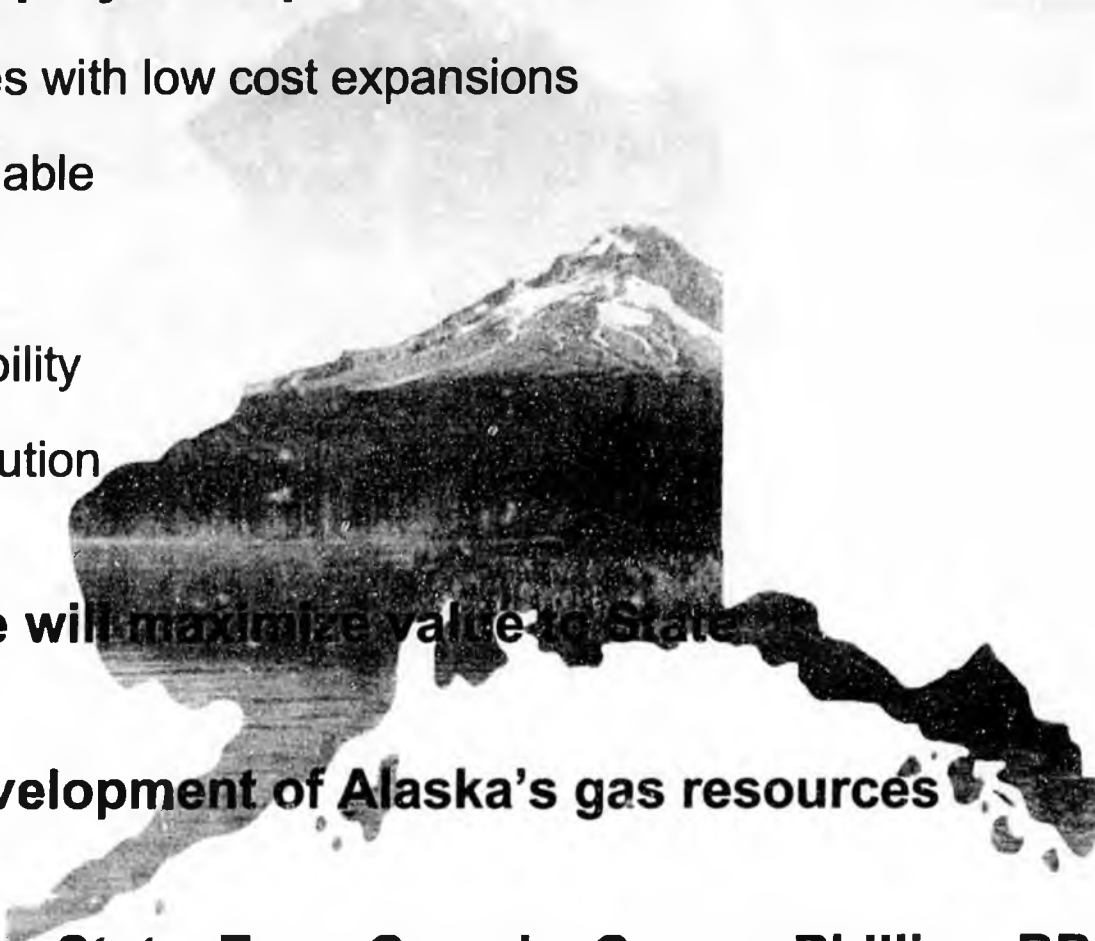
TCF – Trillion Cubic Feet

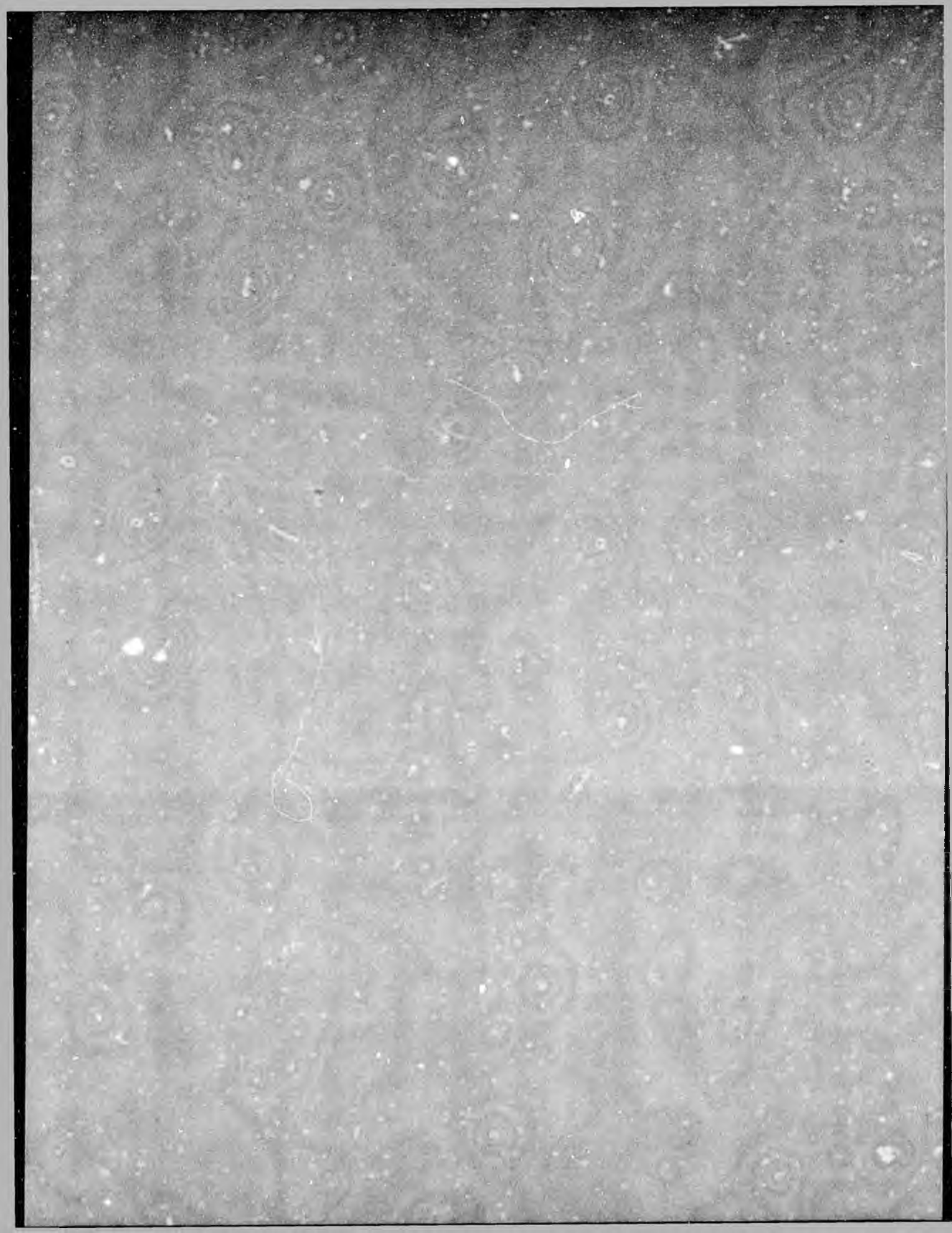
# FT Commitments – Real Risk and Cost to Producers



## ***Key Take-Aways***

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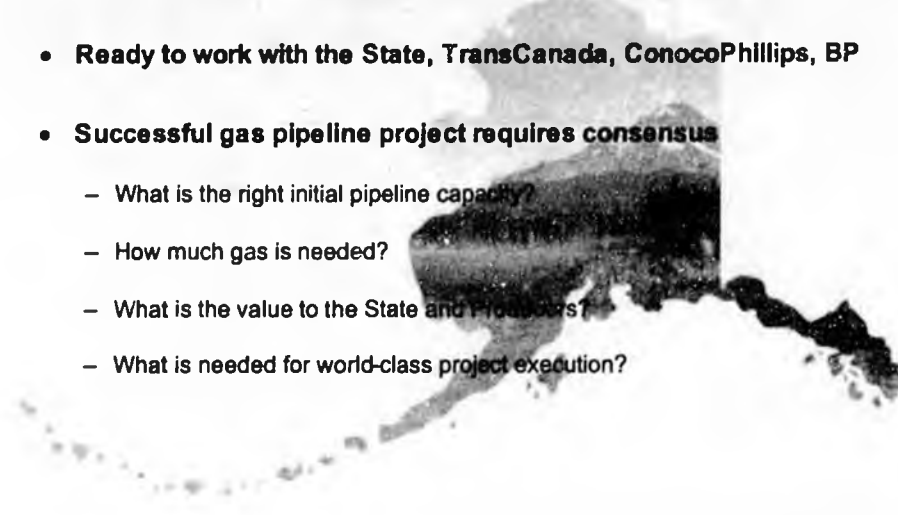
- **Successful gas pipeline project requires:**
    - 4.5 BCFD initial gas sales with low cost expansions
    - Point Thomson gas available
    - Ownership equal to FT
    - Fiscal and tariff predictability
    - World-class project execution
  - **Agreement on the above will maximize value to State**
  - **EM committed to the development of Alaska's gas resources**
  - **EM ready to work with the State, TransCanada, ConocoPhillips, BP**
- 



**Slide 1 – ExxonMobil Committed and Ready to Work**

***ExxonMobil Committed and Ready to Work***

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- **Committed to the development of Alaska's gas resources**
  - **Ready to work with the State, TransCanada, ConocoPhillips, BP**
  - **Successful gas pipeline project requires consensus**
    - What is the right initial pipeline capacity?
    - How much gas is needed?
    - What is the value to the State and Producers?
    - What is needed for world-class project execution?
- 

ExxonMobil 1

- Good afternoon. My name is Marty Massey. I am the U.S. Joint Interest Manager for ExxonMobil, a position I've held since November 2001, and I am responsible for ExxonMobil's development of gas resources in Alaska.
- First, I want to thank you for the opportunity to speak with you today and address questions that I am sure you have.
- I recognize you are going through a very thorough process to decide how best to deliver a pipeline for the State. I know that you have a tough decision to make.
- We have taken an active interest in your deliberations and it is clear your focus is on doing what is in the best interest of Alaska.
- I also know you have questions about whether or not we are really on board to make this project happen. I hear questions like, "Where is ExxonMobil?" and "Do they really want to advance a project?" Today, my intention is to demonstrate that we are

committed to the timely development of Alaska's gas resources and we want to be part of the solution.

- I understand you are frustrated that more progress has not been made, but you also recognize how important this project is to the future of the State – we recognize that as well.
- I want to offer to you that we are ready to work with the Administration, TransCanada, ConocoPhillips and BP to advance this project.
- We were invited to testify and share our observations from review of the State's consultant's work on the TransCanada application. In particular, I plan to cover what we believe will be necessary to make this pipeline project a success by addressing four key questions:
  - "What is the right initial pipeline capacity?"
  - "How much gas is needed?"
  - "What is the value to the State and the Producers?" and
  - "What is needed to ensure world-class project execution?"
- Before getting into the details, I would like to introduce four folks with me today that are part of our Alaska Gas team. With your permission, I may call on them to help me with a question or two.

**Jim Brown** – works in our Worldwide Gas Marketing Company; Jim just wants to sell Alaska gas

**Mark Nelson** – works in our Commercial group; Mark has been working Alaska for nearly 15 years, and many of you know him.

**Norman Kreutter** – one of our senior Treasurer's; Norman has completed numerous financings and ensures we properly value this project.

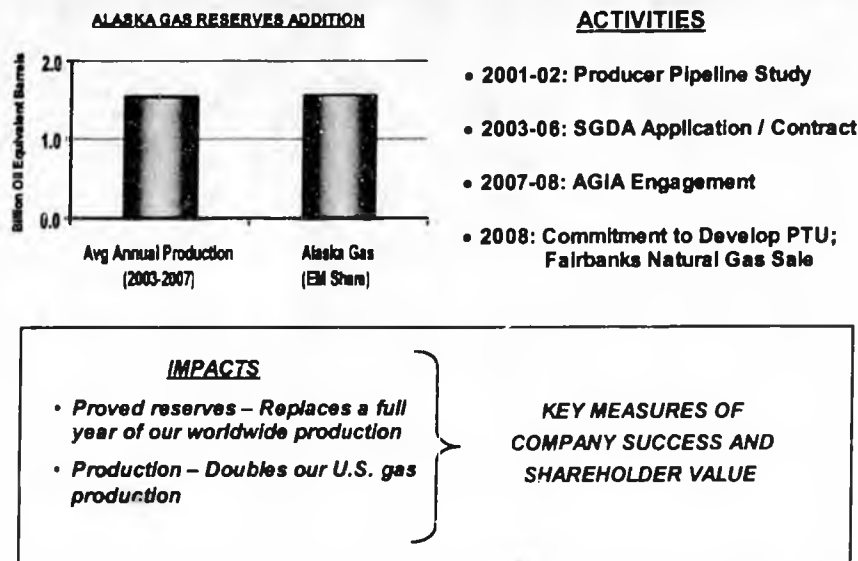
**Jim Morse** – is our commercial attorney; I know we all have to have one; Jim has completed many deals around the world leading to successful projects.

We will be here over the next few days and will make ourselves available to address any topic you would like to discuss.

- Let's begin by looking at why this project is so important to us.

## Slide 2 – Motivated to Develop Alaska Gas

### *Motivated to Develop Alaska Gas*



ExxonMobil 2

ExxonMobil has been in Alaska for over 50 years and has been a key player in Alaska's oil industry development. We hold the largest working interest at Prudhoe Bay (36.4%) and are the largest lease holder of discovered North Slope Gas.

ExxonMobil is in the business of developing oil and gas resources. That is what we do and we have proven throughout the world that we can do it well.

Development of Alaska's gas resources is extremely important to our company. Let me describe why.

If I could draw your attention to the bar chart, an Alaska gas pipeline project would allow us to add over one and a half billion oil equivalent barrels of proved reserves, which is more than our production has averaged over the past 5 years.

In addition, this project has the potential to double our current U.S. gas production. Reserves and production are key measures of any oil company's success and shareholder value.

With our size, only the very large projects can impact our performance in any significant way. The Alaska gas pipeline project would have a clear, positive impact on our worldwide results, and would be seen as a significant enhancement to our performance.

We've been working hard to develop that gas ever since Prudhoe Bay was discovered. We've now invested more than \$180 million looking for a way to bring Alaska gas to market including early pipeline studies and the LNG and gas-to-liquid technology studies.

I'll tell you our activities have picked up significantly in this decade as natural gas prices started to climb. For example, prior to 2000 gas prices were in the range of \$2/MMBTU. During 2001/2002, a \$125 million gas pipeline study was performed by ExxonMobil, ConocoPhillips and BP. Following the study, we submitted a Stranded Gas Development Act application which led to the Stranded Gas contract.

Since the development of the Alaska Gas Inducement Act, we've provided testimony and engaged in the public comment process. The good news is that we are aligned with the Administration's recent determination that a gas pipeline project to North American markets will result in the best value for the State and the Producers.

Earlier this year, we made a commitment to put Point Thomson Unit on production, which will provide valuable information to remove any doubt on how best to produce the hydrocarbons at Point Thomson, including the major gas resource.

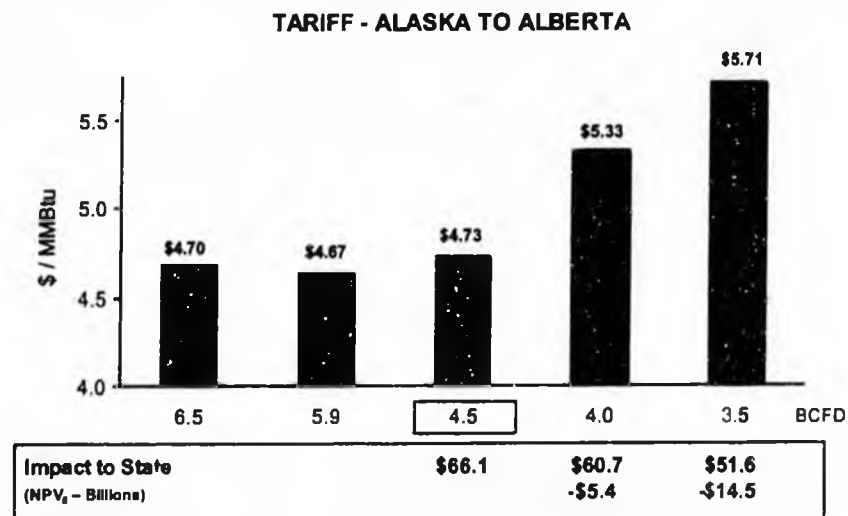
We are pursuing a large-scale gas pipeline project and continue to pursue smaller volume opportunities when there is a market. For example, I recently had the opportunity to participate in the sale of Prudhoe Bay gas to Fairbanks Natural Gas to

address the energy needs of consumers living in Interior Alaska. If I'm not mistaken, this is the first sale of gas off the North Slope and we're pleased to be a part of it.

We are working very hard to determine the best way to move an Alaska gas pipeline forward. We believe a successful project requires the support of all three major producers and the State of Alaska. We are ready to work with the State, TransCanada, ConocoPhillips and BP to put in place the "necessary ingredients" for a successful gas pipeline project.

**Slide 3 – 4.5 BCFD Balances Tariff, Revenue and Resources**

**4.5 BCFD Balances Tariff, Revenue and Resources**



Source: Black and Veatch

ExxonMobil 3

The Producers' joint effort in 2001 and 2002 determined that a pipeline of around 4.5 BCFD would provide the best chance of achieving a viable project. This determination resulted from a detailed technical evaluation of pipeline hydraulics and cost.

The State's data is consistent with this analysis.

Looking at the chart on the slide, which is based on data provided to the public by the Administration and their consultants (Chapter 3, page 3-57 and Appendix G1, pages 191, 199), we can see that when the pipeline throughput is 4.5 BCFD, the tariff is

\$4.73/MMBTU, as shown in the green bar. When the capacity is reduced to 3.5 BCFD, the transportation tariff shoots up from \$4.73 to \$5.71, which is about a 20% increase.

If the pipeline is expanded to 5.9 BCFD from 4.5 BCFD, the tariff is reduced to \$4.67. At 6.5 BCFD, you can see the tariff starts to increase. This cost and hydraulic analysis clearly shows "the sweet spot" for this pipeline is 4.5 BCFD, given the amount of gas available to support a pipeline of that size.

I will address volume of gas available to support the pipeline on my next slide, but before I do that, let's look a little deeper at the impact of these various pipeline sizes.

As the slide shows (based on the public information provided by the Administration and their consultants), when you compare the less efficient 3.5 BCFD case to the optimum 4.5 BCFD case, you can see that with the smaller pipeline throughput, the tariff is about \$1.00/MMBtu higher. This change results in a significant \$14.5 billion reduction in the State NPV<sub>5</sub>. Even a reduction of 0.5 BCFD to 4.0 BCFD would cost the State over \$5 billion (NPV<sub>5</sub>). Producer profits would also see a similar percentage reduction. That is a huge impact to the State and Producers. So flowing gas at 4.5 BCFD is the right way to go with this project.

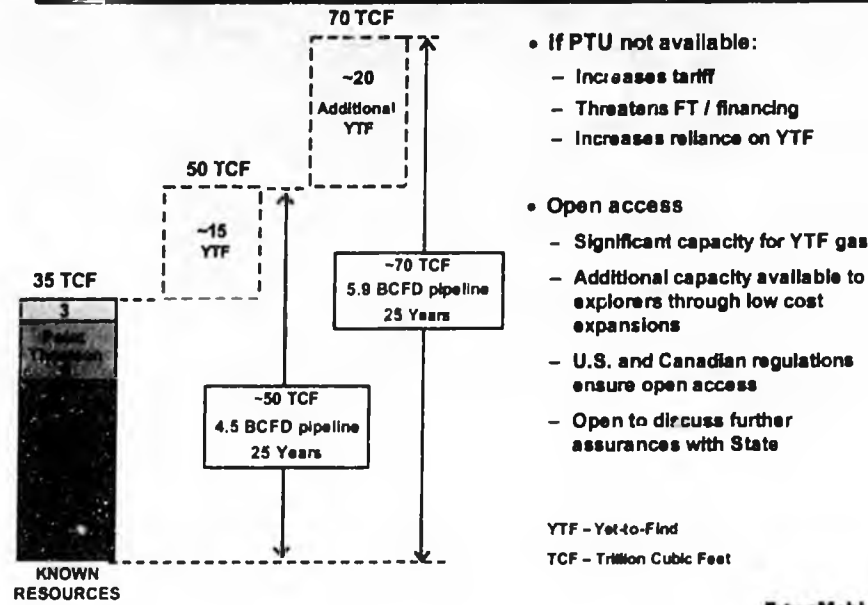
We are fortunate the hydraulics and cost analysis show that the pipeline should provide low cost expansions. For example, expanding from 4.5 BCFD to 5.9 BCFD or possibly even to 6.5 BCFD, could result in essentially the same tariff. Based on the State's consultant's analysis, significant low cost expansion is expected to be available. That is great news for the State and our company, because there will be significant incentive for exploration. I'll expand on this point later.

The initial pipeline capacity will be determined at the open season, but, all of the available information today suggests the proper balance of tariff, revenue and utilization of gas resources is a 4.5 BCFD pipeline.

Let's now look at some critical elements for achieving a successful project: the importance of Point Thomson gas to support the optimum pipeline capacity and the importance of open access.

**Slide 4: Critical Elements – Point Thomson/ Open Access**

**Critical Elements – Point Thomson / Open Access**



ExxonMobil 4

On this slide, the green bar on the left shows the State's known gas resource: Prudhoe Bay at 24 trillion cubic feet (or TCF), Point Thomson at 8 TCF, and then 3 TCF from other fields, which brings us to a total of 35 TCF. We've also shown the additional gas needed to keep the pipeline full for a 25 year period, which is a reasonable assumption for the firm transportation period likely to be requested.

In the 4.5 BCFD case, a total of approximately 50 TCF is needed, which would require that another 15 TCF of yet-to-find gas be discovered and developed, shown as the yellow bar in the middle of the screen. This illustrates how critical Point Thomson gas is to the project.

It is estimated that Point Thomson could provide daily gas production of approximately 1 BCF per day. So without this gas, the tariff will be too high; and, without this gas, the

critical firm transportation commitments (or "FT") may not be adequate to support the project. The financial markets will require sufficient long term transportation commitments and the ability for the pipeline owner to finance the project is threatened without Point Thomson.

Point Thomson gas also provides security for downstream consumers of Alaska gas by ensuring supply in the event of a temporary shutdown in the Prudhoe Bay Field. This gas also helps if exploration or "yet-to-find" gas does not materialize or is not adequate to meet gas marketing commitments.

The bottom line is that without Point Thomson, you would be counting on 23 TCF of yet-to-find gas which is essentially another Prudhoe Bay. On my prior slide, I showed that the State and Producers would forego significant profits at lower throughput rates, which makes it absolutely critical we land on the right approach at Point Thomson.

Through the extensive technical work we've performed to date, we've determined that a Point Thomson Unit (PTU) gas sales development will produce and recover the majority of the condensate from the gas reservoir. However, we also recognize a gas pipeline project is still many years away and there is still some uncertainty about the best way to produce Point Thomson.

For this reason, ExxonMobil and the 26 other lease holders developed the current proposed Plan of Development, which consists of a gas cycling project estimated to cost over \$1.3 billion. The project will bring Point Thomson into production by year end 2014. More importantly, this project will give us the information that is needed to remove any doubt about how best to produce Point Thomson. In addition, we will perform the engineering necessary for individual Point Thomson lease holders to participate in a gas pipeline open season. There is no faster way to bring the Point Thomson into production; there is no faster way to ensure that the Point Thomson gas will be available for a gas pipeline – gas which is absolutely critical to the success of the pipeline project.

Turning back to yet-to-find gas, the 15 TCF required in the base case represents about 30% of the gas required to fill the 4.5 BCFD pipeline over a 25 year period. While that is a lot of gas, with both Prudhoe Bay and Point Thomson available, we are able to keep the pipeline full for well over 10 years – which allows time to find and develop additional gas.

The previous slide also showed that it may be possible to get an even lower tariff if we build the pipeline to carry 5.9 BCFD. While shipping gas at 5.9 BCFD would certainly generate more revenue early on, to do so would place too much reliance on future yet-to-find gas. That is just too risky for anyone. We believe the better solution is to expand the pipeline with low cost expansions as yet-to-find gas is discovered and developed.

Given the need for 15 TCF of yet-to-find gas in the base case and room for an additional 20 TCF of yet-to-find gas that can be shipped through low cost expansions, there will be significant incentive for exploration to occur once a pipeline project is advancing. We are already starting to see increased leasing activity in offshore Alaska, largely driven by today's prices. Although we should expect significant future gas exploration and development activity, this will take time and it is unlikely expansion shippers will commit to firm transportation in the initial open season for gas they don't have. That is why open access is so critical.

We recognize open access has long been on the minds of Alaskans and those in the industry. It is an important concern for us as well. However, we do believe the necessary assurances are in place. Let me describe how we come to this conclusion.

Some people have expressed concern that if the Producers own the business entity that builds and operates the gas pipeline, then those Producers would try to "shut out" any new explorers who find gas and want to ship it through the pipeline. There are several reasons why this would not occur.

First, as I discussed earlier, exploration or yet-to-find gas is needed for the success of the base project. Substantial expansion capacity at low cost should be available, so there are good reasons to bring on this new gas. Major hurdles to access do not exist.

Second, the regulatory framework of FERC and NEB is based on the concept of open access. FERC rules expressly provide open, competitive access to gas pipeline capacity for prospective gas shippers. Canada's National Energy Board Act has similar objectives.

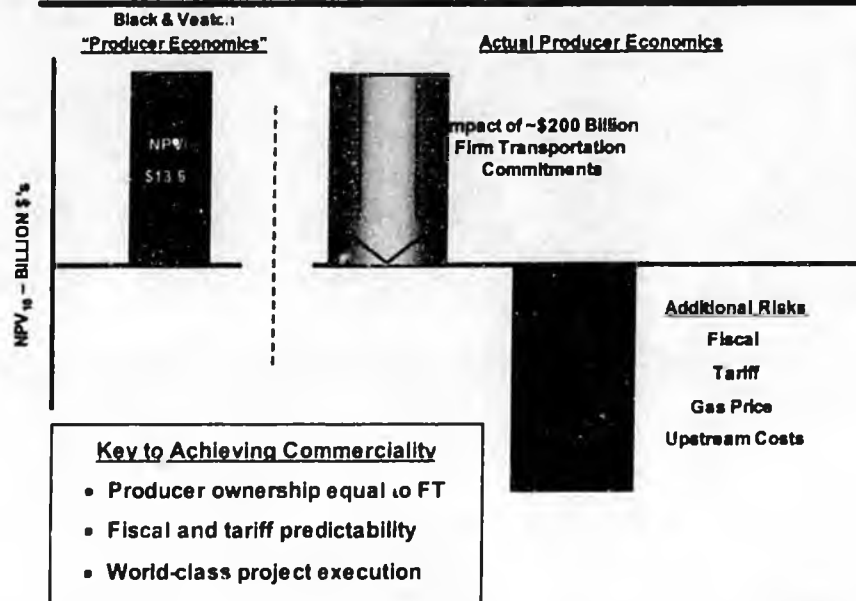
Further, the U.S. federal government recognized that an Alaska gas pipeline would be a very unique undertaking, so additional rules were established by Congress and FERC, which apply specifically to Alaska gas. These rules provide extra certainty that ANS explorers can obtain shipping capacity via expansions. For example, FERC could even order an expansion if there happens to be a disagreement about the need for an expansion.

I think the FERC's own words say it best. When he addressed this legislature in Anchorage on June 16, Jeff Wright, FERC's Deputy Director - Office of Energy Projects, stated: "the law says this is going to be an open access pipeline".

Finally, although we believe ample assurances of open access exist, we are willing to discuss other assurances that could be provided to make the State comfortable successful explorers will have access for their newly discovered gas.

Slide 5: FT Commitments – Real Risk and Cost to Producers

**FT Commitments – Real Risk and Cost to Producers**



ExxonMobil 5

Now, let's turn to the economic picture.

To evaluate TransCanada's license application, the State's consultant Black and Veatch produced what they have termed "Producer Economics for a 3<sup>rd</sup> Party Pipeline Case". This is shown as the blue bar on the slide. In their words, Black and Veatch made a 'simplifying assumption' by treating the firm transportation commitment costs as an operating expense which they said 'does not materially change the relative attractiveness of the project from the producer's perspective' (Appendix G-1, Section 3.8.1, page 36). Anytime someone tells me they made a simplifying assumption, I pay close attention. Unfortunately, this assumption has an enormous impact on the producer economics.

Black and Veatch's simplifying assumption ignores the reality that firm transportation commitments represent real risk and are valued differently from an operating expense by the financial markets. Since an uncommitted operating expense cannot be used to support the proposed project financing like a 25-year ship-or-pay firm transportation commitment can, clearly something of value is being transferred from the shippers to the pipeline developer and lenders.

We, like many economists and finance practitioners, believe that firm transportation commitments are long-term and debt-like in nature. These financial commitments should be capitalized and treated as a lump sum cash outflow in the year the commitments are made. Handling the FT commitments in this manner significantly reduces Black and Veatch's estimate of the producer's benefit. In fact, as you can see by the yellow arrow, it drops Black and Veatch's producer economics from \$13.5 billion NPV<sub>10</sub> to essentially zero. Allow me to explain this in a different way. For this project, as a gas shipper on the pipeline, we have two choices going forward.

- One option is that we can choose to invest in the project utilizing a pipeline affiliate. Under this approach we would invest our share of the capital upfront.
- The other option available to us is to make a long-term financial commitment to the pipeline developer to reimburse them for the actual cost (not their estimated cost) of the pipeline, plus a return on their investment. In this case our shipper affiliate, through the firm transportation commitments, is paying for the ultimate cost of the pipeline, plus the profit the pipeline builder requires and incremental financing costs. Because these are long-term, binding commitments to "pay for the project" regardless of whether the gas flows, we treat these commitments as if we were investing based on the value of those firm commitments.

When you think about it this way, the economics have to be worse for us to make a commitment to a third-party pipeline developer like TCPL because we are paying for actual costs plus their profits, and potentially higher financing costs. This is conceptually no different than a new car buyer looking at the true cost of leasing a car rather than purchasing it outright.

I think it is important for you to know how we run our economics and value these firm transportation commitments. And I know you have become very familiar with the need for firm transportation commitments to support financing for this project. By only making

this one change to Black and Veatch's analysis, the producer economics NPV<sub>10</sub> drops to zero.

In addition as shown by the red arrow, it is appropriate to recognize the additional risk that fiscal terms might change in the future; the risk that tariffs could increase; as well as exposure to higher costs and lower natural gas prices.

I realize some of these are difficult to predict, but it would only be prudent to recognize these exposures which could move the Black and Veatch NPV<sub>10</sub> for producers to well below zero.

We would welcome the opportunity to share our analysis with the Administration and their consultants. As you can see, we are in a much different place on how to value a third-party pipeline project.

So does this mean the project is unattractive under any scenario or that we won't bear any risk? No, we are quite willing to bear price risk. If we are an owner in the project, we will also bear our share of the capital risk. This is what we are in the business of doing.

However, from our perspective, the other risks I've outlined need to be mitigated. The keys to developing a commercial project are ownership in the pipeline equal to throughput. With this approach, any pipeline profits from transporting our gas will come to us. We can also work to achieve the lowest financing costs and participate in the project to ensure it is completed at the lowest possible capital cost.

At some point we will need to align with the State on fiscal and tariff predictability.

Lastly, world class project execution is a must to minimize the total cost of the project.

I think we are all coming to realize this project is not simply "another pipeline project". Goldman Sachs agree, as per Appendix H, page 2 – "It is important to note that this project is unprecedented in terms of scope, costs and financing requirements...". It is a

massive mega-project and faces extreme risks due to its scale and complexity. The project would be the largest private investment in North America. The gas treating plant, which is an integral part of the project, will be the largest of its kind in the world. There is not another project that compares to this one. For this reason, world-class project execution is essential.

Let me put this in perspective. A 20% overrun would reduce the State NPV<sub>5</sub> by more than \$5 billion. So, the State and the Producers are aligned on achieving the lowest possible cost because our value comes from the netback on the gas...which is simply the gas sales price minus the transportation costs.

On a project of this magnitude and complexity, project construction and operating experience should be a significant consideration. This project will require combining the resources, skills, expertise and financial strength of all parties to be successful.

## Slide 6: Key Take-Aways

### Key Take-Aways

- **Successful gas pipeline project requires:**
  - 4.5 BCFD initial gas sales with low cost expansions
  - Point Thomson gas available
  - Ownership equal to FT
  - Fiscal and tariff predictability
  - World-class project execution
- **Agreement on the above will be required**
- **EM committed to the development of Alaska's gas resources**
- **EM ready to work with the State, TransCanada, ConocoPhillips, BP**

ExxonMobil <sup>®</sup>

Let me close with the key take-aways from my testimony today. A successful project will require alignment among the parties on the following:

- The pipeline should be built and flowed at an initial rate of 4.5 BCFD with the ability to add low-cost expansions.
- Point Thomson is critical to the pipeline. This gas should be made available to support commitments to the pipeline. The Point Thomson Initial Production System, which is currently underway, should be allowed to continue. The Point Thomson Plan of Development should be approved to remove any doubt on how best to produce the Thomson Sand. All 27 Point Thomson owners are committed to the plan and would like to resolve the current dispute with the State.
- Ownership equal to FT commitments, as well as fiscal and tariff predictability are necessary to achieve a commercially viable project.
- World-class project execution is essential. Expertise from all players is needed.

- Aligning on these important considerations will maximize value to the State.
- And finally and most importantly, we are committed to the development of Alaska's gas resources. We are ready to work with the State, TransCanada, ConocoPhillips and BP to develop a solution that ensures a successful project.

Thank you for the opportunity to speak with you today to address this important topic for the State of Alaska and our company. I look forward to addressing your questions.

Before the  
Alaska State 25th Legislature Third Special Session

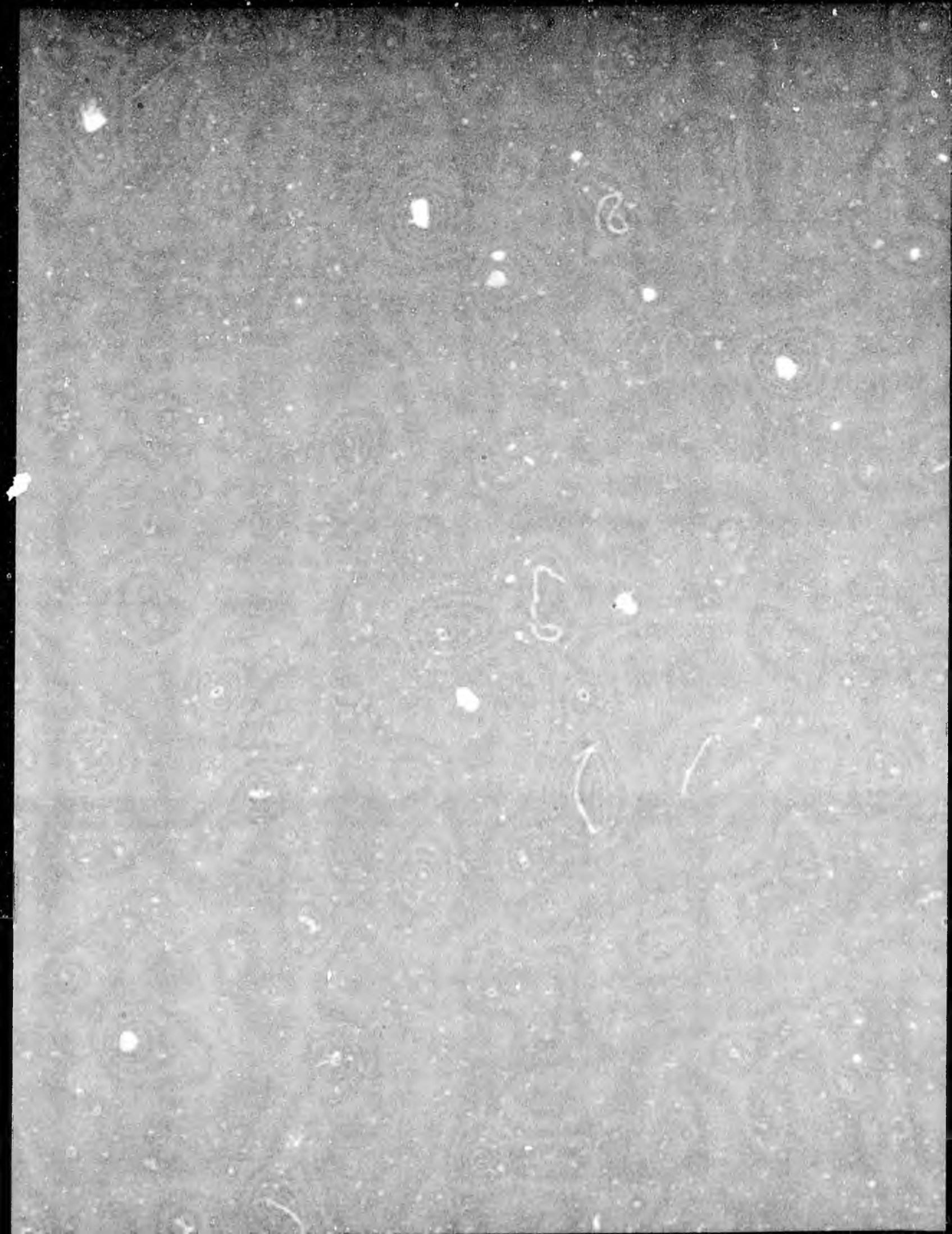
Regarding the  
**TransCanada Application Pursuant to the  
Alaska Gasline Inducement Act**

*Statement of*

**Prof. Joseph P. Kalt**

**John F. Kennedy School of Government  
Harvard University  
and  
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#### **Introduction**

My name is Joseph P. Kalt. I am the Ford Foundation Professor of International Political Economy at the John F. Kennedy School of Government, Harvard University, and a Visiting Professor at the Eller College of Management at the University of Arizona. The Kennedy School is Harvard's graduate school for the study of public policy and public administration. I also work as a senior economist in the Cambridge, Massachusetts, and Tucson, Arizona, offices of Compass Lexecon, an economics consulting firm. I have attached my biography as Attachment I.

I hold B.A., M.A., and Ph.D. degrees in economics and am a specialist in the economics of competition, antitrust, and regulation, with particular emphasis on the transportation, energy, communications, and financial sectors. Throughout my professional career I have conducted research, published, taught, and testified extensively on the economics of market structure, competition, antitrust policy, regulation, pricing, and strategic

performance in the energy industries (including natural gas transportation and marketing) and various other segments of the economy.

Of particular relevance, I have extensively studied the production and pipeline transportation of oil and gas resources throughout North America and, specifically, in Alaska. I have testified as an expert in various state and federal proceedings concerning the valuation of Alaskan North Slope crude oil and natural gas for purposes of royalty and taxation, and I have studied and testified as an expert regarding the regulation of the Trans Alaska Pipeline System.

I have now been asked by ExxonMobil Corporation to analyze key elements of the AGIA license application filed by TransCanada Alaska Company, LLC, and Foothills Pipe Lines Ltd. (together "TransCanada") to build and operate a natural gas pipeline. In particular, I have been asked to assess the economics of TransCanada's AGIA application from the perspective of the State's and producers' interests as direct or indirect shippers on the proposed TransCanada pipeline.

### **Key Findings**

Based on my analysis of the economics of TransCanada's proposal to build and operate the critical pipeline infrastructure upon which North Slope gas development now depends, I find that four key aspects of the proposal bear particular attention:

- **The State's Interests:** Certainly, at least at this stage of project development, the State's interests are aligned with those of a North Slope gas producer. Alaska has abiding interests in (1) maximizing the ultimate magnitude and value of North Slope gas production; (2) expeditious completion of the major pipeline system upon which such development depends; and (3) minimization of dispute and litigation with the pipeline owner/operator over the life of the system.

- **TransCanada's Shifting of Risk:** The TransCanada proposal shifts substantial risk away from TransCanada and to producer-shippers and, in turn, to the State of Alaska. Unless subjected to appropriate, negotiated contractual risk-reward protections, this is markedly contrary to each of the State's interests noted above.
- **Threats to Producers' Economics:** In light of TransCanada's aggressive shifting of risks to producers (and the State) via the significant long-term, non-cancelable obligations of producers anticipated in the TransCanada proposal, claims of "robust" producer returns are dangerously overstated in the analysis of the State's consultant (Black and Veatch).
- **Need for Contract Negotiations and Conditioning:** In the presence of the very large risks that producers and the State are being asked to assume under TransCanada's proposal, it is in the producer-shippers' and State's best interests that contracting with TransCanada for long-term transportation be approached in a standard, businesslike manner. This means negotiating contracts and conditioning "open seasons" on pipeline capacity so as to strike sustainable agreements that reflect balanced allocations of risk.

Let us examine these findings in detail.

### **The State's Interests: What Should It Care About?**

The question of whether the TransCanada proposal sufficiently protects and maximizes the benefits to Alaskans is one that will have significant ramifications for the State's ability to fully realize its return from the development of the State's resource. The State's direct monetary interests, derived from the payment of royalties and severance and income taxes, are very much the same as those of a prospective producer-shipper on the pipeline. Gas will not flow and revenues will not be earned if pipeline development is delayed by inflexibility in project contracting or by the shifting of so much risk to producers, without offsetting protections and rewards, as to threaten the economics of producers' investments. The cost, delay, and disruption that can plague such an expensive and long-lived project will not be held at bay over the project's life if initial contracting does

not undertake best efforts to arrive at fair and balanced allocations of risks and rewards. With the only certainties about the future decades in world energy markets being that they are uncertain and will be volatile, contractual *imbalance* as risk converts itself to reality is a recipe for maximizing conflict among the stakeholders.

### **Project Risks Cannot Be Eliminated: Where Does TransCanada Put Them?**

With daily reports of world crude oil prices hitting ever-higher peaks and pulling up natural gas prices in the process, it is easy to believe that there is and will continue to be an endless supply of investment dollars ready and willing to flow into development of North Slope gas. But, as Figure 1 should remind us, we have been here before – and billions of dollars were lost betting that the price run-ups of the 1970s and early 1980s would not turn into two decades of prices substantially below their peak.

In fact, North Slope gas development, itself, was a victim of these risks. As everyone here is likely aware, during the early development of the State's crude oil resources, the expectation was that natural gas resource development would soon follow. However, dramatically declining worldwide energy prices subsequently rendered such natural gas projects uneconomic in light of the very high costs associated with providing transportation from such a remote area. The extremely high costs of TransCanada's proposed pipeline – estimated at \$31.5 billion by the State's consultant, Black and Veatch ("B&V") – are no less a source of potential risk and impediment to North Slope development today. In fact, the cost of the proposed pipeline would far exceed the cost of any recent majority privately financed infrastructure development anywhere in the world (see Figure 2). TransCanada's proposal is approximately three times more expensive than the next largest "mega" project. Furthermore, the risk burden these figures

imply is only magnified by the remarkable size and length of TransCanada's proposed pipeline, the remoteness of the resource base, the arctic environment, and the existence of multiple state, provincial, national, and Native governmental jurisdictions along its path.

In light of the risks, it is readily understandable that TransCanada has assiduously sought to protect its economic interests by minimizing the risks it bears. In the process, however, TransCanada has shifted the lion's share of the project's risks to producer-shippers and those (like the State) with a producer's interests. This risk shifting is most starkly seen in TransCanada's proposal that producer-shippers be expected to sign long-term non-cancelable commitments to provide the pipeline developer with a steady stream of cash flows over the project life span. The mechanisms by which this would be achieved include:

- 25-year, firm ship-or-pay contracts for pipeline capacity;
- The absence of a project completion guarantee from TransCanada (leaving risks on producers and taxpayers);
- Cost recovery guarantees that leave TransCanada with a minimal cost at risk of about \$125 million out of \$31 billion.

### **Risk, Risk Shifting, and Producer Economics**

The costs to the producer-shipper of risk-shifting elements of the TransCanada proposal can be easily illustrated by the fact that TransCanada is looking for 25-year producer ship-or-pay contracts for essentially the entire capacity of the pipeline. Such 25-year, firm ship-or-pay contracts create fixed obligations that are payable to TransCanada over the next 25 years whether or not the producers ship gas on the system and whether or not producing and selling Alaska North Slope gas is actually profitable. For all intents and purposes, producer-shippers are being asked to take on the economic equivalent of a long-term stream of mortgage or lease payments that would

effectively finance and pay for the pipeline. In the process, producer-shippers would be taking on the risks of the system, but without acquiring any ownership and control. It's like putting up the financing to pay for a new house or a new condominium, but then letting the builder remain as perpetual landlord.

The fundamental economic character of producer-shippers' financial obligations have not been accurately characterized in B&V's analysis of the economics that *producers* face in developing and selling Alaskan gas. Since the producer-shippers would have to pay TransCanada the stream of mortgage like payments over the next 25 years regardless of other market and/or project changes, these obligations shift gas price, cost, and geologic risk to producer-shippers. The pipeline developer, meanwhile, would receive a stream of payments that are effectively guaranteed by the financial capability of the producer-shippers signing the long-term ship-or-pay contracts.

Critically, TransCanada's ability to raise the financing in this case is not dependant on TransCanada's financial capabilities. Rather, it is based almost exclusively on the financial capabilities of the parties signing the ship-or-pay contracts. TransCanada is essentially a pass-through middleman in the financing chain. For these reasons, it is the producers' balance sheets and debt-carrying capacity, not TransCanada's, that are the keys to the financial markets' willingness to finance the pipeline.

The financial implications of this risk shifting for the producer-shippers are not properly recognized by the net present value ("NPV") and rate of return calculations of the State's consultant, Black & Veatch. In its analysis, B&V treats the ship-or-pay contracts as an operating expense ("OPEX") of the producer-shippers, rather than as a fixed commitment that

must be paid regardless of other market developments. This is economically incorrect: The ship-or-pay contracts are actually capital commitments whose basic payment obligation does not vary with operations (throughput). Financial markets (and economics) properly treat such commitments as upfront debt of the producer-shippers<sup>1</sup> – especially under the huge costs and unique risks of an Alaskan gas pipeline. TransCanada ends up bearing the relatively low risk that very large and financially sound producer-shippers like ExxonMobil, BP, and ConocoPhillips will not be able to pay their debts. The producer-shippers, meanwhile, end up bearing the very substantial risks of volatility in world energy markets, the uncertainties of geologic unknowns in the arctic, and the vagaries of domestic and international politics and regulation affecting development costs and pricing. Failure to account for this leads B&V to overstate the risk borne by TransCanada and understate the risk borne by producers.

### **The Threat to Producers' Economics**

Under proper treatment of ship-or-pay commitments, B&V's characterization of producers' economics of investing in and developing North Slope gas as "robust" evaporates. With project risk shifted overwhelmingly to producer-shippers under TransCanada's proposal, it is inappropriate to discount the costs of the pipeline tariff at the overall project risk rate since that payment stream is guaranteed by the producer's debt-bearing capability. Using a 6% discount rate (as a measure of the producer's weighted average cost of debt) for the projected stream of tariff costs, B&V's claim of an NPV project worth of \$13.5 billion collapses to worse than breakeven (see Figure 3). That is, the overall project does not generate enough risk-adjusted revenue to cover producers' costs of capital. The State cannot have security

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<sup>1</sup> See, e.g., Standard & Poor's, *Operating Lease Analytics, Corporate Ratings Criteria 2006*; and Brealey, Richard A., Stewart C. Myers, and Franklin Allen, *Principles of Corporate Finance*, 9th edition, McGraw-Hill Irwin, 2008, at 706.

that the TransCanada proposal will enable the development of the State's gas resources.

But is there really much risk being borne by producers, in light of the very high prices and go-go investment environment we now see in energy markets around the world? History says there is. While describing the producer returns as "robust," even the B&V sensitivity analysis acknowledges that positive producer returns evaporate if prices fall 40-60% from the B&V base case of steadily rising prices.<sup>2</sup> While world energy prices are likely to be on an upward trend over the very long term, history tells us that such trends can be upended for sustained periods of time.

Consider the actual case of the 1980s and 1990s shown in Figure 1. World oil prices peaked in 1982, and then embarked on a long period in which prices were far below the peak. It was not until 2004 that prices once again exceeded the 1982 level. At the peak in the early 1980s, "consensus forecasts" (see Figure 4) of rapidly rising prices implied "robust," positive economics for a multitude of potential projects (including a natural gas pipeline from the North Slope). Given the subsequent decline in world energy prices, however, investors in many of those projects, if they had moved forward, would have regretted their decision. Billions of dollars were lost as expectations were dashed. Accounting for the possibility that price forecasts may turn out to be significantly overly optimistic is clearly relevant to the discussion of the "robustness" of producer economics. If history repeated itself, based on the pattern of percentage declines shown in Figure 1 – which it could – B&V's framework indicates that the Alaskan producers' NPV would be reduced to approximately *negative* \$1.5 billion.

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<sup>2</sup> Black & Veatch, AGIA NPV Analysis Report Prepared for the State of Alaska, May 22, 2008, at 222.

Producers bear risks not only of price decline. Mega projects can also experience significant cost overruns, especially in new and untested environments. For example, the cost of the TAPS crude oil pipeline was originally estimated at \$900 million, but eventually ballooned to over \$8 billion in the 1970s.<sup>3</sup> That represents a ninefold increase in project cost and subsequent tariffs. Such cost escalation on large energy projects is not unique to the TAPS project. More recently, even smaller, faster-to-market projects have exhibited significant increases in costs. For example, press reports indicate that the Nabucco Gas Pipeline (serving Europe) is over budget by 60% due to increasing materials cost and the Sakhalin-2 project has exceeded early cost estimates by over 100%.<sup>4</sup>

Other important factors that can affect producer profitability include the fiscal regimes under which they operate. While the B&V analysis assumes a certain set of governmental fiscal policies over the life of the pipeline, the chance that these policies may change over time creates an additional layer of uncertainty that must be considered in the context of existing price and cost risks faced by the producers. As so many countries around the world have learned, uncertainty regarding fiscal regimes raises producer risk and deters investment and development in otherwise well-functioning marketplaces.

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<sup>3</sup> Testimony of Monte Canfield, Jr., Director, Energy and Minerals Division, GAO, before the Senate Committee on Energy and Natural Resources, *Planning and Construction of the Trans-Alaska Pipeline*, September 26, 1977.

<sup>4</sup> "Sakhalin Energy Projects Face Reality Check", *Eurasia Daily Monitor*, July 27, 2005, [http://www.jamestown.org/edm/article.php?article\\_id=2370064](http://www.jamestown.org/edm/article.php?article_id=2370064); and "Nabucco natural gas pipeline over budget as steel prices soar", *International Herald Tribune*, June 3, 2008, <http://www.ihf.com/articles/2008/06/03/business/pipe.php>.

### **Protecting the State and Producer-Shippers through Negotiation and Conditioning**

As I have discussed above, the risk-shifting contained in the TransCanada proposal is understandable from TransCanada's perspective. At the same time, however, it is eminently rational for the producers and the State to work to protect their interests. It is not in producers' or the State's interests to treat the TransCanada proposal as "take it or leave it." As in any case of a business proposal involving substantial risk and huge cost, producer and State interests here should be protected by allowing parties to negotiate over key terms and conditions that define the project's risk-sharing relationships.

It is standard practice for prospective shippers to "condition" their bids in a new pipeline's "open season" for capacity contracting on contractual provisions and terms that protect their interests. Similarly, it is standard practice that prospective shippers engage in extensive negotiations and discussions with the pipeline developer. This often leads to extensive changes in what the developer might originally propose – changes that ultimately result in a sustainable, viable project that all parties can enter into and live with over the long term. In this context, North Slope producer-shippers should be expected to condition "open season" offers to TransCanada and to negotiate with TransCanada. Doing so is consistent with their interests and ultimately serves to protect the State's interests.

While it is up to the parties to define the key elements of their negotiations, there are several aspects of the TransCanada proposal that are reasonable candidates for possible negotiation and conditioning as part of the pipeline capacity contracting and development process. These include measures to provide:

- Tariffs commensurate with risk allocation between TransCanada v. the State and producer-shippers;
- Matching of risk and control via producer-shippers holding ownership interest in accord with expected throughput<sup>6</sup>;
- Conditioning and/or modifying such provisions as downstream TransCanada exclusivity, withdrawn partner liability, and cost overrun responsibility (all of which now are tilted strongly in TransCanada's favor).

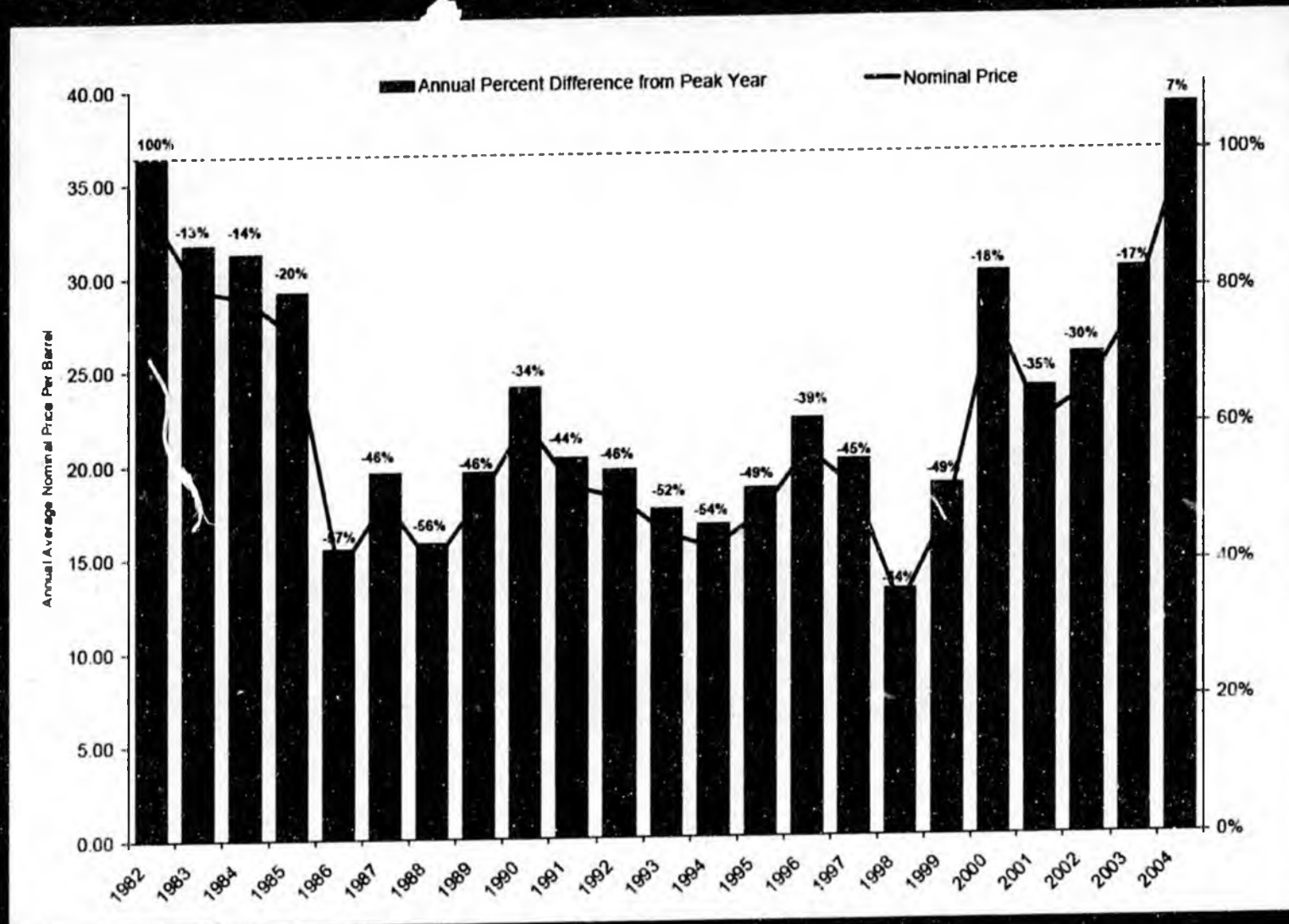
Finally, conditioning and negotiation over these kinds of matters should not be viewed as setbacks to the process of establishing a pipeline project in a reasonable timeframe. Given the possibility that the lack of flexibility around key risk and control provisions could create a "one size fits none" outcome, the ability to condition bids and engage in negotiations of key terms and conditions can enhance the chances for the State's resources to be developed sooner rather than later. And, developing a pipeline with a balanced sharing of risk and reward will promote a pipeline system that is sustainable and subject to fewer disputes and disruptions over its life. This is clearly in the State's interest.

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<sup>6</sup> With access by future expansions and producer-shippers now being protected by new FERC access rules pursuant to recent federal legislation.

# Figure 1

## DESPITE FORECAST MADE AT A PEAK, WORLD ENERGY PRICES CAN KILL PRODUCER ECONOMICS



Source: EIA

Figure 2  
**THE TRANSCANADA PIPELINE IS EXTREMELY COSTLY**

Project Name	Amt. (\$B)	Country	Sector	Year
Saudi Kayan Petrochemical Complex	10.00	Saudi Arabia	Petrochemical Chemical Plant	2008
Rabigh Petrochemical Expansion Project	9.90	Saudi Arabia	Petrochemical Chemical Plant	2006
Abu Dhabi Aluminium Smelter	7.05	United Arab Emirates	Processing Plant	2007
Liaoning Nuclear Power Plant Project	6.94	China	Power	2008
Jamnagar Petrochemicals Refinery Complex	6.00	India	Petrochemical Chemical Plant	2006
Qatargas 4	5.71	Qatar	Oil Refinery/LNG and LNG Plants	2007
Fujian Refining and Ethylene Joint Venture Project	5.60	China	Petrochemical/Chemical Plant	2007
YanSab Petrochemical Complex	5.00	Saudi Arabia	Petrochemical Chemical Plant	2006
Indiana Toll Road	4.83	United States	Road	2006
Qatar Aluminum Trust	4.74	Qatar	Processing Plant	2007
QCTC Nakilat LNG Vessels	4.74	Qatar	LNG	2006
FARAC Toll Road PPP	4.28	Mexico	Road	2007
Ambatovy Nickel Project	3.70	Madagascar	Mining	2007

Note: \* In 2008 dollars according to Black Veatch NPV<sub>10</sub> analysis at 9.

Source: Project Finance and Infrastructure Finance, Issues 288 and 277, Dealogic.

Figure 3

# PURPORTEDLY "ROBUST" PRODUCER ECONOMICS v. REALITY OF RISK SHIFTING

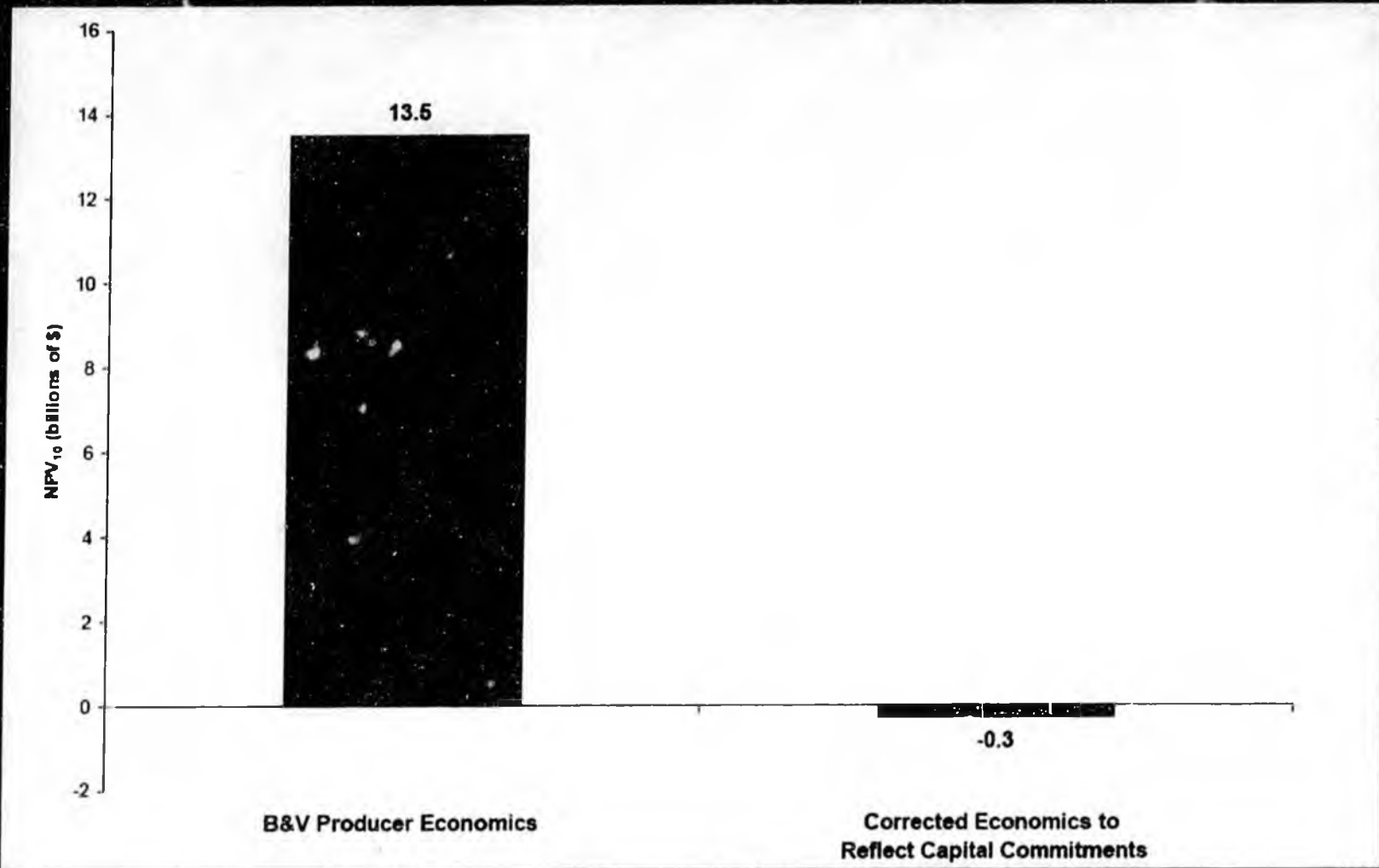
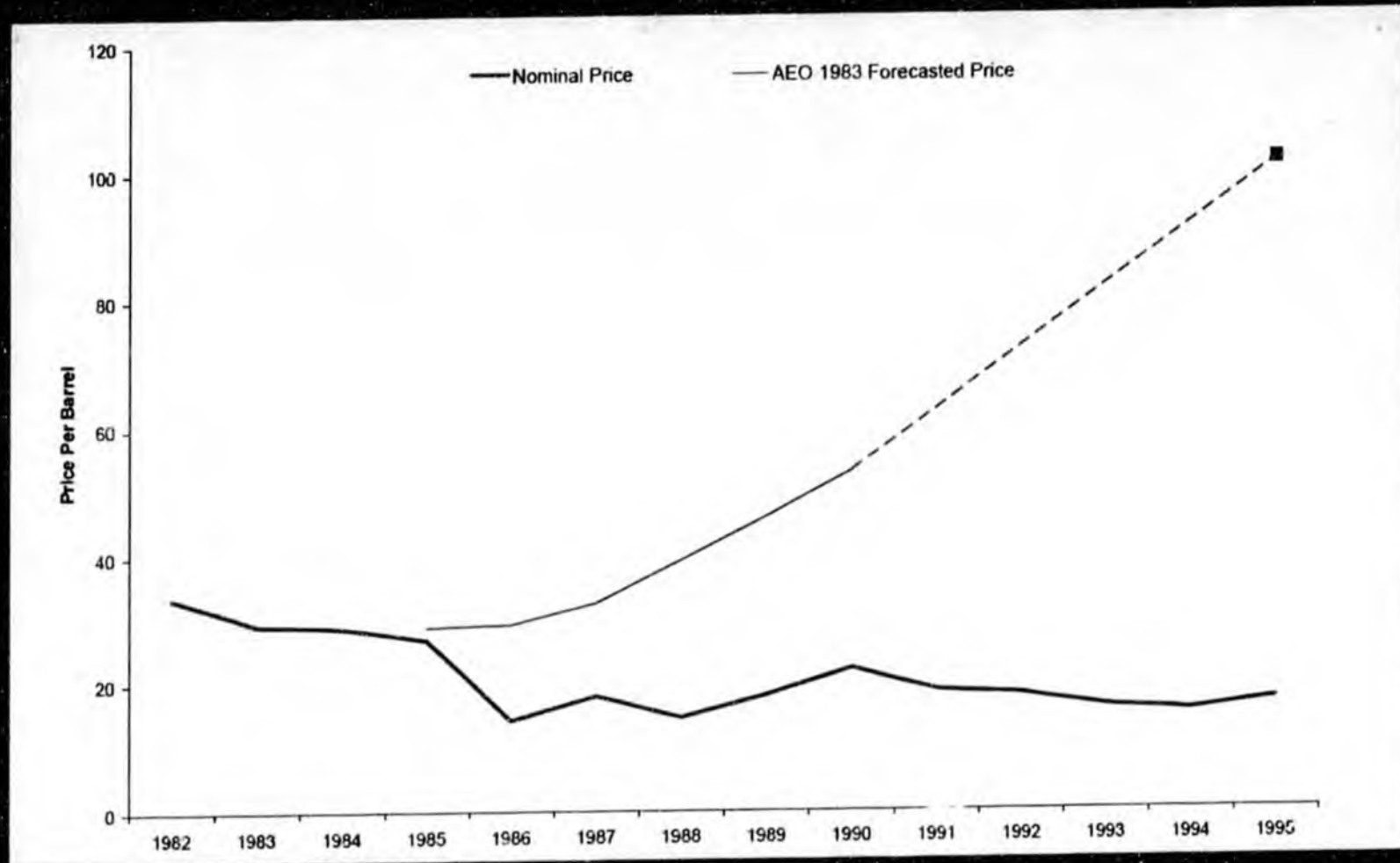


Figure 4  
THE PRICE PER BARREL OF OIL v. THE AEO 1983  
FORECASTED PRICE PER BARREL OF OIL



Source: EIA

## Attachment I

**JOSEPH P. KALT**  
**FORD FOUNDATION PROFESSOR OF**  
**INTERNATIONAL POLITICAL ECONOMY**  
**JOHN F. KENNEDY SCHOOL OF GOVERNMENT**  
**HARVARD UNIVERSITY**



Joseph P. Kalt is the Ford Foundation Professor of International Political Economy at the John F. Kennedy School of Government at Harvard University. He joined the faculty at Harvard in 1978 and is a specialist in the economics of development, political economy, industrial organization, antitrust, and regulation. The Kennedy School of Government is Harvard's graduate school for public policy and administration, and Prof. Kalt has served as the School's Academic Dean for Research, chair of degree programs, chair of Ph.D. programs, and chair of the economics and quantitative methods section. Since 2005, Prof. Kalt also has served as a visiting professor at The University of Arizona's Eller College of Management. He received his Ph.D. (1980) and M.A. (1977) in Economics from the University of California at Los Angeles, and his B.A. (1973) in Economics from Stanford University.

Prof. Kalt's publications include *The Economics and Politics of Oil Price Regulation*, *Drawing the Line on Natural Gas Regulation* (with Frank C. Schuler), *Petroleum Price Regulation: Should We Decontrol?* (with Kenneth Arrow), and *New Horizons in Natural Gas Deregulation* (with Jerome Ellig). He is a Senior Economist with Compass Lexecon, an FTI Consulting company specializing in the economics of competition and regulation. He previously founded The Economics Resource Group, an economics consulting firm acquired by Lexecon in 1999. Prof. Kalt has appeared frequently as an expert before the U.S. Congress and various state, federal and international tribunals, and he has served as mediator and arbitrator in various private and intergovernmental disputes. Prof. Kalt has also served as an adviser to various national and international governments, including the U.S., Thailand, China, Canada, and numerous American Indian tribes.

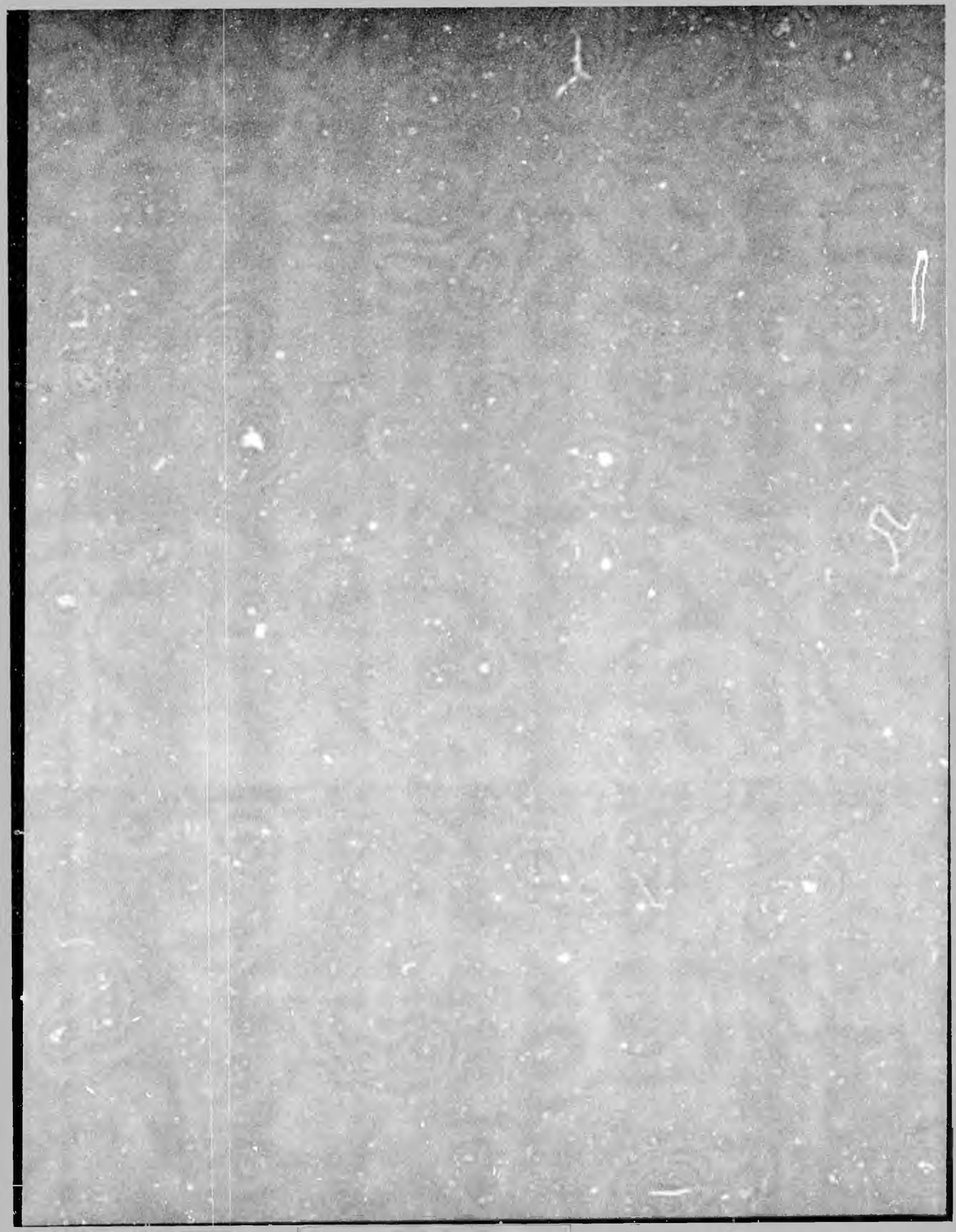
Prof. Kalt is widely recognized for his work in economic development on American Indian reservations and among First Nations in Canada. In 1987, he founded (with Stephen Cornell) the Harvard Project on American Indian Economic Development. He continues to serve as the Project's co-director. He is a principal author of *The State of the Native Nations: Conditions under U.S. Policies of Self-Determination* (with the Harvard Project), co-editor and a primary author of *What Can Tribes Do? Strategies and Institutions in the Economic Development of American Indian Reservations* (with Stephen Cornell), and a principal author of *Rebuilding Native Nations: Strategies for Governance and Development*. In 2005, Professor Kalt received the National Center for American Indian Enterprise Development's First American Leadership Award for his contributions to research in public policy affecting Native peoples.

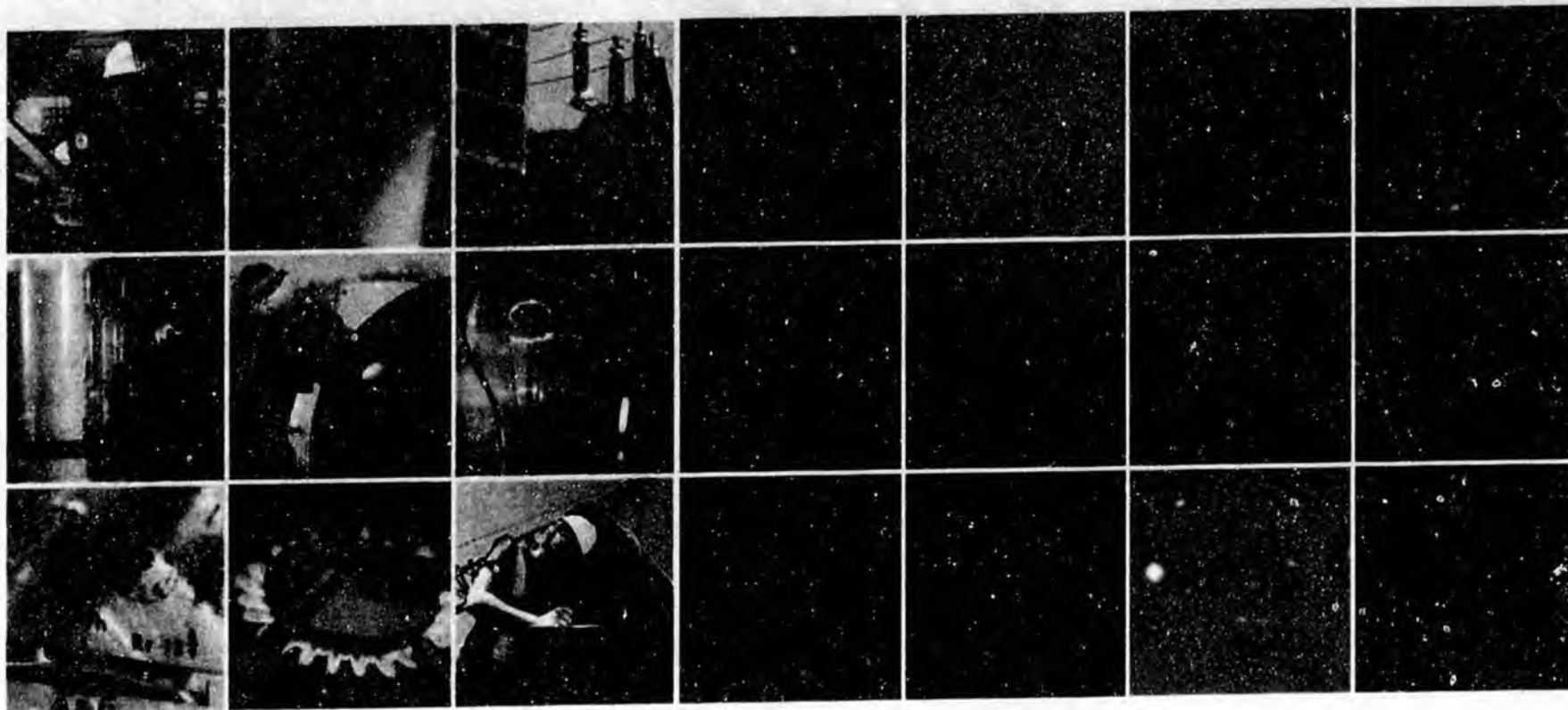
Prof. Kalt is a member of the Board of Trustees of The Communications Institute, the National Advisory Board of The Big Sky Institute, and the Board of Directors of The Sonoran Institute. He served on the President's Commission on Aviation Safety and on the Steering Committee of the National Park Service's *National Parks for the 21st Century*.

Prof. Kalt is a native of Tucson, Arizona. He and his wife, Judy Gans, have two children. The family owns Arrow Mountain Ranch, with horse breeding and training operations in Montana and Arizona.

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Cambridge, MA 02138

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joe\_kalt@harvard.edu





# Alaska Pipeline Project

## Workforce Plan in Alaska



**TransCanada**  
*In business to deliver*

## Presentation Overview

1. AGIA Commitments
2. Alaska Pipeline Project Phases
3. Alaska Section Workforce Requirements
4. Alaska Workforce Strategy
5. Workforce Risks / Opportunities
6. Workforce Preparation / Training

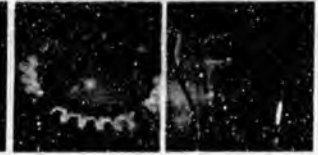


## AGIA Commitments

- AS 43.90.130 (15) – **hire qualified residents** from throughout the state for management, engineering, construction, operations, maintenance, and other positions on the proposed project;
- **Contract with businesses** located in the state;
- Establish **hiring facilities** or use existing hiring facilities in the state;
- Use, as far as is practicable, the **job centers** and associated services operated by the Department of Labor and Workforce Development and the Internet-based labor exchange system operated by the state;
- AS 43.90.130 (17) commit to negotiate, before construction, a **project labor agreement** to the maximum extent permitted by law....



# APP Project Phases



## Development Phase

### Proposal (< 2 years)

- Define Project scope, cost and schedule (Initial Front End Engineering Design [FEED])
- Conduct initial binding Open Season

### Definition (4 years)

- FERC and NPA approvals / certificates
  - Technical, environmental and regulatory effort (complete FEED)

## Execution (<4 years)

- Build the project

## Operations

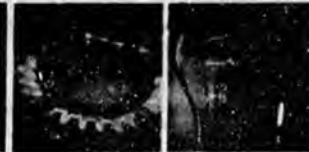
- Operate and maintain the facilities

## Alaska Section Workforce Requirements (Averages – Full Time Equivalents)

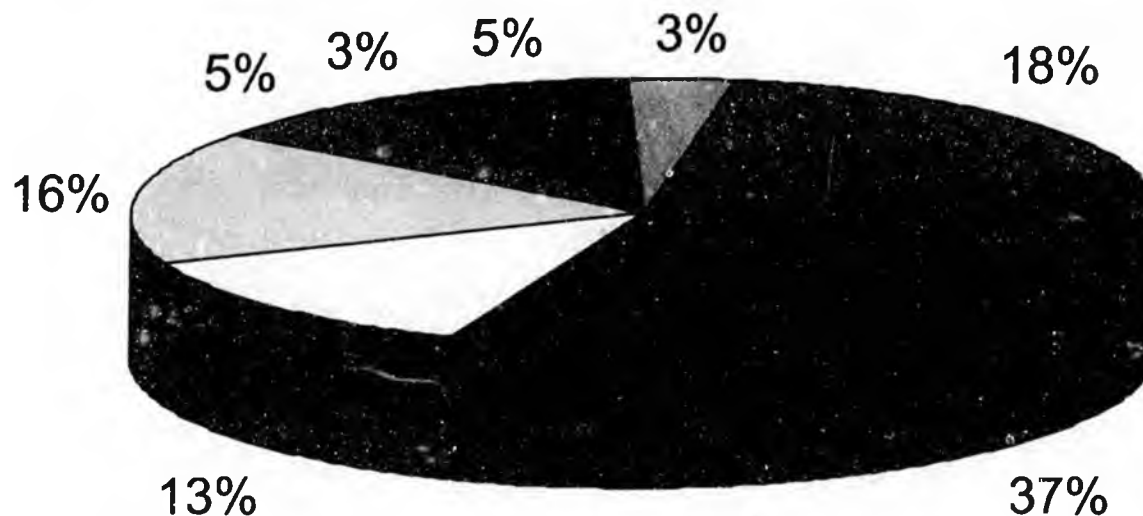
<b>PHASE</b>	<b>RESOURCES REQUIRED</b>
Proposal 2008 - 2010	100 - 150
Definition 2010 - 2014	275 - 400
Execution 2014 - 2018	7000 - 9000
Operations Excludes GTP 2018 -	50 - 80

Estimates only – subject to revision through Front End Engineering work

# Execution Phase Workforce Requirements



## APP Construction Spread Workforce Breakdown



- Laborers/Ironworkers / Carpenters
- Machinery Operators
- Drivers
- Welders / Pipefitters
- Foremen
- Services
- Inspectors
- Engineers / Project Mgrs



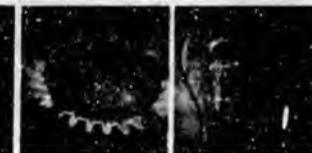
# Alaska Workforce Strategy

## Development Phase

### Proposal Phase

- Internal team managing few contracts
  - Hire Alaska residents for some key internal roles
  - Utilization of owner's engineer contract and existing environmental Master Services Agreements, both of which incorporate Alaska based firms
  - Supplement with additional Alaska based sub-contracts for services
  - Web based instrument for goods and service providers to supply information on offerings – information will be shared with contractors for consideration throughout project

## Alaska Workforce Strategy (continued)



### Definition Phase

- Larger internal team managing new contracts with service providers
  - Requests For Proposals would be issued during previous phase for major engineering, environmental and socio-economic work packages for the Definition Phase. This would provide great opportunity for Alaska service providers, including Alaska Native Regional Corporations.
  - Opportunities for internal team will be open for Alaska residents
  - Work will be supplemented with Alaska based sub-contracts for services

## Alaska Workforce Strategy (continued)

### Execution Phase

- Project Labor Agreements will be negotiated
- Internal team will manage large EPCM contractors
- Requests For Proposals will be issued and evaluated during previous phase
- TransCanada commitments will be reflected in resultant contracts regarding Project Labor Agreements, Alaska hire and Alaska business opportunities
- Opportunities for internal team will be open for Alaska residents – job centers and associated services operated by the Department of Labor and Workforce Development will be utilized

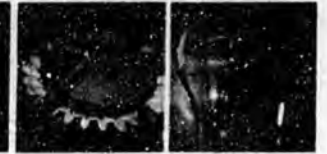


## Alaska Workforce Strategy (continued)

### Operations Phase

- Efficient team will provide operations and maintenance services for facilities in Alaska, including the GTP if required
- Support services will be contracted to local service providers
- Maintenance activities will be contracted to local service providers to the fullest extent possible

## Workforce Risks / Opportunities



### Opportunities:

- High profile, anticipated project
- Good potential for multi-year, year round construction effort
- Strategies have been largely developed
- Time available to act on strategic initiatives
- TransCanada support and involvement with AGIA Training Strategic Plan

### Risks

- 'Heated' labor market factors
- Demographic profile of workforce
- Potential for significant in-migration

# Workforce Preparation and Training AGIA Training Strategic Plan

- Broad-based, inclusive, strategic and action oriented framework

Industry

Trade Associations

Trade Unions

State  
Agencies

Educational Institutions

Federal Agencies



## TransCanada roles:

- Direct participation with strategic planning process
- Provision of timely project labor demand information
- Dialogue with all stakeholders
- Coordination of training implementation
- On-going effectiveness evaluation

**HB 3001**

**SB 3001**

**7/13/08**

**SPECIAL**

**SESSION**

**DOCUMENTS**

**STATE OF ALASKA**  
**ALASKA GASLINE INDUCEMENT ACT**  
**TRANSCANADA ALASKA COMPANY, LLC**  
**and Foothills Pipe Lines Ltd.**

**ALASKA PIPELINE PROJECT**

**REPORT BY**  
**Bennett Jones, LLP**

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**STATE OF ALASKA**  
**ALASKA GASLINE INDUCEMENT ACT**  
**TRANSCANADA ALASKA COMPANY, LLC**  
**and Foothills Pipe Lines Ltd.**  
**ALASKA PIPELINE PROJECT**

**A. EXECUTIVE SUMMARY**

We have been requested to address aspects of the proposed Alaska Pipeline Project (or "Project") application filed by TransCanada Alaska Company, LCC and Foothills Pipe Lines Ltd. (collectively "TransCanada") pursuant to the *Alaska Gasline Inducement Act* ("AGIA") on November 30, 2007. We have been specifically asked to consider matters that could impact the timeline of the Project. As specified in the request for applications, TransCanada's proposal addresses the specific requirements of the AGIA and also included a timetable for the completion of various activities associated with bringing the Project to fruition.

The expected timing of the development phase of the Project is of critical importance in the assessment and quantification of the potential benefits that could result from the proposed Project. As such, it is necessary to understand the rationale underpinning TransCanada's forecasted schedule and the risks TransCanada has taken into account in its evaluation. In addition, we have attempted to identify other potential concerns and issues that could impact overall timing. This Report is restricted to an examination of the Canadian segment of the Project.

TransCanada has adopted a five and one-half year schedule for securing major Canadian pre-construction approvals, following the issuance of the AGIA License. TransCanada has expressed the view that it expects to rely on the *Northern Pipeline Act* ("NPA" or "Act") as the primary legislative vehicle through which necessary regulatory approvals have and will be coordinated in Canada. This is viewed by TransCanada as minimizing the time required to complete the above process. TransCanada has also identified a number of project risks that could result in delay.

While we agree that there are advantages associated with the prior NPA approvals received by TransCanada and the "single window" process provided by the NPA, based on the detailed assessment contained herein, it is our view that the schedule proposed by TransCanada represents a "best case" scenario that may be difficult to achieve.

Given the nature and magnitude of the Project, it is our view that one could reasonably expect that at least certain of the issues identified herein, or by TransCanada in its risk assessment, will be raised during the preparation and regulatory approval phases of the Project, with a resultant impact on timing. In our view, a timeframe of seven to eight years is more realistic, with the lower end of the range (seven years) having a higher probability of being achieved. A seven to eight year timeline, to complete the required pre-construction processes, may be the minimum for a Third Party pipeline project that does not have the advantage of the existing approvals obtained under the NPA.

As will be discussed herein, the strategy and approach ultimately adopted by TransCanada for the execution of its proposal will likely have a significant impact on its ability to achieve the proposed "best case" scenario. By this we mean that TransCanada will face a number of choices with regard to the strategy it will employ on various key project items. If TransCanada adopts a course of action that seeks to address concerns that have previously been expressed it may be able to mitigate the risk of delay identified herein.

By way of illustration, TransCanada maintains that it will pursue the completion of the Project under the NPA, to the exclusion of other legislation that arguably could be applicable to the Project, such as the *Canadian Environmental Assessment Act* ("CEAA") and the *Yukon Environmental and Socio-Economic Assessment Act* ("YESAA"). If TransCanada maintains this approach, it will likely face challenges from a variety of parties that could result in delay.

However, if TransCanada proposes or encourages a process that encompasses the requirements of all applicable legislation (even if under the umbrella of the NPA), it

may be able to materially mitigate the risk of a challenge in this regard. In our view, this could involve TransCanada proposing that the Designated Officer under the NPA adopt the standards and open, public processes embedded in legislation such as CEAA and YESAA, in order to achieve substantially similar levels of review and analysis as would be expected under such legislation; albeit still under the "single window" approach contemplated by the NPA. In addition, TransCanada could minimize inefficiencies and delays by seeking a single, coordinated process that addresses all regulatory and environmental requirements at the outset.

Another example is TransCanada's proposal to make use of only NGTL facilities in Alberta (in addition to the Pre-Build) to transport Alaskan gas. If TransCanada chooses to maintain the exclusive link to the NGTL system, it is likely to face challenges, with resultant delays. However, if TransCanada adopts a more flexible and expansive approach of assessing the most economic and efficient use of all available infrastructure to transport Alaskan gas, as well as accommodating the positions of shippers, it will likely be able to materially mitigate the risk of such challenges and hence the potential for delay.

The above attempts to illustrate that, to some extent, TransCanada will be the master of its own destiny. While the positions advanced in its AGIA filing may be characterized as TransCanada's "opening position," the degree to which TransCanada exercises flexibility in its business approach will have a direct impact on its ability to achieve the desired schedule. In this regard, we would expect that TransCanada would have an incentive to complete the Project in a timely manner, which should drive it towards minimizing such debates and challenges. TransCanada is a large and successful pipeline company that likely appreciates the dynamics that will be at play. As will be discussed herein, TransCanada has acknowledged that current requirements and standards should be used to assess an Alaska Pipeline Project filing. To the extent this is, in fact, achieved by a TransCanada filing, the above concerns could be mitigated. We have no reason to believe that TransCanada will not ultimately adopt a strategy that will seek to minimize opposition and, hence, maximize its chances of expediting the Project.

It is also important to note that the extended timeline suggested herein would not necessarily disadvantage TransCanada vis-à-vis any Third Party pipeline proponent that may seek to construct a pipeline from Alaska and into Canada. Many of the specific concerns identified herein would apply equally to any such Third Party such as a detailed assessment of environmental and socio-economic considerations, the duty to consult First Nations, as well as, routing, land rights, and potential litigation. In fact, TransCanada would likely have an advantage due to such things as its existing Certificates, the "single window" approach adopted by the NPA and its easement in the Yukon. We also note that TransCanada has previously asserted that it has the exclusive right to build a pipeline from Alaska into Canada. While not commenting on the validity of this claim, we would expect that TransCanada would seek to enforce this right and oppose any Third Party project. This could result in a significant delay in any such project.

In the end result, based on the information available to this point, it is reasonable to expect that certain delays will be encountered by TransCanada. Consequently, it would appear prudent for the State of Alaska to also examine the somewhat more extended timeline of approximately seven years discussed herein, for the completion of the required pre-construction approval processes; in addition to the five and one-half year period reflected in the AGIA Application, as part of its assessment.

A summary of the significant issues that could impact timing of the proposed TransCanada project is outlined below. Greater detail on these, and other, matters is provided in the body of this Report.

#### **1. Continued Applicability of the NPA Approval**

As reflected in the past submissions of Alliance Pipeline Ltd. ("Alliance") and Enbridge Inc. ("Enbridge"), it is likely that certain parties will challenge the general applicability of the NPA to the circumstances confronting the Alaska Pipeline Project today. This argument also appears to be supported by statements made by producers, including ConocoPhillips and Exxon-Mobil. It is arguable whether certain of the objectives of the NPA are relevant today, given that one of the main purposes was to

facilitate the "efficient and expeditious planning and construction of the [then proposed] pipeline". Nonetheless, it is our view that the NPA and the Certificates awarded thereunder remain valid. Of note is the fact that the NPA was relied upon as recently as 1998 for authority to expand the Pre-Build facilities. As detailed below, the NPA does not provide direct guidance on the process or procedure that would be used to consider an Alaska Pipeline Project filing. Therefore, the challenge for TransCanada will be to encourage and facilitate a process under the NPA umbrella that accommodates current requirements and minimizes the risks of additional delays.

As well, we anticipate that there will be significant political pressure brought to bear for the Governments and regulatory agencies to "do the right thing" and assess such a massive undertaking under current regulations and standards; and not accept an authorization that was granted under circumstances that were very different. There may indeed be some legitimacy to the argument that the information from the distant past is stale and outdated; and that the basis upon which the previous evaluations were conducted no longer remain valid.

In our view, while TransCanada will have certain advantages because of existing approvals and the NPA process, there will likely be political pressure asserted to expose the Project to an extensive regulatory and environmental review process, similar to that employed regarding the examination of the Mackenzie Gas Project. In this regard, it is noteworthy that the Mackenzie Gas Project has taken some eight plus years from initial regulatory process design to anticipated receipt of major regulatory approvals. While these are material differences, the Mackenzie Gas Project process may be viewed as broadly analogous in terms of regulatory complexity to the Alaska Pipeline Project. In our view, there will clearly be an expectation that the Project will be exposed to a rigorous process and not provided any short-cuts because of past approvals.

## **2. Technical Concerns with the Application of the NPA**

In our view, while the deemed Certificates of Public Convenience and Necessity granted to the Foothills affiliates under the NPA contain a measure of flexibility, it is certainly arguable that the new proposal, which reflects a substantially different flow

rate, economic cost and possibly even route changes, is outside the scope of the Project which was certificated pursuant to the NPA. The TransCanada proposal contains information on a number of these parameters which arguably are a "material" change from those previously approved. In our view, these changes in scope, etc. could expose TransCanada to a challenge respecting its reliance on the prior NPA authorizations. To the extent that TransCanada has to seek amendments to either the existing approvals or the governing legislation, to accommodate proposed changes, this could precipitate a protracted debate that could delay the process from moving forward.

### **3. Required Environmental Assessment**

In its AGIA filing, TransCanada characterizes its proposed actions as an "update" to the information previously filed in support of the existing NPA approvals and the Terms and Conditions it must fulfill thereunder. At this time, TransCanada has indicated that it intends to rely on the NPA and is not required to conduct an assessment in accordance with the CEAA or YESAA. If TransCanada attempts to fulfill outstanding requirements via an expedited process that does not include a comprehensive environmental assessment, with full public input as contemplated by these statutes, or meet other applicable requirements, it could face challenges that the above-referenced environmental legislation should apply to the Project.

It is also clear that, absent the NPA, such legislation would indeed apply, and TransCanada would be required to conduct a comprehensive environmental assessment thereunder. As mentioned above, TransCanada has confirmed that it intends to adopt a transparent and public process and, as well, has confirmed that it will be updating the numerous technical environmental reports associated with the construction of the subject pipeline. These actions may in some measure mitigate opposition (and potentially litigation) over the Project. To the extent an open and comprehensive process is employed, the risk of a challenge could be reduced. Conversely, the opposite is also true. Given that the Yukon Government has indicated that it believes YESAA will apply to the Project, TransCanada would appear to have an incentive to accommodate a review process that addresses this concern.

#### **4. Duty to Consult First Nations**

Since the time of the approvals granted under the NPA, the obligations imposed upon both Project Proponents and Governments (Provincial, Territorial and Federal) with respect to the duty to consult First Nations has evolved considerably. As with any project proponent, TransCanada's failure to ensure that the currently recognized obligation to consult is completely fulfilled, would inevitably lead to challenges on behalf of potentially affected First Nations. A failure by the Crown to fulfill this duty has been one of the main stumbling blocks for project proponents when their undertakings could potentially have a significant impact on First Nations. To the extent TransCanada and the relevant Governments fulfill this obligation pursuant to the current requirements the Project risks will be reduced. Nonetheless, history would suggest that this is a likely basis for challenge. We note that this concern is not unique to a TransCanada proposal and would apply to any proposed pipeline project from Alaska that traverses First Nations lands or lands where the First Nations assert traditional uses. In fact, the work conducted by TransCanada to date should provide it with an advantage in this regard. We are not able to comment on the extent to which the relevant governments have engaged in consultation.

#### **5. North American Free Trade Agreement ("NAFTA")**

NAFTA did not exist at the time the NPA approvals were granted to TransCanada and the NPA was not grandfathered under NAFTA. As will be detailed below, certain NAFTA issues could arise which would potentially cause significant delays to the advancement of the pipeline proposal. It is worthwhile noting that the above referenced Joint Alliance/Enbridge submission expressly raises NAFTA issues as an area of concern. As such, it is apparent that these parties, and likely others, are attuned to this basis for challenging a TransCanada Application under the NPA.

#### **6. Alberta Component of the Overall Project**

TransCanada's Application did not describe the precise facilities that will be utilized to transport the Alaskan based gas once it reaches the B.C./Alberta border. While TransCanada identifies certain benefits associated with the use of Transportation

by Others, it appears that these comments are made solely in the context of using TransCanada's "Alberta System". In our view, it is likely that certain other pipeline carriers, including Alliance and Spectra, will argue that excess capacity or economic expandability on existing pipelines should be used for the transportation of Alaskan based natural gas. The information filed in the ongoing Alberta Inquiry into NGL matters, as well as a recent Press Release regarding a report by the Canadian Energy Research Institute on the capacity of the Western Canada Natural Gas Pipeline System, forecast that existing pipelines will have significant excess capacity by the time the Alaska Pipeline Project is proposed to be in-service. To the extent that TransCanada demonstrates a willingness to work jointly with third party carriers, it should be able to minimize debates that could cause material delays in the implementation of the Project. If such a debate arises, to the extent that TransCanada would be relying upon National Energy Board ("NEB") or Alberta Utilities Commission approval for additional facilities in Alberta (versus pursuant to the NPA) there will be a forum for such a debate. Otherwise, recourse to the Courts is likely.

#### **7. Acquisition of Land Rights**

It appears that TransCanada has obtained an "easement" across the Yukon, which should give it a timing advantage over any Third Party pipeline proponent. It also appears that, at this time, TransCanada does not have any secure rights to the necessary rights-of-way across British Columbia and Alberta. The acquisition of such rights in these two Provinces could take TransCanada, or any other project proponent, a considerable amount of time; and provide leverage to affected stakeholders. As such, while the NPA approvals would clearly give TransCanada an advantage over any third party pipeline proposal (particularly in the Yukon), the completion of the outstanding land acquisition process could create material delays. TransCanada's Application does not describe the precise manner in which it proposes to handle these outstanding land acquisition matters.

## **8. Fulfillment of Existing NPA Terms and Conditions**

Even if TransCanada were successful in confining the process for examining the Alaska Pipeline Project to the "single window" approach advanced by the NPA, there is the matter of the extensive Terms and Conditions attached to the existing approvals. For example, the Designated Officer under the NPA can require that additional environmental information be filed in support of the Application. As such, it is possible that even if TransCanada were to succeed in technical arguments (likely following lengthy debate) that CEAA or YESAA do not apply, the Designated Officer could impose similar information requirements to ensure that a complete assessment of all applicable requirements is conducted for the length of the pipeline in Canada. In fact, there may be significant pressure to ensure that such an approach is followed.

Additionally, TransCanada will be required to meet other extensive conditions under the existing approvals prior to commencing construction. The exact process for a consideration of the information filed regarding these matters is uncertain, but could be the source of debate if a full public vetting is not accommodated.

## **9. Litigation**

As will be detailed below, there are likely to be a significant number of "trigger points" which will provide the basis for a Court challenge. As noted below, there has already been litigation regarding the NEB's Northern Pipeline Decision involving First Nations and Environmental groups. Past experience suggests that such parties are well versed in their legal rights and have little hesitation in seeking recourse to the Court system when they are aggrieved. Likewise, commercial parties will often commence litigation if they are not satisfied with the outcome of commercial discussions. We also note that there has already been litigation involving a past Foothills Pre-Build application. While the past litigation was not successful, if such a challenge were to occur, it could result in a significant delay. This litigation concern would apply equally to any party seeking to build a pipeline from Alaska into Canada, as the facilities would likely have similar potential impacts on the environment and First Nations, regardless of the project proponent.

In our view, any single item identified above could result in a material delay to the schedule detailed by TransCanada in its Application. Based on the situation one could reasonably expect to evolve following TransCanada's filing, it is conceivable that several of these potential concerns could become a reality, with resultant delays to the schedule. As stated above, the extent to which the matters identified herein, or by TransCanada itself, actually lead to delays in TransCanada's proposed schedule will be impacted to a significant degree by the strategy TransCanada ultimately employs in pursuing the Project.

**B. INTRODUCTION**

The State of Alaska has requested that we provide our views on a number of issues associated with the November 30, 2007 Application filed by TransCanada pursuant to the AGIA. While a number of issues will be discussed regarding the TransCanada proposal, one of the primary mandates we have undertaken is to identify issues that could arise which would materially impact the proposed timeline for the completion of the pre-construction approvals phase of the Project put forward by TransCanada. After reviewing TransCanada's proposed timeline, we believe that it likely represents a "best case" scenario and is aggressive, in the sense that it will be difficult to complete all the identified tasks in the time allotted. However, we would logically expect a project proponent to adopt such an approach when bringing forth a proposal of this unique nature and magnitude. In essence, TransCanada has put forth a plan which assumes that it will not encounter any significant difficulties or delays in securing the major pre-construction approvals for the Project. In this regard, while we note that the TransCanada Application provides a "Key Risk Assessment and Mitigation" matrix, it does not provide a sensitivity analysis of, or a contingency for, the impacts (including on Project timing) that would be associated with certain events, that are arguably foreseeable, actually occurring. As such, should the matters identified by TransCanada or discussed below become a reality, it is likely that timing delays beyond the period forecast by TransCanada would occur.

In this Report we have attempted to incorporate consideration of a number of issues that could arise in the context of any Application (including a submission in the