



The Great Northern Pipeline Debate

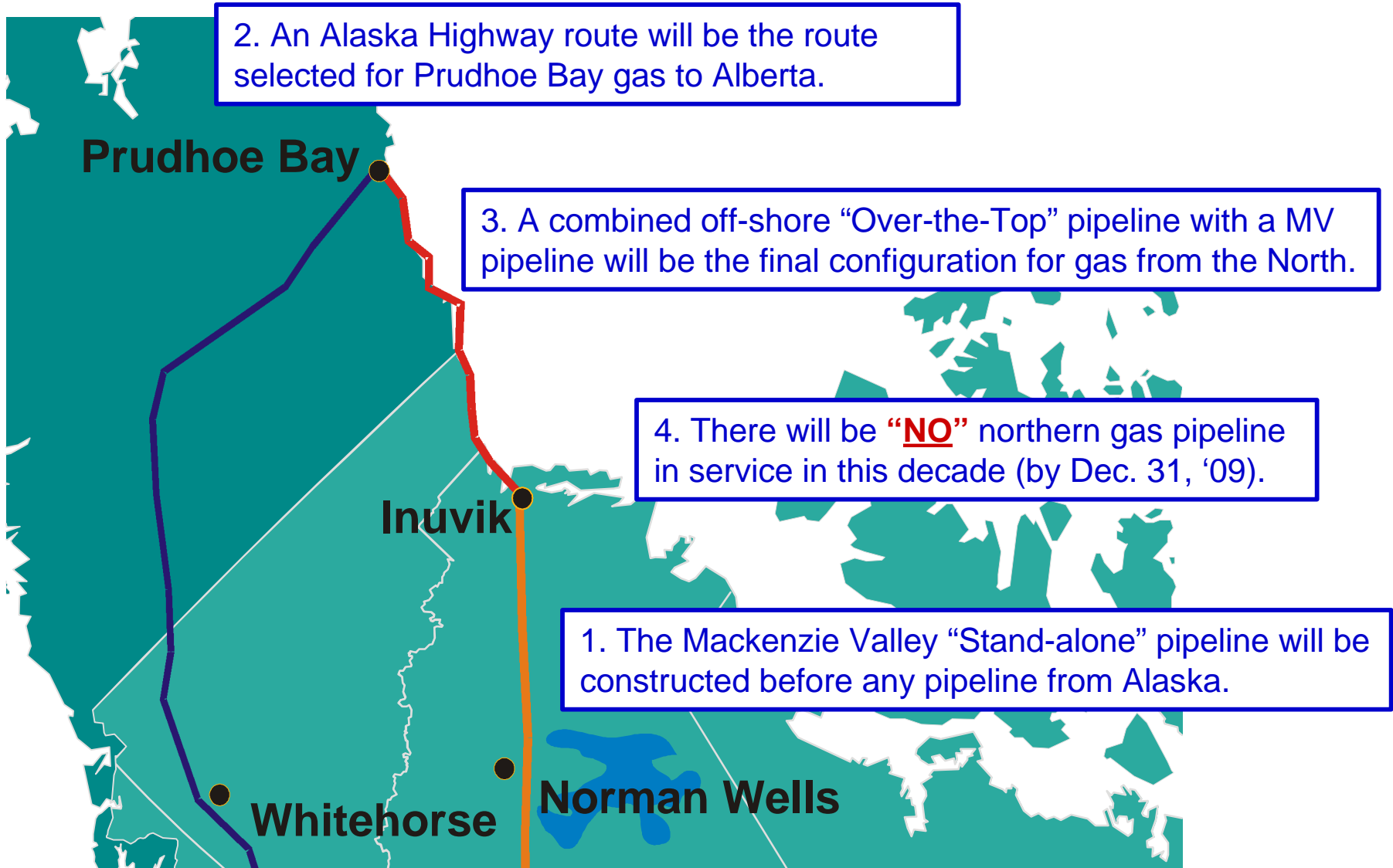
Enbridge Perspectives on Northern
Pipeline Development

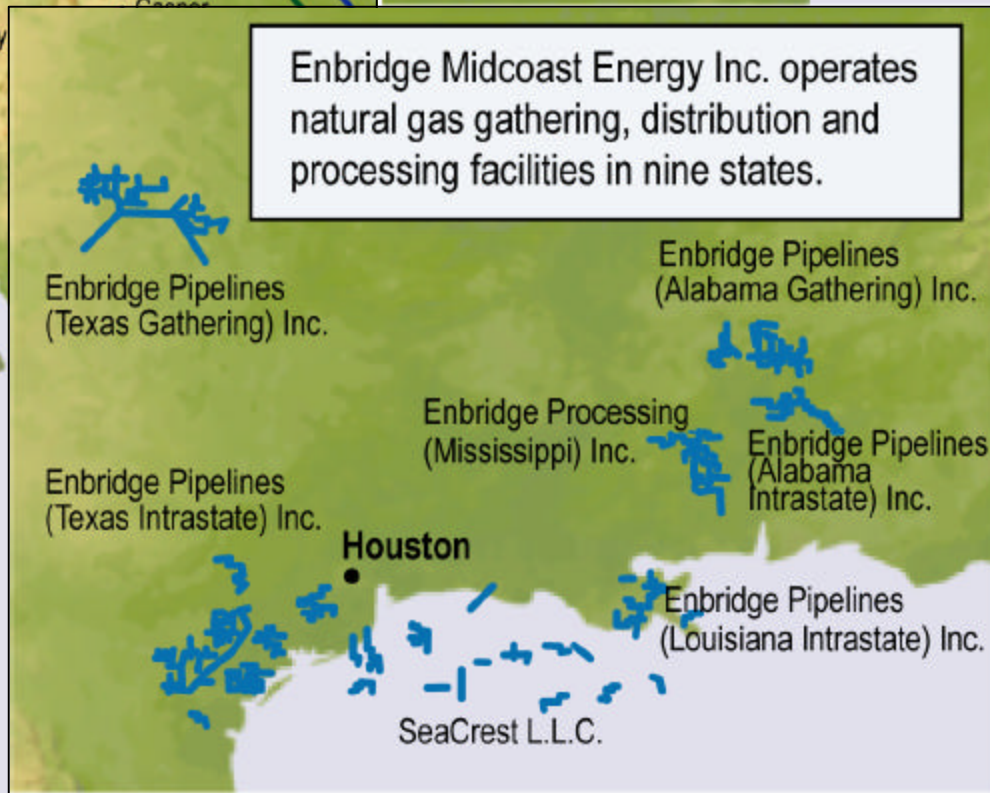
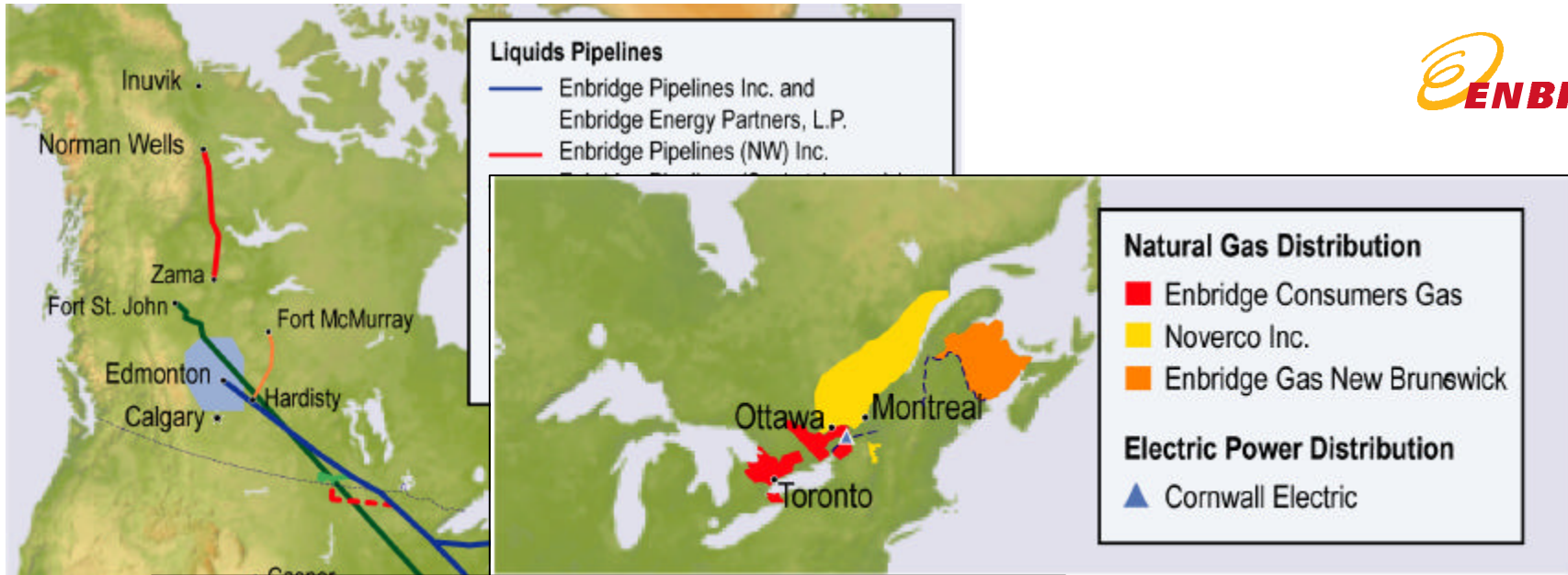
Wayne Sartore
Vice President
Northern Pipeline Development

Presented to:
Economic Society of Calgary

February 20, 2002

Ask the Audience - "Survey"





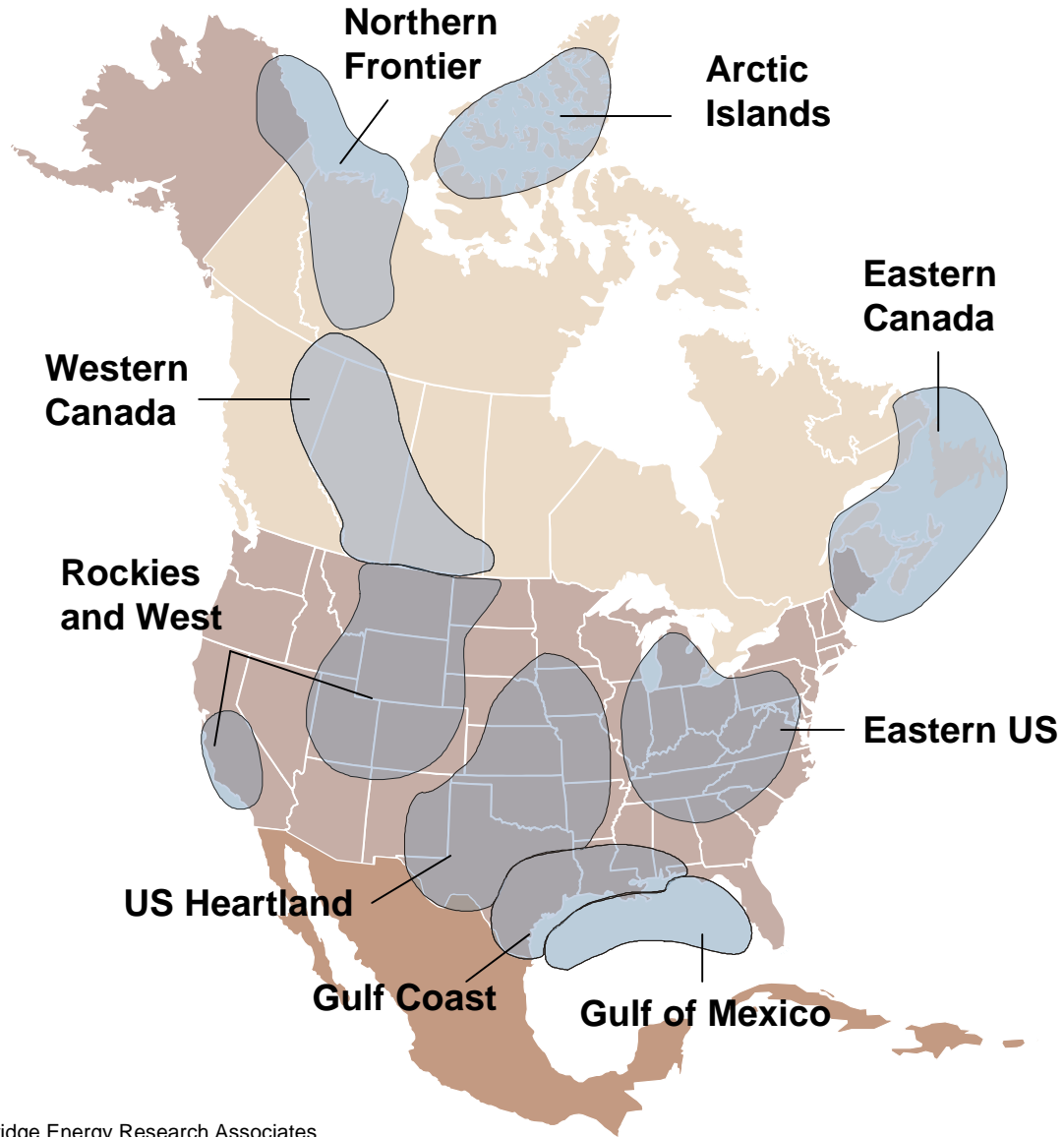
Enbridge: North & South America

Northern Expertise

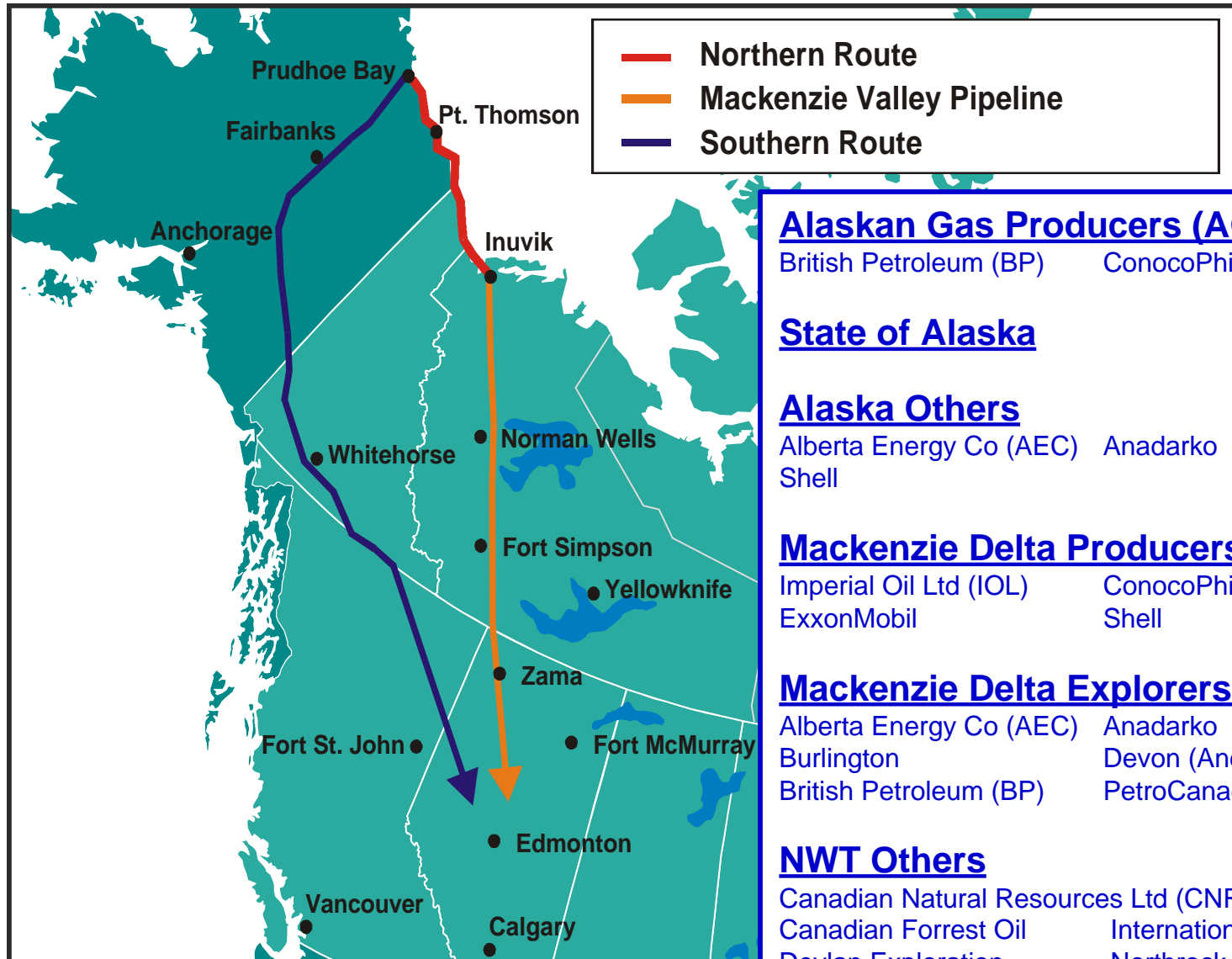
- Enbridge has substantial experience constructing and operating northern infrastructure projects....



North American Natural Gas Reserves



Who's Who and the Routes



—	Northern Route
—	Mackenzie Valley Pipeline
—	Southern Route

Alaskan Gas Producers (AGP)

British Petroleum (BP) ConocoPhillips ExxonMobil

State of Alaska

Alaska Others

Alberta Energy Co (AEC) Anadarko ChevronTexaco
Shell

Mackenzie Delta Producers Group (MD4)

Imperial Oil Ltd (IOL) ConocoPhillips (Gulf)
ExxonMobil Shell

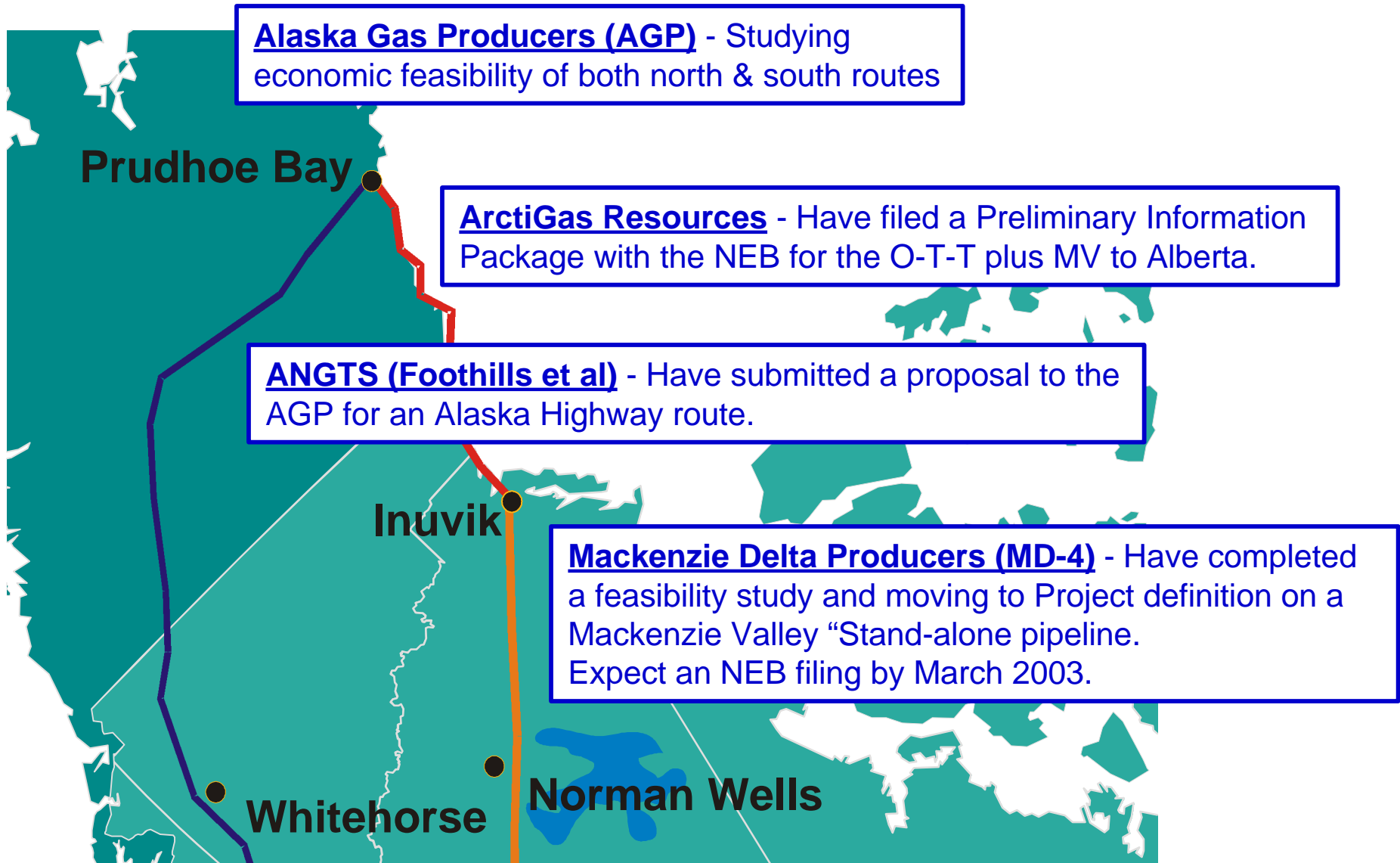
Mackenzie Delta Explorers (MD 7)

Alberta Energy Co (AEC) Anadarko ChevronTexaco
Burlington Devon (Anderson)
British Petroleum (BP) PetroCanada

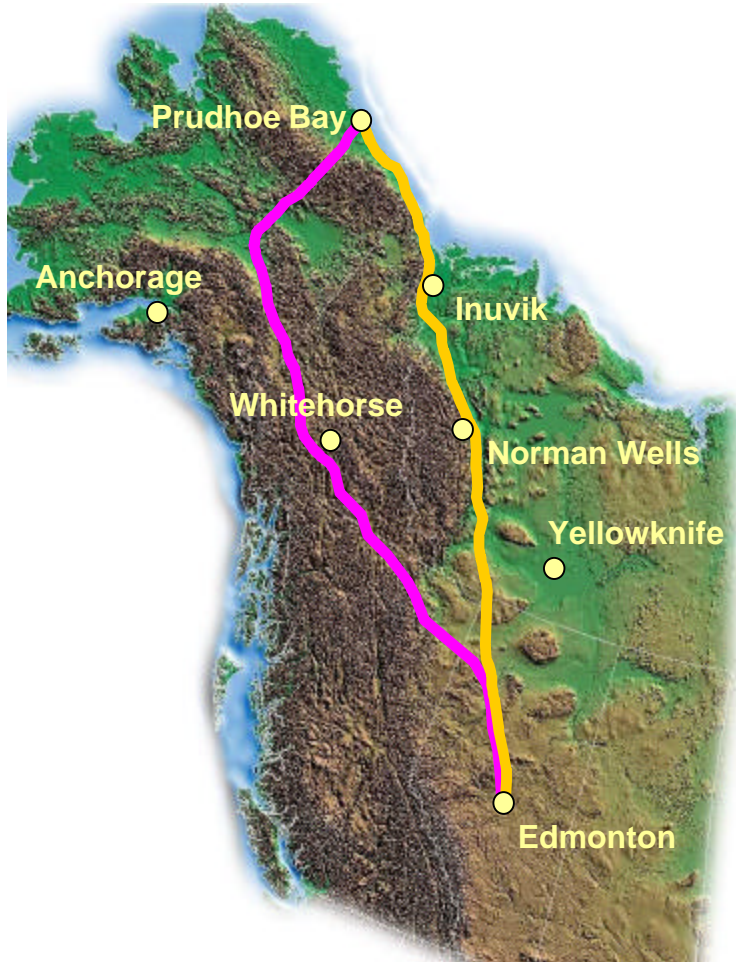
NWT Others

Canadian Natural Resources Ltd (CNRL)
Canadian Forrest Oil International Frontier
Devlan Exploration Northrock Resources
EOGResources Pacific Roder Ventures
Hunt Oil Paramount Resources

The Proponents - The Studies



Route Cost & Toll Comparison



Alaska to Lower 48 Market

	South	North
Total Project Cost (US\$billions)	17.2	15.1
Notional tolls (US\$/mcf)	2.39	2.07

(Far North O&G Conference on Sept. 20, '01)

Mackenzie Valley (Stand Alone)

Total Project Cost (US\$billions)	2.3
Notional tolls (US\$/mcf)	0.95

Both Routes are

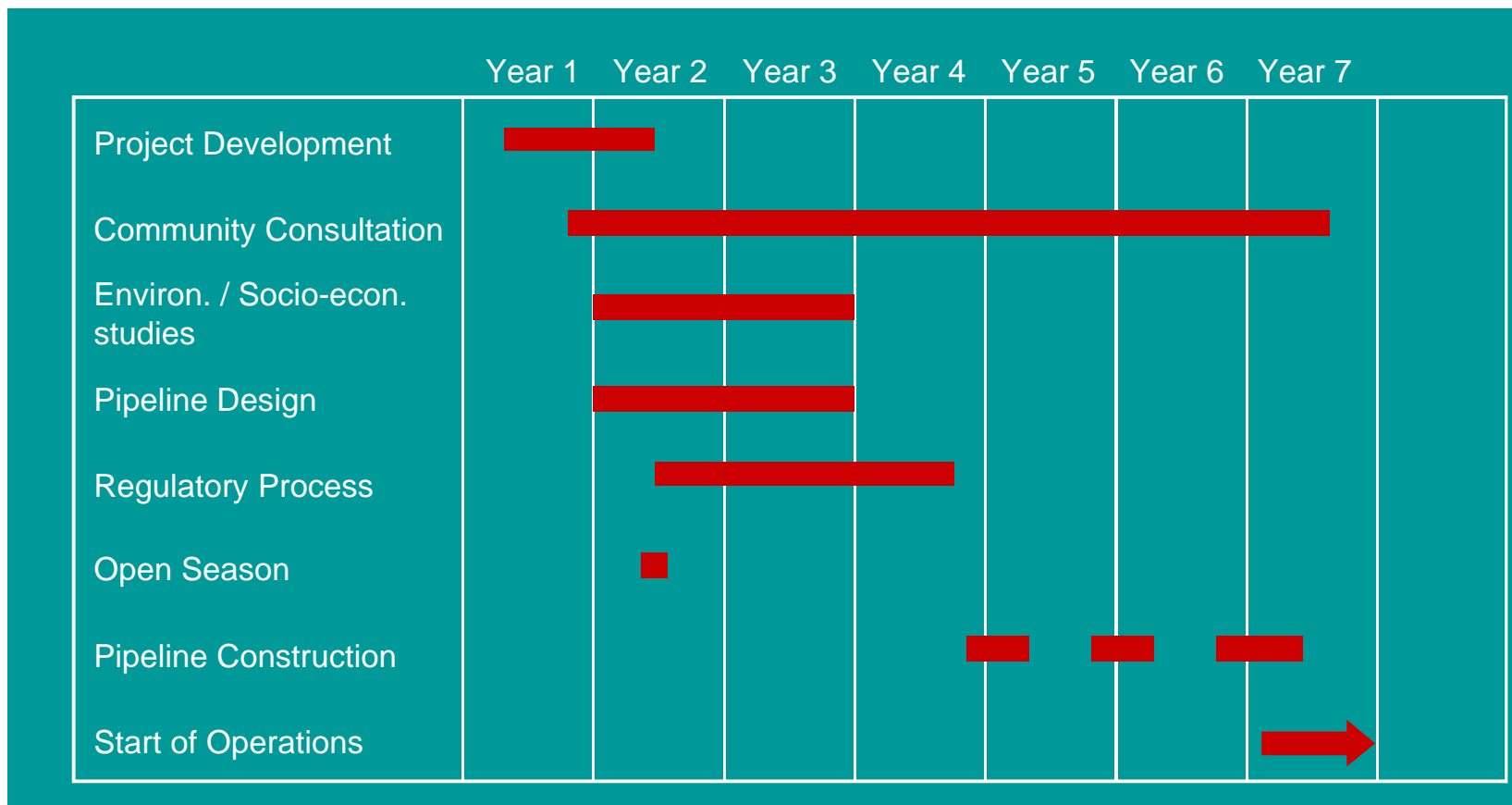
- **Constructable**
- **Operable**

Enbridge is route neutral

Safety and environmental excellence is a baseline requirement

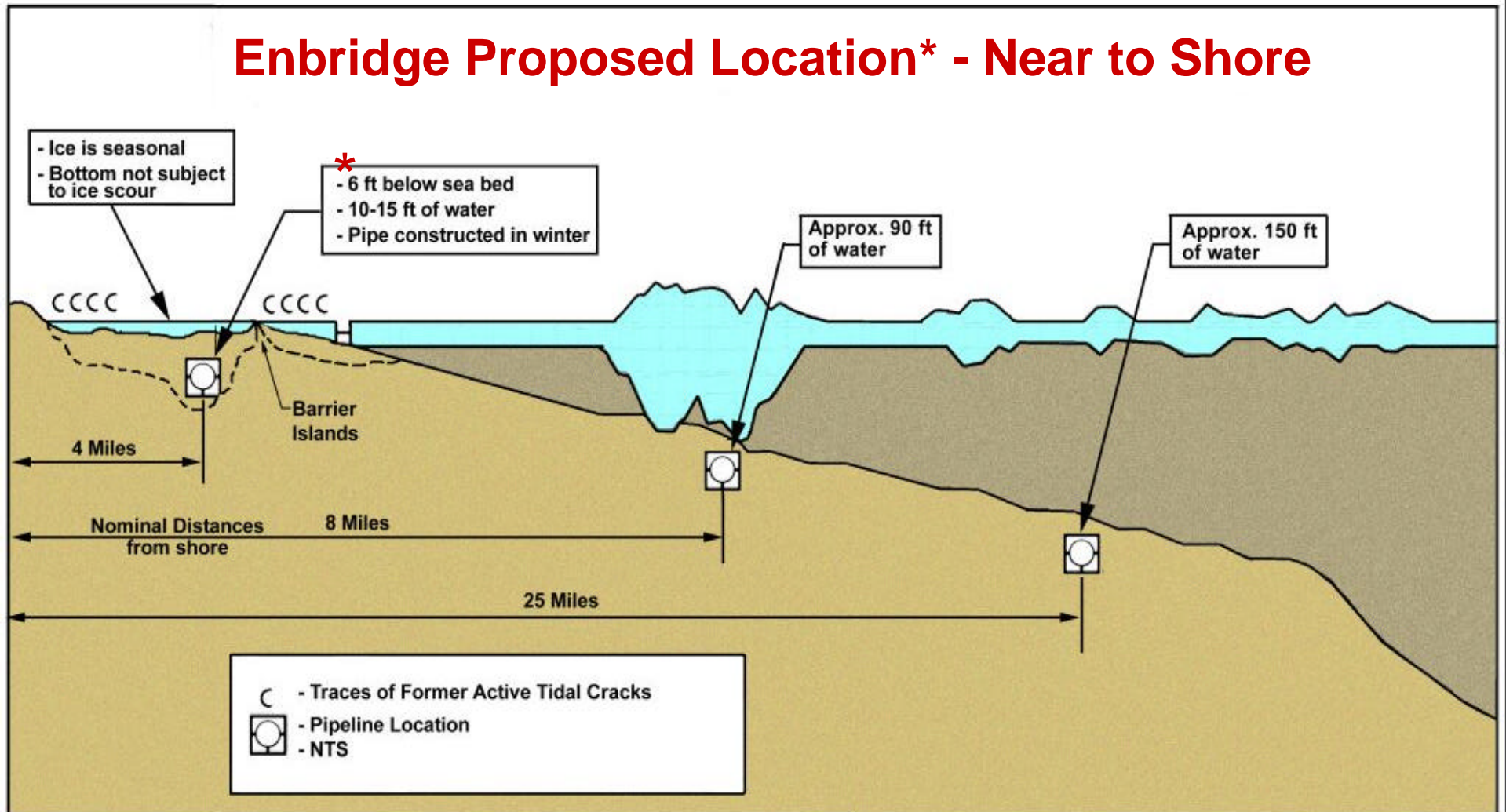
Illustrative Project Schedule

- Completion of a Northern gas pipeline and related infrastructure is expected to take 6 -7 years....



Over the Top - Constructable and Operable !!

Enbridge Proposed Location* - Near to Shore

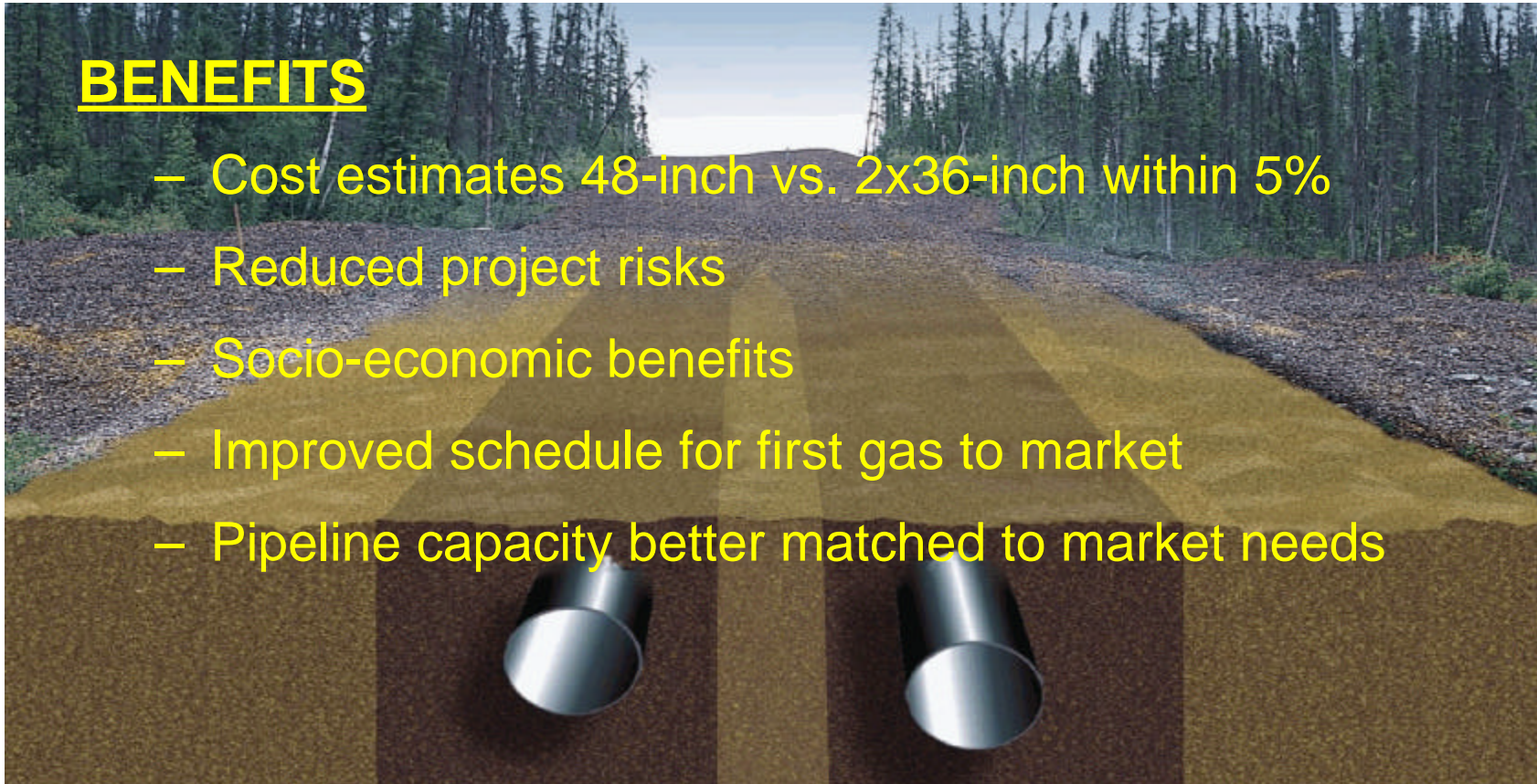


The “Measured Approach”

***Build multiple smaller lines “consecutively”
in the same right-of-way***

BENEFITS

- Cost estimates 48-inch vs. 2x36-inch within 5%
- Reduced project risks
- Socio-economic benefits
- Improved schedule for first gas to market
- Pipeline capacity better matched to market needs



“Measured Approach” - Advantages

- Improved schedule for first gas to market
- Reduced market risk
- Reduced construction risk
- Reduced operational risk
- Existing pipe mill capability
- Existing construction contractor capability
- Available construction personnel for project
- Extended construction program provides additional local benefits
- Available construction contractor capability for take-away requirements
- System flexibility



Northern Pipeline Development

The Bottom Line

- Project economics must be positive and robust
- The Core Producers will direct the development
- Political / Social issues must be resolved
- Either pipeline route can be constructed and operated
- Only one pipeline route will be developed in near term



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QUESTIONS ??