

SCOMM

128:7



ALASKA NORTH SLOPE LNG PROJECT

Phillips Alaska
BP Exploration (Alaska)
Foothills Pipelines
Marubeni Corporation

2/27/01

AGENDA

- Project Overview
- Market Essentials
- Stage 1 Focus / Results
- Stage 2 Plan

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ANS LNG SPONSOR GROUP

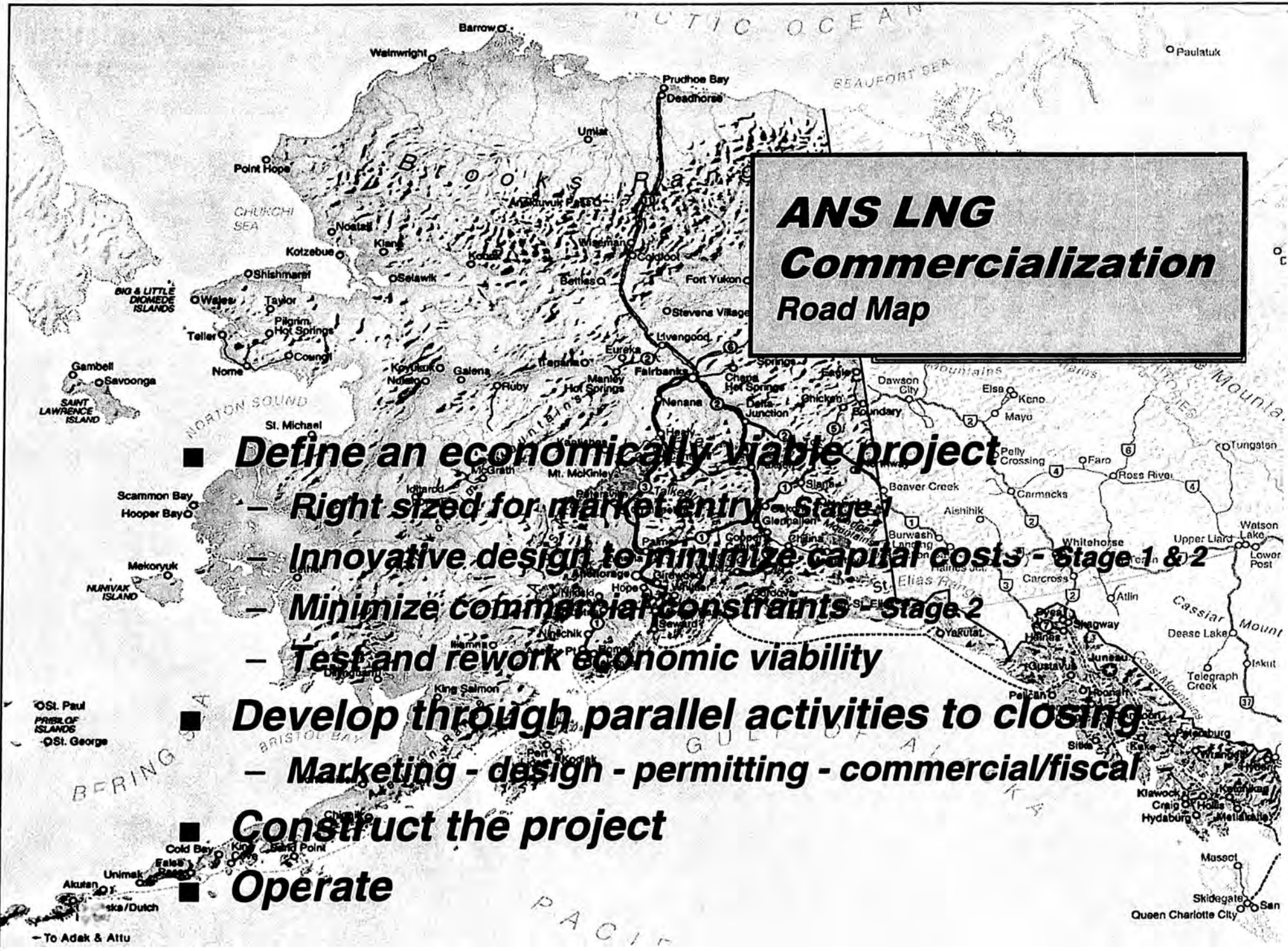
Review

- Initiated to attempt to develop an economic and commercially viable LNG project
- Arco solicited interest 1997-1998
 - Stranded Gas Act (HB393) facilitated formation
- Current Sponsors
 - Phillips Alaska ~ 30%
 - BP Exploration (Alaska) 26%
 - Foothills Pipelines 25%
 - Marubeni Corporation ~ 19%
- Sponsors completed an 18 month \$12 million engineering design effort in August of 2000 (Stage 1)
- Now focusing on many of the commercial aspects (Stage 2)
- Here today to update you on our past and ongoing efforts of these project stages

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ANS LNG Commercialization Road Map

■ Define an economically viable project

- Right sized for market entry - Stage 1
- Innovative design to minimize capital costs - Stage 1 & 2
- Minimize commercial constraints - Stage 2
- Test and rework economic viability

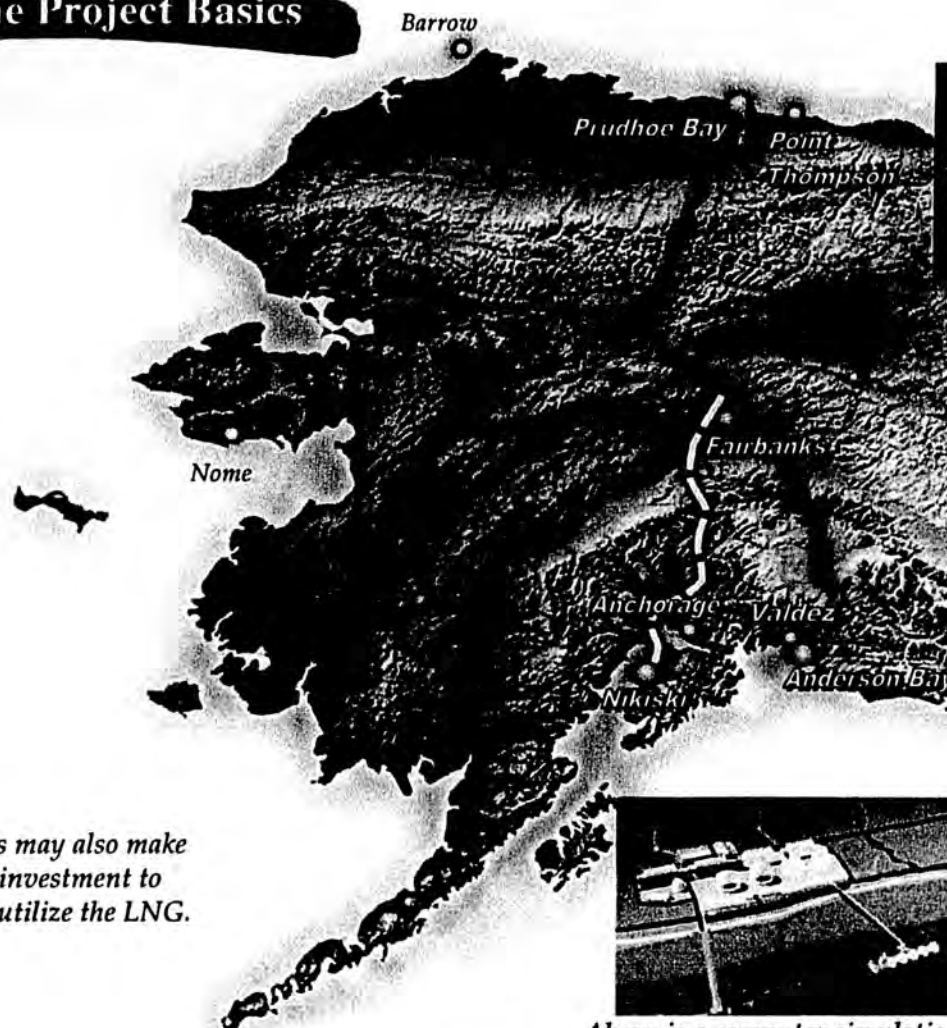
■ Develop through parallel activities to closing

- Marketing - design - permitting - commercial/fiscal

■ Construct the project

■ Operate

The Project Basics



LNG buyers may also make substantial investment to handle and utilize the LNG.

The LNG is loaded onto ships (much like large Thermos® bottles) for transport to East Asian Markets.

Above is a computer simulation of the potential Nikiski LNG plant and marine terminal site.

In the LNG Plant, gas from the pipeline is chilled to -259°F (-160°C) so that it forms a safe, clean, liquefied natural gas (LNG).



Gas from the North Slope is to be purchased and routed to a nearby gas conditioning facility where impurities and carbon dioxide are removed.

The purified gas is then to be transported by pipeline system to an ice-free port in South Central Alaska.

Sites at both Anderson Bay – at the Port of Valdez, and Nikiski – in the Cook Inlet, are viable options.



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MARKET UNDERSTANDING

Sponsor Group Expertise

- **MARKET UPDATES AND INPUTS ARE PERPETUAL**
 - From well established, experienced and knowledgeable sources

- **Marubeni**
 - ✦ Japanese trading company, doing business throughout East Asia and the world
 - ✦ *Continuous feedback* through ANS LNG Market Liaison office
 - Providing significant input and updating to our market analysis

- **Phillips**
 - ✦ 30 years marketing to Asia (from Alaska)
 - Continual LNG market negotiations
 - Coordinated through international LNG group
 - ✦ Offices in Asia including: Tokyo, Taiwan and China (ongoing feedback)

- **BP**
 - ✦ Ongoing worldwide LNG marketing experience
 - ✦ Offices in Asia (ongoing feedback)

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LNG FUNDAMENTALS

- 2 fundamental elements needed for Alaskan LNG to move forward
 - **Commercial viability**
 - ✦ Right sized and sufficiently advanced project
 - ✦ Competitive with other new projects
 - **A market that is ready for gas from the new Alaska LNG project**
 - ✦ Requires additional new demand
 - 1st - incremental expansions - existing LNG projects
 - Then - most competitive new LNG projects
 - Providing secure supply
 - Delivering when the market is ready

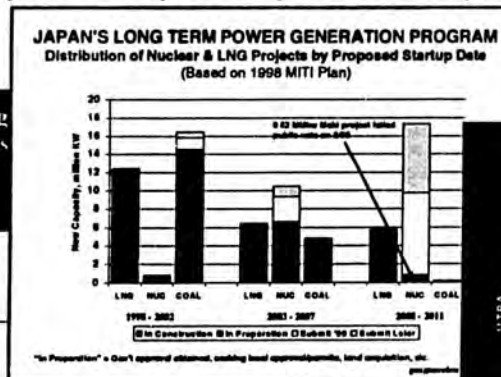
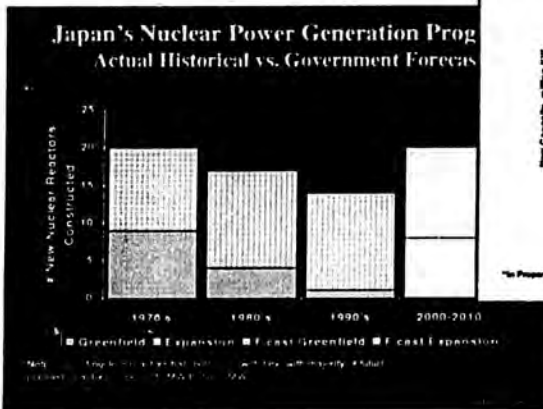
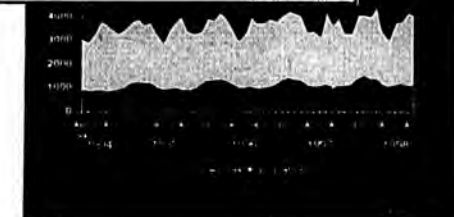
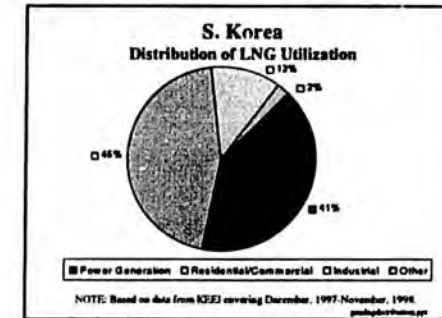
MARKET ANALYSIS SCOPE

■ Existing market issues and market potential

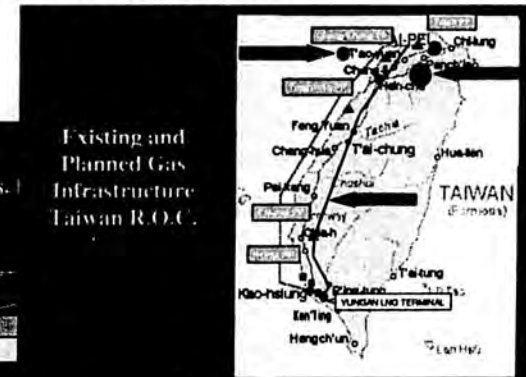
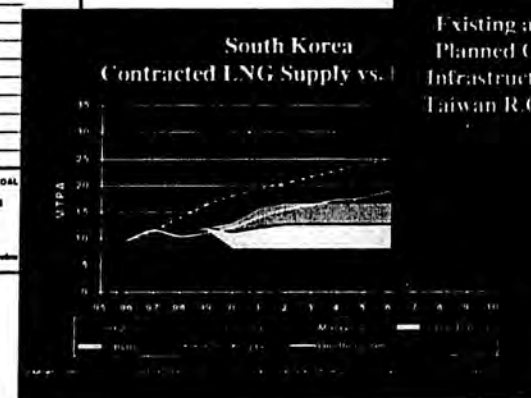
- Targeting Japan, Taiwan, S. Korea - Stage 1 & 2
- Emerging markets of China and India - Stage 1 & 2
- U.S. and Mexico west coast - Stage 2

■ In-depth analysis for each target country of:

- Government initiatives in *nuclear power* capacity
- Competition from *coal-fired versus LNG/gas* fired generation
- City gas companies ability to displace with *competing fuels*
- *Deregulation* of electricity and city gas industries
- "Other" *gas competition* from potential *pipelines*
- Effects of independent power producers (*IPP's*) in a deregulated environment



EXAMPLES OF DATA TABULATION IN MKT ANALYSIS



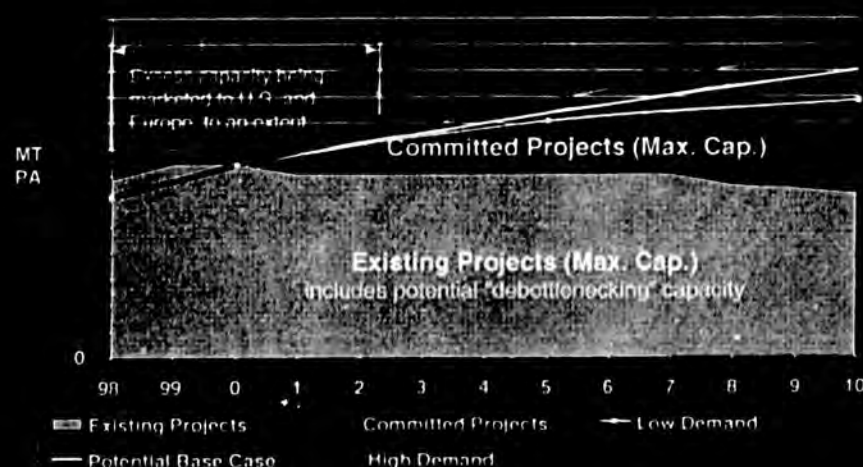
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Market Competition Potential Asian LNG Projects

Country	Earliest Date of 1 st Delivery	Customers	Nominal Capacity MTPA
Australia NWS	~2003+	Asian Markets	7.5
Malaysia Tiga (III)	~2003+	Asian Markets	7.6
Tangguh (Irian Jaya)	~2003+	Asian Markets	6
Qatargas/Rasgas	~2002+	Asian Markets	7.5
Bayu	~2003+	Asian Markets	3
Indonesia "I"	~2004+	Asian Markets	3
Yemen	~2004+	Asian Markets	5
Sub Total			39.6

Total Asia-Pacific Supply/Demand Outlook Includes Emerging Markets (India, China, etc.)



LNG Market View -- *Fiercely Competitive*

Market Competition Potential Asian LNG Projects (cont'd)

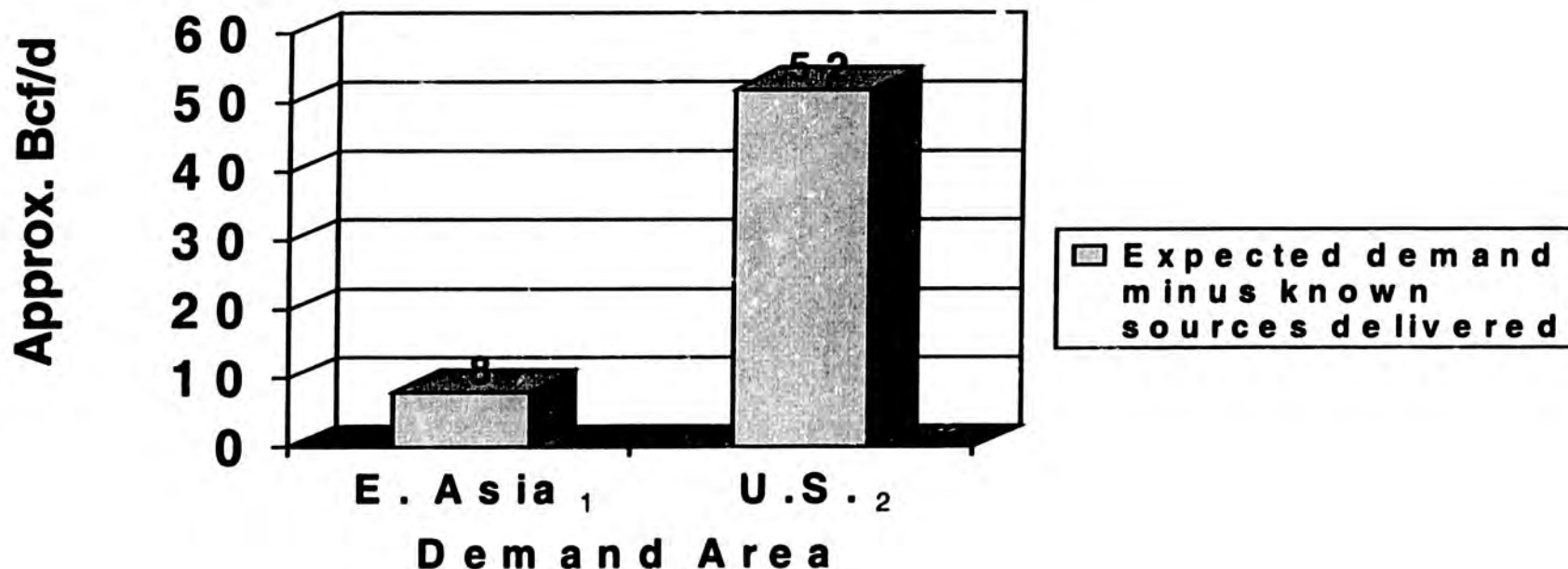
Country	Earliest Date of 1 st Delivery	Customers	Nominal Capacity MTPA
Gorgon	2004/5	Asian Markets	7.6
Sakhalin II	2005/6	Asian Markets	6
Alaska NS	2007+	Asian Markets	8 - 14.7
Indonesia Natuna	NA	Asian Markets	0
Sakhalin I	2007+	Japan/Asia	7
Sub Total			28.6 - 35.3
Total			~68 - 75

Smaller market entry reduces risk

- **60-80 MTPA of potential projects**
 - Pursuing 20 - 40 MTPA of 2010 growth
- **Problematic trends**
 - Downward price pressure
 - Shorter contracts & spot deliveries

ANS LNG MUST ALSO COMPETE WITH U.S. GAS DEMAND

2010 New Source Needs



1 - High case LNG demand forecast of Tokyo Gas presented to 2001 HOAG
Year 2010 high demand of 135+ MTA (~19 Bcf/d) minus ~80 Mta (11 Bcf/d)

2 - National Petroleum Council, 12/99
2010 demand of 76 Bcf/d minus 24 Bcf/d of existing production

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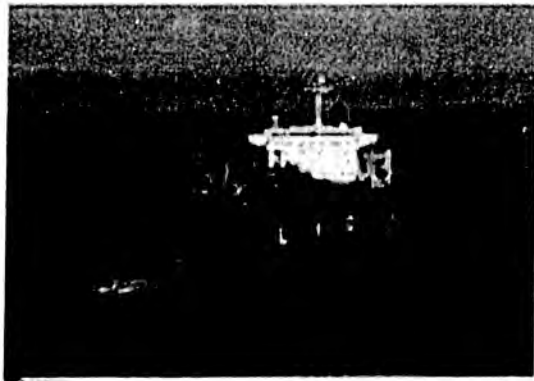


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STAGE 1 WORK

Major Advance

- **MARKET ENTRY PROJECT**
- 7-8 MM ton/year, projected \$6.8 billion project
 - *Redesigned to*
 - ✦ defer cost to as-needed
 - minimize pre-investment
 - Improves market entry probability
 - Significantly reduces capital cost (and risk)
 - Expandable to 14 MTA as market develops



- ✦ **Mandate: to become economically sufficient at 7-8 MTPA even if future expansion never occurs**

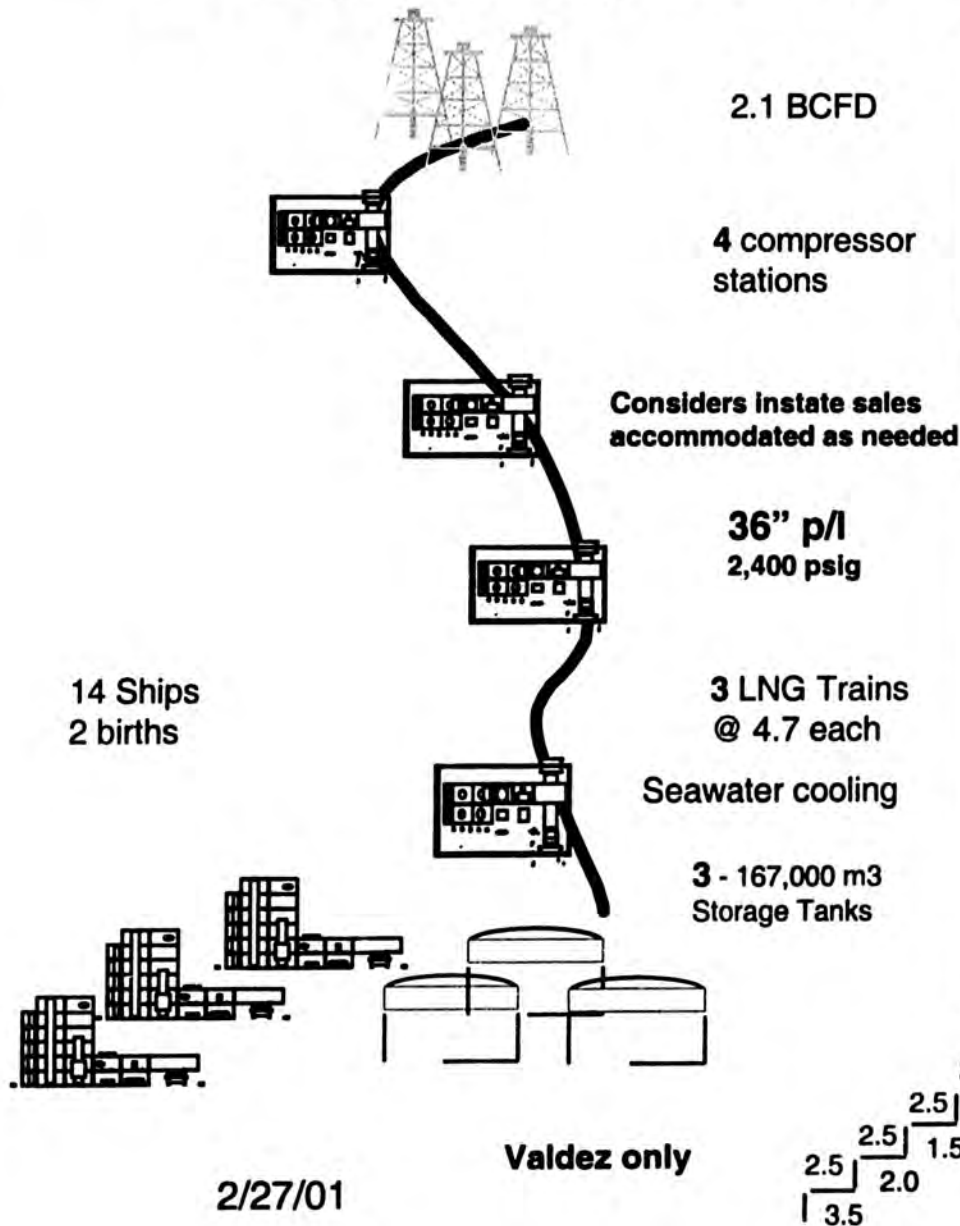
On-site Asian LNG market discussions confirm:
Smaller 7-8 MTPA, market entry project

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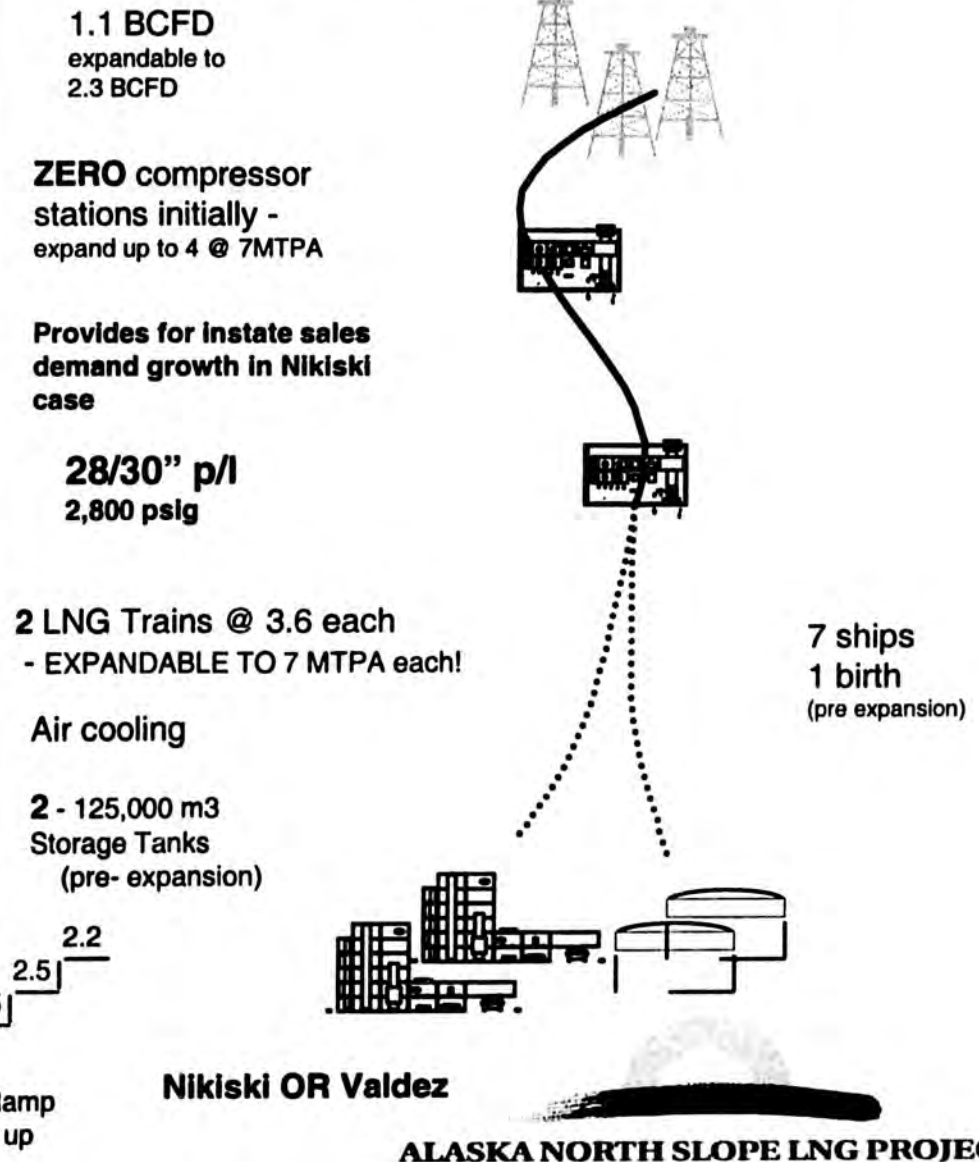
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KEY AREAS OF REDESIGN

■ Pre-Sponsor Group 14.7 MTPA



■ Sponsors smaller, market entry, 7 MTA expandable to 14 MTPA



- System integration and smaller project design
- Pipeline route / LNG plant and marine terminal site
- Pipeline design and construction
- LNG plant/marine terminal design
- Gas treatment plant

1. Significant external input
2. Workshops incorporated both external and internal experts
3. **Both route/sites advanced**



PRESENTING OVERVIEW AT LNG 13

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PIPELINE ROUTE & LNG PLANT SITE

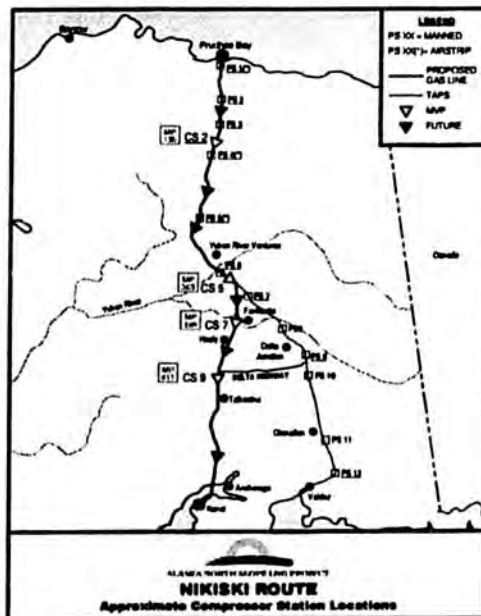
Pacing item is a cost competitive project - at either location

Neither site works if overall project isn't doable

Stage 1 engineering and construction design for BOTH

■ **NIKISKI**

- INSTATE GAS SALES
POTENTIAL



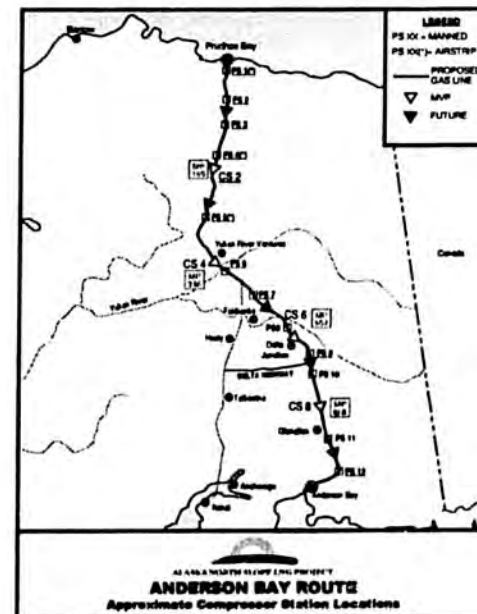
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■ ANDERSON BAY

- POTENTIAL FOR REDUCING PERMITTING TIME

✦ Existing TAPS P/L corridor

- Possibly less resistance
 - environmental
 - landowner, etc.

**ALASKA NORTH SLOPE LNG PROJECT**

STAGE 1 - PERMITTING WORK

- **In depth analysis on route/site options**
 - Internal expert studies/review
 - ✦ Draw upon proven track record
 - External, Alaska content consultant - extensive analysis

- **CONCLUSION: Both Anderson Bay and Nikiski can be permitted**
 - Any permitting time differences doable within current market timing needs
 - Existing Anderson Bay route permits will also require extensive work *and* cost to perfect

Note: Nikiski route does NOT go through Denali National Park

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Stage 1 design and cost estimating
exceeded expectations

ESTIMATING CATEGORIES

AVAILABLE DATA	SCREENING	CONCEPTUAL	PRELIMINARY	CONTROL
Process Size/Capacity	★	★	★	★
Location	★	★	★	★
Project Timing/Schedule	★	★	★	★
Process Flow Sheet		★	★	★
Equipment List		★	★	★
Project Milestone Schedule		★	★	★
Plot Plan			Preliminary	Approved
Execution Plan			Preliminary	Approved
Project Schedule			Preliminary	Approved
Engrg. & Design Started			★	★
Equipment Specified			★	★
Equipment Quotes			★	★
Engineering & Design 30%		TARGET	ACHIEVED	★
P&ID's Complete				★
Major Equip. Firmly Quoted				★
MTO's				★
ESTIMATE ACCURACY	+100/-50%	+60/-40%	+30/-20%	+15/-10%
CONFIDENCE FACTOR	80%	80%	80%	80%

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ANSI/ISO 9001:2000

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STAGE 1 WORK

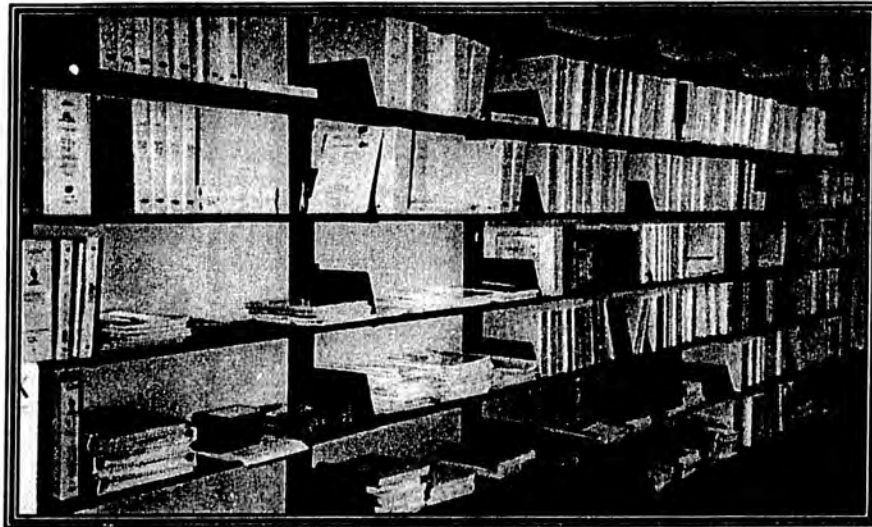


Photo: Stage 1 work library

■ Stage 1 Documented Activities

- 30+ Studies
- 10+ Cost & construction estimates
- 15+ Analysis & assessments
- 30+ Reports
- 25+ Workshops

■ 26 Outside contractors/consultants (~60% AK content)

- 15+ Engineering design & cost
- 3 Permitting
- 2 Regulatory
- 2 Federal
- 1 State
- 1 Governmental entity

\$12 Million - 18 months

**STAGE 1 WORK COMPLETED:
ON TIME
WITHIN BUDGET
EXCEEDING ENGINEERING DESIGN EXPECTATIONS**

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STAGE 2

KEY AREAS OF FOCUS

2

- Ongoing design/cost optimization
- Synergy of shared cost with a lower 48 pipeline project
- Value of public entity or port authority concept to our project
- Key risks, their impact and potential mitigation strategies (including financing)
- Alternate LNG markets evaluation
 - Including U.S. and Mexico West Coast
- Further understanding and valuation of competing LNG projects
- Further permitting analysis and execution strategy
 - blue print for moving crisply forward - with the regulators and agencies
- TIMING: 12-15 months (underway) COST: ~\$3 million

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Key Stage 2 Highlights *To Date*

2

- Additional capex optimization of ~\$400 Million
 - Market entry 7-8 MTPA capex now at
 - ✦ \$6.5 B - including ships
 - ✦ \$4.9 B - without ships
 - ✦ Identification of further savings opportunities through shared facilities with a lower 48 gas pipeline are ongoing
- Public entity valuation -- current view indicates no compelling advantage to a joint public/private project
 - Generally:
 - ✦ Benefits passed to private enterprise will be taxable
 - ✦ Public borrowing rates unlikely to offset private entity deduction of interest and depreciation
- Other Stage 2 activity in progress and on schedule

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Stage 2 Market Engagement

2

- Ongoing E. Asian contact continuing through
 - ANS LNG Market Liaison Office
 - Individual corporate contacts
- Appropriate level of E. Asian contact consistent with market view of project development
 - Until fully defined, cost competitive project developed
 - Until market need for new, green field projects is established through demand growth - end of decade
- Stage 2 deliverable of ANS LNG market competitiveness analysis is ongoing
- Stage 2 analysis of non-traditional markets is ongoing

ECONOMIC ISSUES

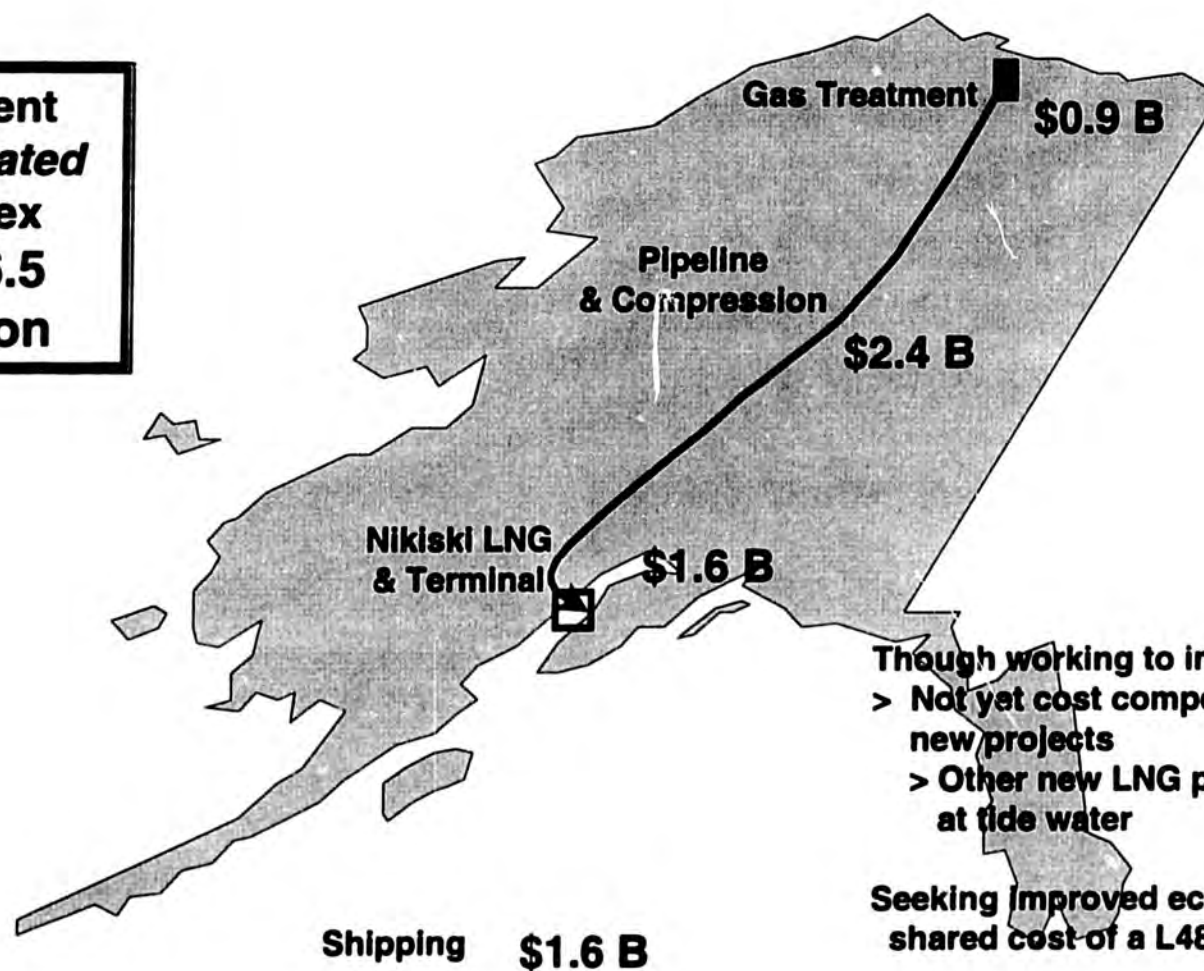
- Key: become cost competitive with other E. Asian LNG projects at a sufficient economic return
 - ANS LNG Project
 - ✦ is not yet cost/market competitive
 - ✦ is not yet economic on a cost of capital basis
 - for the expected risk
- Considerable, additional efforts required
 - To reduce cost
 - To share cost or find other synergy
 - Reduce risk
 - To achieve meaningful fiscal modification (especially federal)

■ ***Axiom:***

- Project economic assumptions must be salable
 - ✦ Internally - to the investment community - to the suppliers and markets

ANS LNG Project Current CAPEX Estimate

**Current
Estimated
Capex
~ \$6.5
Billion**

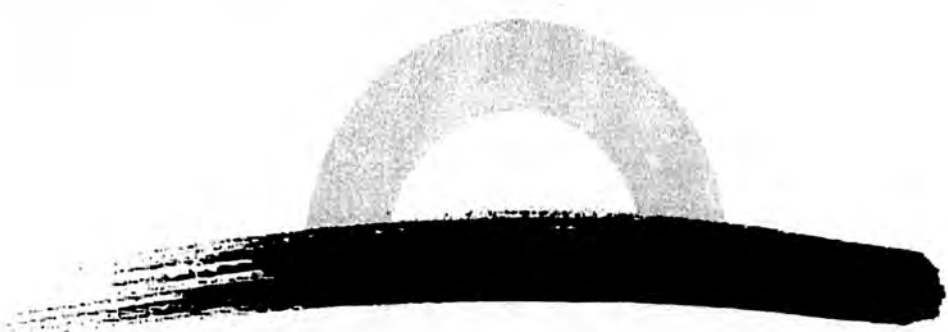


Though working to improve economics
> Not yet cost competitive with other new projects
> Other new LNG projects are already at tide water

Seeking improved economics with shared cost of a L48 pipeline

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- The ANS LNG Sponsor Group continues forward
 - Attempting to develop a cost competitive project
 - Being prepared but pragmatic about market timing

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