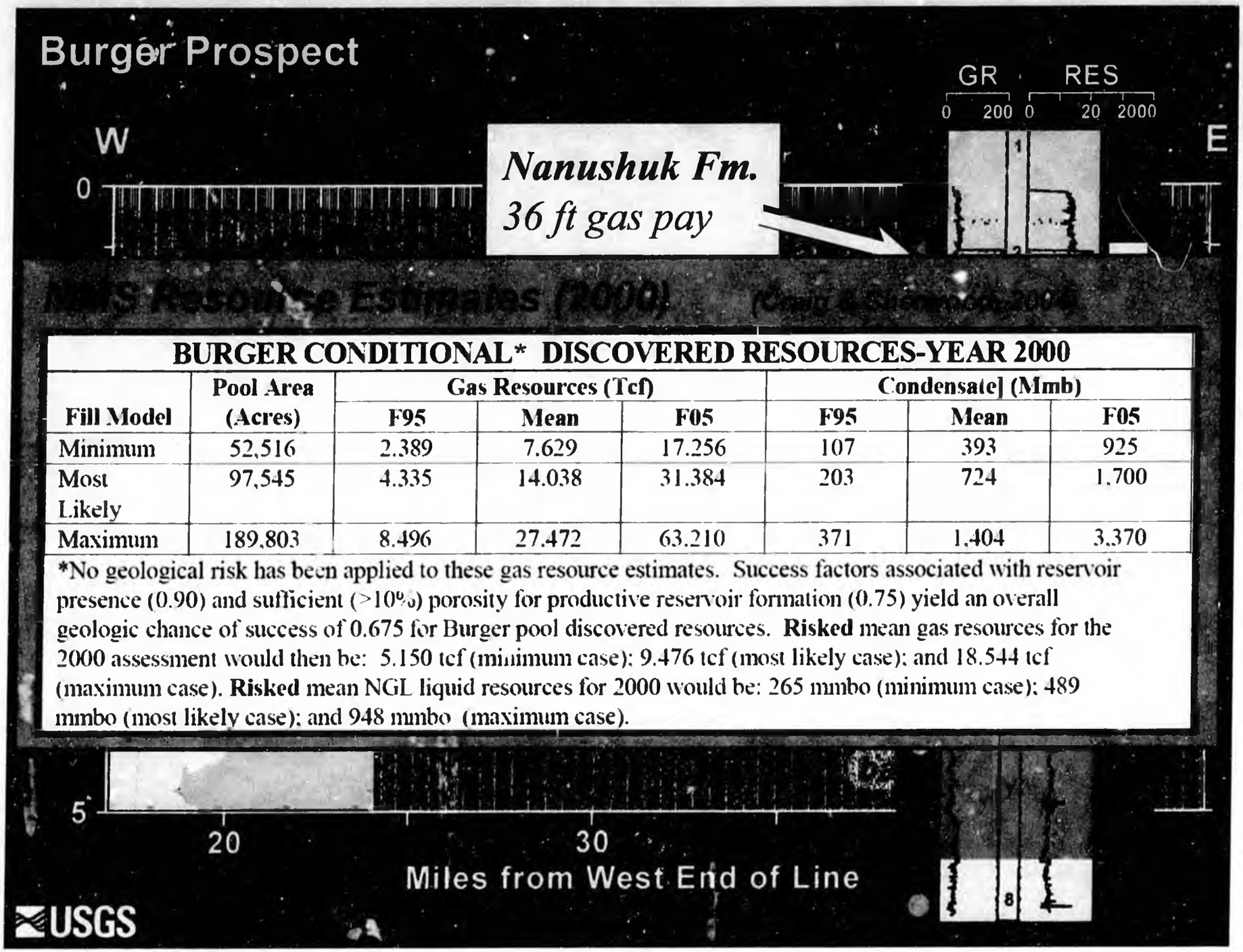
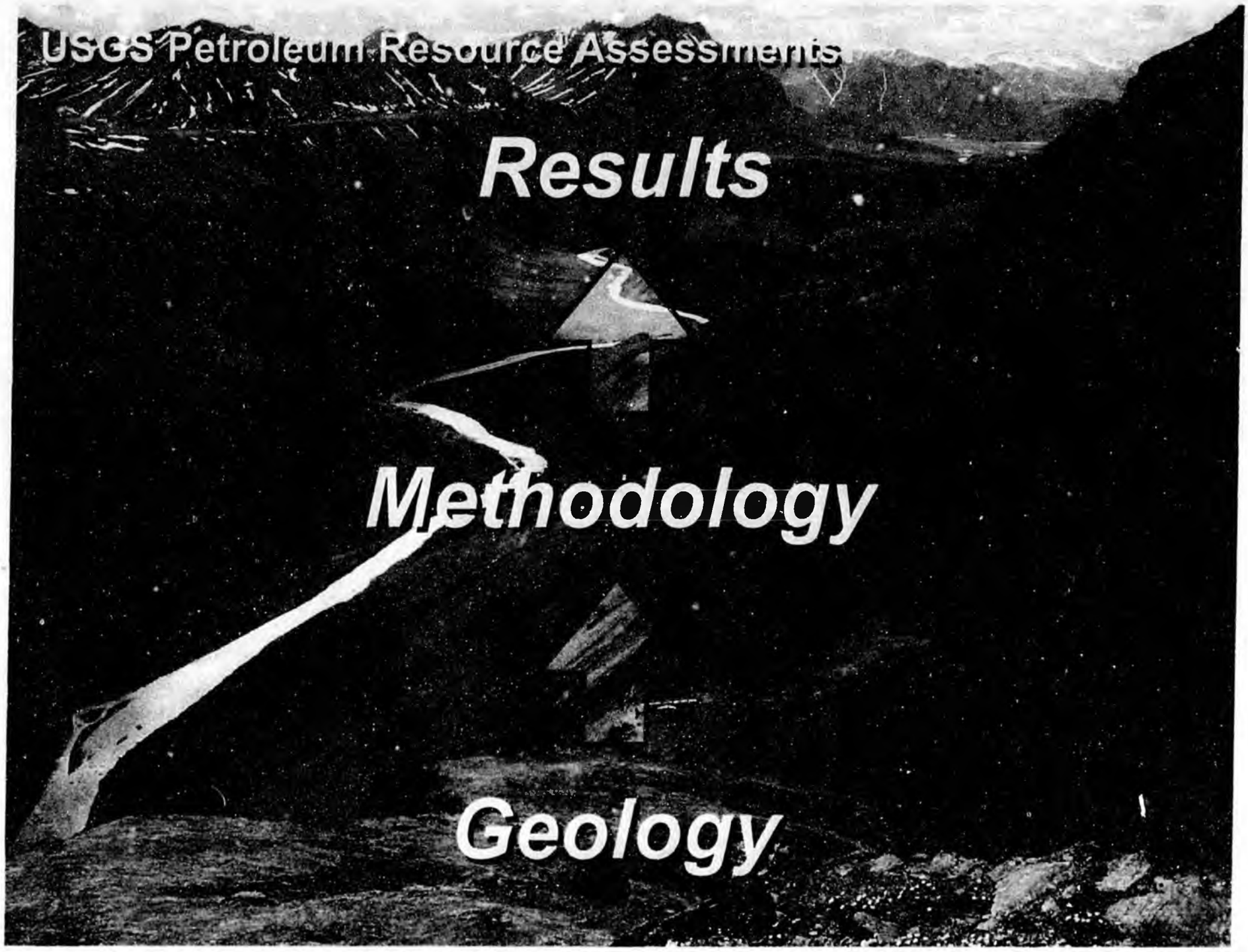


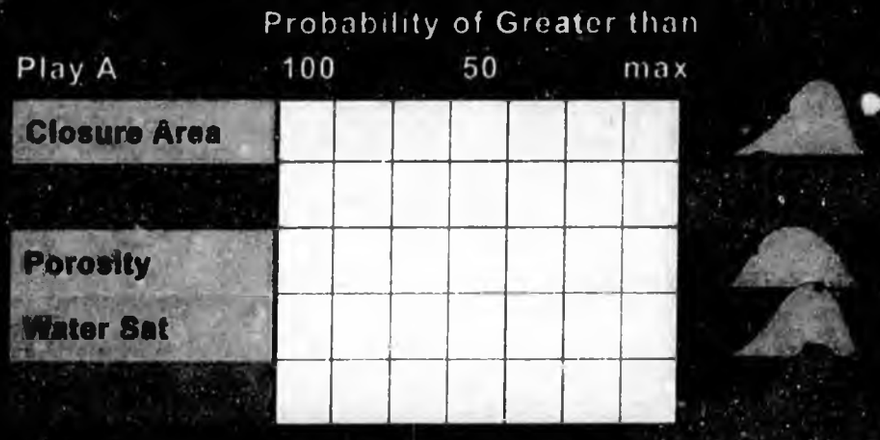
BURGER CONDITIONAL* DISCOVERED RESOURCES-YEAR 2000

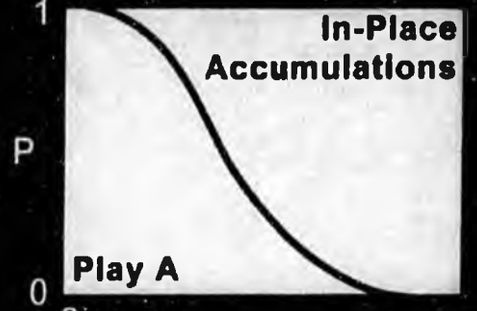
Fill Model	Pool Area (Acres)	Gas Resources (Tcf)			Condensate] (Mmb)		
		F95	Mean	F05	F95	Mean	F05
Minimum	52,516	2.389	7.629	17.256	107	393	925
Most Likely	97,545	4.335	14.038	31.384	203	724	1,700
Maximum	189,803	8.496	27.472	63.210	371	1,404	3,370

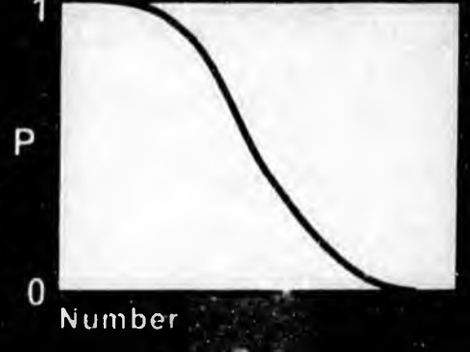
*No geological risk has been applied to these gas resource estimates. Success factors associated with reservoir presence (0.90) and sufficient (>10%) porosity for productive reservoir formation (0.75) yield an overall geologic chance of success of 0.675 for Burger pool discovered resources. **Risked** mean gas resources for the 2000 assessment would then be: 5.150 tcf (minimum case); 9.476 tcf (most likely case); and 18.544 tcf (maximum case). **Risked** mean NGL liquid resources for 2000 would be: 265 mmbo (minimum case); 489 mmbo (most likely case); and 948 mmbo (maximum case).


USGS Petroleum Resource Assessments
Results
Methodology
Geology

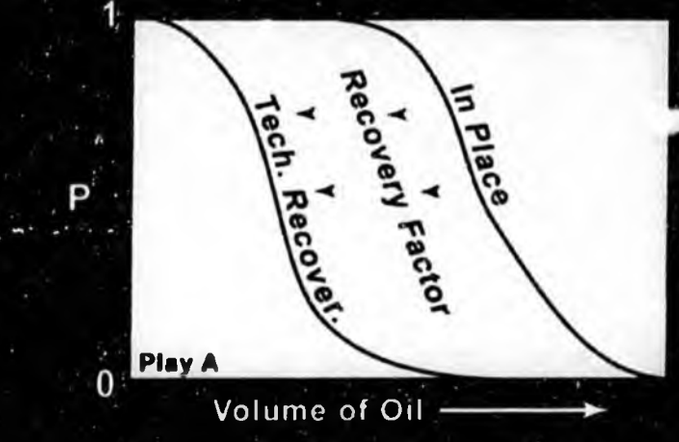
Assessment Methodology – Geologic Basis







Oil vs. Gas



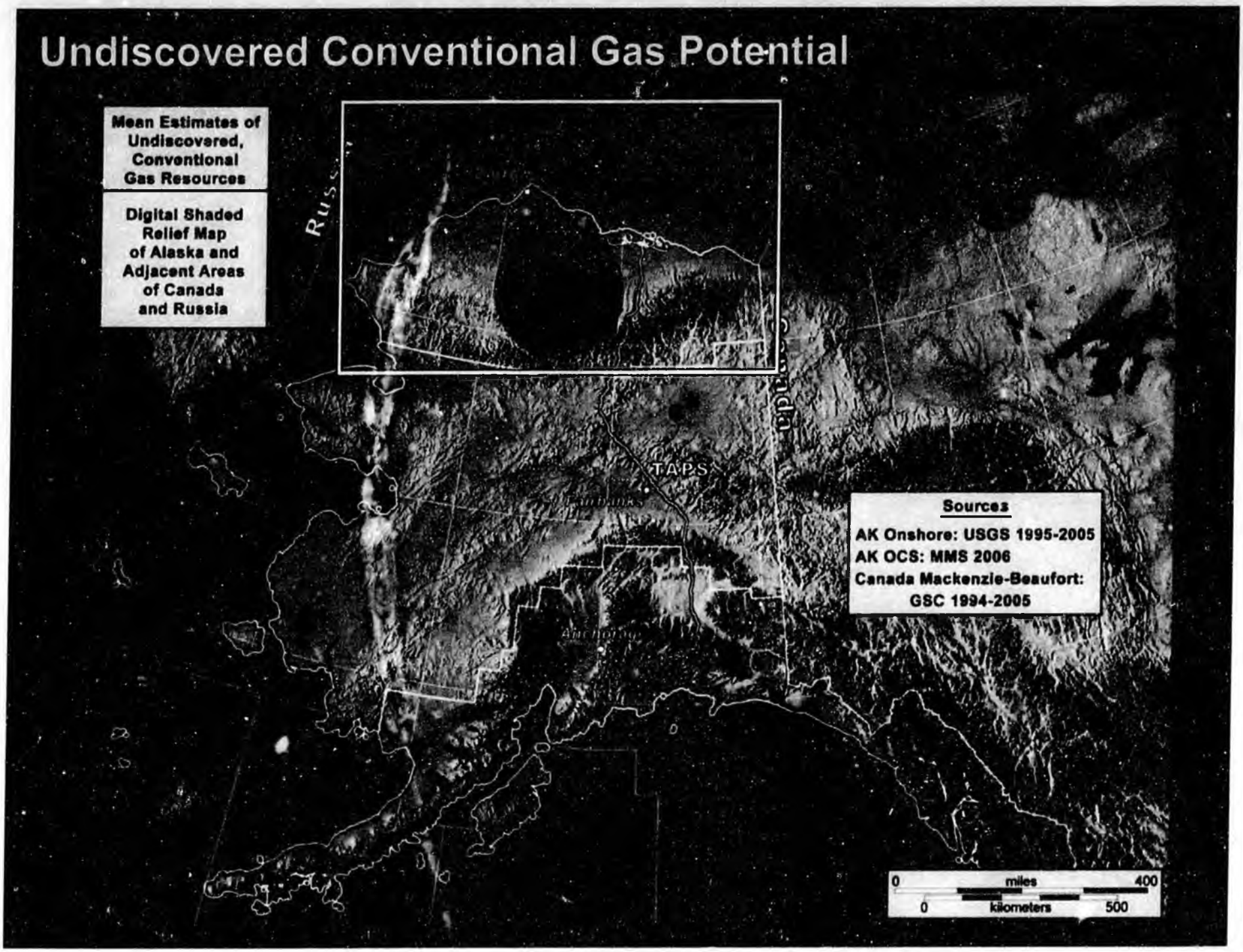
Prospect Risk

Charge	
Reservoir	
Trap	

Play Risk

Charge	
Reservoir	
Trap	

Undiscovered Conventional Gas Potential



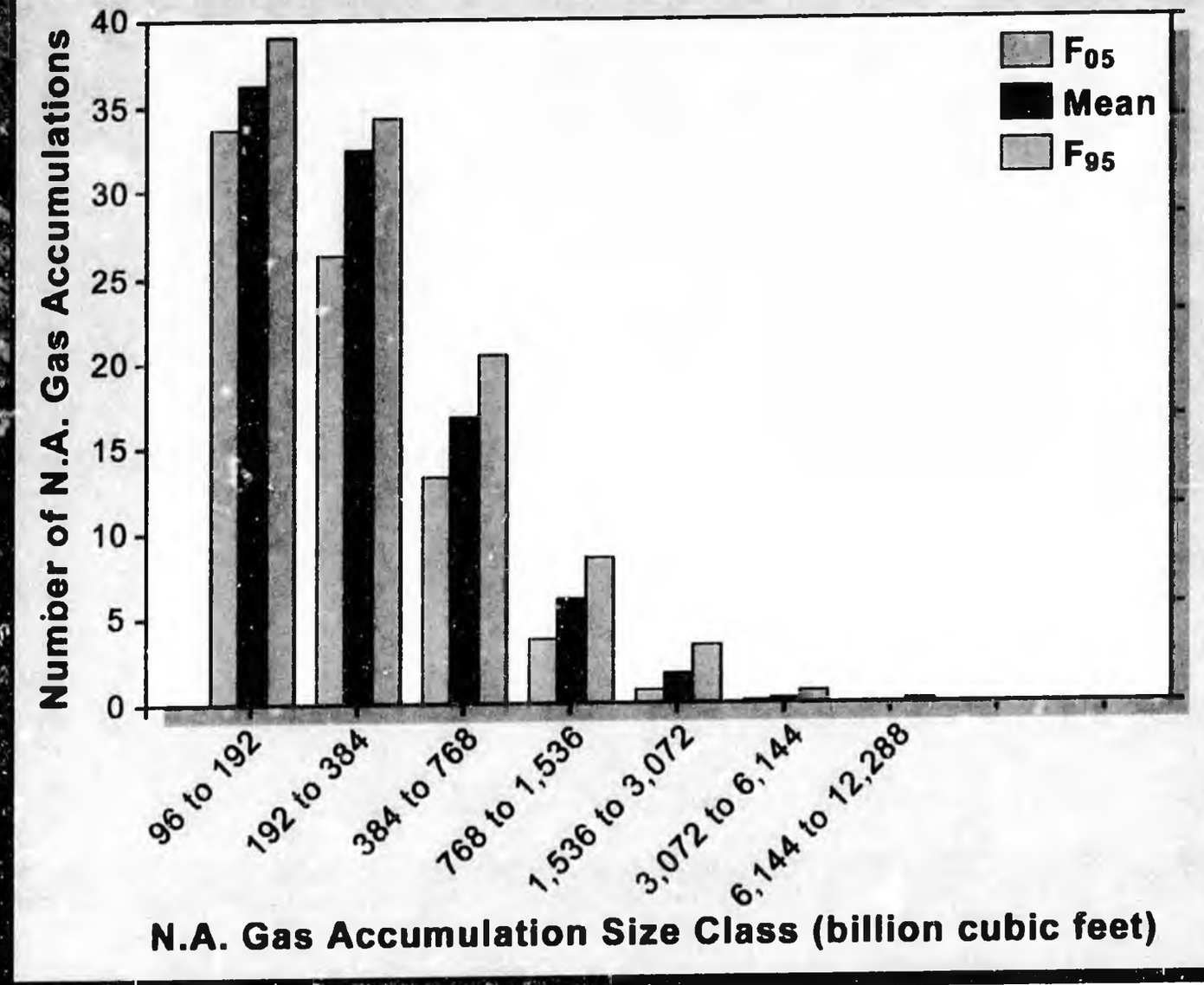
Potential for Undiscovered Petroleum in Arctic Alaska

Mean Estimates of Undiscovered, *Conventional* Natural Gas in Arctic Alaska (trillion cubic feet)

	Non-Associated Gas	Associated Gas	Total Gas
Onshore & State Offshore Areas (USGS estimates)			
NPRA	61.35	11.68	73.03
Central North Slope	33.32	4.20	37.52
ANWR, 1002 Area	3.84	4.76	8.60
Subtotal	*98.51*	*20.64*	*119.15*
Federal Offshore Areas (MMS estimates)			
Chukchi Shelf	na	na	76.77
Beaufort Shelf	na	na	27.65
Hope Basin	na	na	3.77
Subtotal	na	na	*108.19*
TOTAL			*227.34*

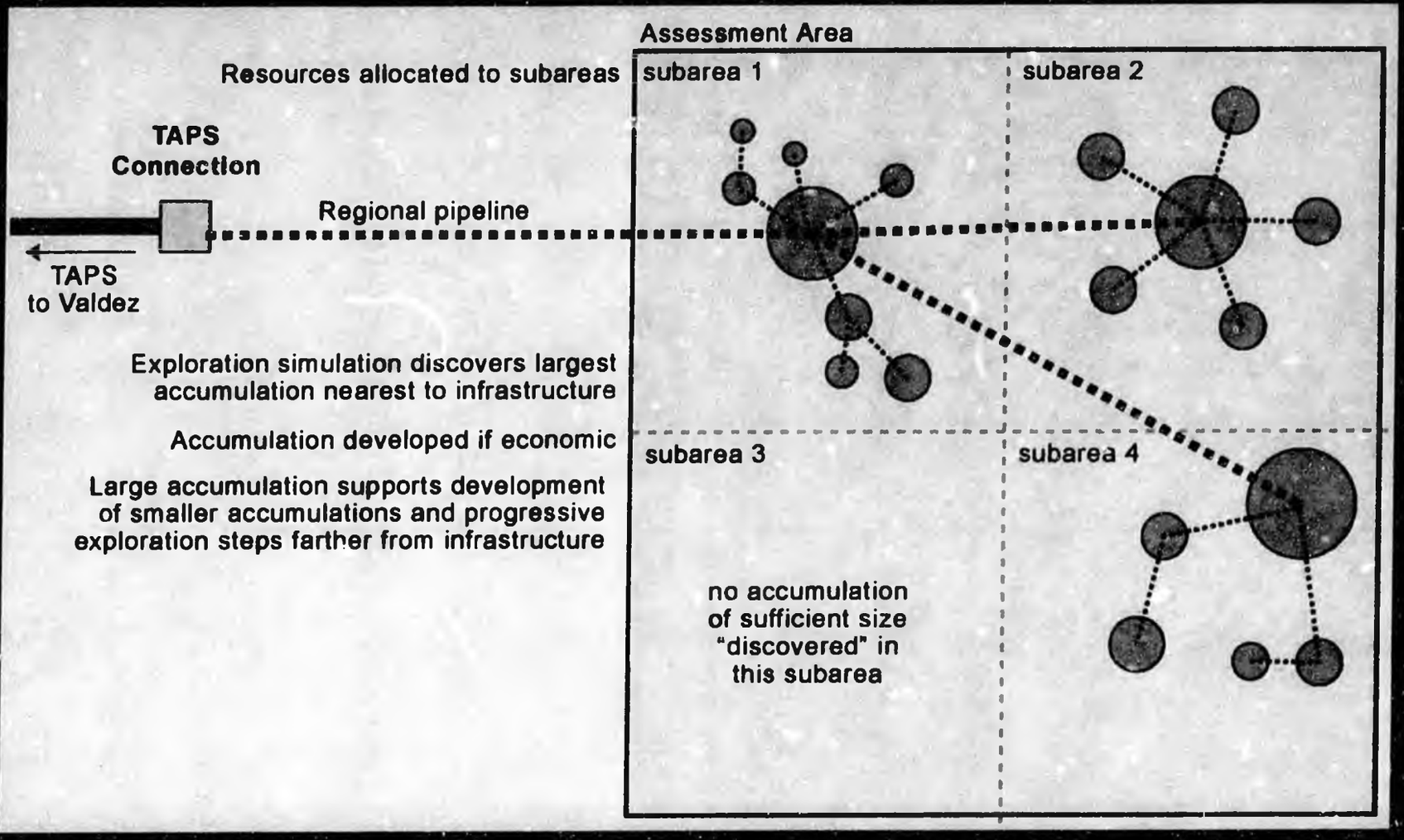
Sources: OCS estimates from MMS; onshore & state waters estimates from USGS

Estimates of Gas Accumulation Sizes



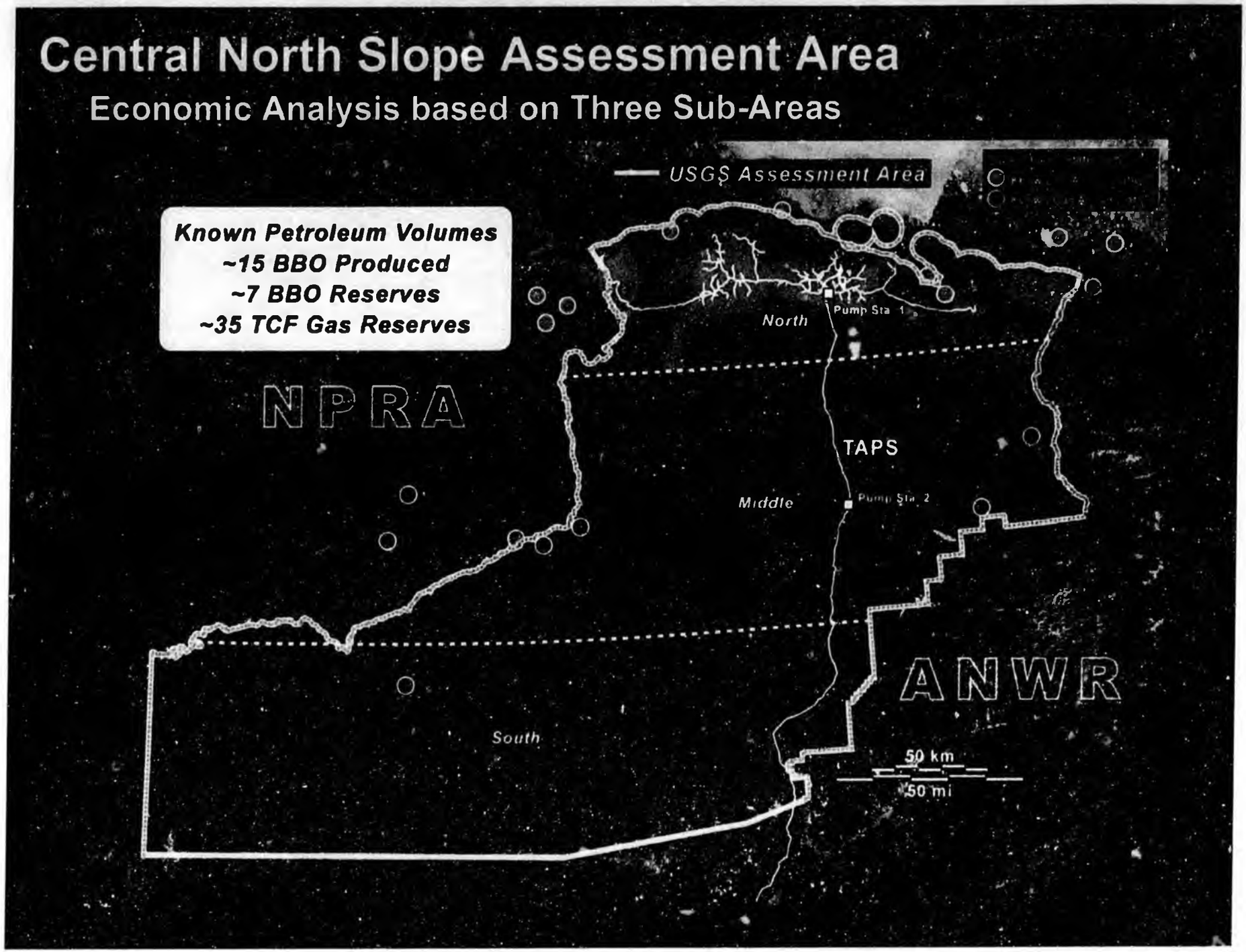
USGS

Economic Analysis Simulates Exploration and Development



Central North Slope Assessment Area

Economic Analysis based on Three Sub-Areas



Costs Included in Economic Analysis

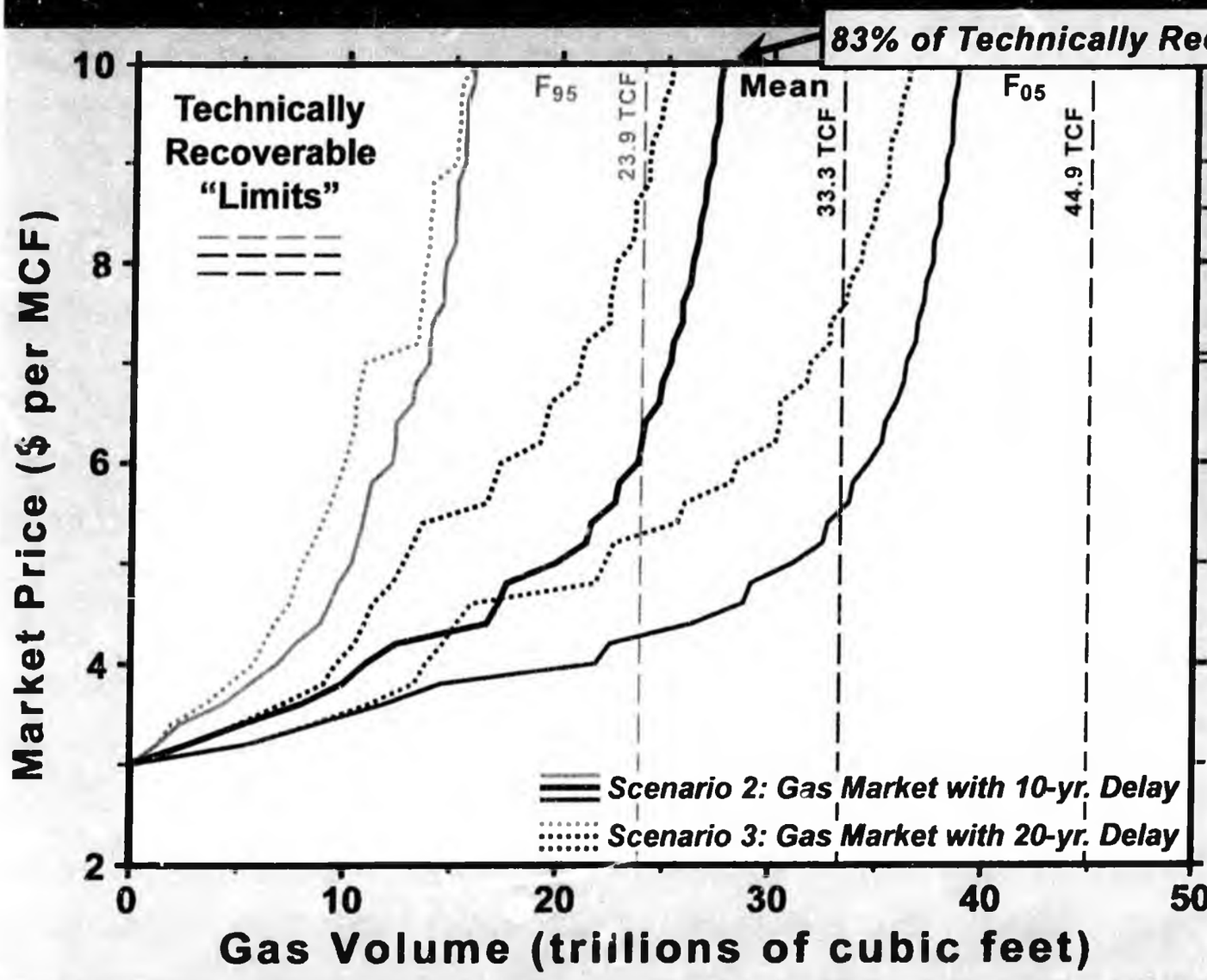
- **Exploration**
  - Geology & Geophysics
  - Exploration Drilling (including all preparation & mobilization)
- **Development**
  - Construction of production pads
  - Development wells
  - Construction of processing facilities
- **Production**
  - All operational costs
  - Abandonment costs
- **Transportation**
  - New pipelines from fields to gas-processing plant near PB
  - Pipeline tariff to market in lower-48
- **Taxes**
  - All applicable Federal and State
- **Return on Investment**
  - 12% rate of return

Analysis conducted in 2005 using 2003 dollars & costs

USGS

Central North Slope Economically Recoverable Gas

Undiscovered, Non-Associated Natural Gas Resources

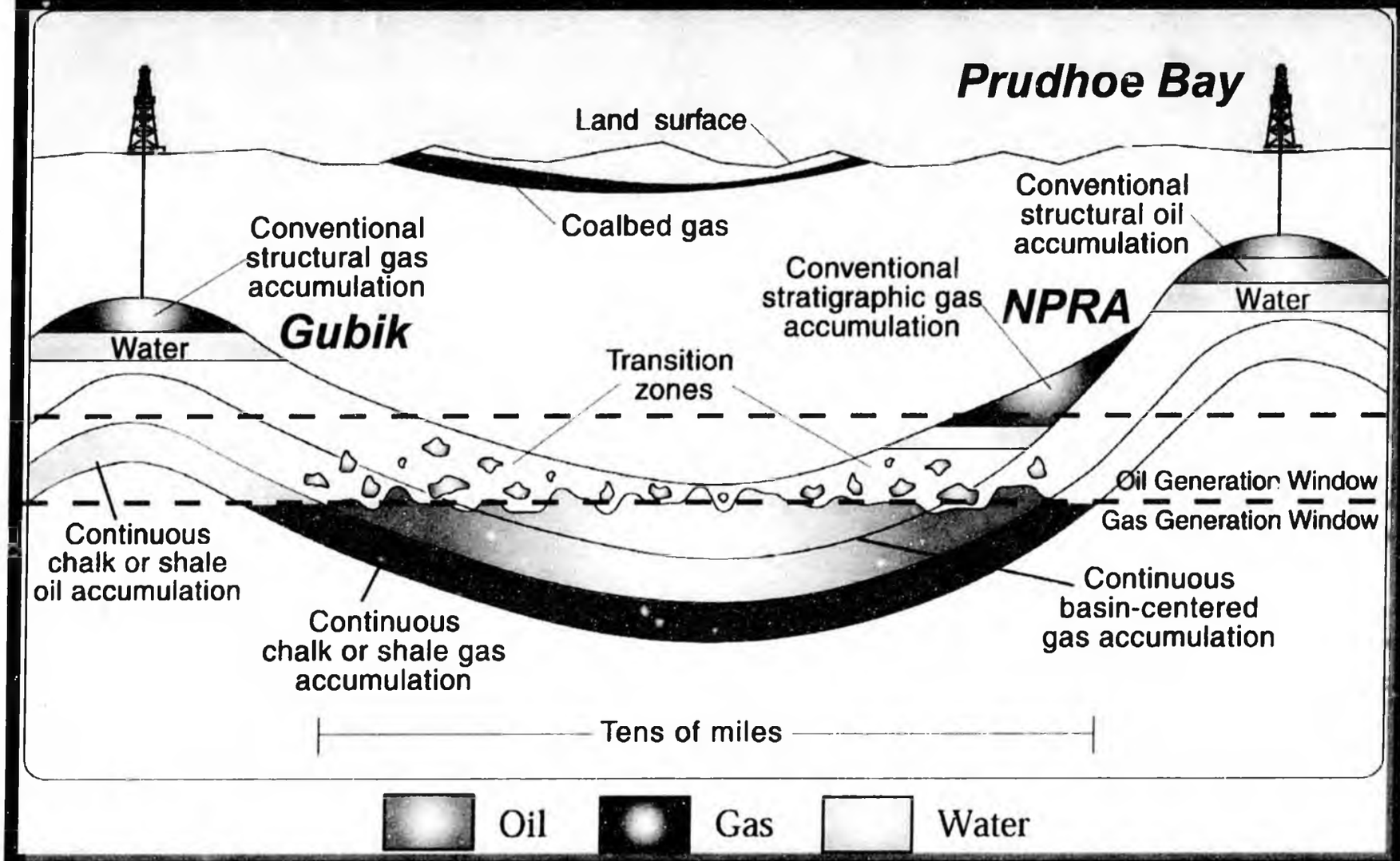


Market Price ($/MCF)	Economically Recoverable Gas (trillion cubic feet) Sc. 2	Sc. 3
2	0	0
3	0	0
4	10.9	9.6
5	19.9	12.7
6	23.7	17.2
7	25.2	21.0
8	26.2	22.6
9	27.1	24.1
10	27.6	25.2

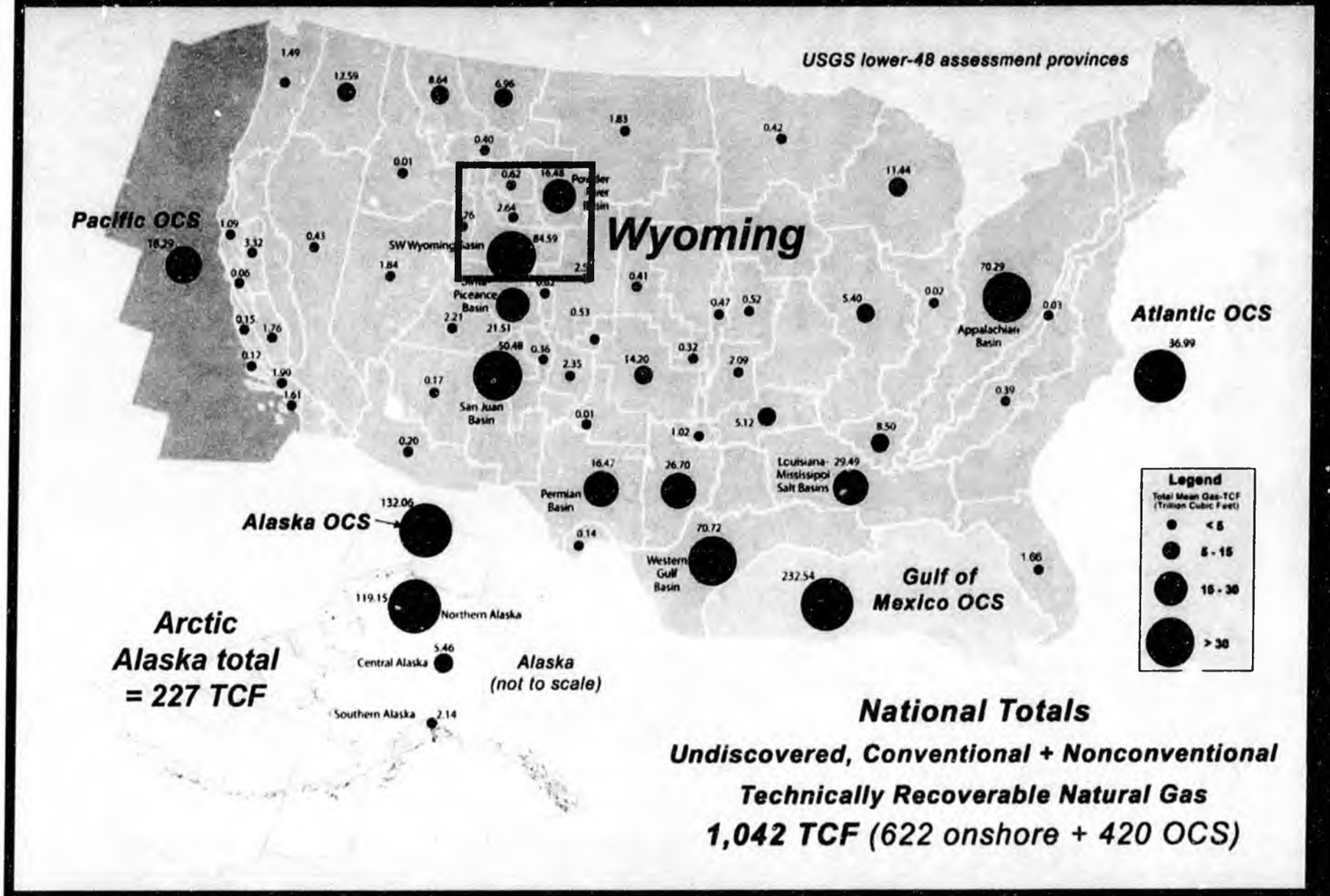
Based on mean estimates of technically recoverable oil resources

Scenario 1 - No Gas Market

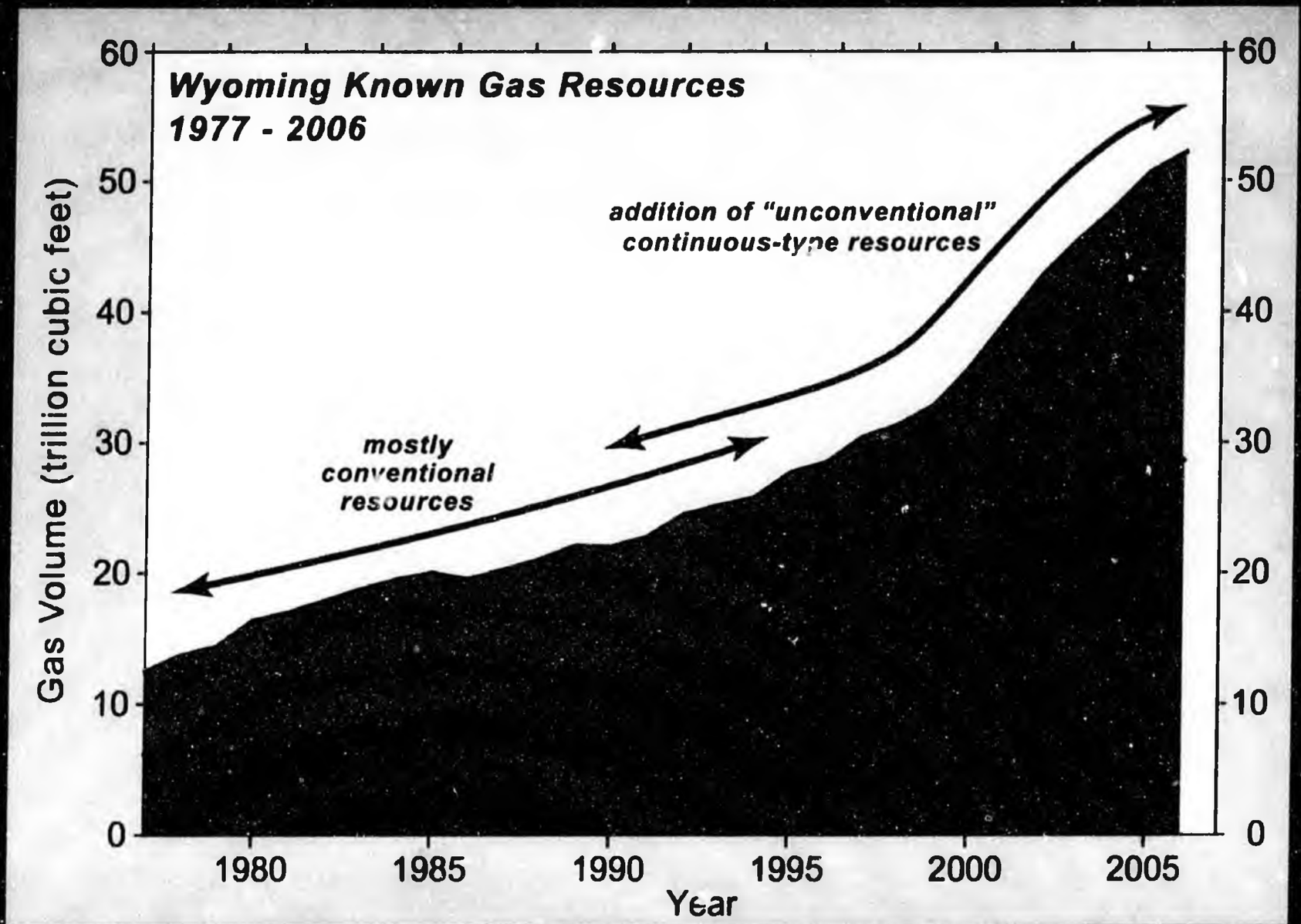
Conventional and "Unconventional" Accumulations



Undiscovered, *Total* Gas Resources of the U.S.

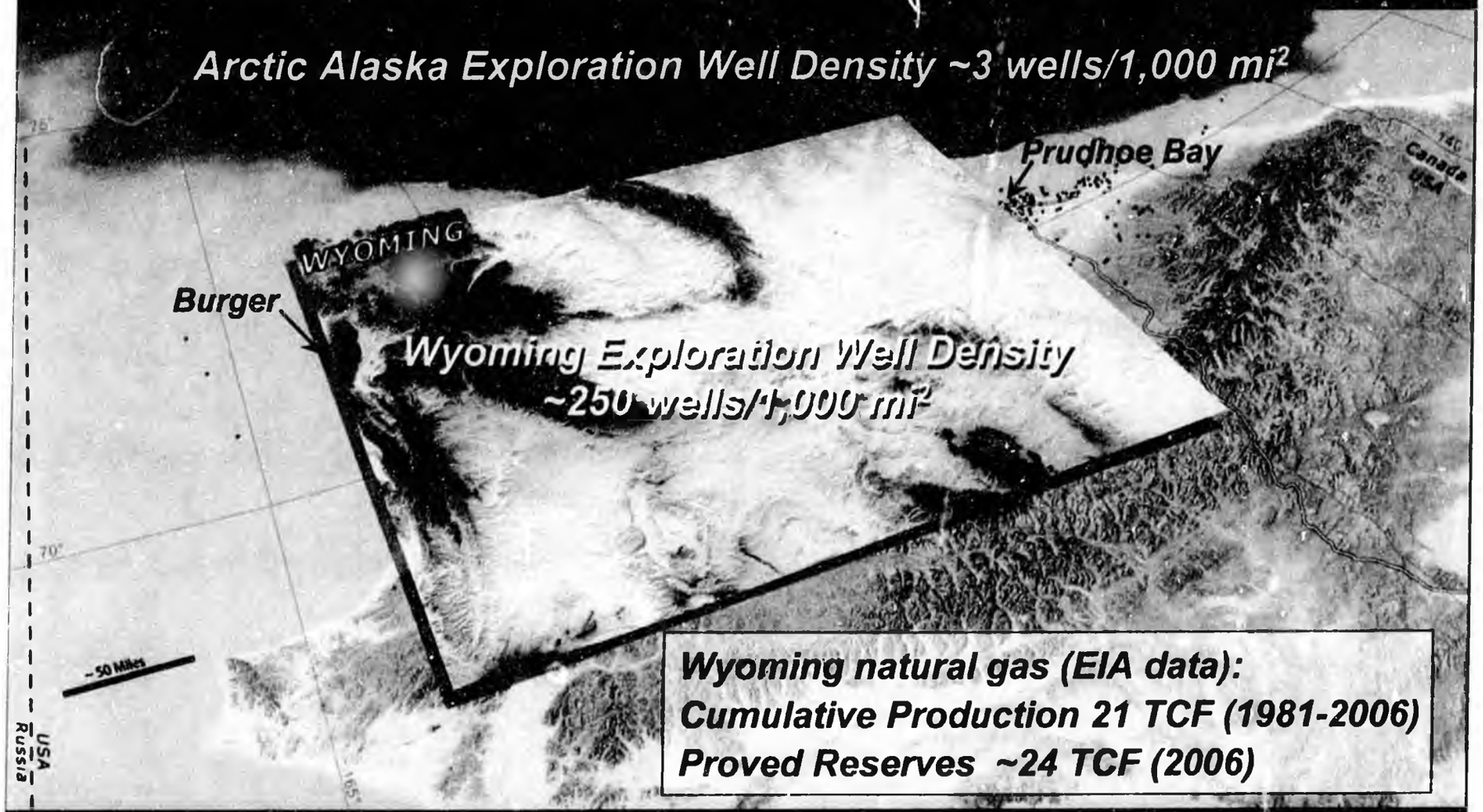


Wyoming Gas Reserves & Production History



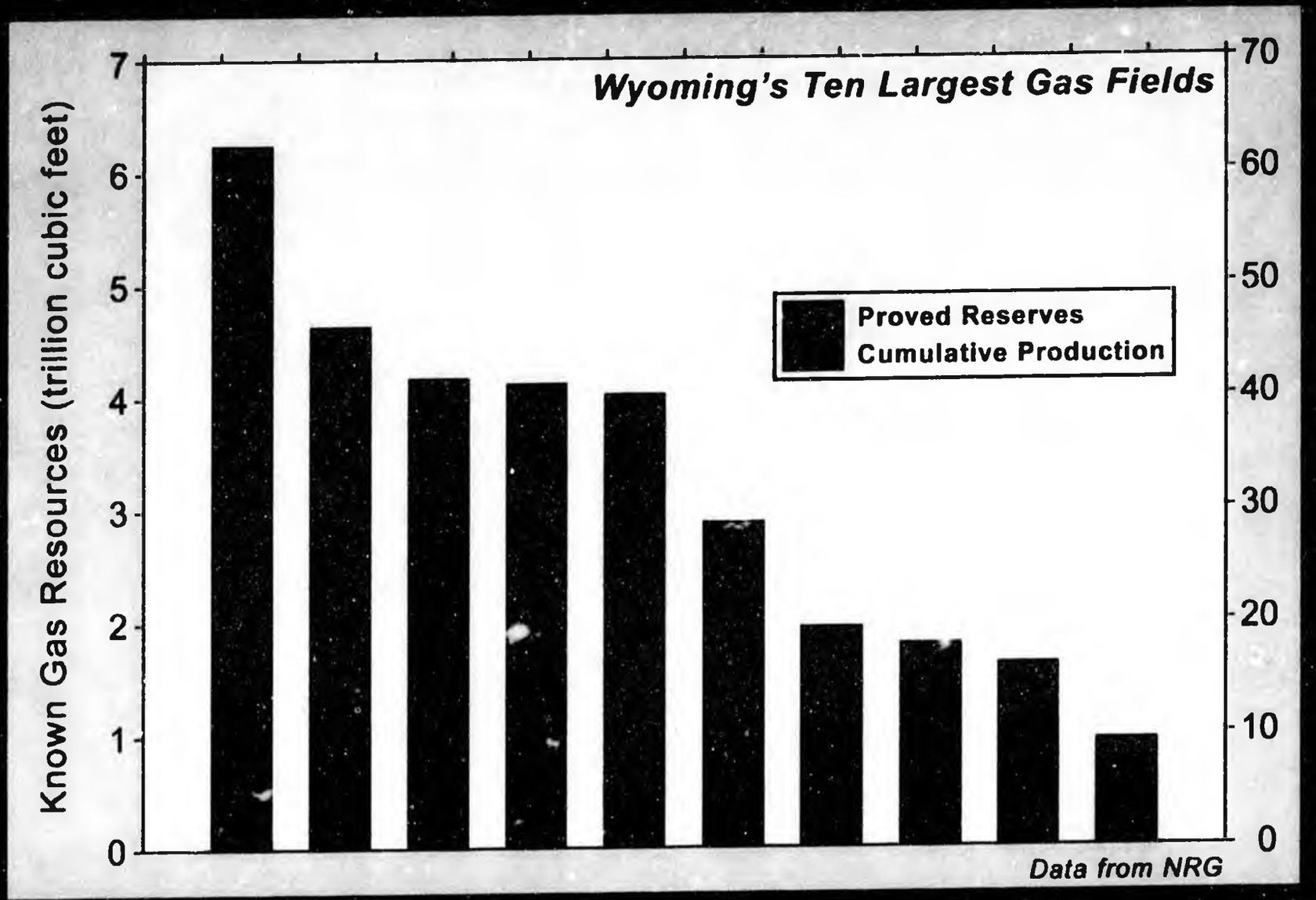
Arctic Alaska Exploration Maturity

- *Prospective area onshore & offshore shelves ~ 150,000 mi² (~400,000 km²)*
- *Fewer than 500 exploration wells (red dots)*



- *Entire state of Wyoming ~100,000 mi² (~250,000 km²)*
- *Petroleum-prospective area ~75,000 mi² (~250,000 km²)*
- *~19,371 exploration wells*

Wyoming – Ten Largest Gas Fields

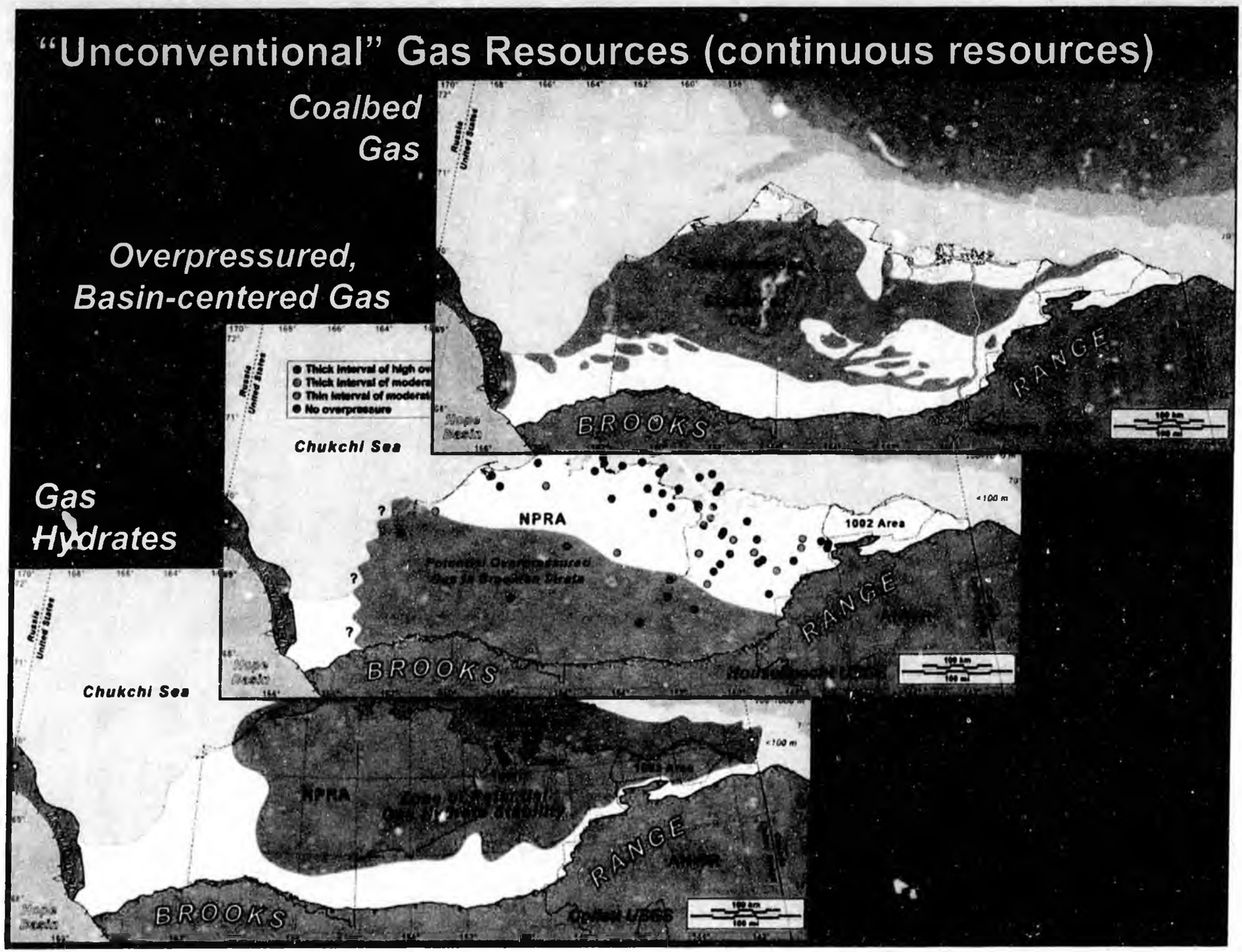


"Unconventional" Gas Resources (continuous resources)

Coalbed Gas

Overpressured, Basin-centered Gas

Gas Hydrates

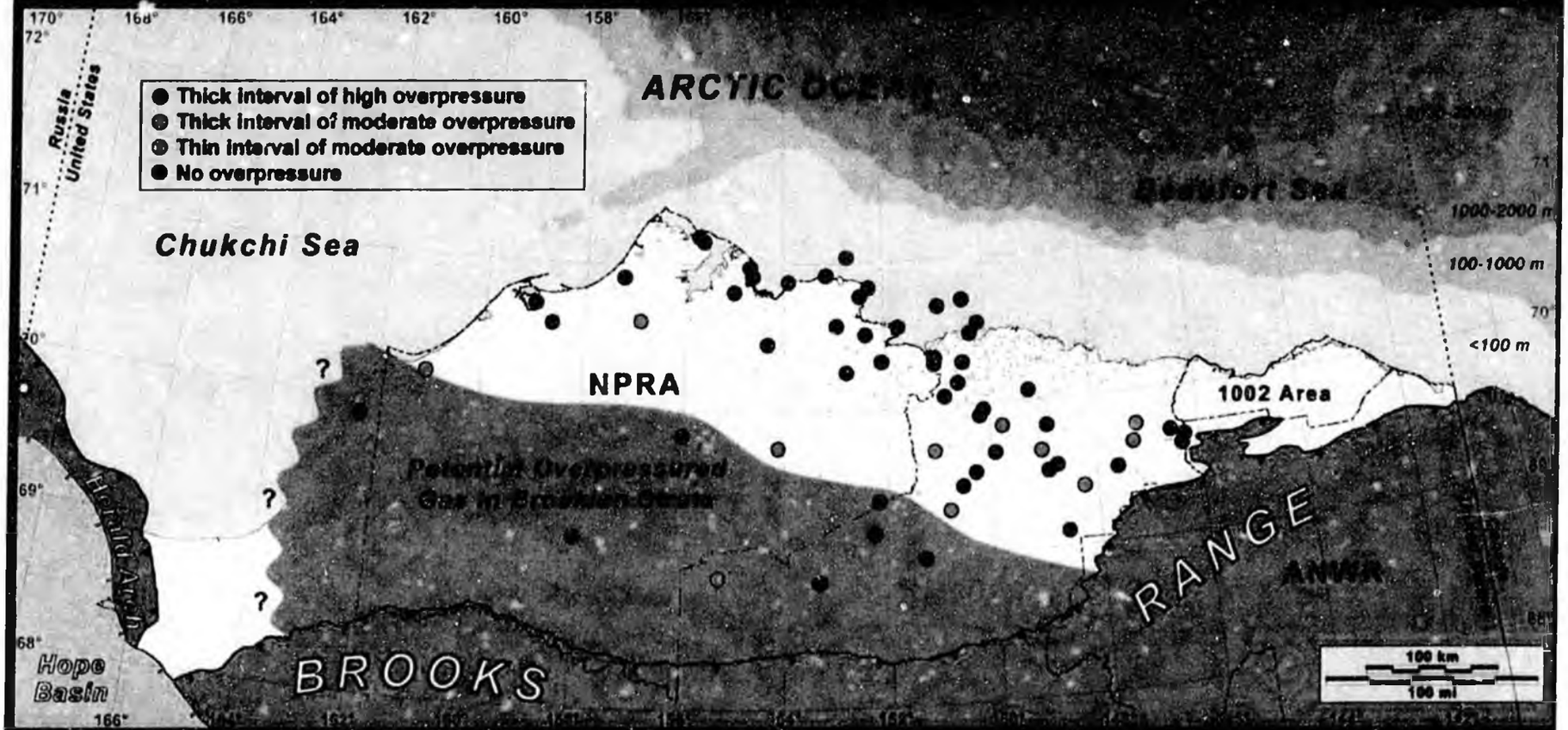


Overpressured Natural Gas in the Colville Basin

Brookian strata (Torok & Fortress Mountain Formations)

Potential reservoirs mostly low-permeability sandstone

Shale reservoirs possible



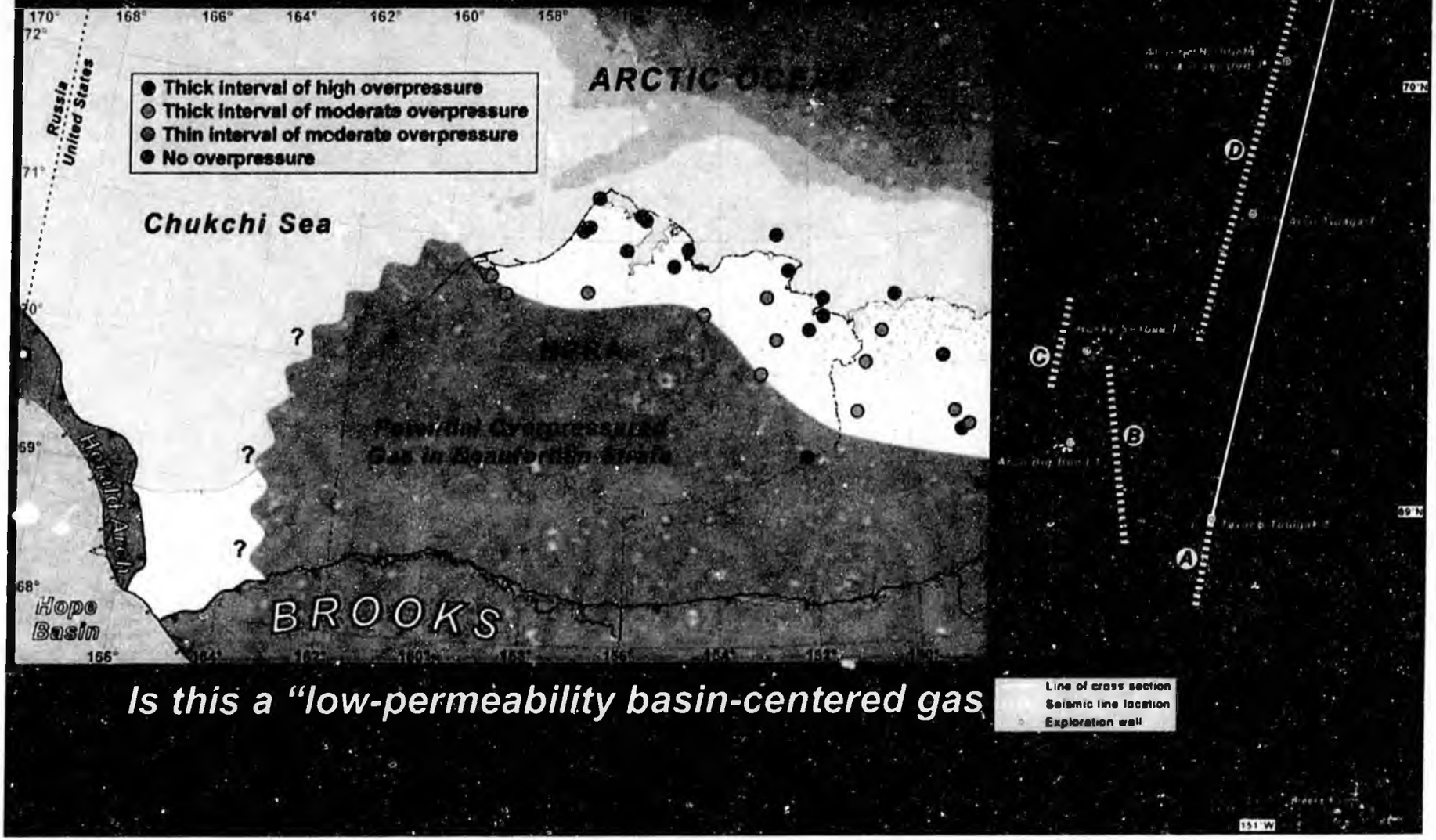
Is this a "low-permeability basin-centered gas accumulation" ?

Overpressured Natural Gas in the Colville Basin

Beaufortian Strata (Kingak Shale)

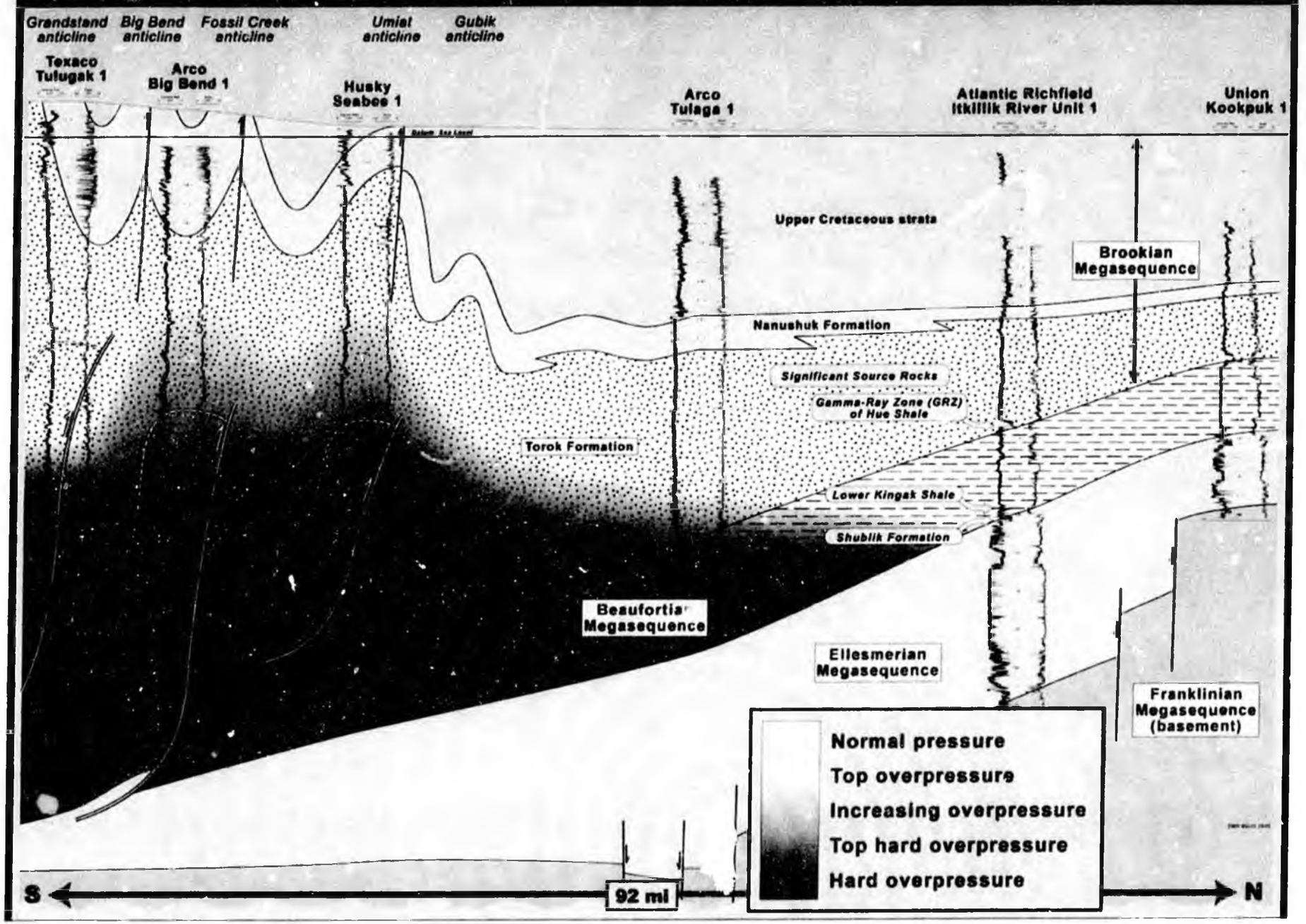
Potential reservoirs mostly shale

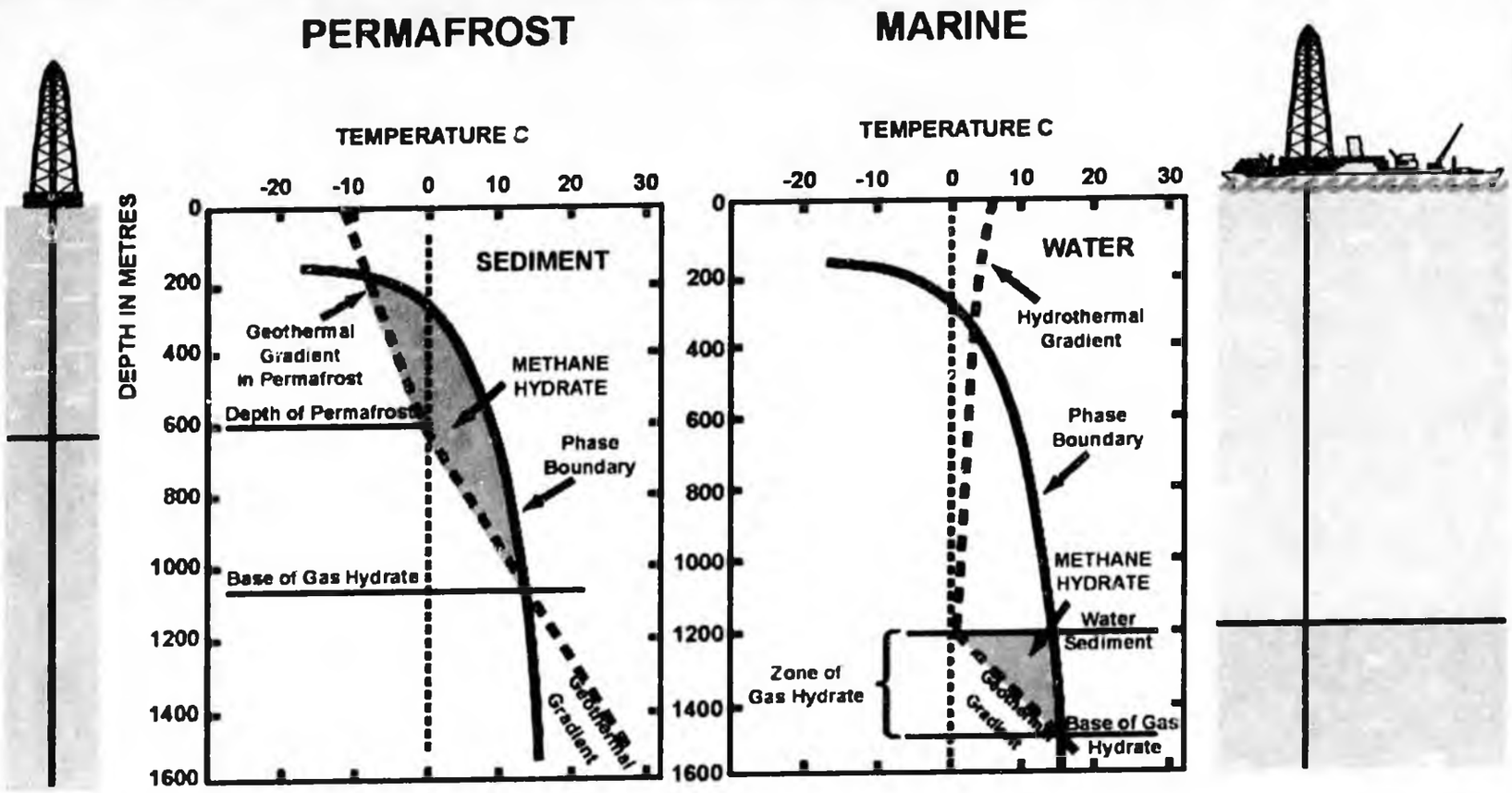
Low-perm sandstone reservoirs possible

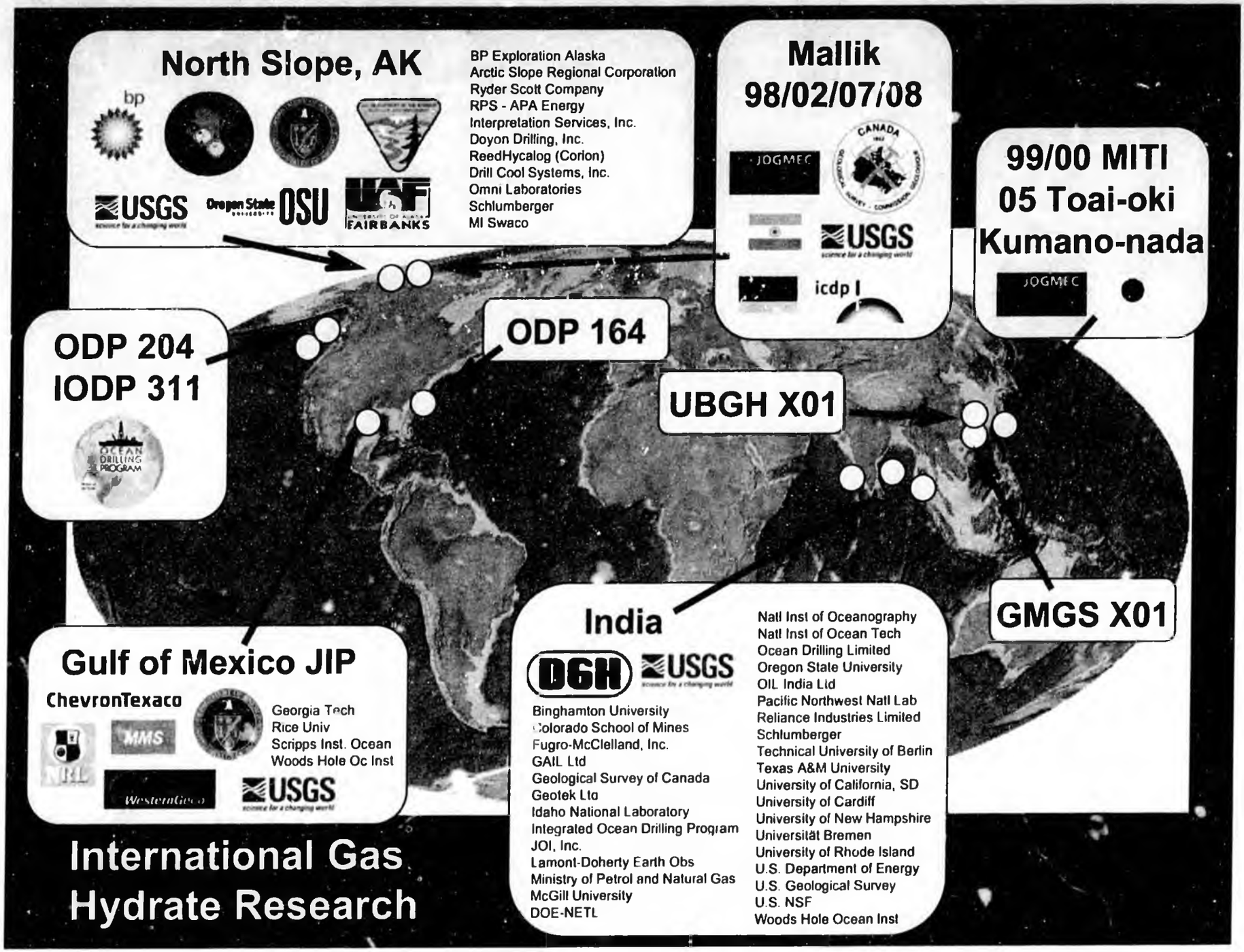


Is this a "low-permeability basin-centered gas

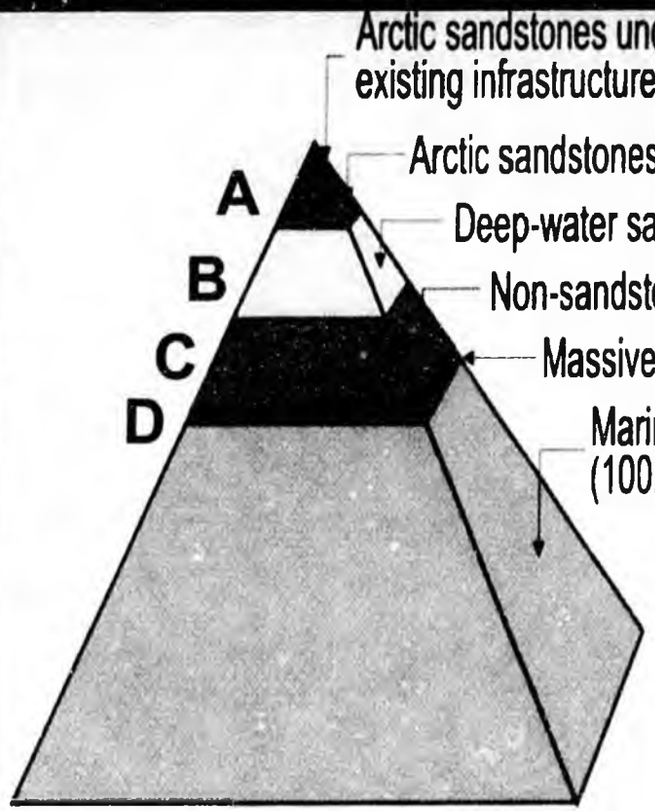
Overpressured Natural Gas in the Colville Basin




PERMAFROST
MARINE
TEMPERATURE C
-20 -10 0 10 20 30
DEPTH IN METRES
0 200 400 600 800 1000 1200 1400 1600
SEDIMENT
Geothermal Gradient in Permafrost
Depth of Permafrost
METHANE HYDRATE
Phase Boundary
Base of Gas Hydrate
Geothermal Gradient
WATER
Hydrothermal Gradient
Phase Boundary
METHANE HYDRATE
Water
Sediment
Zone of Gas Hydrate
Geothermal Gradient
Base of Gas Hydrate


North Slope, AK
BP Exploration Alaska
Arctic Slope Regional Corporation
Ryder Scott Company
RPS - APA Energy
Interpretation Services, Inc.
Doyon Drilling, Inc.
ReedHycalog (Corion)
Drill Cool Systems, Inc.
Omni Laboratories
Schlumberger
MI Swaco
Mallik
98/02/07/08
99/00 MITI
05 Toai-oki
Kumano-nada
ODP 204
IODP 311
ODP 164
UBGH X01
GMGS X01
Gulf of Mexico JIP
Georgia Tech
Rice Univ
Scripps Inst. Ocean
Woods Hole Oc Inst
India
Natl Inst of Oceanography
Natl Inst of Ocean Tech
Ocean Drilling Limited
Oregon State University
OIL India Ltd
Pacific Northwest Natl Lab
Reliance Industries Limited
Schlumberger
Technical University of Berlin
Texas A&M University
University of California, SD
University of Cardiff
University of New Hampshire
Universität Bremen
University of Rhode Island
U.S. Department of Energy
U.S. Geological Survey
U.S. NSF
Woods Hole Ocean Inst
Binghamton University
Colorado School of Mines
Fugro-McClelland, Inc.
GAIL Ltd
Geological Survey of Canada
Geotek Ltd
Idaho National Laboratory
Integrated Ocean Drilling Program
JOI, Inc.
Lamont-Doherty Earth Obs
Ministry of Petrol and Natural Gas
McGill University
DOE-NETL
International Gas
Hydrate Research

The Gas Hydrate Resource Pyramid



Arctic sandstones under existing infrastructure (~10's of Tcf in place)

Arctic sandstones away from infrastructure (100s of Tcf in place)

Deep-water sandstones (~1000s of Tcf in place)

Non-sandstone marine reservoirs with permeability (unknown)

Massive surficial and shallow nodular hydrate (unknown)

Marine reservoirs with limited permeability (100,000s Tcf in place)

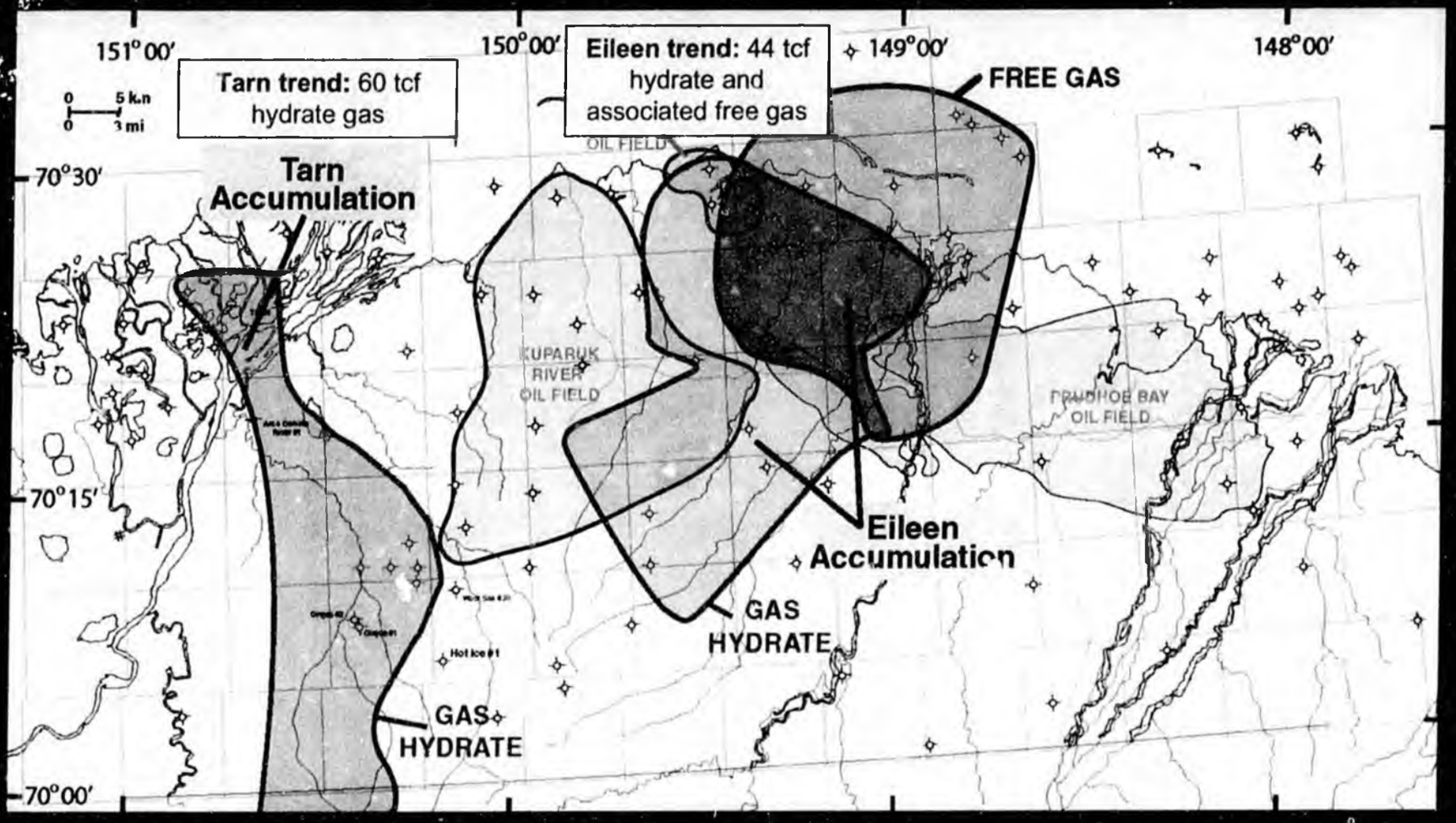
- increasing in-place
- decreasing reservoir quality
- decreasing confidence in resource estimates
- increasing technical challenges and likely decreasing % recoverable

Gas Hydrates

Northern Alaska Zone of Potential Hydrate Stability

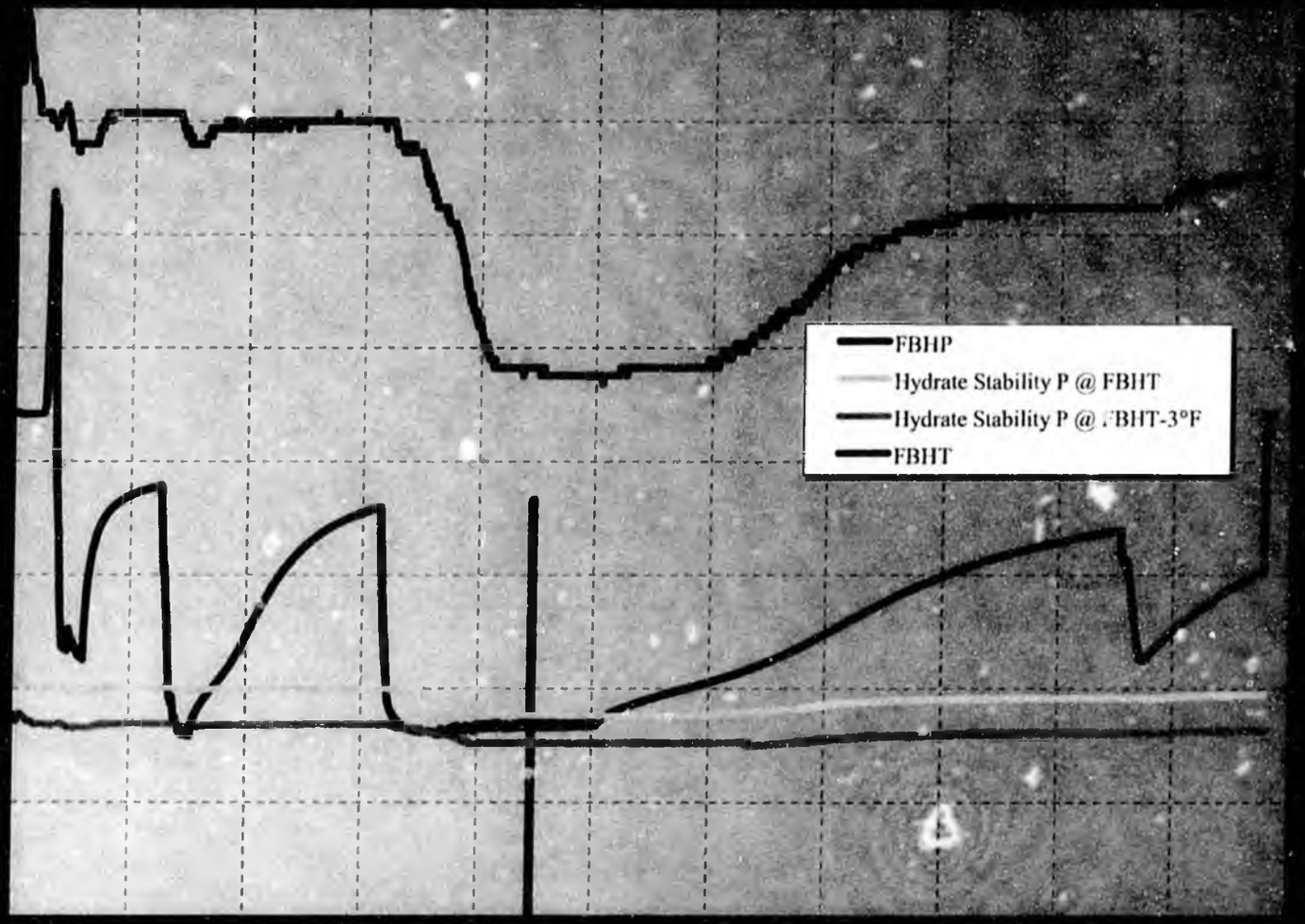
Information from Tim Collett (USGS)

Known Gas Hydrate Accumulations

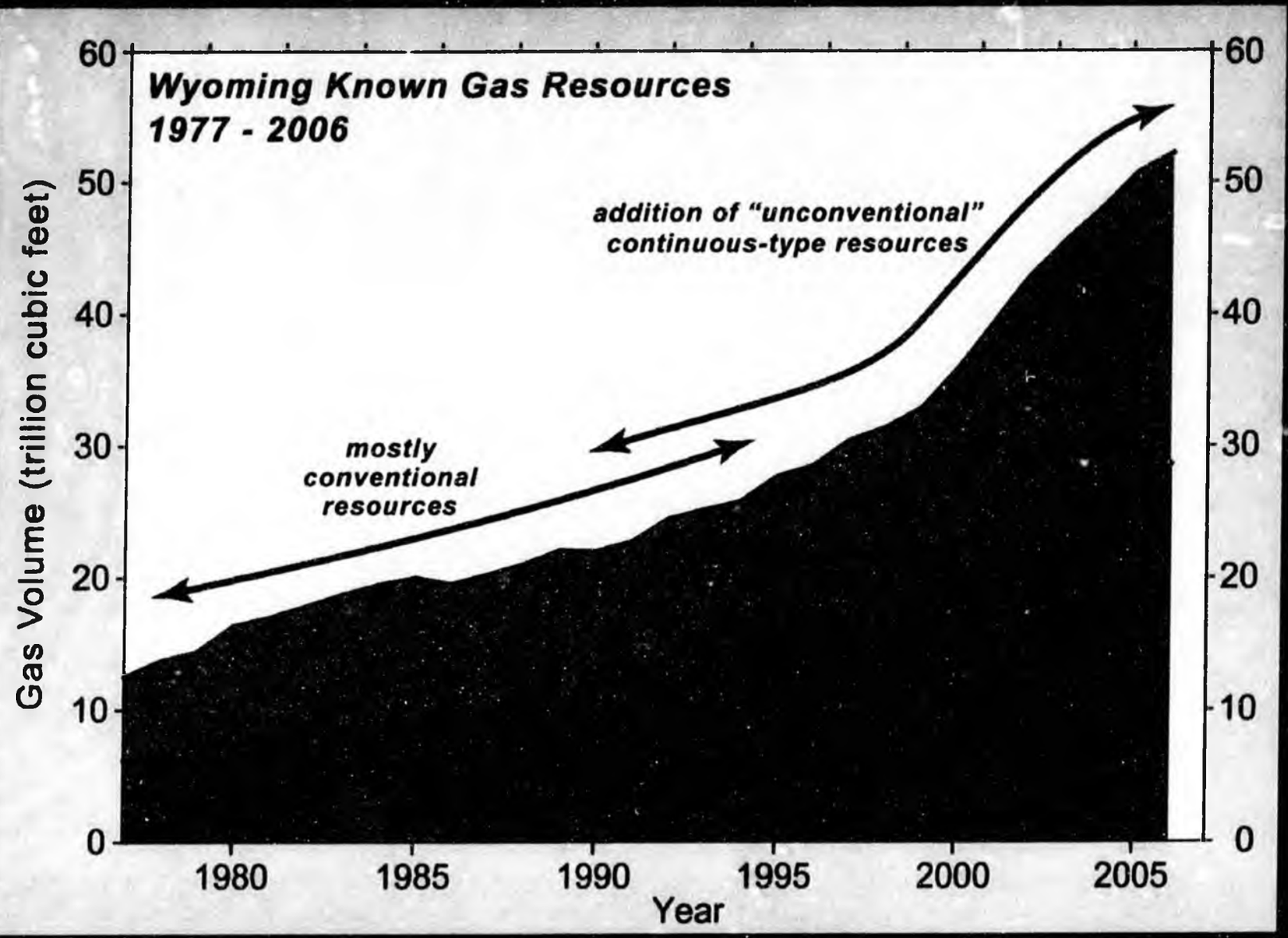


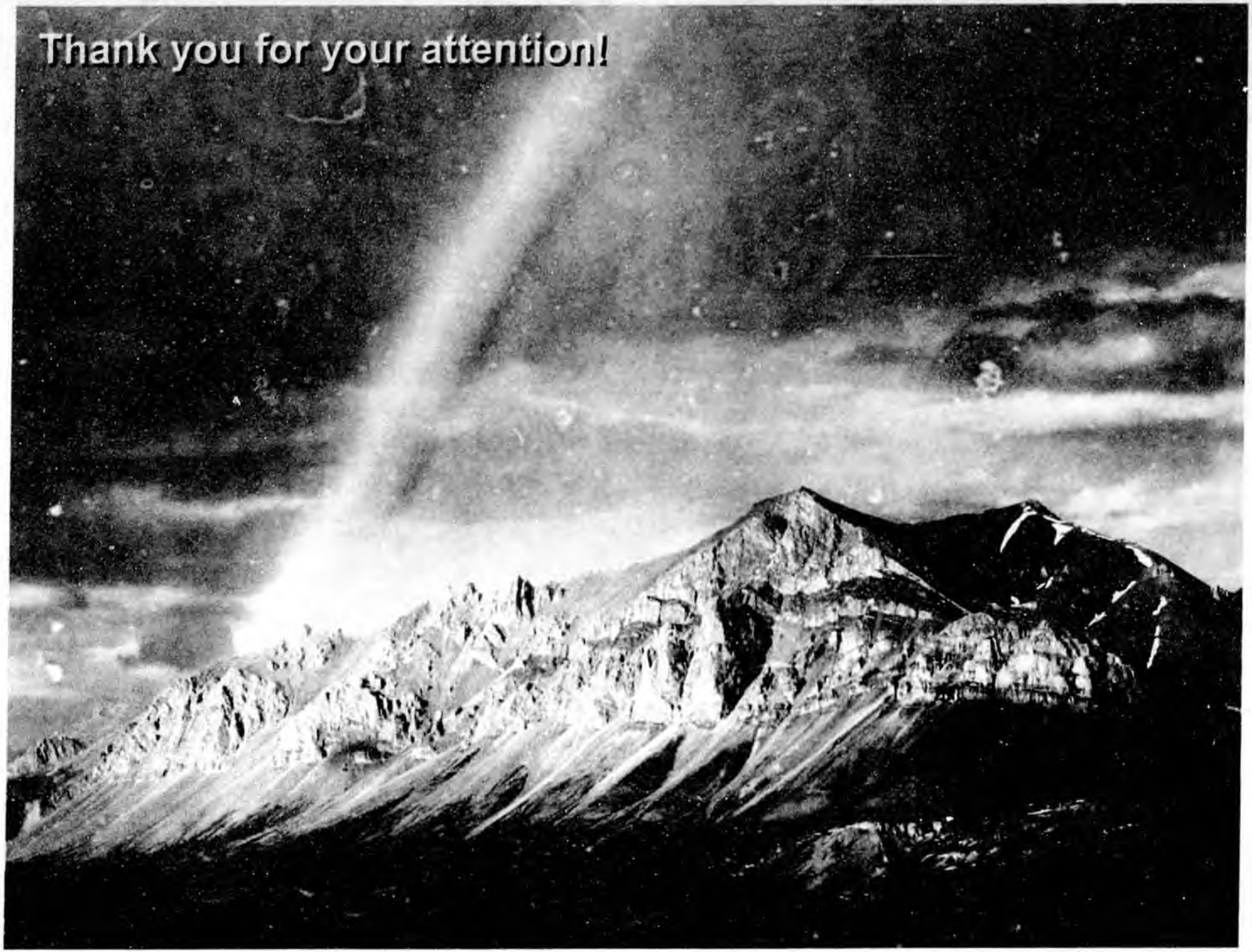
Known gas hydrate accumulations (blue) and hydrate-associated free gas accumulations (orange) in the vicinity of the major North Slope oil fields (green). The USGS estimates up to 100 tcf in place of hydrate in the Eileen and Tarn trends combined. From U.S. Collet (2001) and Hunter and Collett (2004).

BP DOE Mt Elbert-01 MDT C2



Wyoming Gas Reserves & Production History




Thank you for your attention!

HB 3001
SB 3001
6/8/08
SPECIAL SESSION DOCUMENTS

AGIA Training Strategic Plan

Alaska Department of Labor and Workforce Development

Commissioner Click Bishop

June 6, 2008

"This gasline will fuel our homes, our economy and careers for Alaskans - for generations."

Governor Sarah Palin
2008 State of the State Address

Gasline Workforce Goal

Alaskans are trained and ready for a gas pipeline and other natural resource development jobs—and these jobs are made available to Alaskans.

Workforce Development Process

- Identify skills gaps
- Minimize gaps through career awareness, effective labor exchange, job center network, accessible training services

Result: Alaskans meet the needs of Alaska employers for legacy jobs and long term careers.

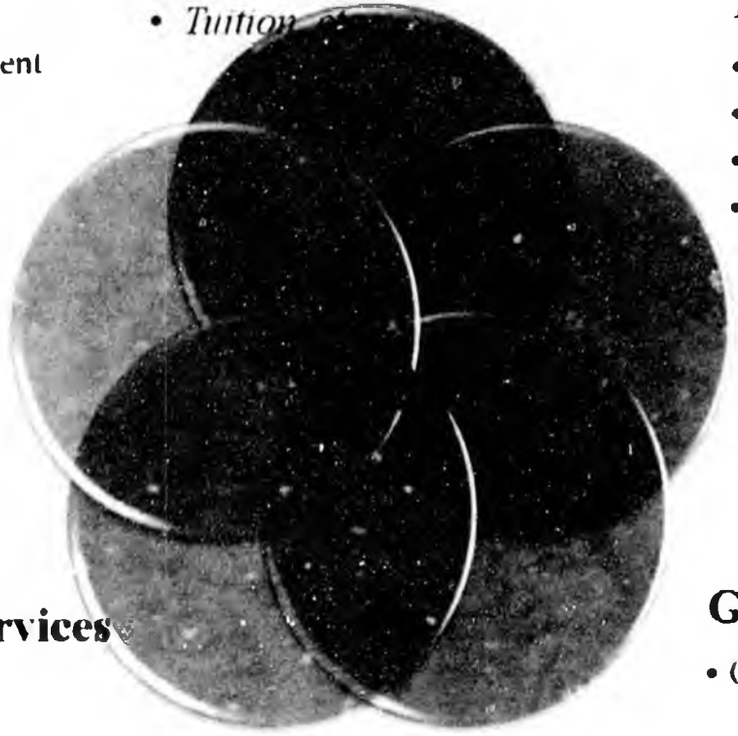
Training System at a Glance

Funding

- *Federal*
  - Workforce Investment Act
  - Denali Training
  - Pipeline Training
- *State*
  - STEP
  - TVEP
  - GF
- *Tuition*

Secondary Education

- Education & Early Development
- High Schools
- Adult Basic Education
- Youth First
- Construction Academies
- College Ready Work Ready



Postsecondary Education

- University of Alaska
- AVTEC
- Regional Training Centers
- Private Training Providers

Employment Services

- Job Center Network
  - Counseling
  - Job Training Referral

Grantees

- Competitive Selection

Challenges

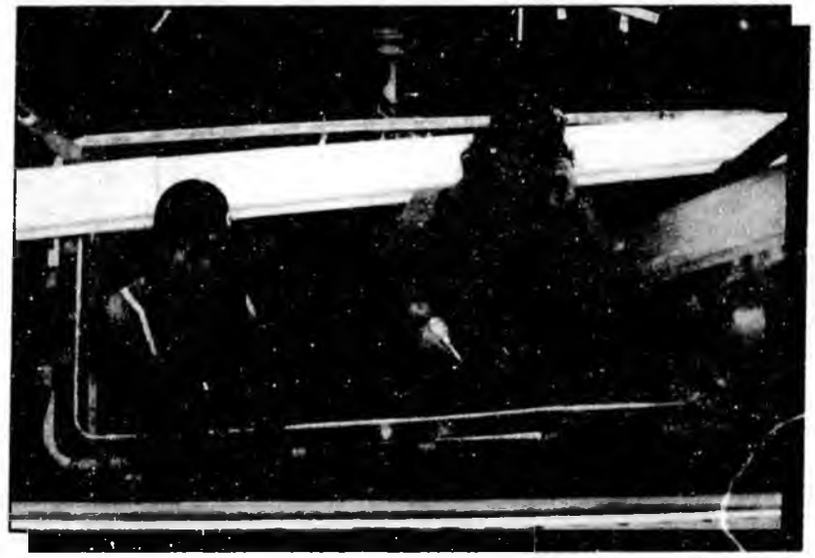
- Economic Cycles
- Ebb and flow of workers
- Awareness—not just professional positions but high paying blue collar jobs
- Cost and accessibility of training
- Job barriers—drug free, driver's license, employability skills, transferrable certification

Four AGIA Strategies

- Increase awareness of and access to careers in natural resource development
- Develop comprehensive career and technical education system
- Increase registered apprenticeships and on-the-job training opportunities
- Increase training for operations, technical and management workers

1. Increase Awareness of and Access to Careers in Natural Resource Development

- Job awareness program
- One stop information on jobs and training
  - Received funding in FY 09 budget to develop training web site and improve on-line job service



2. Develop Comprehensive Career and Technical Education System

- Career pathways and skill standards
  - FY 09 Budget includes coordinator
- Work Keys DEED/DOLWD partnership
  - FY 09 funding in DEED
- K-12 career planning and counseling
  - Alaska Youth First funded
- Integrated system for youth and adults
  - Construction academies funded
- Coordinate existing training programs

3. Increase Registered Apprenticeships and On-the-Job Training Opportunities

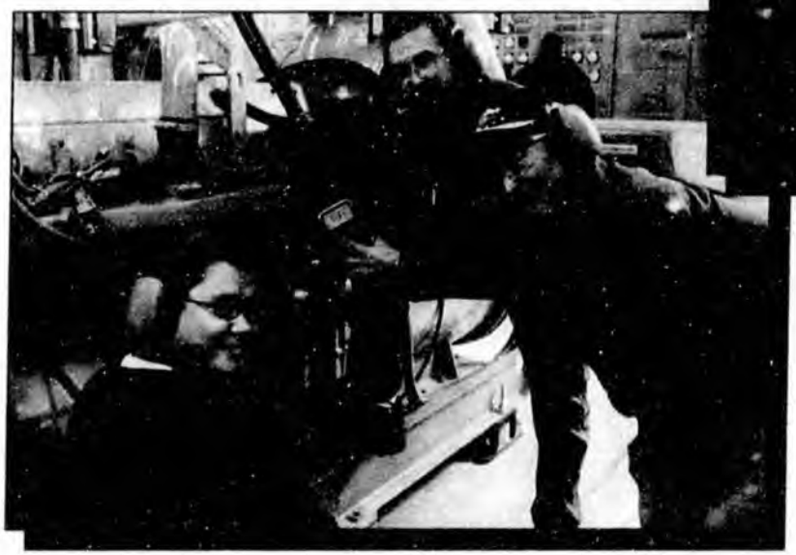
- Increase job training for entry level jobs
- Increase apprenticeships in construction
- Employer incentives for apprenticeships and OJT
  - Funding received to support apprenticeships and OJT—targeted federal grant and general fund

4. Increase Training for Operations, Technical and Management Workers

- Expand programs for critical jobs
  - FY 09 for UAA engineering program expansion
- Recruit more Alaska high school grads
- Better articulation between job training and management programs
- Help workers keep pace with technology and skill upgrades

Our Focus

- Current skills gap
- Legacy and long-term jobs



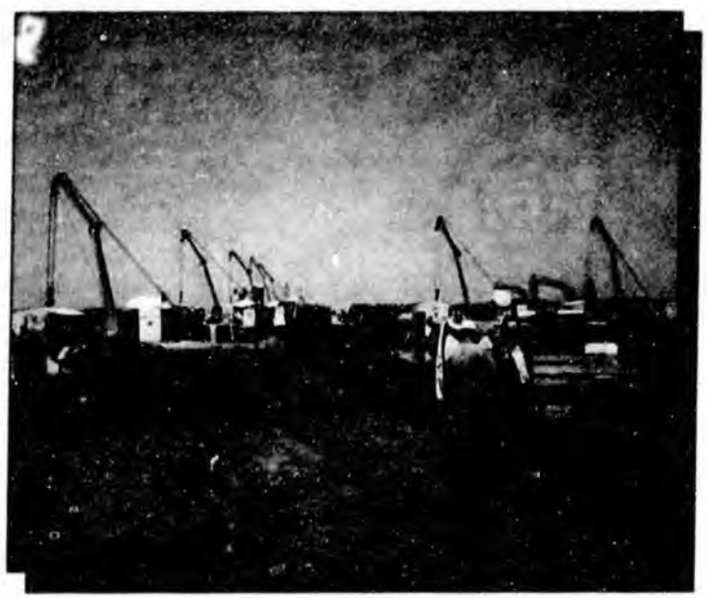
Identifying the AGIA Skills Gap

Working with industry partners, DOLWD:

- Identified 113 AGIA occupations
- Used existing occupational supply and demand data to help identify potential gaps

Alaska's AGIA Skills Gap

- Current gap: In 2006 nonresidents accounted for more than16% of the workers in the AGIA identified occupations
- Future gap: More than 37% of individuals working in AGIA occupation were 45 years old or older in 2006

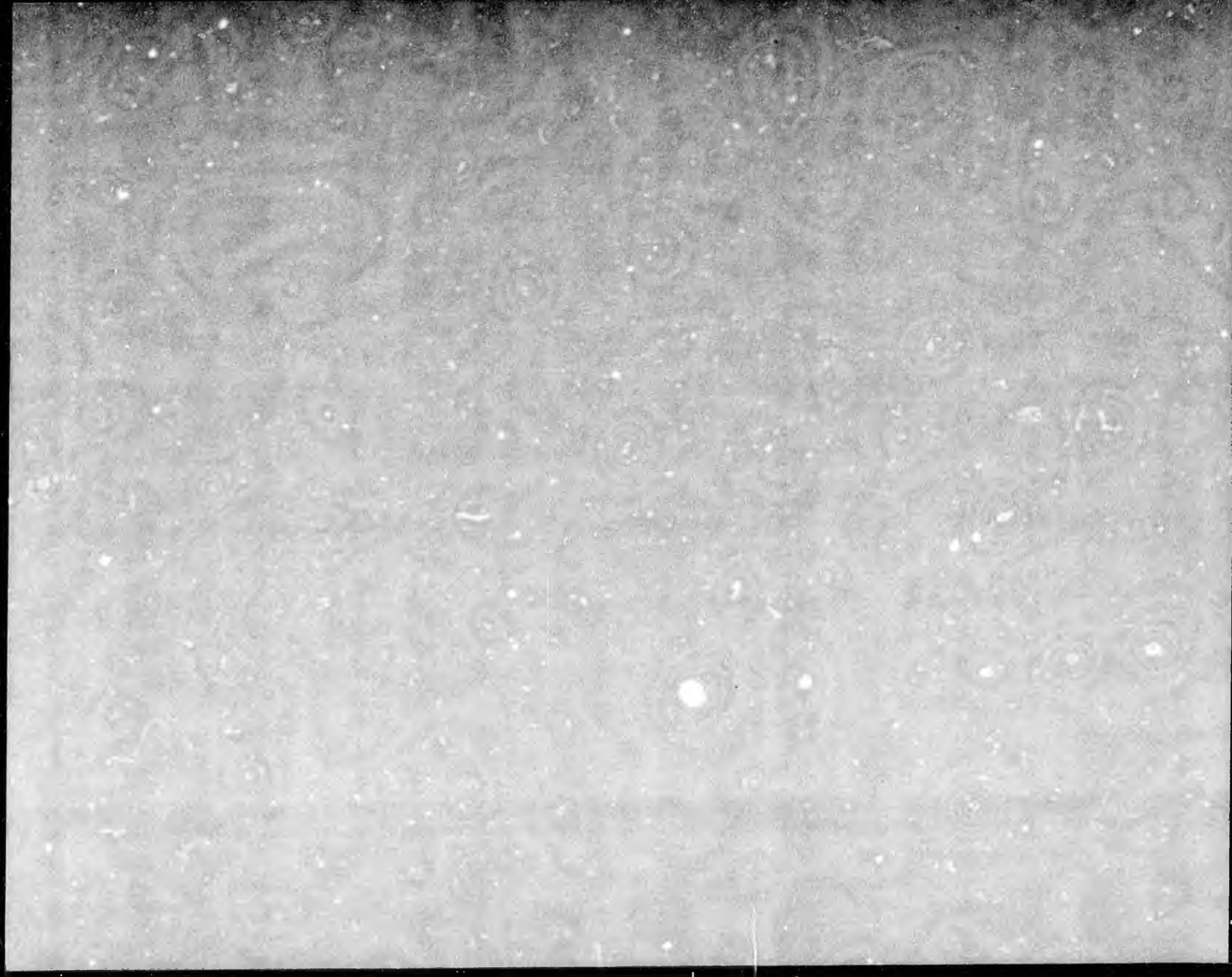


AGIA Occupational Data

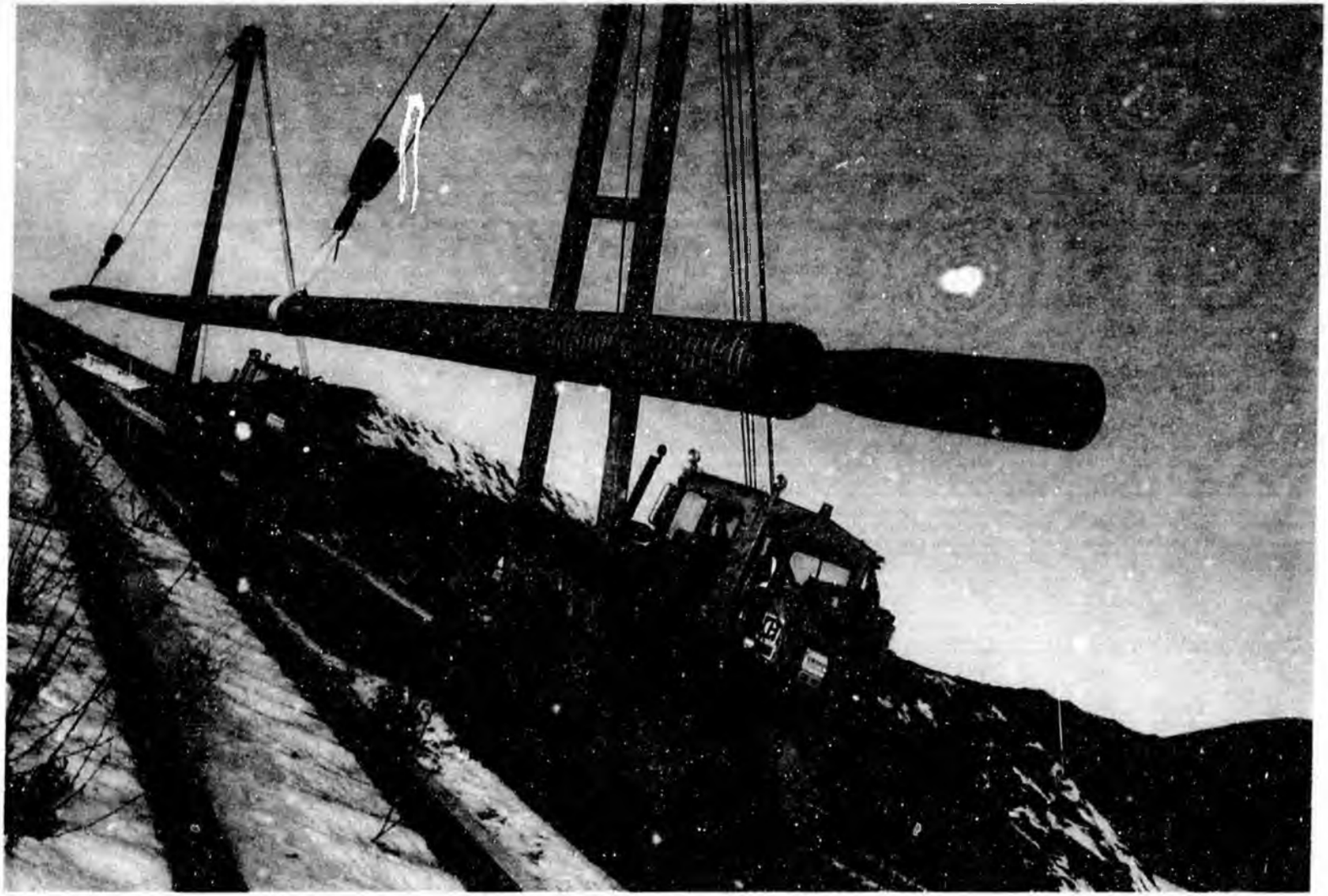
Carpenters	17.0%	34.6%	$26.33
Civil Engineers	12.4%	43.9%	$36.64
Electricians	24.2%	32.7%	$31.47
Operating Engineers and Other Construction Equipment Operators	18.3%	49.9%	$28.10
Surveyors	18.1%	45.2%	n/a
Truck Drivers, Heavy and Tractor-Trailer	13.6%	48.8%	$21.66
Welders, Cutters, Solderers, and Brazers	34.8%	40.4%	$25.05

For More Information

- Web: labor.state.ak.us
- Click on: AGIA Training Strategic Plan



Modeling of Short- and Long-Term Employment Generated by Construction and Operation of an Alaska Natural Gas Pipeline Project



ARCADIS

Employment projections generated for …

- **Construction Phase** of the pipeline and installation of compressor stations, Gas Treatment Plant and LNG facility
- **Operation Phase** of the pipeline and related facilities (compressor stations, GTP and LNG plants)
- **Exploration and Development** work on the North Slope spurred by operation of natural gas pipeline

ARCADIS

Sources of Data/Model Used

- Sources of Data
  - Cost data from TC Alaska AGIA Application and other information provided to the State
  - Data generated by State's consultants
  - Information from Division of Oil and Gas

- Model Used
  - IMPLAN
  - Cost driven
  - Uses Alaska-specific labor factors

ARCADIS

Construction Phase Assumptions

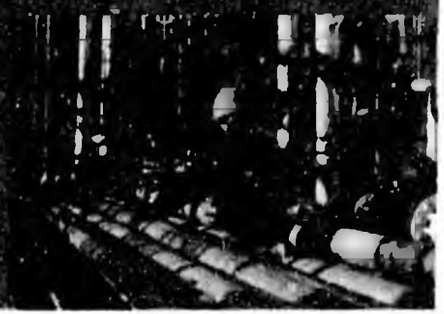
- Gas Treatment Plant and LNG facility will be built Outside
- Major equipment and materials purchased Outside
- Labor force in Valdez constrained by size of camp

ARCADIS

Construction Phase Employment Results

- Any natural gas pipeline project will create thousands of short-term construction jobs

- Largest number of construction jobs will be available during a brief peak period
- LNG option
  - 16,000 jobs in peak year
  - Longer 'peak' period due to LNG installation



- TC Alaska/Producer Pipeline
  - 15,000 jobs in peak year

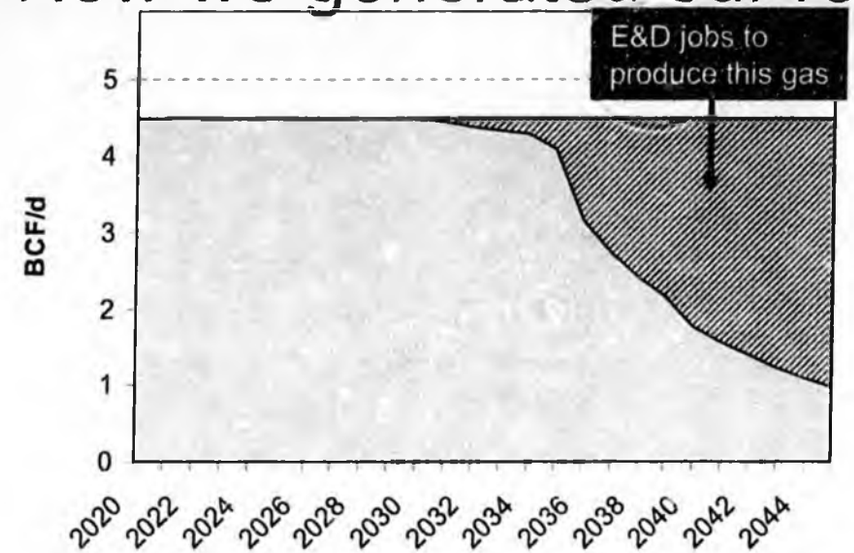
ARCADIS

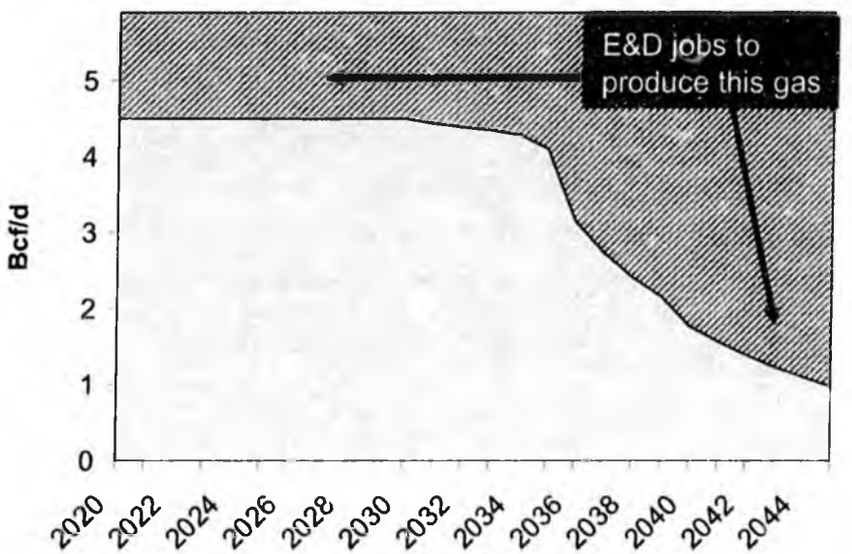
Operations Phase Employment Results

- TC Alaska or Producer Pipeline: ~200 operations jobs in Alaska
- LNG option: ~600 operations jobs in Alaska
  - ~400 jobs at LNG plant in Prince William Sound

ARCADIS

E&D Employment:
How we generated our results—Scenarios





ARCADIS

- Non-Open Access Pipeline
  - No capacity expansion
  - No new natural gas production (or E&D work) until current fields fall off plateau
- TC Alaska Scenario
  - Capacity expansions as demanded + Reasonable tariffs = Favorable explorer economics = E&D rush

E&D Employment:
How we generated our results—Assumptions

- New production facilities will be constructed in Alaska
- Fields will be brought on-line to keep the pipeline full at a given assumed capacity
  - 5.9 bcf/d for TC Alaska Scenario
  - 4.5 bcf/d for Non-Open Access Pipeline Scenario

Results: E&D Employment

- TC Alaska
  - Approximately **72,000** E&D jobs in the 2015 to 2045 timeframe
  - Jobs may be created as early as 2015

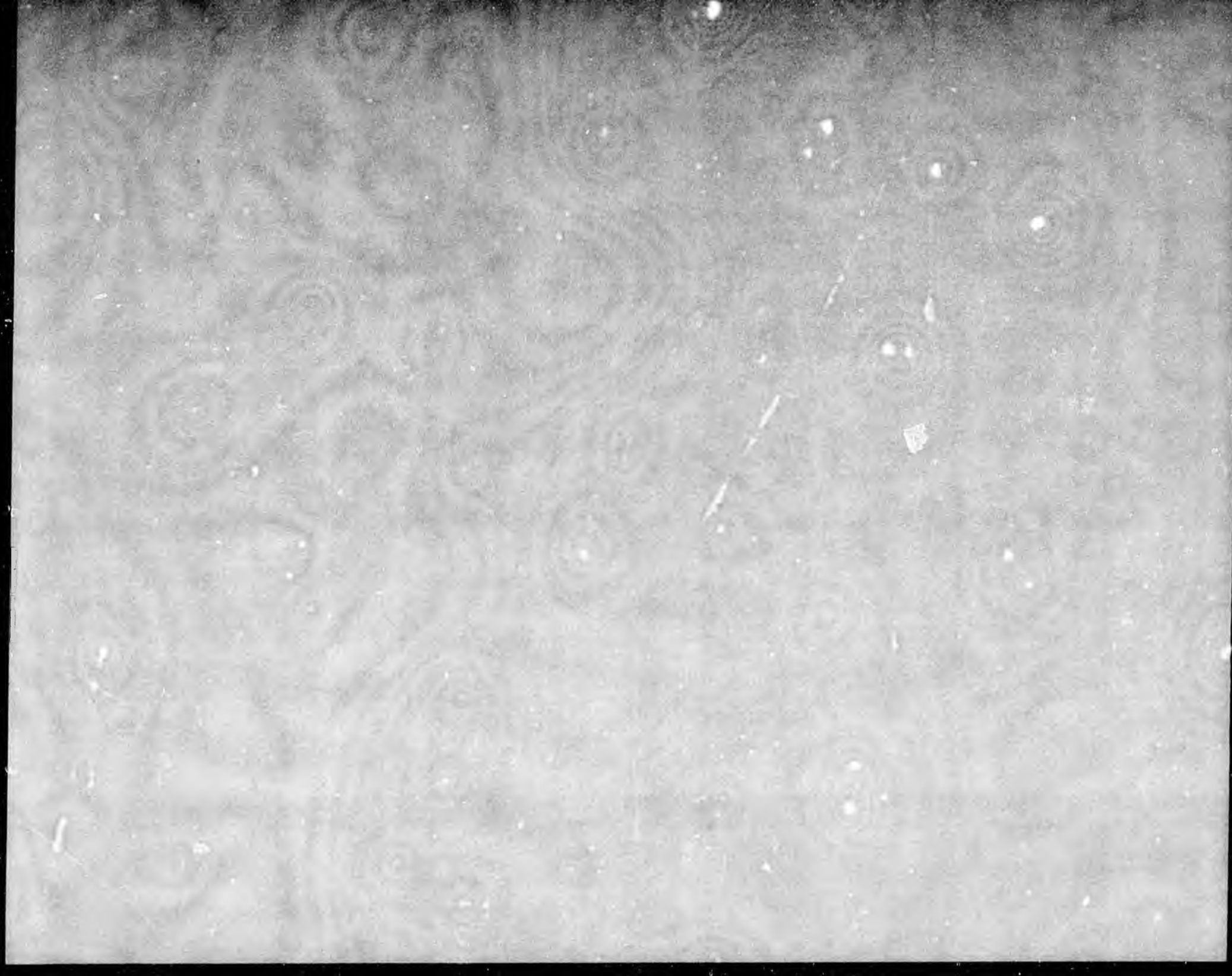
- Non-Open Access Project
  - Approximately **47,000** E&D jobs in the 2015 to 2045 timeframe
  - Job creation may be delayed as late as 2026

ARCADIS

Results: E&D Employment

- Timing of E&D job creation is a function of a pipeline's characteristics
  - Open Access = Jobs Sooner
  - Non-Open Access = Job Creation Delay
- Creating new natural gas basin-related jobs sooner is important …
  - Offset job losses likely to occur as existing oil fields decline
  - Maintain existing skill sets and talent pool in Alaska

ARCADIS



AGIA

The Alaska Gasline Inducement Act

Legal Issues Affecting Producer Participation

Spencer Hosie
Hosie McArthur LLP

Allan Van Fleet
Greenberg Traurig LLP

Duty to Develop and Market

- State of Alaska – Producer Agreement
- Lease Provisions
- Alaska Common Law
- "Move It or Lose It"
- AGIA Solution

Antitrust/Market Manipulation

- State and Federal Antitrust Laws
- Federal Energy Market Manipulation Laws

Antitrust Statutes

- Sherman Act §§ 1-2
- Federal Trade Commission Act § 5
- Alaska Restraint of Trade and Monopolies Act, AS §§ 45.50.562-596
  - Prohibit exclusionary conduct to maintain monopoly power
  - Prohibit joint action to withhold supply from the market

Standard Oil Monopoly

1910: Broken into "Seven Sisters"

ENERGY

Perspectives on Energy

Power Markets

Fuels Markets

Alternative Fuels

Liquefied Natural Gas (LNG)

Air Emissions & Environment

Renewable Energy & Green Power

Climate Change & Ozone Protection

Electric Transmission

Energy Efficiency & Demand Management

Water Utilities & Markets

Regulatory & Litigation Support

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Fuels Markets

To help clients control a critical and potentially volatile component of the energy equation, ICF International assesses and forecasts natural gas, petroleum, and coal markets worldwide using deep industry expertise and proprietary models and databases. Our analyses and valuations have supported the financing of more than US$10 billion in gas assets.

ICF's gas area expertise was augmented in January 2007 with the acquisition of Energy and Environmental Analysis (EEA), a national leader in gas market analysis.

- **Natural Gas Market Analysis**
- **Supply Assessments and Project Evaluation**

WHAT'S NEW

» **U.S. Emission & Fuel Markets Outlook**

Evaluating Natural Gas Gathering Facilities. On behalf of an interstate pipeline, ICF International estimated the value of a nonjurisdictional gathering pipeline system. The analysis used the EADSS™ to examine the implications of possible new production coming on line, gas market prices on different connecting pipelines, and competition from nearby gathering systems. The analysis showed the expected stream of revenues and the high and low values associated with project uncertainties.

Pacific Northwest Gas Storage Strategy Study. ICF International used EADSS™ to evaluate strategies for purchasing or releasing transportation capacity and purchasing gas storage capacity. The work was performed for the owner of a gas-fired generator and thus

Alaskan Pipeline. For producers on the Alaskan North Slope, ICF International evaluated the effect of Alaskan and MacKenzie Delta gas on U.S. and Canadian gas markets, prices, and pipeline flows. We evaluated various scenarios to assist the producers in understanding the implications of different assumptions and configurations for bringing frontiers supplies into the

market.

TOP

Market Manipulation Statutes

- Energy Policy Act of 2005
  - Gives FERC new enforcement powers over natural gas and electricity markets
  - FERC imposed $200 million penalty in one pending case; nearly $100 in another (in addition to disgorging unjust profits)

Market Manipulation Statutes

- The Energy Independence and Security Act of 2007
  - Prohibits any manipulative or deceptive device or contrivance in connection with purchase or sale of crude oil or gasoline or petroleum distillates
  - Authorizes FTC to prescribe regulations

FTC Advance Notice of Proposed Regulation

- Identifies "Potential Practices" that may constitute market manipulation

- Seeks comments "on the circumstances, if any, under which a firm's decision regarding supplying a market (including whether to reduce, increase, or maintain unchanged the amount it supplies) should be considered manipulative or deceptive."

FTC Advance Notice of Proposed Regulation

"Regulated petroleum pipelines may not allow new shippers a share of a pipeline's capacity when historical shippers seek to transport more petroleum products than the pipeline is capable of transporting. The Commission seeks comment on whether pre-announcements that pipelines are approaching capacity constraints may be a conduit for market manipulations or deceit . . ."

FTC on BP in Alaska North Slope

- FTC required BP to divest ARCO's ANS holdings to Phillips (now ConocoPhillips)
- "the Commission had reason to believe that BP occasionally had exported ANS crude oil to the Far East in order to increase spot prices for ANS crude oil on the West Coast and that BP benefitted from those higher spot prices because of its status as a merchant marketer."