New Frontiers, Expanding Opportunities

Presented to

24th Annual Conference of the
Resource Development Council

Alaska Resources 2004 - New Frontiers, Expanding Opportunities"

November 20 - 21, 2003

Mark D. Myers, Director
State of Alaska
Department of Natural Resources
Division of Oil and Gas

Alaska Department of
Natural
Resources

http://www.dog.dnr.state.ak.us/oil

The State Revenue Pie

Petroleum Revenue Sources, (FY 2003 Preliminary)

Total Royalties, Bonuses, Rents & Settlements:

$1,296.0 Million

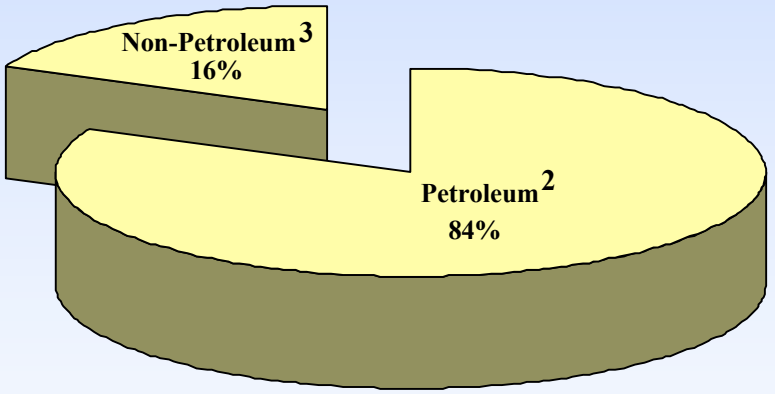
General Fund Royalties, Bonuses & Rents:[1,2]
$839.1 Million

Royalties to Permanent Fund & School Fund:[4]
$400.0 Million

Royalty Settlements to CBRF:[4]
$22.3 Million

NPRA:[4]
$34.6 Million
(Bonuses & Rents)

FY 2003 Unrestricted Revenue (Preliminary)



Taxes:

$799.9 Million [2]

(Oil & Gas Property Tax + Income Tax + Severance Tax + Tax Settlements to CBRF)

1 Includes Federally shared rentals

2 Source: DOR Fall 2003 Revenue Sources Book - Preliminary

3 Source: DOR Fall 2003 Revenue Sources Book - Preliminary

4 Source: DOR Fall 2003 Revenue Sources Book - Preliminary

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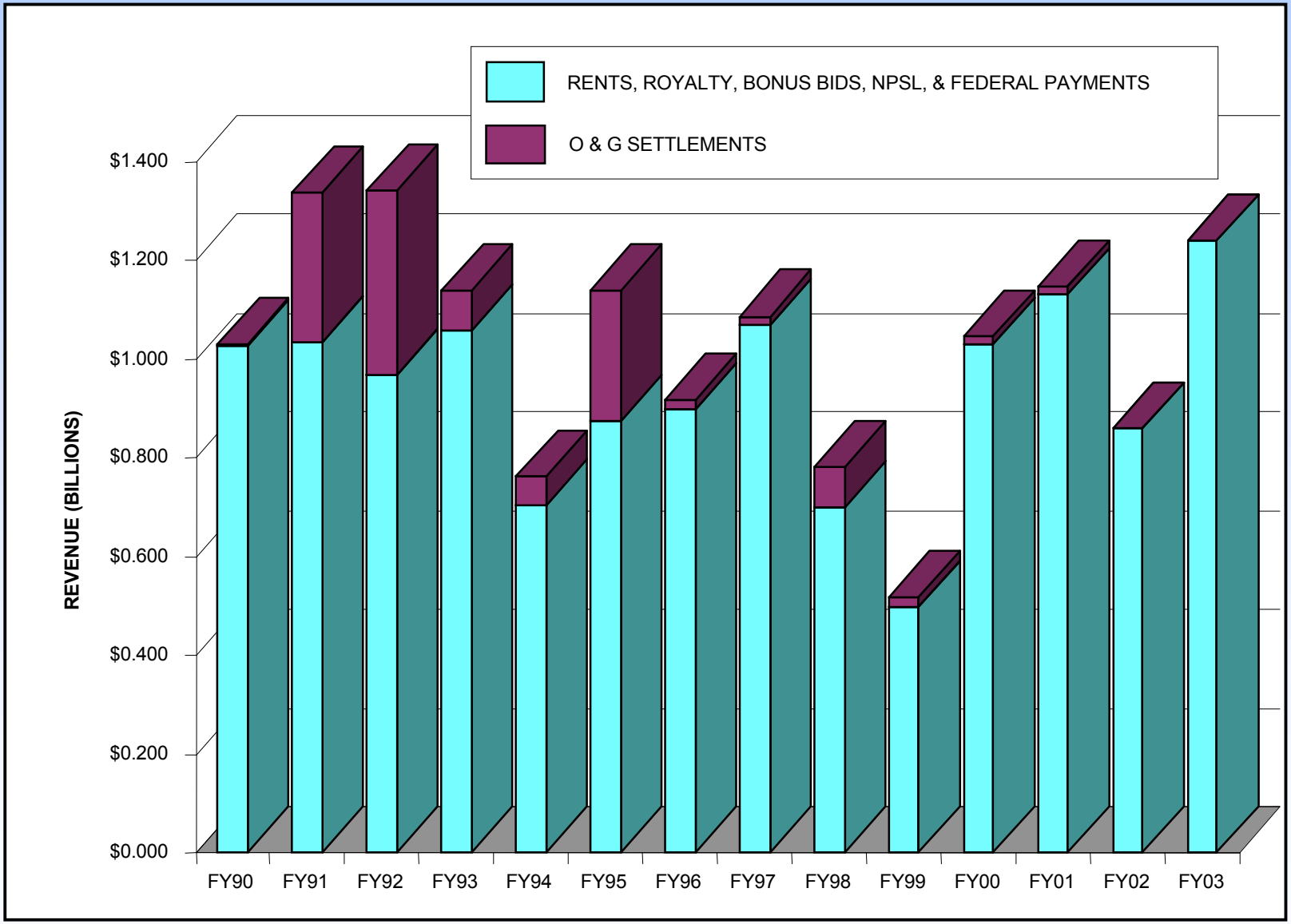
Fiscal Year Oil and Gas Revenue From State Lands

Fiscal Years 1990 through 2003



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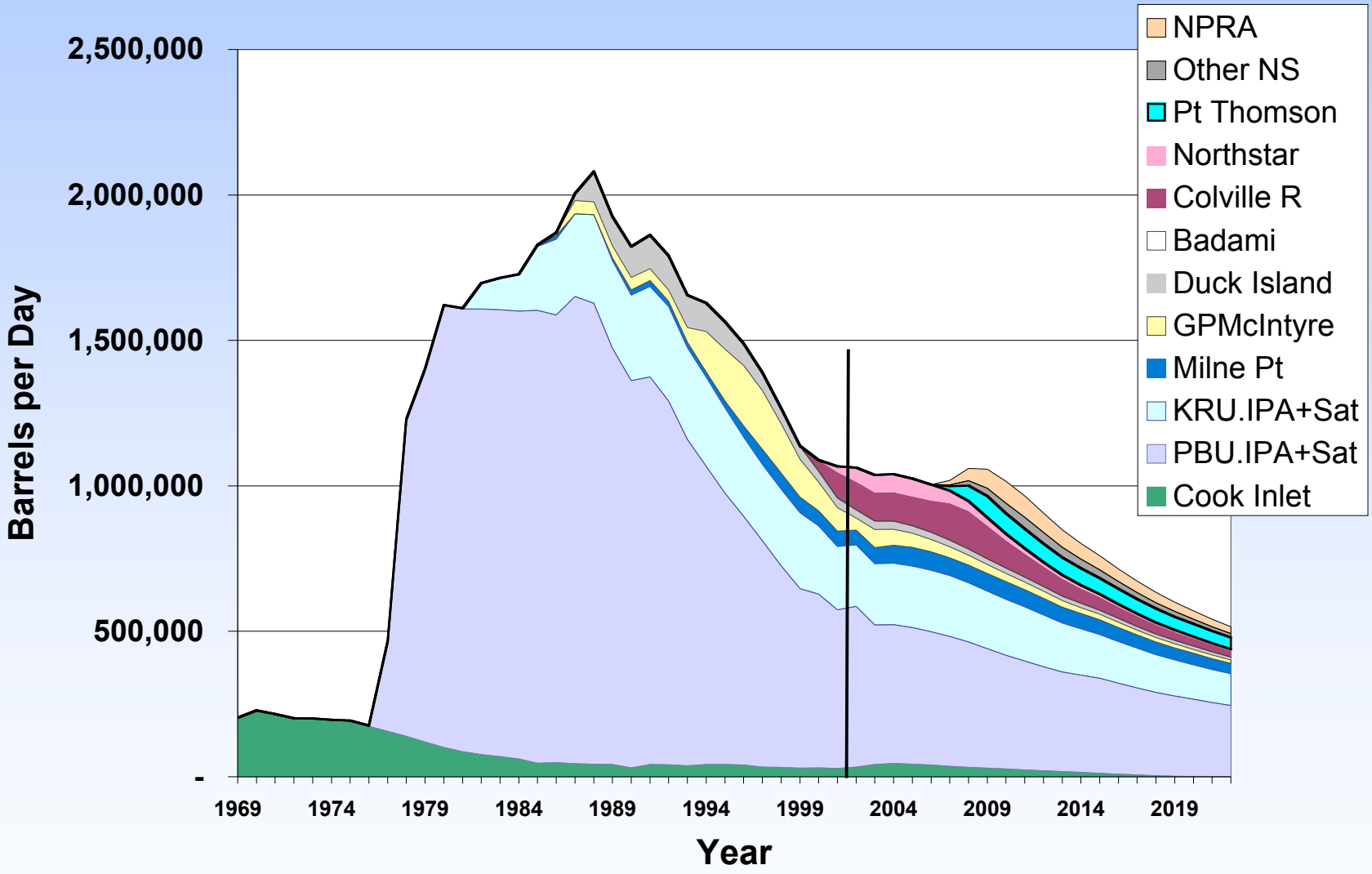
Historic and Projected Oil Production

1969 - 2022



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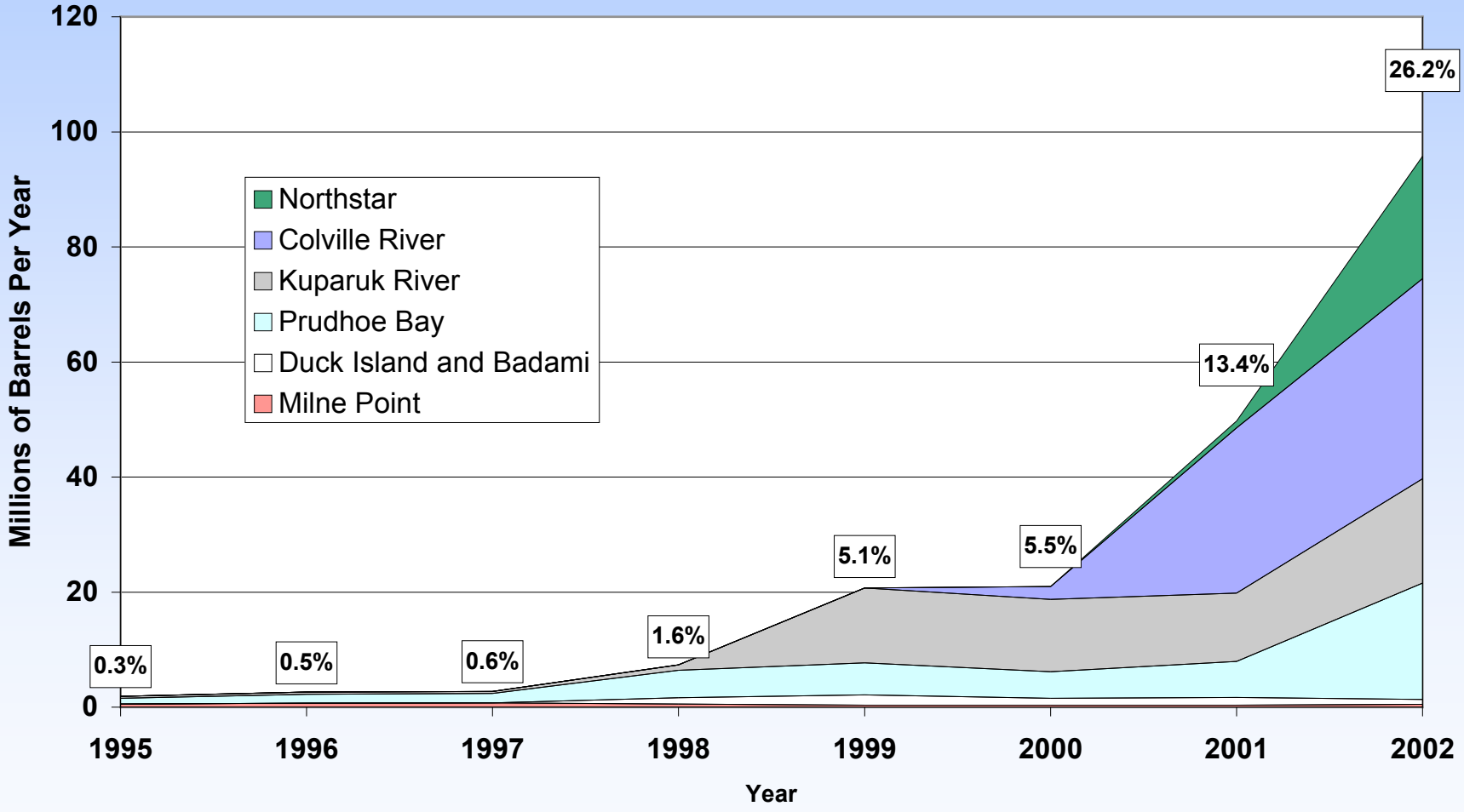
Incremental North Slope Oil Production since 1995 by Unit



Note: Percentage figures show fraction of incremental oil since 1995, as a proportion of total North Slope production by year.
Sources: AOGCC and ADNR.

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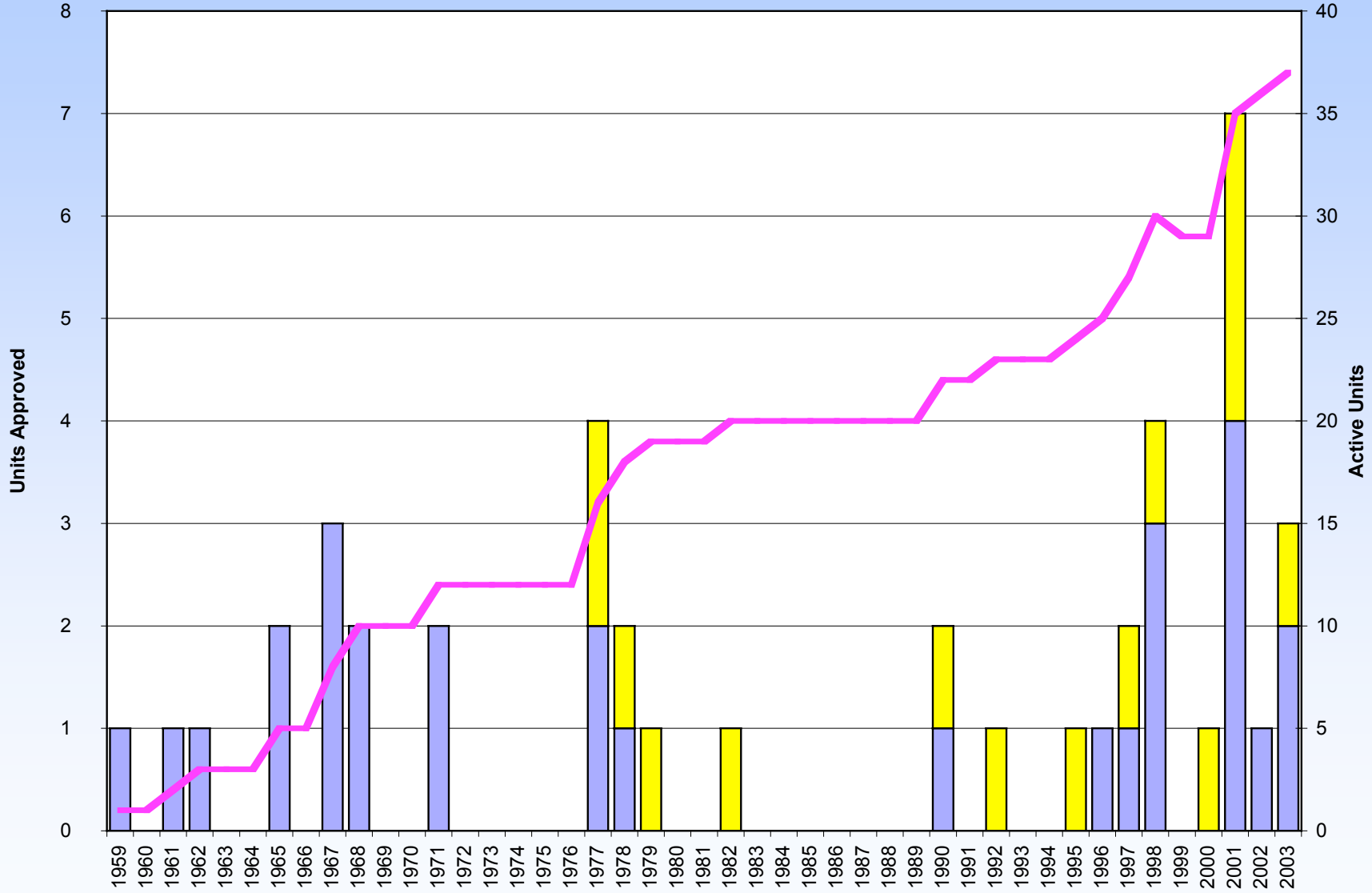
Oil and Gas Unit Agreements

1959 - 2003



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Alaska Reserves and Production

- **22% of total U.S. oil reserves.**
- 7.1 billion barrels of oil
- **19% of total U.S. gas reserves**
- 36.2 trillion cubic feet of gas
- **19% of total U.S. oil production**
- 0.993 million barrels of oil per day
- **Total Alaska Production to date**
- 15.3 billion barrels of oil
- 7.0 trillion cubic feet of gas (net production)

Sources: Alaska data are from Department of Natural Resources, Division of Oil and Gas, 2002 Annual Report
U.S. data are from U.S. Crude Oil, Natural Gas, and NGL Reserves, 2001 Annual Report, U.S.D.O.E.-E.I.A.

Projects Under Development

Northern Alaska (October 2003)

Project Name	Status	Expected Start-Up	Estimated Reserves or Expected Production
PBU Borealis	Development continuing	2002	35,000 BOPD
KRU Palm (DS-3S)	Development underway	2002 (Nov.)	35 MMBO 16,000 bbls. oil/day
MPU Schrader Expansion (S Pad)	Drilling & test production underway	Late 2002	17-20,000 BOPD
PBU Gas Cap Water Injection	Drilling underway	2003	Risked est. reserves ~200 MMBO
PBU Orion	Preliminary development underway/PA application submitted Oct. 2003	2003	270-450MMBO 30M-50M BOPD at peak prod.
PBU Pt.McIntyre PM2 to GC1 Project	Development underway	Late 2003 or Early 2004	~5,500 BOPD
CRU Alpine PA Increased Water	Planning	Late 2004	5,000 BOPD
PBU Pt.McIntyre Supplemental M/I	Project Underway	Mid-2003	~1,000 BOPD
CRU Fiord	Technical studies, permitting, EIS or EA	2006	10,000-20,000 BOPD
CRU Nanuq	Technical studies, permitting, EIS or EA	2006	10,000-20,000 BOPD
KRU Exp. Area 1, 2 & 3 (west and south)	4 wells proposed by 2004, areas must be in KRU or contracted out by 2005.	2006	?
KRU Exp. Area 4 & 5 (southeast)	3 wells proposed by 2004, areas must be in KRU or contracted out by 2007.	2008	?
Point Thomson	Start drilling in 2004, major facilities mobilization in 2006	2007	75,000 bbls. condensate/day

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Mean Value, Total Natural Gas Reserve and Resource Base for Gas Pipeline Supply Report

All Values Trillions of Cubic Feet (TCF)

Alaska Division of Oil and Gas (4/15/03)

BASIN	KNOWN RESERVES	UNDISCOVERED TECHNICALLY RECOVERABLE CONVENTIONAL RESOURCE	*UNDISCOVERED TECHNICALLY RECOVERABLE DEEP CONVENTIONAL RESOURCE*[2]	GAS HYDRATES IN PLACE RESOURCE[6]	COALBED METHANE IN PLACE RESOURCE	BASIN TOTAL
NORTH ALASKA (onshore)	35.000 [1]	63.500	*17.700* [2]	519.000	800.000 [7]	1,417.500
NORTH ALASKA (Beaufort shelf)	0.000	32.070	*N/A*	32,325.000 [3]	N/A	32,357.070
NORTH ALASKA (Chukchi shelf)	0.000	60.110	*N/A*	50.000 [3]	N/A	110.110
CENTRAL ALASKA[4]	0.000	2.760	*N/A*	N/A	N/A	2.760
YUKON FLATS	0.000	N/A	*N/A*	N/A	N/A	N/A
KANDIK[5]	0.000	0.116	*N/A*		N/A	0.116
NENANA/TANANA	0.000	N/A	*N/A*	N/A	N/A	N/A
COPPER RIVER	0.000	N/A	*N/A*	N/A	N/A	N/A
TOTAL BY GAS TYPE	**35.000** [1]	**158.556**	***17.700*** [2]	**32,894.000**	**800.000** [7]	**33,887.556**

After Craig, J., and Sherwood, K.,Prospects for development of Alaska natural gas: a review as of January 2001, Minerals Management Service, Alaska Region. tbl. 9, p. 76.
Modified to include only North and Central Alaska basins and updated to include new information as footnoted.
N/A = Not Assessed

[1] Current estimate of known "stranded" recoverable North Slope conventional gas reserves in Prudhoe Bay, Point Thomson and smaller fields.

[2] *Subcategory of and included in "Undiscovered Technically Recoverable Conventional Reserves". Represents Basin Deep or Basin Centered component > 15,000' depth.*

[3] Craig and Sherwood arbitrarily split offshore hydrate resource estimates between Beaufort and Chukchi Sea shelves. Total North Alaska offshore gas hydrate potential remains 32,375 tcf.

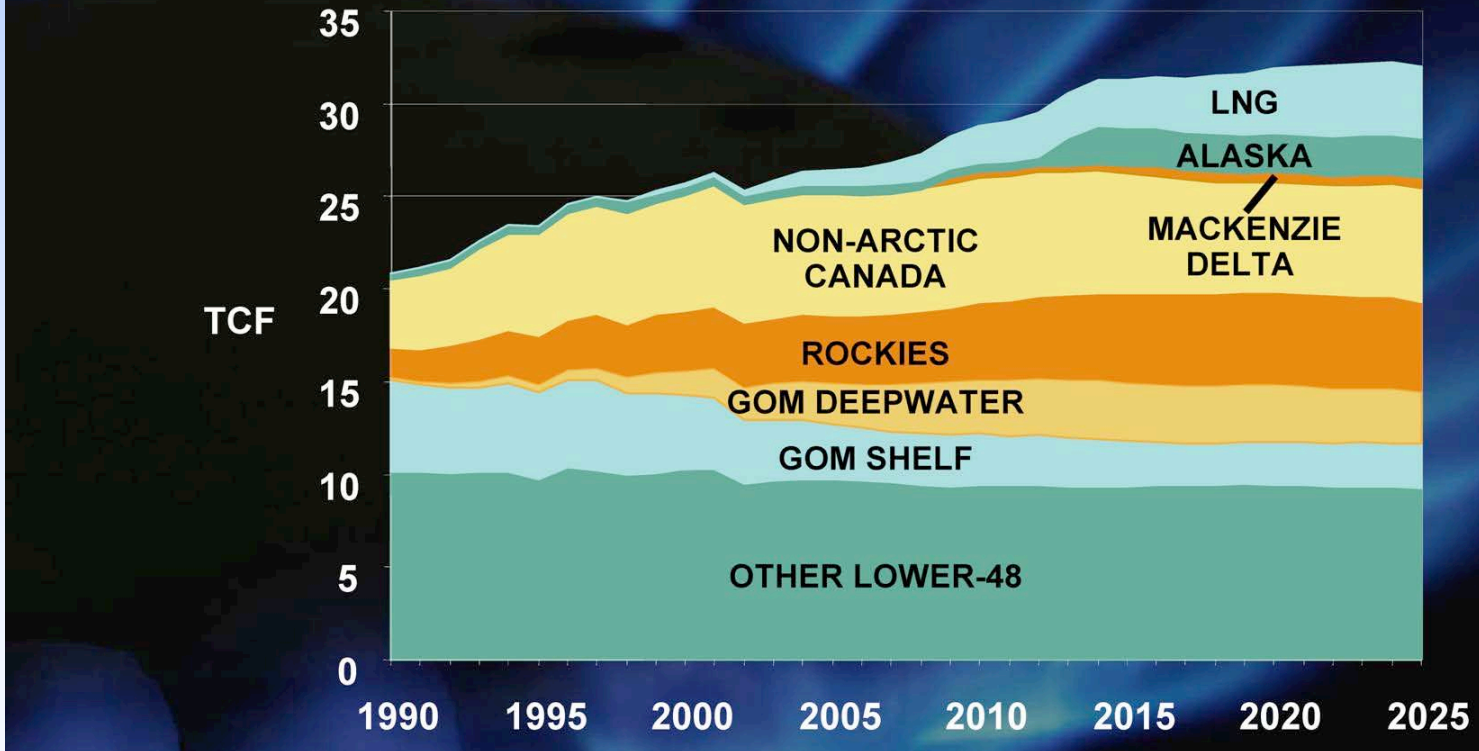
[4] 1995 National Assessment of United States Oil and Gas Resources, U.S. Geological Survey, Open File Report , Digital Data Series-30, pub. 1995. For all central Alaska basins except the Kandik Basin. Other basins not evaluated individually.

[4,5] Geological Survey of Canada estimated mean undiscovered gas in place ~ 0.489 - 0.800 TCF.

[6] Collett and Kuuskraa, 1998, tbl. 1; USGS, 1995.

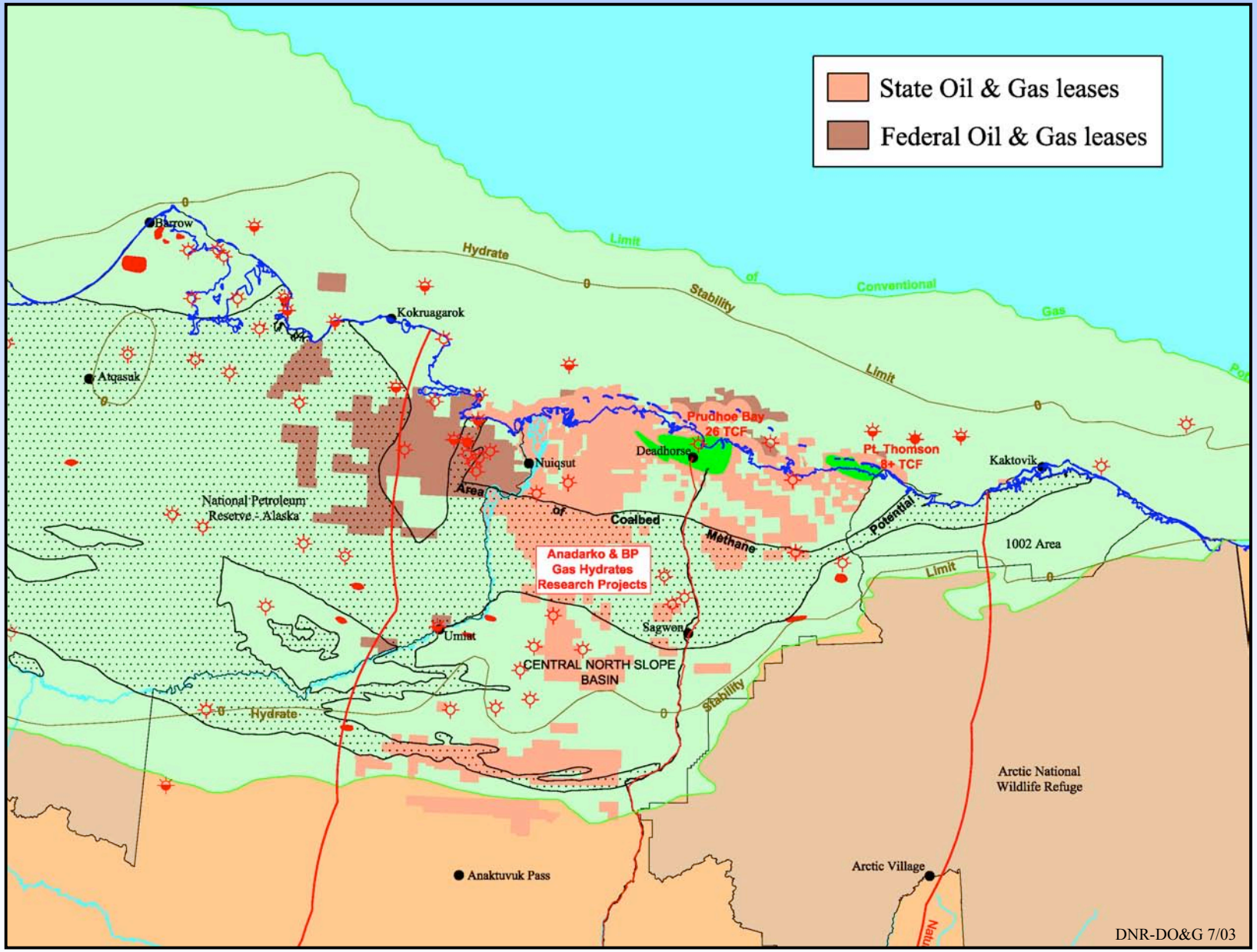
[7] Barker, C.E., Clough, J.G., Roberts, S.B., and Fisk, R., Coalbed methane in Northern Alaska: potential resources for rural use and added supply for the proposed trans-Alaska gas pipeline; AAPG-SPEM Joint Technical Conference, Anchorage, AK, May 2002.

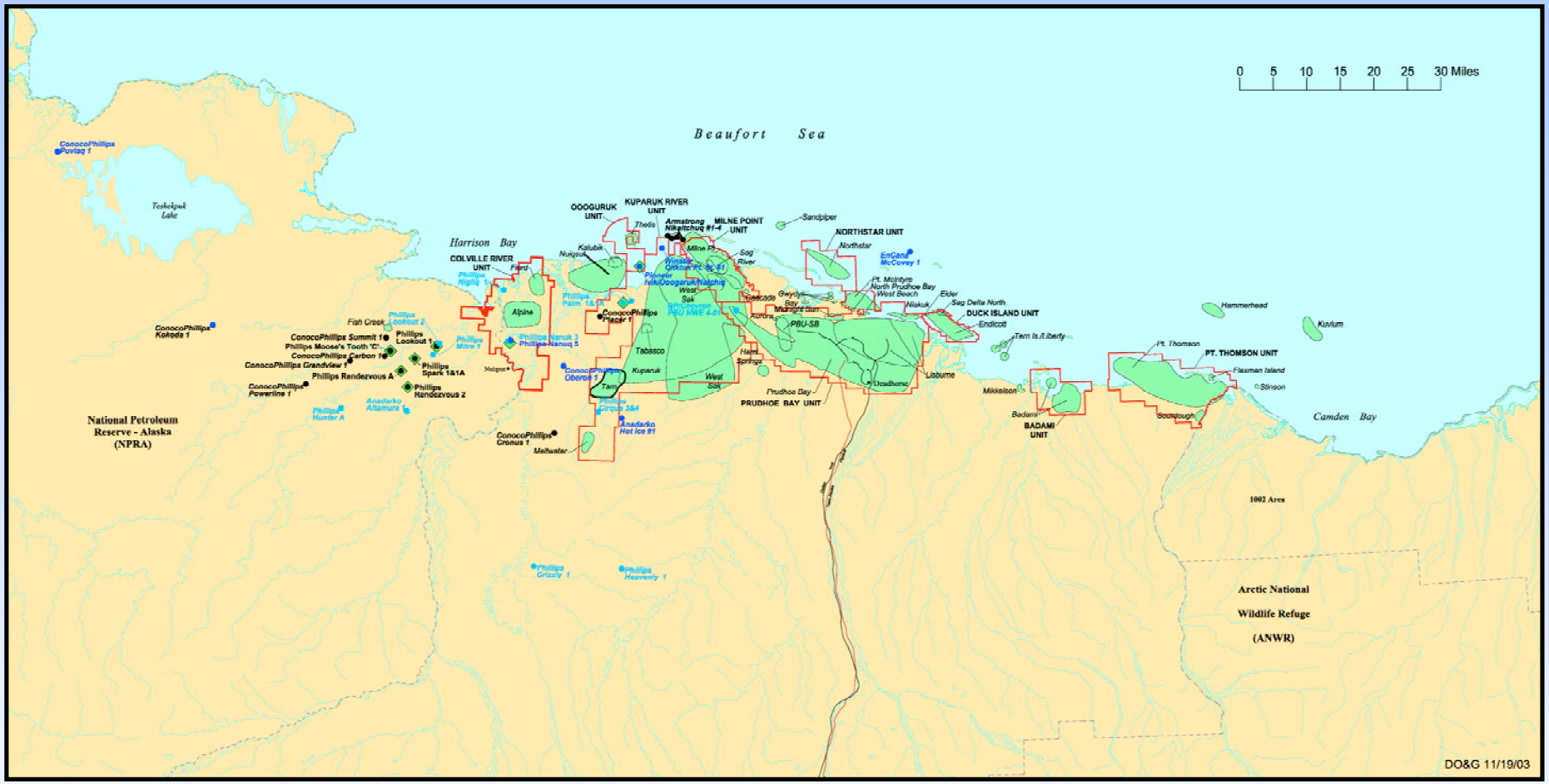
Demand is Met from Diverse Sources of Supply



NPC

Gas Potential - North Slope
with Oil & Gas Leasing Activity





North Slope Oil & Gas Activities & Discoveries November 2003

Map Legend

- Units
- *Oil Field / Accumulation*
- Recent Discoveries
- *2004 Exploration Wells*
- *2003 Exploration Wells*
- *2002 Exploration Wells*
- Road
- Trans-Alaska Pipeline

Map Location

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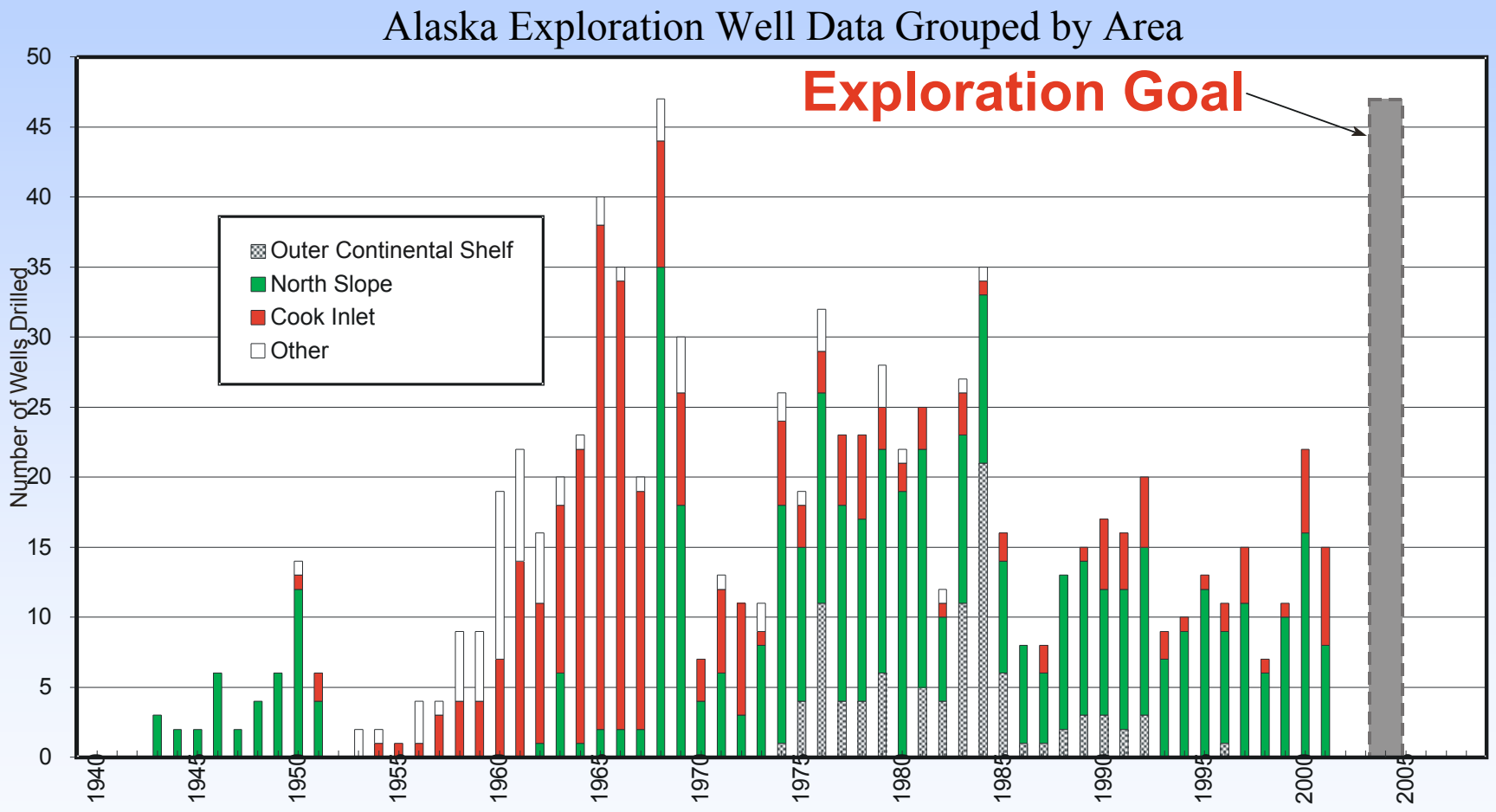
In Order to Increase Alaskan Oil Production the Number of Exploration Wells Drilled per Year Must Dramatically Increase.



Number of Alaskan Exploration Wells Drilled per Year

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Exploration Incentive Credit (EIC) Programs
Program III - AS 43.55.025 Exploration Tax Credits

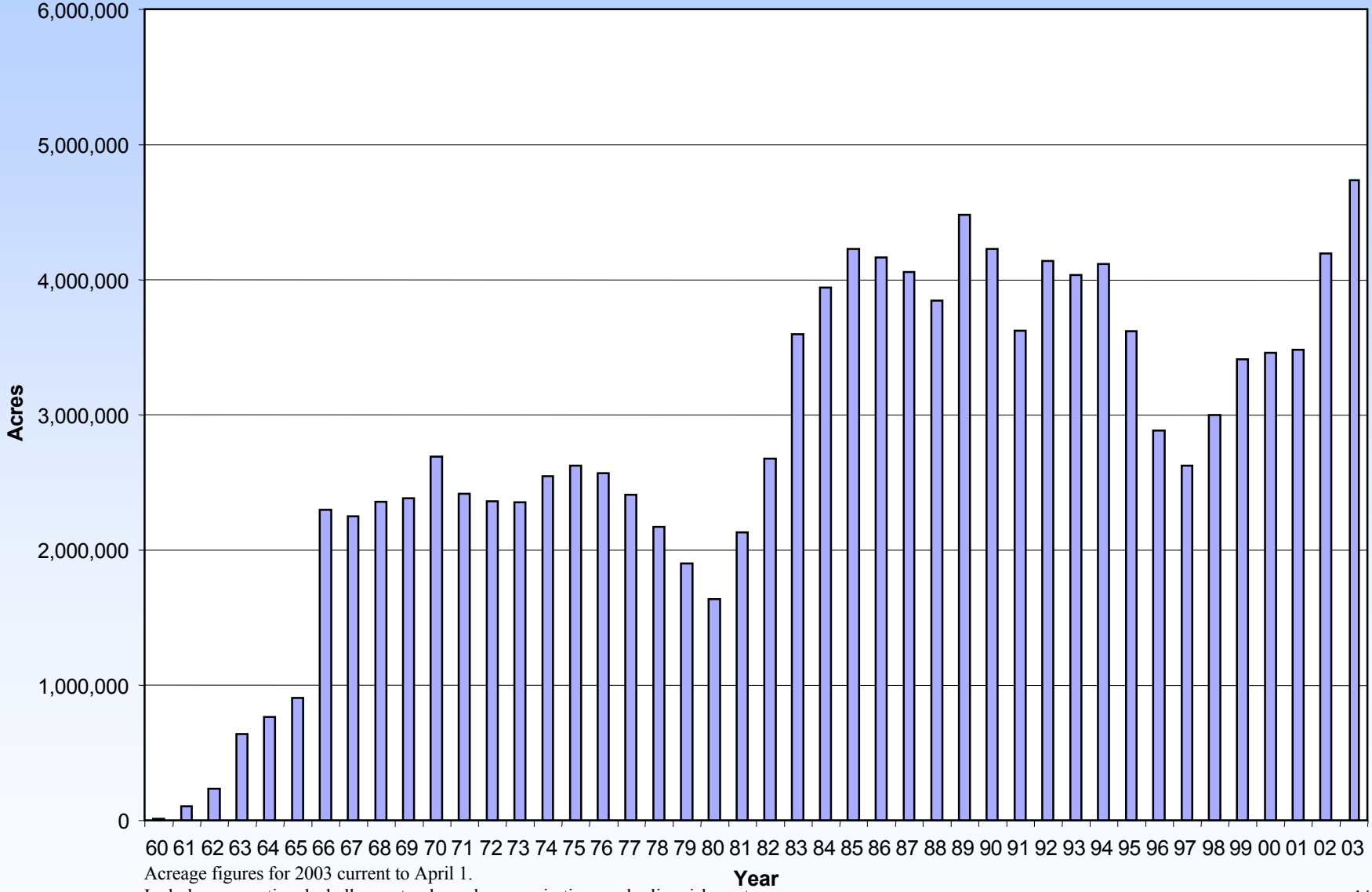
- Result of SB 185.
- Implemented as 15 AAC 55.220.
- Effective for exploration well and seismic and geophysical exploration activities conducted July 1, 2003, through June 30, 2007, except those included in a unit plan of development or plan of exploration on May 13, 2003.
- Applicable only to production occurring on or after July 1, 2004.
- Applicable to all unleased and leased state, federal and private land within the state.
- Applicable to production taxes only.
- Application must be made within six months following completion of exploration activity.
- Production tax credit is transferable.
- Exploration well tax credits:
  - 20% if the bottom hole location is 3 or more miles from the bottom hole location of a preexisting completed, suspended or plugged and abandoned oil or gas well that was spud more than 150 days, but less than 35 years, prior to spud date of the eligible exploration well.
  - 40% if the bottom hole location is 25 or more miles from the boundary as of July 1, 2003, of any unit under a plan of development.
- Seismic exploration tax credits:
  - 40% of eligible costs for those portions of activities outside of units under plan of development or plan of exploration.
  - Seismic data submitted to state will be held confidential for 10 years and 30 days following activity completion date.

Alaska Oil & Gas Programs

1. AREAWIDE OIL AND GAS LEASING
   - Cash Bonus Bid
   - 12.5 – 16.67% royalty
   - 7-10 year lease term
2. EXPLORATION LICENSING
   - Work Commitment
   - 500,000 acre maximum
   - 10–year maximum term
3. SHALLOW NATURAL GAS LEASING
   - Non-competitive filing
   - 3-year term
   - $5,000 filing fee
   - 138,240 acre maximum

Acreage under Oil & Gas Lease
1960 – 2003

(Does not include acreage under Exploration License)



Acreage figures for 2003 current to April 1.
Includes conventional, shallow natural gas, lease expirations and relinquishments.

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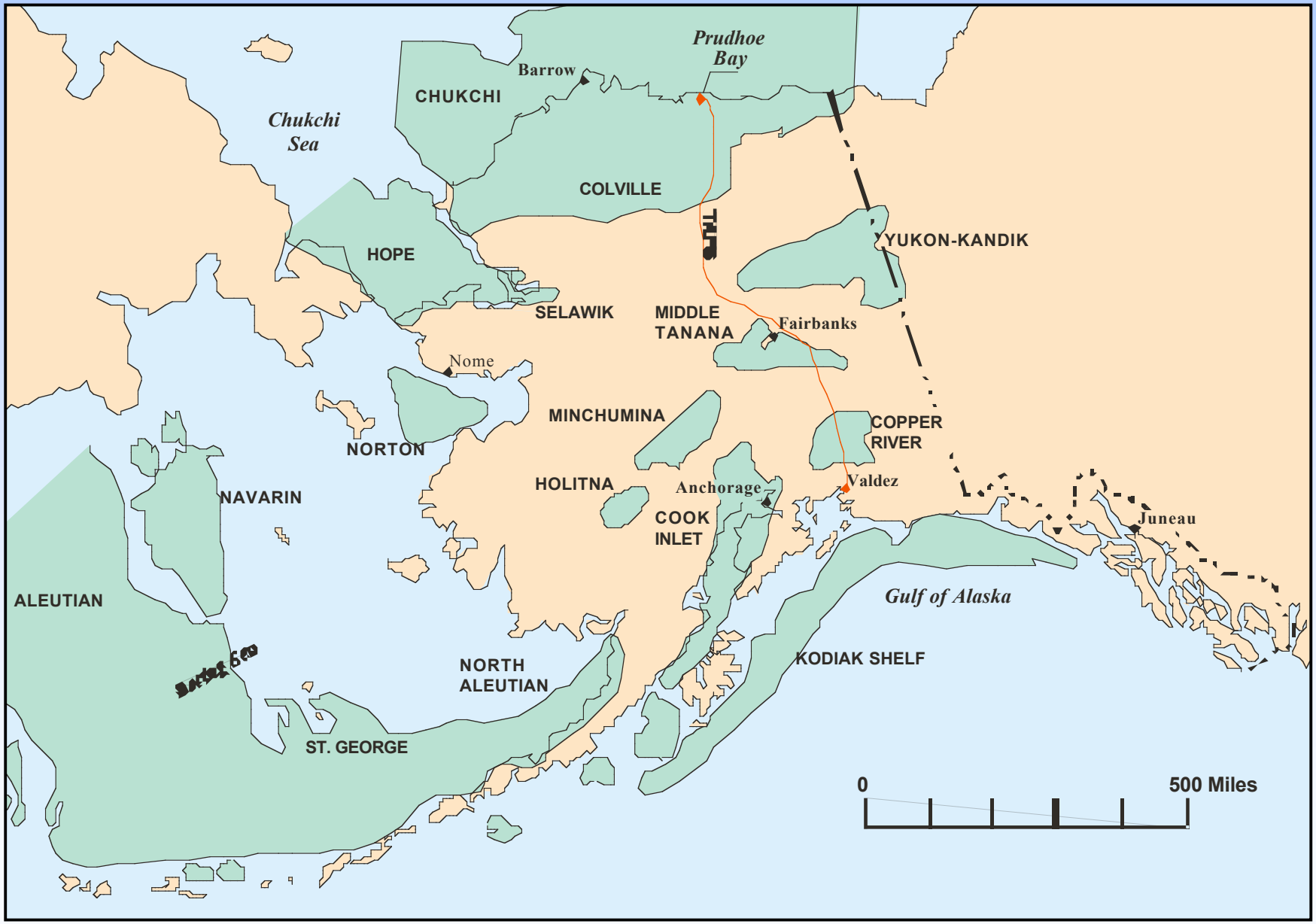
Alaska's Oil and Gas Basins



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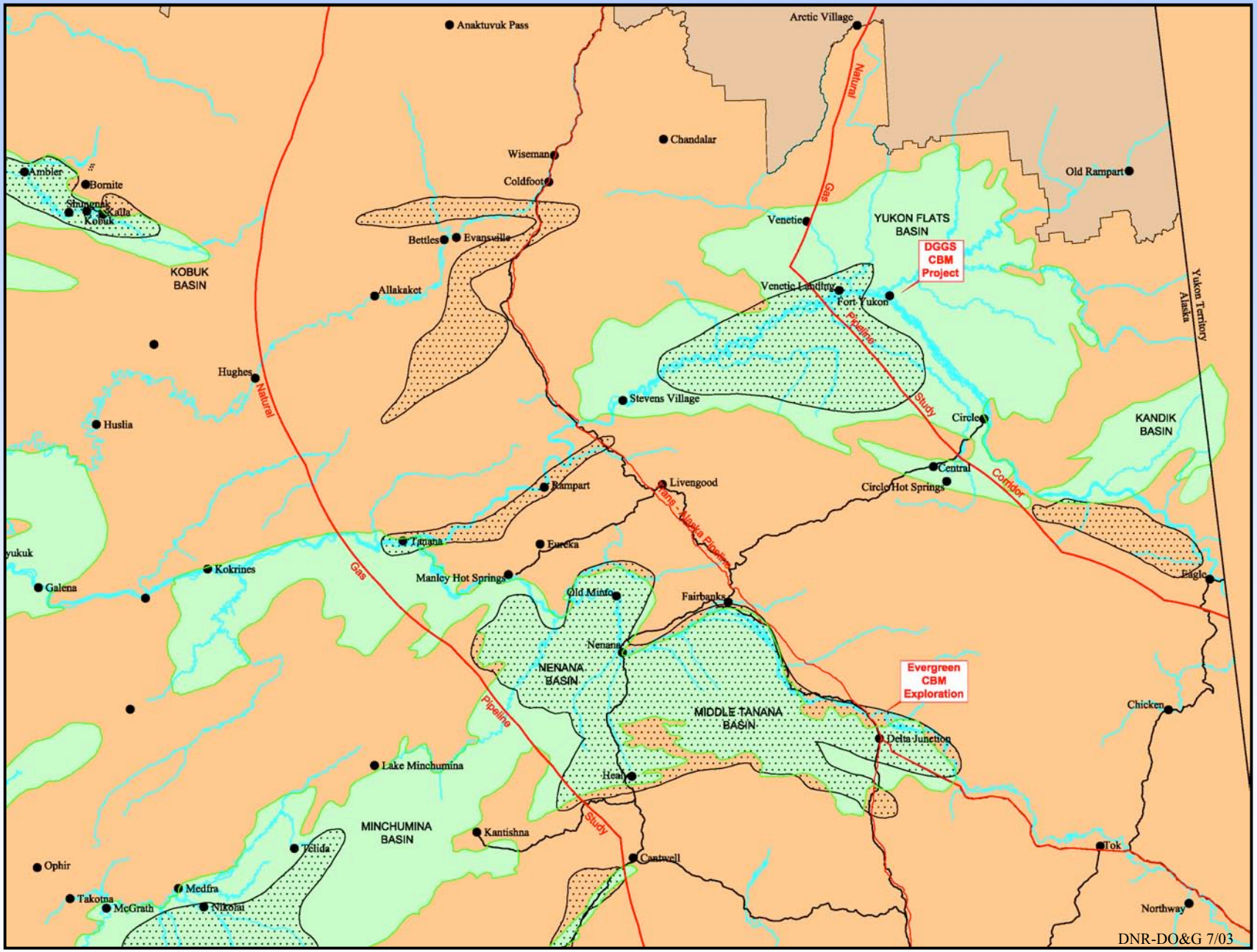
Exploration Incentive Credit (EIC) Programs
Program IV - AS 43.20.043 Gas Exploration and Development Tax Credit

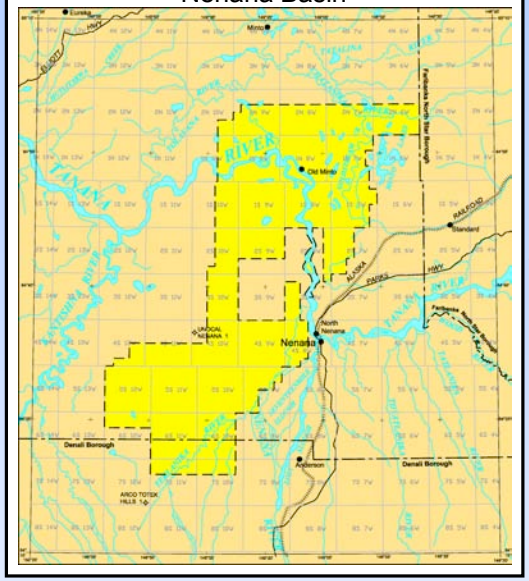
- **Result of HB 61.**
- **Effective December 31, 2002.**
- **Applicable only to operators and working interest owners engaged in exploration for and development of gas resources and reserves south of 68 degrees North latitude.**
- **May not be used in conjunction with a tax credit or royalty modification provided under any other title.**
- **Allows 10% tax credit equivalent of qualified capital investments made after June 30, 2003, and of annual cost of activity in the state during each tax year.**
- **Total allowable yearly tax credit may not exceed 50% of the taxpayer's total tax liability and shall be determined before application of any other credits allowable under AS 43.20.**
- **Expires January 1, 2013.**
- **Unused tax credit may be carried forward into five or less of the following tax years.**
- **Credit is transferable only as part of a conveyance, assignment, or transfer of the taxpayers business.**
- **By November 30, 2008, the Department of Revenue shall publish a report evaluating the effect of this legislation and shall distribute the report to the legislature.**

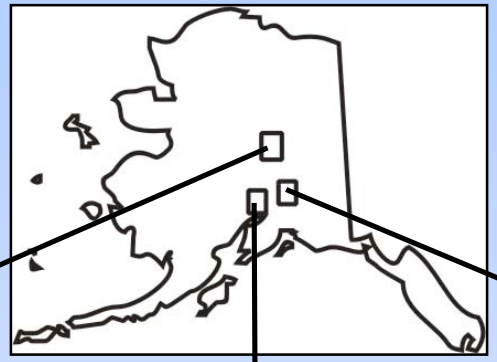
Gas Potential – Interior Area



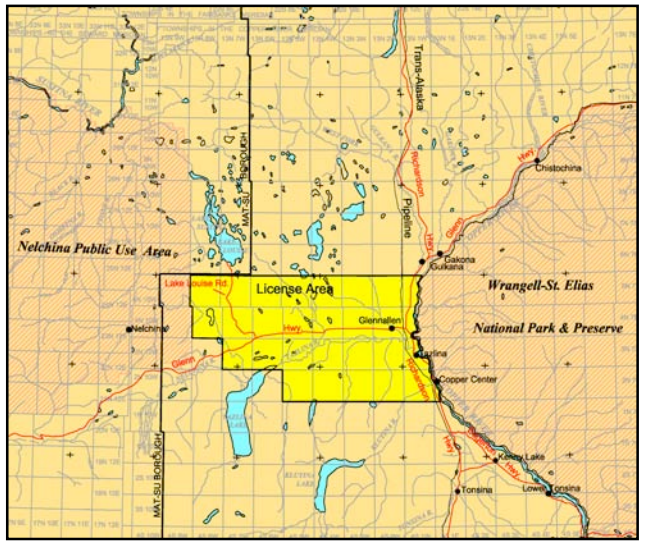
Exploration Licensing Program

Nenana Basin

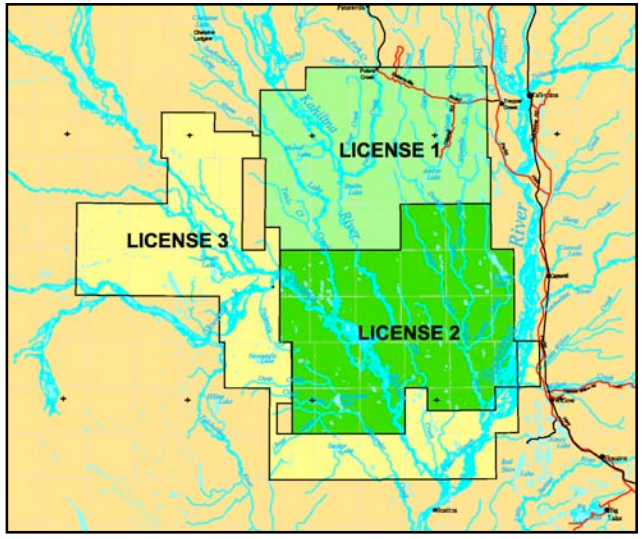




Copper River Basin



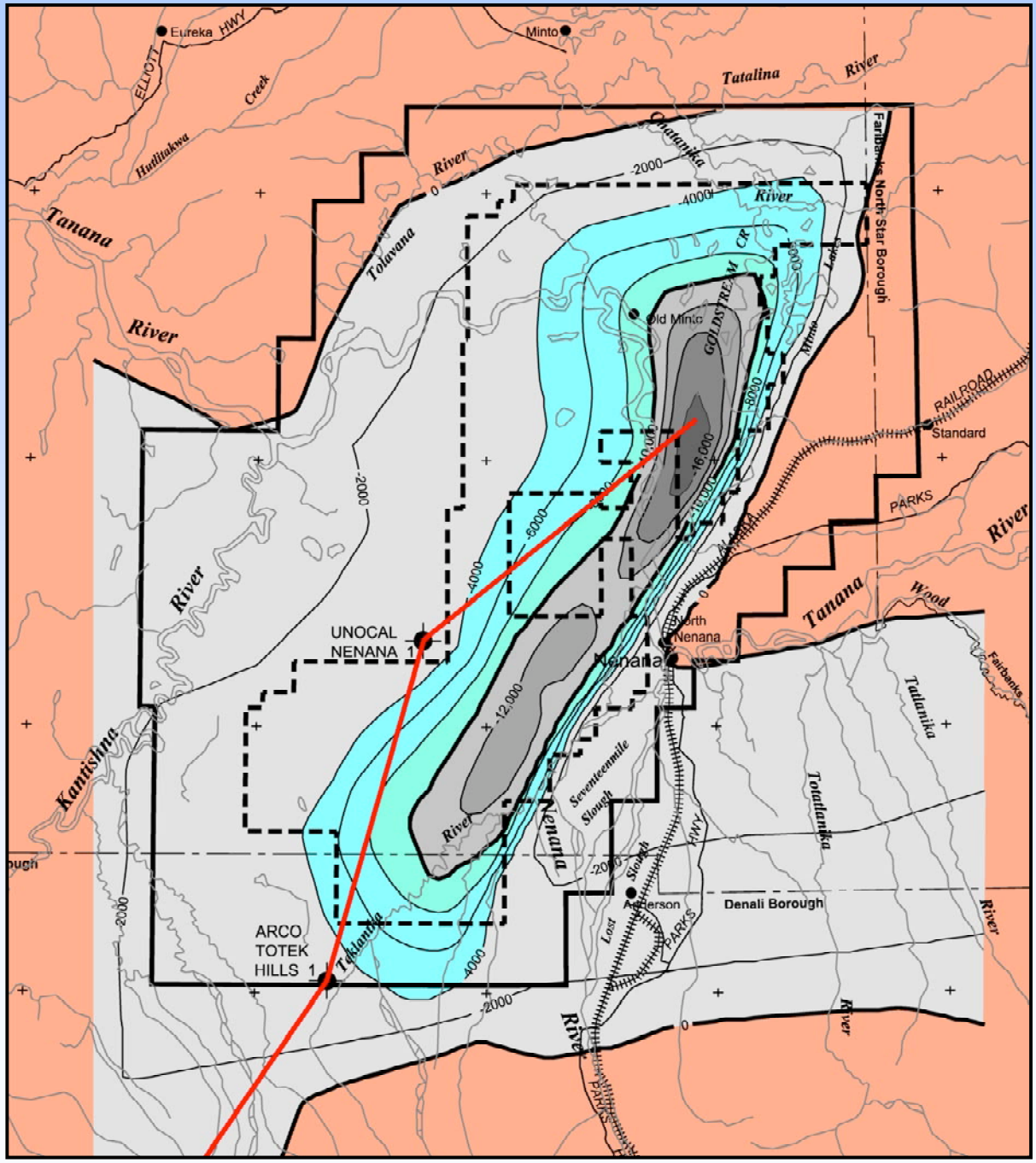
Susitna Basin



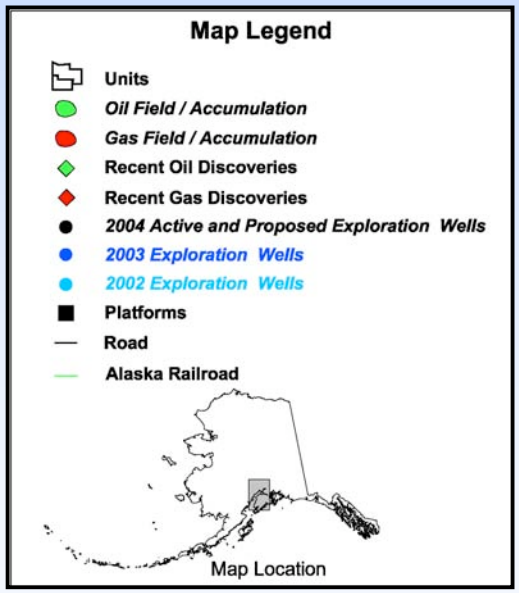
Nenana Basin
Oil & Gas Potential

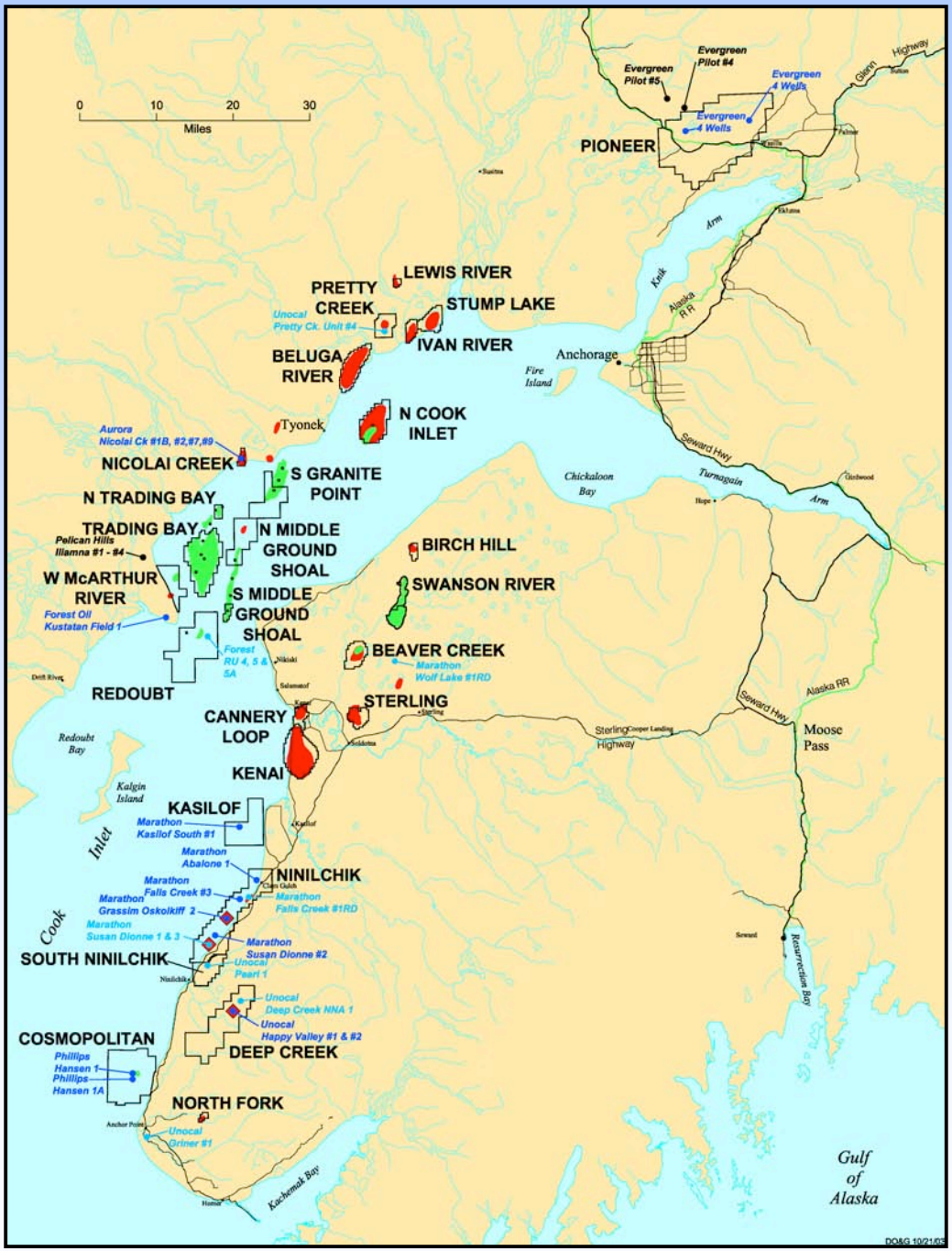
- Andex Resources, LLC, holds a 7-year Exploration License for 482,942 acres with a $2.5MM work commitment. License expires September 2009.
- Tertiary-age alluvial basin covering 8,500 square miles and up to > 18,000 feet deep in its northern area.
- Potential for coal bed methane and conventional thermogenic natural gas is good.
  - Good reservoir rocks are associated with thick coal seams.
  - Deep source and reservoir rocks and geothermal history are conducive for formation and entrapment of conventional natural gas.
  - Tertiary sedimentary section is time-equivalent to Cook Inlet's productive Kenai Group.
- Potential for oil is low due to thin low-organic source rocks.
- With only limited G&G data the basin is "under-explored":
  - Unocal Nenana #1 (1962) – 3,062' deep, coal seam gas shows.
  - ARCO Totek Hills #1 (1984) – 3,590' deep, coal seam gas shows.
  - 350 miles 2-D seismic data in southern and central basin areas (1981-82).
  - Gravity coverage across entire basin..

Thickness of Sedimentary Basin (Tertiary)



Cook Inlet Oil & Gas Activities & Discoveries October 2003





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Cook Inlet Exploration Summary – 2003 (1)

- Anchor Point (Griner #1) – Unocal (Gas)
  - Griner #1 well completed as gas producer, Unocal reported disappointing results, no other details available
- Cosmopolitan Unit – Conoco Phillips (Oil discovered in 1967 by Penzoil)
  - Hansen #1 well P&Aed, Forest reported successful results, no word from ConocoPhillips yet
  - Hansen #1A well completed as oil producer, test production is being trucked to Nikiski refinery
- North Fork Unit – GasPro/NorthStar/Alliance (Gas)
  - Unit getting renewed interest from small investor group
  - Non-binding pipeline contract with ENSTAR signed in September 2003
  - Adjacent exploration unit may be created in the near future
- South Ninilchik Unit and Deep Creek Unit – Unocal (Gas)
  - Pearl #1 and Deep Creek NNA #1 wells completed as gas producers in 2002, Unocal reported disappointing results, no other details available
  - Happy Valley #1 and #2 are drilled, Unocal permitting gas pipeline, so wells are *apparently* succesful
- Ninilchik Unit – Marathon (Gas)
  - G.O. #1 well completed as gas well, tested at 11.2 MMCF/D from one zone
  - G.O. #2 well completed as gas well, tested at 11.9 MMCF/D from three zones between 8,048 and 9,440 ft.(MD)
  - Falls Creek #1RD completed as gas well, tested at 6.8 MMCF/D from a depth of 8,714 ft.(MD)
  - Susan Dionne #3 (SDPA) completed as gas well; Falls Creek #3 (FCPA) active, no details available
  - Abalone #1well drilled in 2003 at north end of unit, not completed, currently shut down, no other details available
  - Plans to drill Susan Dionne #2 (SDPA), Ninilchik State #1 (GOPA)
  - Production started at GOPA in September 2003, currently about 15 MMCF/D rate

MMCF/D = million cubic feet per day

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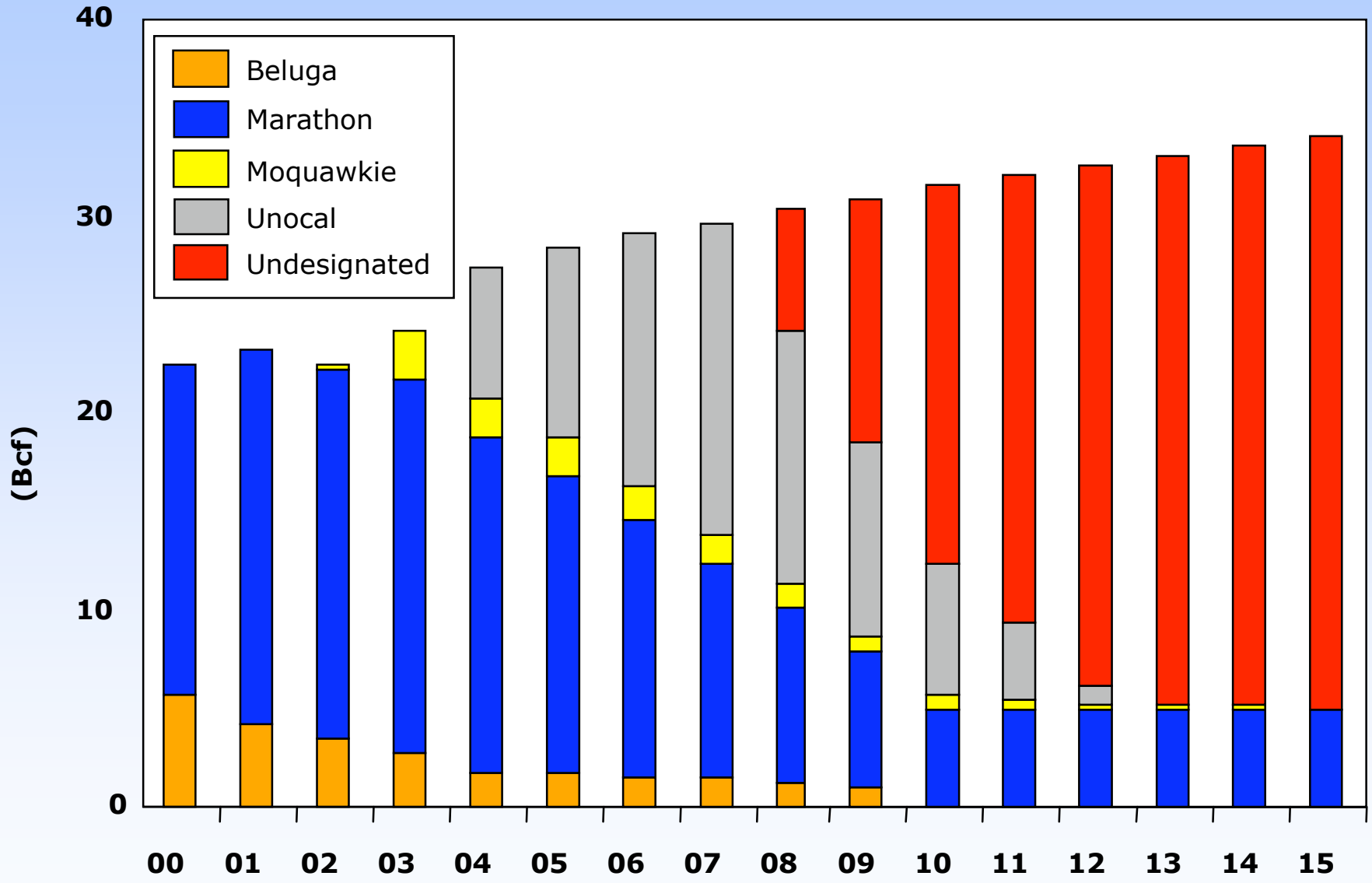
Cook Inlet Exploration Summary – 2003 (2)

- Kasilof Unit – Marathon (Gas)
  - Unit approved in October 2002
  - Well or seismic survey required in 2003, if no well drilled in 2003 it must be drilled in 2004
  - Kasilof South #1 and #1L1 permitted, drilling will begin soon.
- Redoubt Unit – Forest Oil (Oil discovered in 1968 by Pan Am)
  - Production began Dec. 9, 2002
  - Recent drilling results indicate field is more complicated than previously thought; reserves may be reduced
  - Forest has other prospects at Sabre, Corsair, and Valkyrie
- Middle Ground Shoals Field – Unocal & XTO (Oil & Gas)
  - Unocal plans to cease operations at this field and shut down two platforms
  - Decision on "decommissioning" platforms still to come
- Trading Bay Unit/McArthur River Field – Unocal (Oil)
  - T.B.U. #K-13 came on production at 7,100 BOPD, highest rate of any well in Cook Inlet
  - Unit and PA expansions approved to bring boundaries into agreement with producing areas
- Nicolai Ck. Unit – Aurora Gas (Gas)
  - Production started in Oct., NCU #3 well produces at rate of 2 MMCF/day
  - Up to 4 additional wells planned for 2003
- Iliamna Prospect – Pelican Hill
  - Permitting still underway
  - Up to four wells may get permitted

BOPD = barrels of oil per day; MMBO = millions of barrels of oil

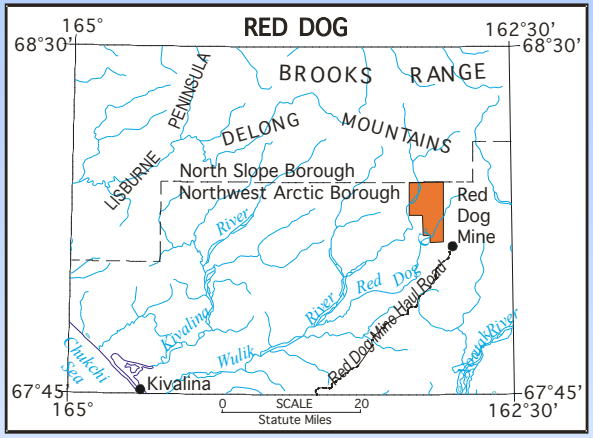
Gas Supply

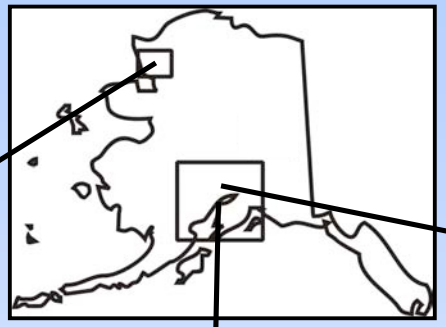
October 2003

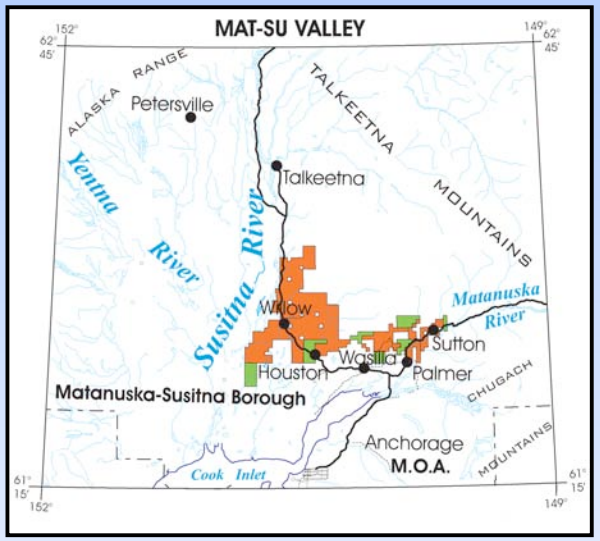


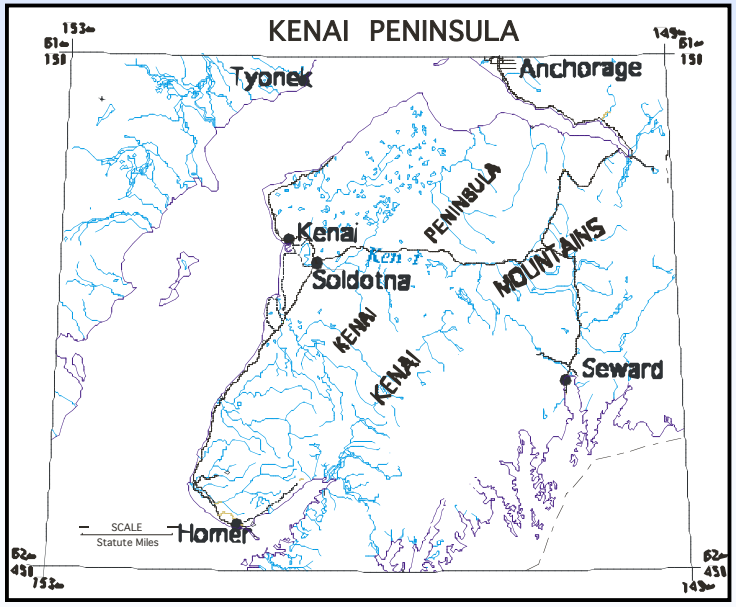
ENSTAR Natural Gas Company
October 8, 2003

Shallow Natural Gas Leasing Program









Issued Leases

Applications

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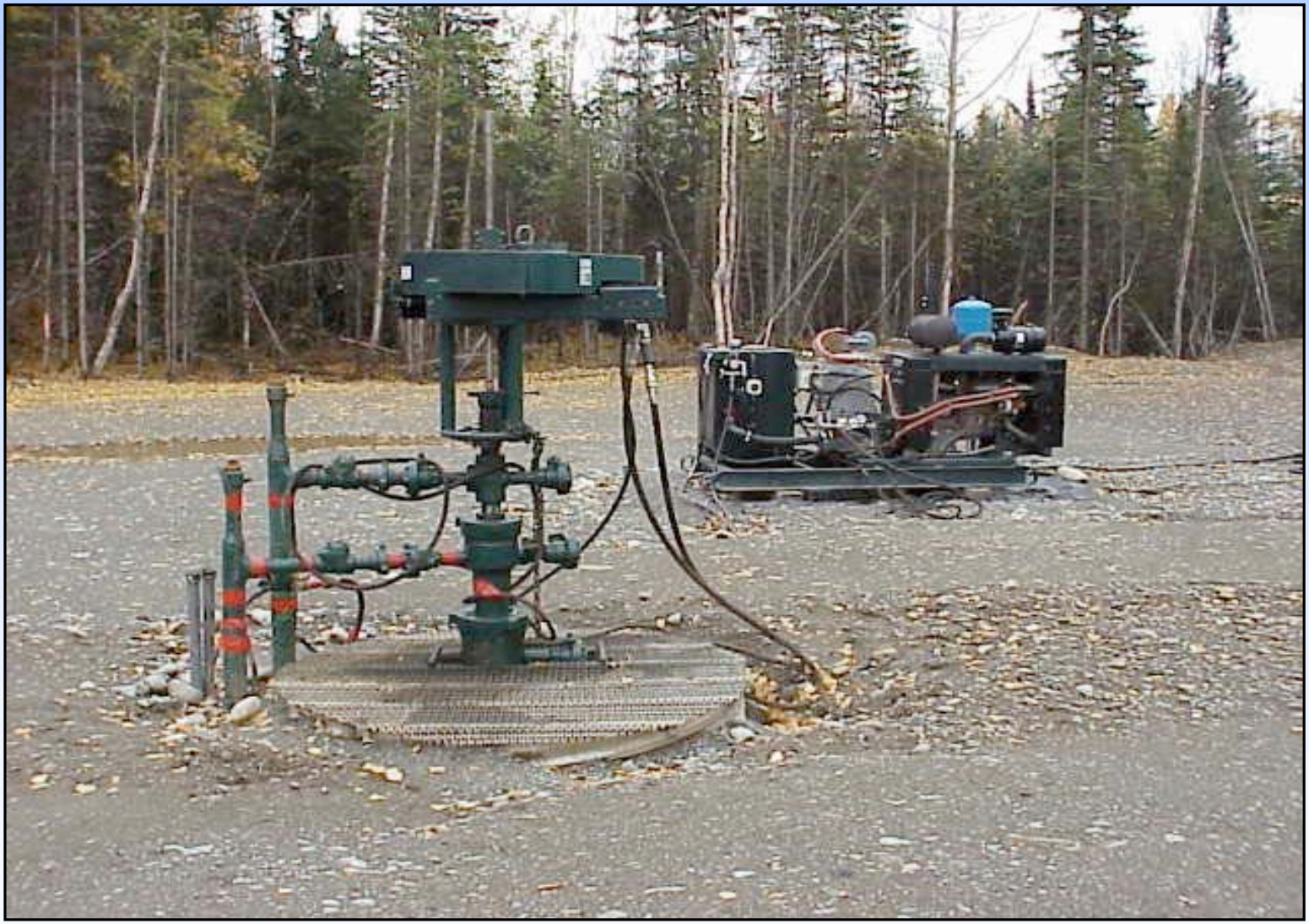
Evergreen Resources

Completed Well and Power Unit

Big Lake, Alaska



Bruce Webb, Division of Oil and Gas

October 1, 2003

Issues Related to Possible Coalbed Methane Development in the Matanuska-Susitna Valley

- **Property Rights:**
  - If the surface owner is different than the subsurface owner, how are conflicts resolved?
  - Is the subsurface owner (or lessee) required to get the surface owner's permission before drilling?
  - What happens if the surface owner says no?

- **Public Notice:** What is the appropriate method of public notice related to coalbed methane decisions?
  - How will a Surface Owner be made aware of coalbed methane development that will occur on their property?
  - Will owners of property nearby coalbed methane development be notified prior to it taking place?
  - Will Plans of Operations be available as public information?

- **Water Impacts:** How will the quantity and quality of water be protected?
  - Surface Water Quality - Sedimentation / siltation from surface disturbance, runoff from potential spills.
  - Aquifer contamination and/or depletion.
  - To what extent will water quality and quantity be monitored?
  - Will re-injection be required for coalbed methane wells?
- **Bonding**
  - What does a damage bond cover?
  - Who decides how much is enough, and how is the amount calculated?

Property Values
  - Potential for decrease in property value because of impacts.
  - Is surface owner responsible to increased property tax due to improvements placed on property?

- **Public Access**
  - Blocking access to public trails.
  - Increases in public access to currently remote areas.

- **Development and Operations**
  - Drilling and Facilities Construction - noise, dust, traffic, inconvenience.
  - Noise (drilling activity and compressors).
  - Visual Impacts.
  - Siting and Design - What considerations are made when locating facilities?
  - Surface Disturbance - What type of disturbance will occur? How large an area?
  - What requirements exist to assure reclamation and restoration?
  - Damages - What guarantees that an operator will compensate for surface damage?

Work Plan for the Project Team – Matanuska-Susitna Valley Coalbed Methane Guidelines

Goal: Mat-Su Valley Coalbed Methane Guidelines to address issues raised by coalbed methane development, including a report to the Commissioner of DNR on the adequacy of existing state and local laws and regulations governing coalbed methane on state and non-state lands.

1. **Gather Public Input on Issues Raised by Coalbed Methane Development**

   Conduct public meetings and attend other public meetings held by local groups to identify issues to be addressed in the guidelines.

2. **Develop Draft Recommendations**

   Project Team analyzes issues, conducts further research, identifies existing state and local authorities (if any) governing the issue, and develops draft recommendations to address the issues.

3. **Work sessions with the public to work on each issue (November/December)**

   The Project Team will conduct work sessions with the public to discuss issues, identify existing authorities, review draft recommendations, and explore approaches to address each issue.

4. **Draft Guidelines**

   Using input from the work sessions, the Project Team prepares a draft of the Mat-Su Valley Coalbed Methane Guidelines.

5. **Public Review of Draft Guidelines**

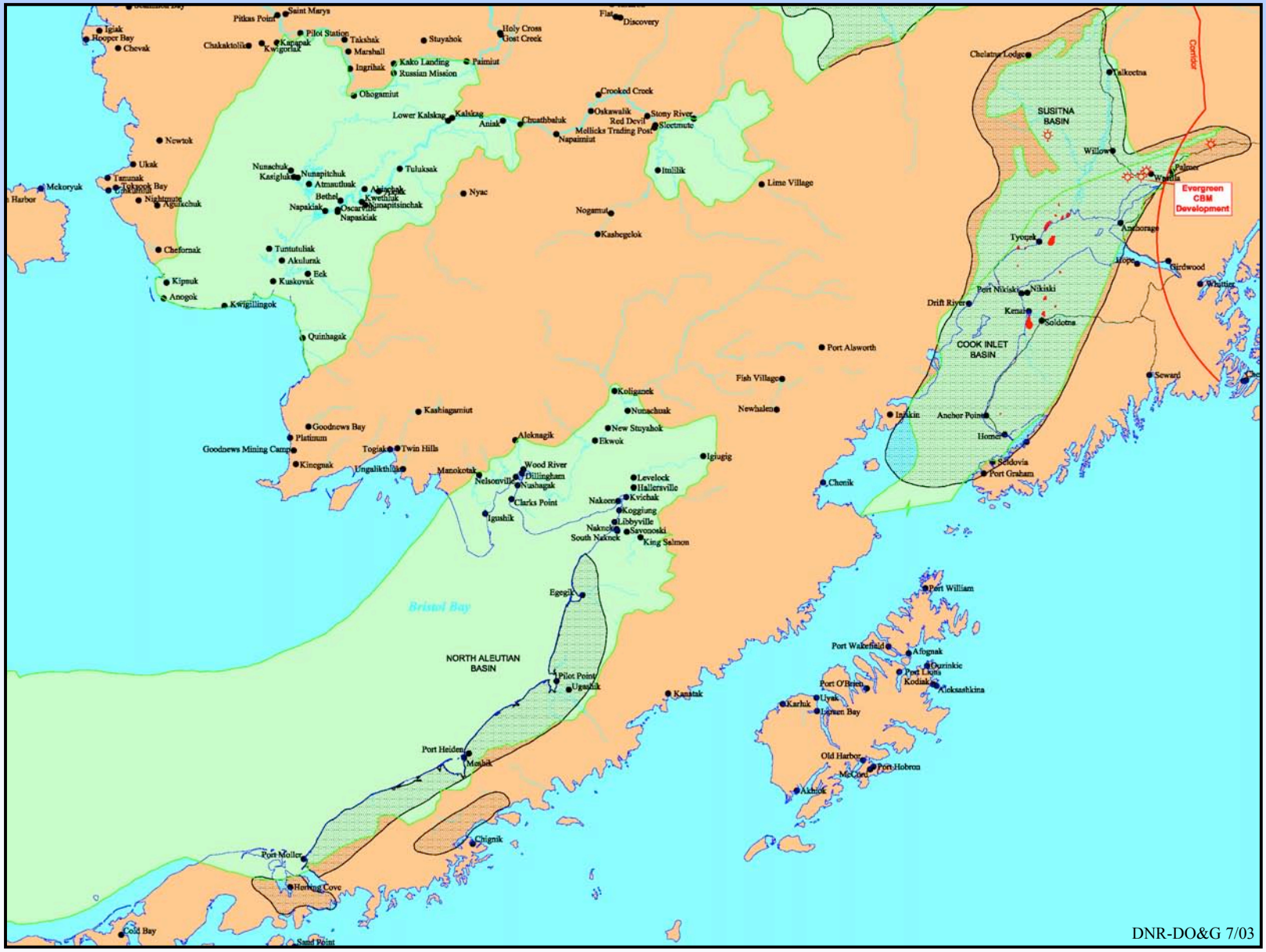
   The Draft Guidelines document is made available for public review and comment.

6. **Finalize and Implement Guidelines**

   Based on comments received during the public review period, the Project Team finalizes Guidelines for adoption by the Commissioner.

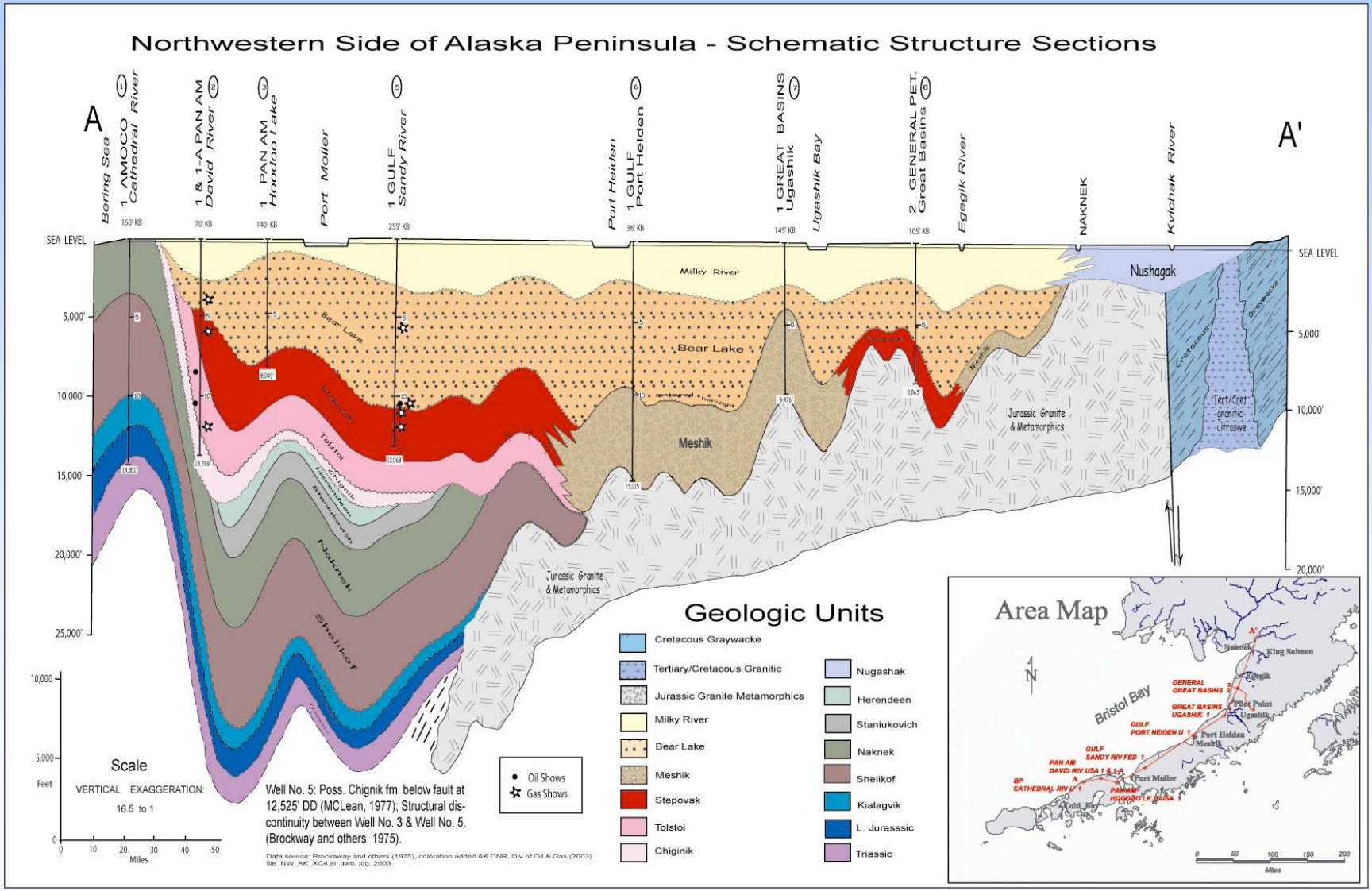
psg/mmc 10/03

Gas Potential – Southcentral and Alaska Peninsula Areas

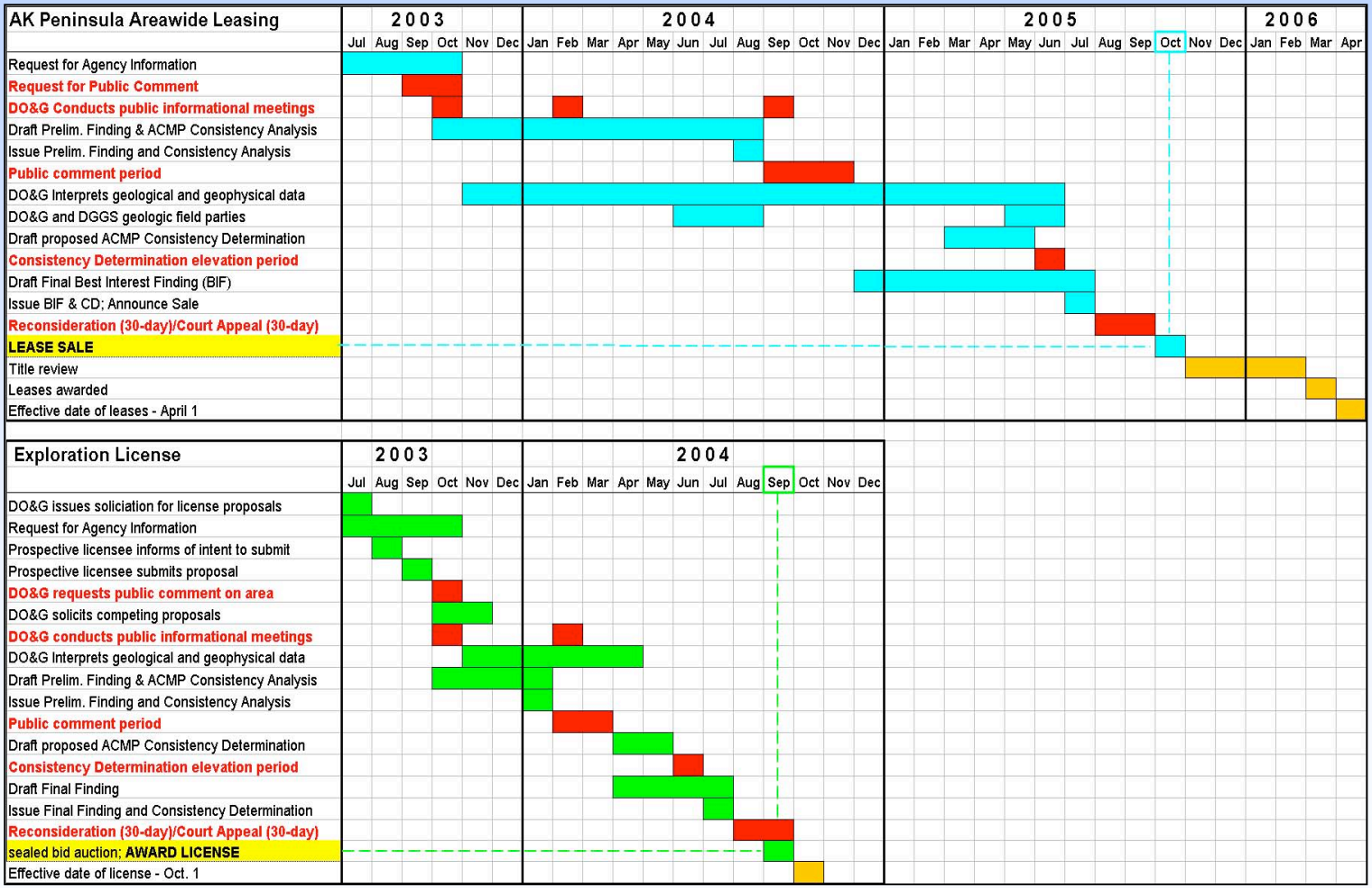


DNR-DO&G 7/03

Alaska Peninsula Geologic Cross Section

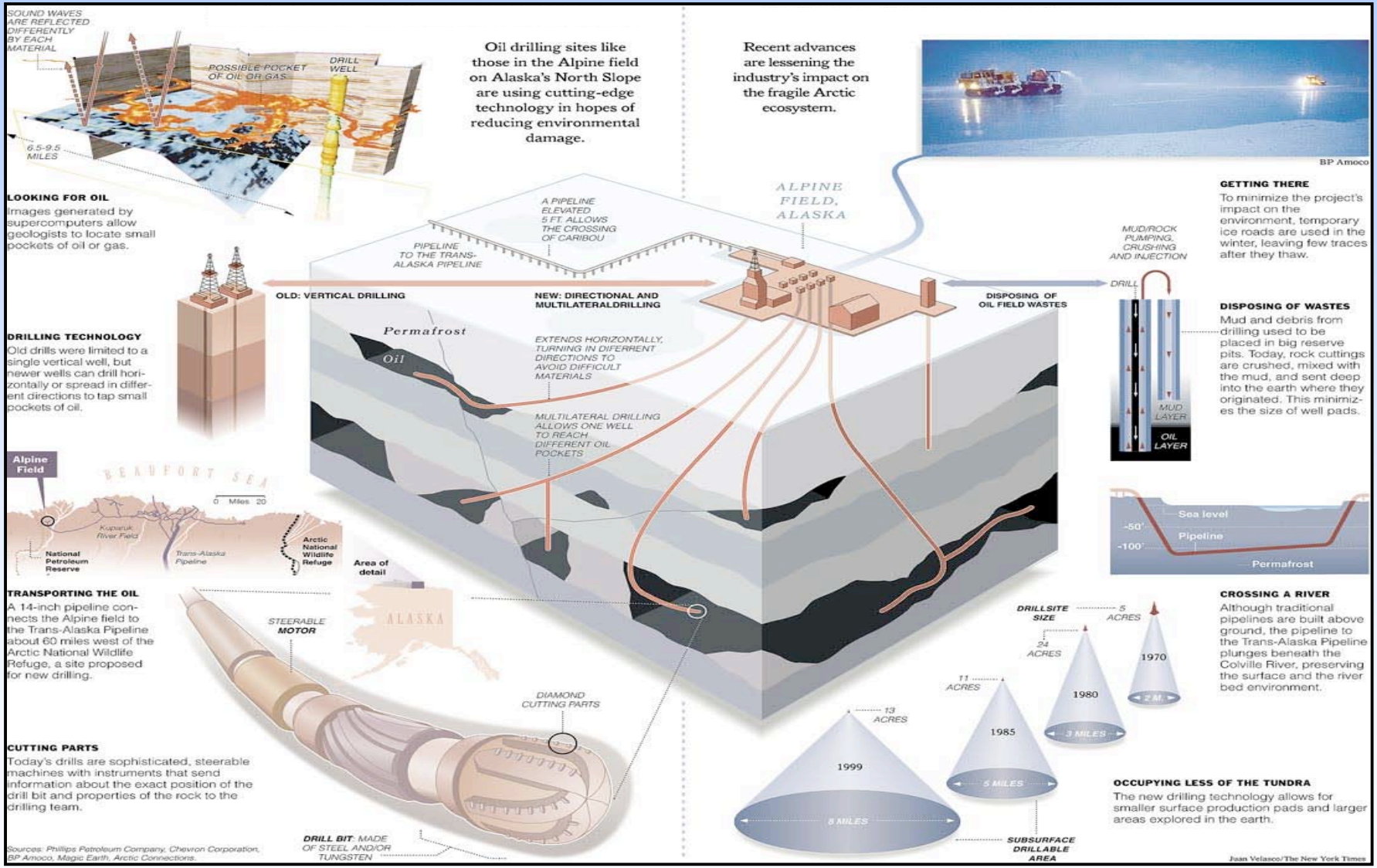


Alaska Peninsula Areawide Lease Sale, and Bristol Bay Basin Exploration License Timelines



jjh 09/03

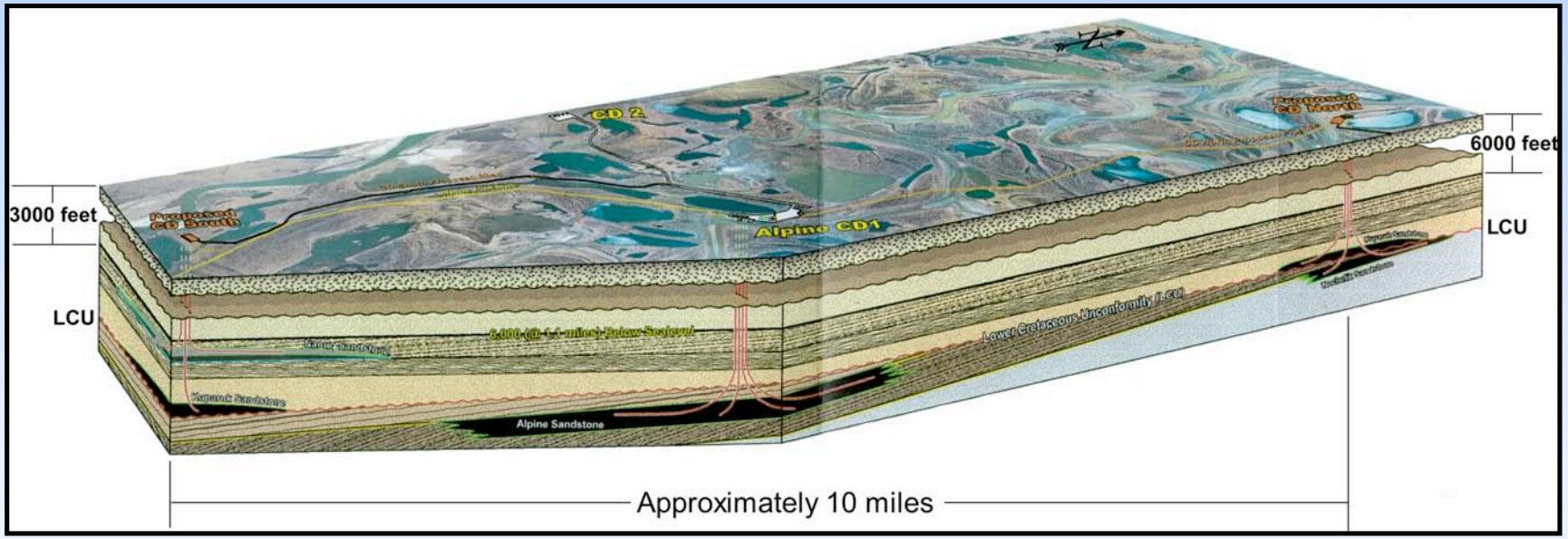
Using the Latest Drilling Technology to Reduce Environmental Damage



Modified from New York Times 3/01

Colville River Unit

Satellite Development



CD1 = Colville Delta Drill Site 1 and Alpine Central Processing Facility
CD2 = Colville Delta Drill Site 2
CD North = (Proposed Pad, Airstrip & Pipelines)
CD South = (Proposed Pad, Road & Pipelines)

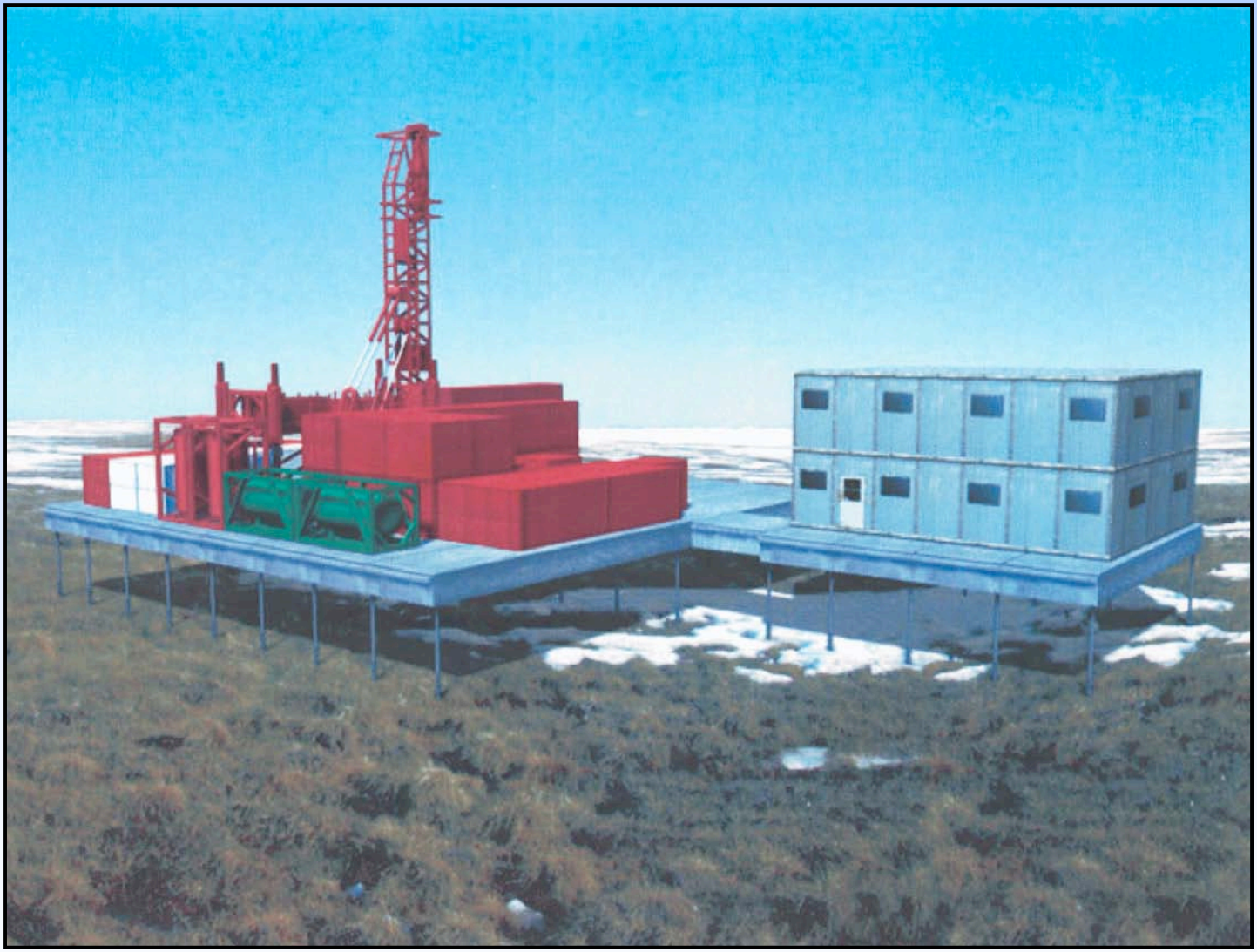
- Proposed Facilites
- Proposed Pipelines with New Vertical Support Members
- Existing Alpine Pipeline Corridor
- Existing Alpine Facilities

Modified from Phillips Alaska Inc. 2001

The Future?

Prototype Drilling Facility

Environmentally Sensitive Areas



Courtesy of Anadarko Petroleum Corporation, 2002

End