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HOUSTE RES



RECORDS CERTIFICATION



I, the undersigned, an employee of the State of Alaska, do hereby certify that the microfilm images on this microform are accurate reproductions of the original records of the State of Alaska as accumulated during the regular course of business, and that it is the established policy and practice of this State to microfilm its records and to dispose of the original documents after microfilm reproductions have been made.

Stan Hubbard

Signature of Camera Operator

6-4-2009

Date

**LIST
OF
FILES**

2007-2008

HOUSE RESOURCES COMMITTEE

LIST OF FILES (PAGE 1)

MICROFICHE #

2/7/07 OVERVIEW: DEPARTMENT OF NATURAL
RESOURCES OIL AND GAS

2/12/07 OVERVIEW: DIVISION OF GEOLOGICAL
AND GEOPHYSICAL SURVEYS-AK GAS COOK
INLET

2/14/07 OVERVIEW: PRODUCER OWNED GAS LINE

2/19 & CONFIRMATIONS BOARDS AND
2/26/07 COMMISSIONS

2/28/07 PRESENTATION: ALASKA MINING
INDUSTRY AND ALASKA NATURAL GAS
DEVELOPMENT AUTHORITY

3/2/07 PRESENTATION: GAS TO LIQUIDS

3/5/07 PRESENTATION: FEDERAL ENERGY
REGULATORY COMMISSION

3/7/07 CONFIRMATIONS: LARRY HARTIG,
COMMISSIONER, DEPARTMENT OF
ENVIRONMENTAL CONSERVATION

3/14/07 PRESENTATION: ENBRIDGE

3/30/07 CONFIRMATION: CATHY FOERSTER,
ALASKA OIL AND GAS COMMISSION;
TOM IRWIN, COMMISSIONER, DEPARTMENT
OF NATURAL RESOURCES

5/7/07 CONFIRMATION: BOARD OF FISHERIES
DENBY LLOYD, COMMISSIONER, FISH
AND GAME

5/11/07 PRESENTATION: NATURAL GAS PIPELINE
PROJECT

6/7/07 TAPS TARIFF PROCEEDINGS, AND OIL
PIPELINE INTEGRITY AND CORROSION
(FILE 1)

6/7/07 TAPS TARIFF PROCEEDINGS, AND OIL
PIPELINE INTEGRITY AND CORROSION
(FILE 2)

HRES25

2007-2008

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1/23/08 PRESENTATION: KENAI RIVER SPORTS
FISHING ASSOCIATION

2/25/08 CONFIRMATION: BOARD OF GAME

3/5/08 PRESENTATION: MINING INDUSTRY

3/12 & CONFIRMATIONS: BOARDS AND
3/14/08 COMMISSIONS

3/17 & CONFIRMATIONS: BOARD OF FISH
3/19/08

EXECUTIVE ORDER 114

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HB 25

HB 26

HB 40

HB 56

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HB 127

HB 128 (FILE 1)

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HB 176

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HB 177 4/10/07

2007-2008
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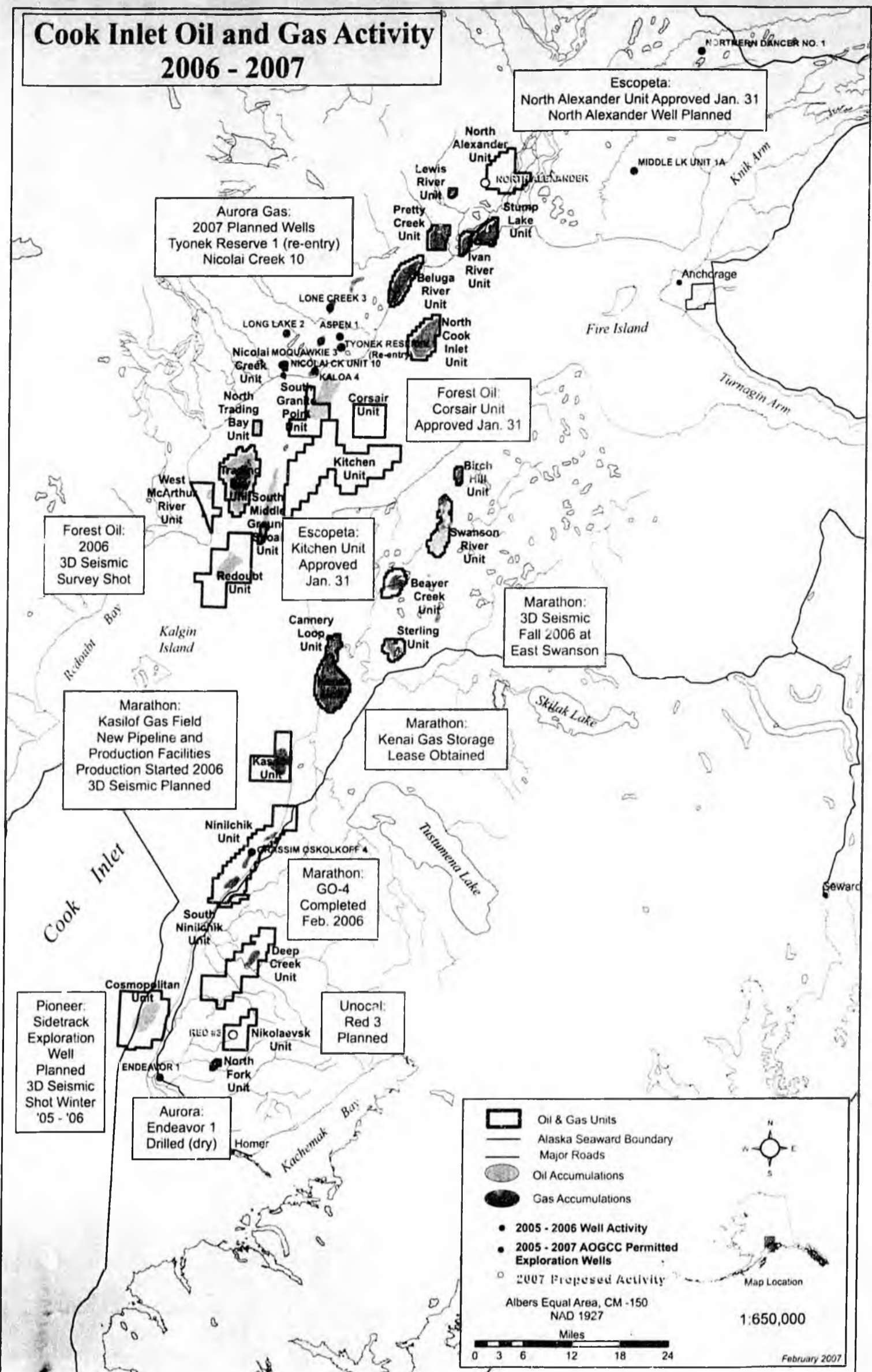
2/7/07

OVERVIEW:

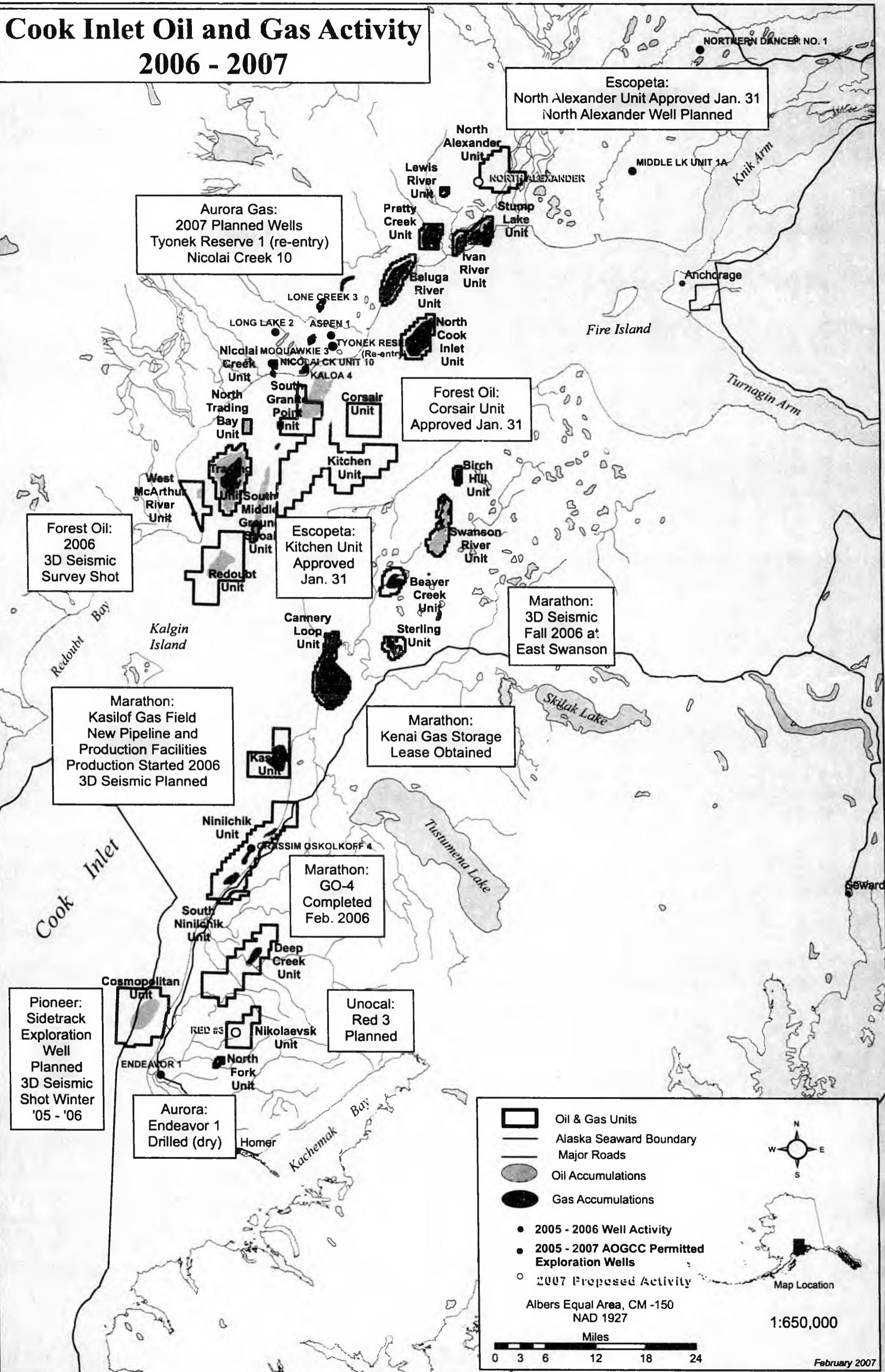
DNR

OIL & GAS

Cook Inlet Oil and Gas Activity 2006 - 2007



Cook Inlet Oil and Gas Activity 2006 - 2007



Escopeta:
North Alexander Unit Approved Jan. 31
North Alexander Well Planned

Aurora Gas:
2007 Planned Wells
Tyonek Reserve 1 (re-entry)
Nicolai Creek 10

Forest Oil:
Corsair Unit
Approved Jan. 31

Forest Oil:
2006
3D Seismic
Survey Shot

Escopeta:
Kitchen Unit
Approved
Jan. 31

Marathon:
3D Seismic
Fall 2006 at
East Swanson

Marathon:
Kasilof Gas Field
New Pipeline and
Production Facilities
Production Started 2006
3D Seismic Planned

Marathon:
Kenai Gas Storage
Lease Obtained

Marathon:
GO-4
Completed
Feb. 2006

Pioneer:
Sidetrack
Exploration
Well
Planned
3D Seismic
Shot Winter
'05 - '06

Unocal:
Red 3
Planned

Aurora:
Endeavor 1
Drilled (dry)

	Oil & Gas Units
	Alaska Seaward Boundary
	Major Roads
	Oil Accumulations
	Gas Accumulations
	2005 - 2006 Well Activity
	2005 - 2007 AOGCC Permitted Exploration Wells
	2007 Proposed Activity

Map Location

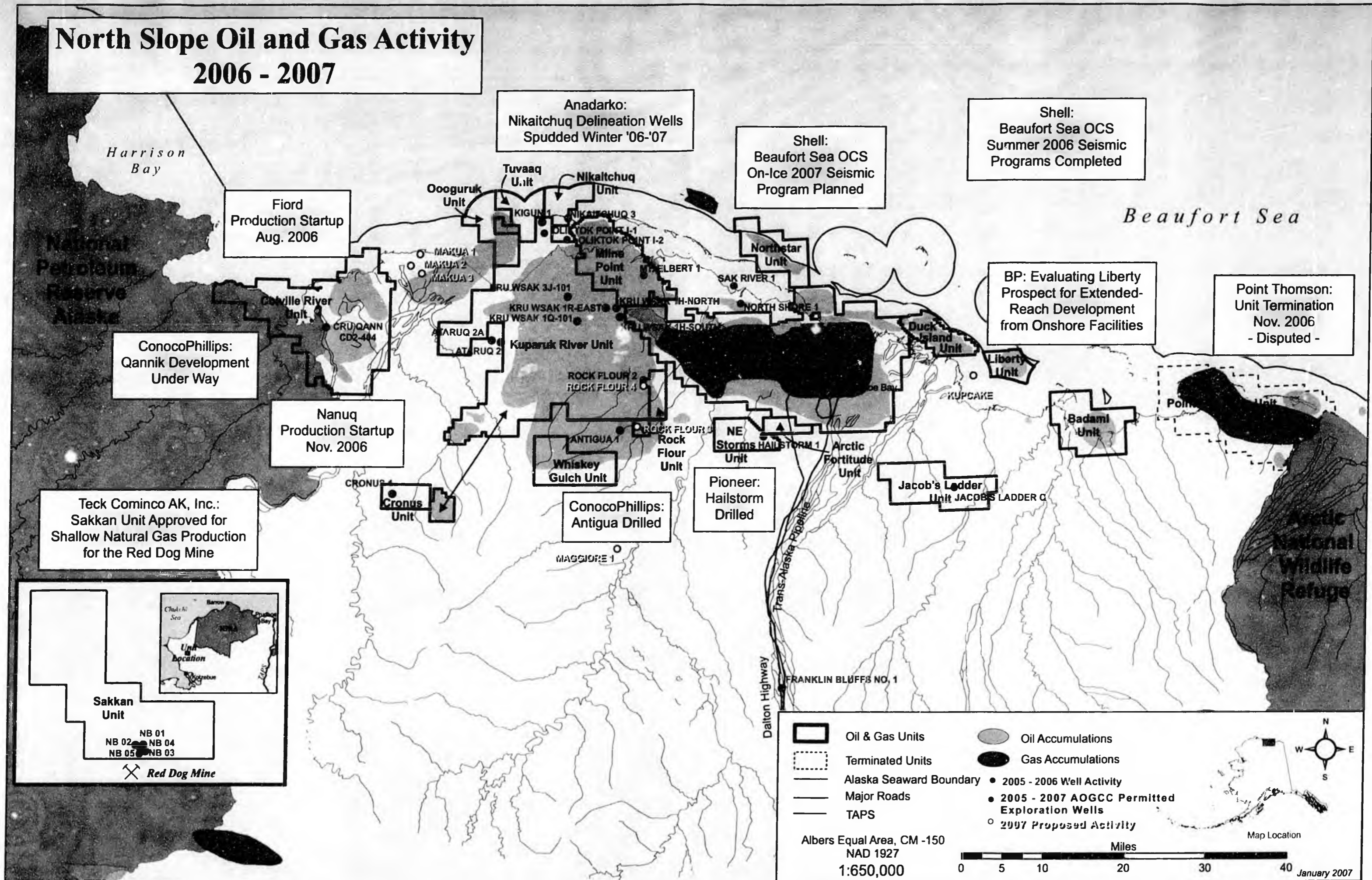
Albers Equal Area, CM -150
NAD 1927

1:650,000

Miles
0 3 6 12 18 24

February 2007

North Slope Oil and Gas Activity 2006 - 2007



Fiord
Production Startup
Aug. 2006

Anadarko:
Niikaichuq Delineation Wells
Spudded Winter '06-'07

Shell:
Beaufort Sea OCS
On-Ice 2007 Seismic
Program Planned

Shell:
Beaufort Sea OCS
Summer 2006 Seismic
Programs Completed

BP: Evaluating Liberty
Prospect for Extended-
Reach Development
from Onshore Facilities

Point Thomson:
Unit Termination
Nov. 2006
- Disputed -

ConocoPhillips:
Qannik Development
Under Way

Nanuq
Production Startup
Nov. 2006

Teck Cominco AK, Inc.:
Sakkan Unit Approved for
Shallow Natural Gas Production
for the Red Dog Mine

ConocoPhillips:
Antigua Drilled

Pioneer:
Hailstorm
Drilled

Sakkan Unit

NB 01
NB 02
NB 03
NB 04
NB 05

Red Dog Mine

	Oil & Gas Units		Oil Accumulations
	Terminated Units		Gas Accumulations
	Alaska Seaward Boundary		2005 - 2006 Well Activity
	Major Roads		2005 - 2007 AOGCC Permitted Exploration Wells
	TAPS		2007 Proposed Activity

Albers Equal Area, CM -150
NAD 1927
1:650,000

Miles
0 5 10 20 30 40

Map Location

January 2007

North Slope Oil and Gas Activity 2006 - 2007

Anadarko:
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Spudded Winter '06-'07

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Beaufort Sea OCS
On-Ice 2007 Seismic
Program Planned

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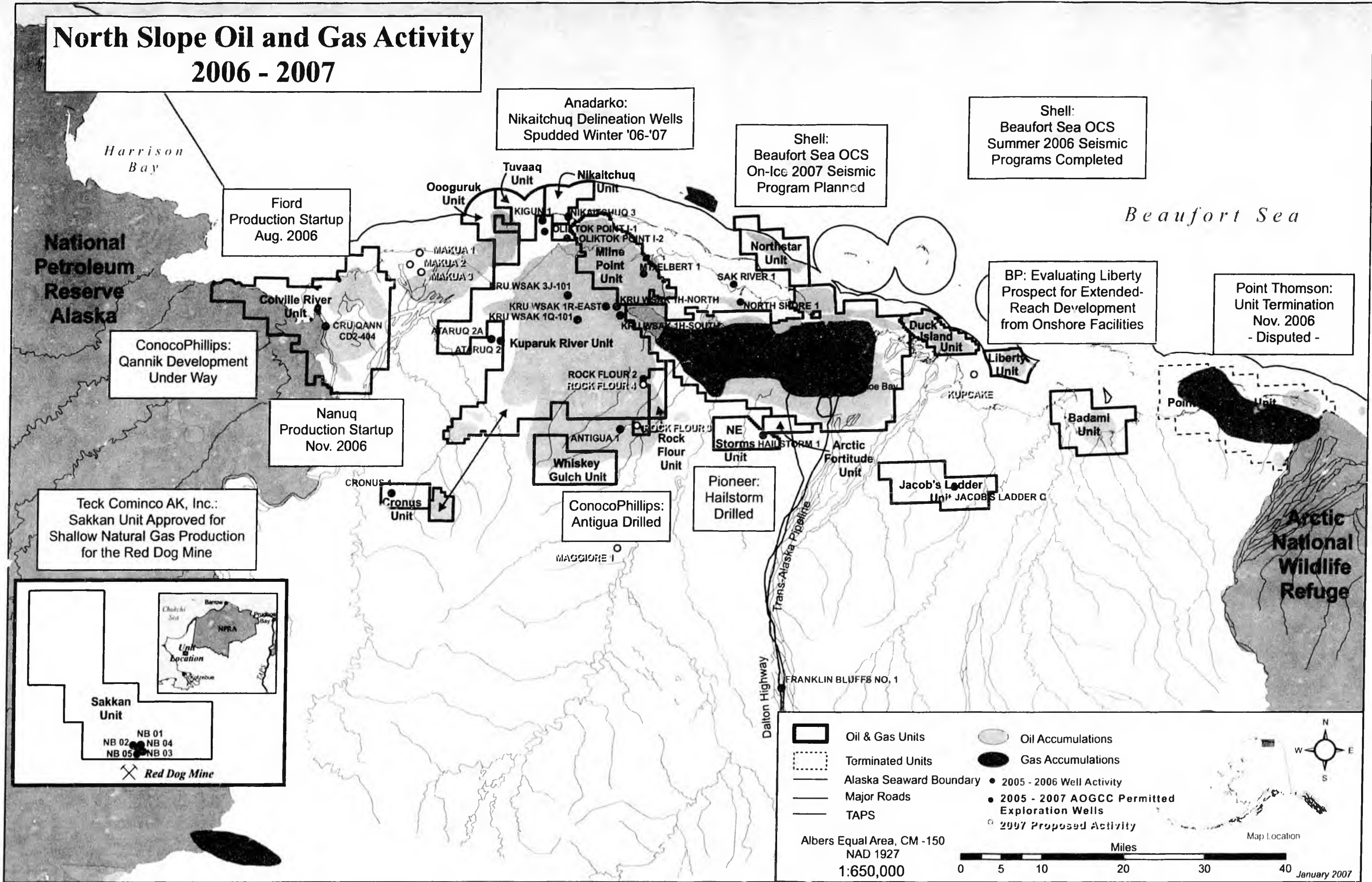
Pioneer:
Hailstorm Drilled

Jacob's Ladder
Unit

Sakkan Unit

NB 01
NB 02 NB 04
NB 03 NB 05

Red Dog Mine



State of Alaska
Division of Oil and Gas

Kevin Banks
Acting Director

February 2007



Alaska Department of
**Natural
Resources**

The Division of Oil and Gas ...

manages oil and gas lands to assure responsible oil and gas exploration and development and maximize revenues to the state.



Core Services

- Encourage exploration and development of Alaska's oil and gas resources
- Maximize revenue from oil and gas production
- Maximize benefits of development and production

GROSS OIL VOLUMES OFF OF STATE LEASES

January 2006 through November 2006

<u>Company</u>	<u>Barrels of Oil</u>
1. ConocoPhillips	92,586,154
2. BP	71,504,716
3. Exxon	41,788,992
4. State of Alaska	32,823,355
5. Anadarko	7,754,658
6. Chevron/Unocal	5,814,851
7. Forest Oil	1,703,775
8. XTO Energy	958,228
9. NANA	20,244
10. Doyon	6,540
Total	254,961,513

The State Revenue Pie

Petroleum Revenue Sources (FY 2006)

**Total Royalties, Bonuses, Rents, Fees & Settlements:
\$2,394.6 Million**

General Fund Royalties, Bonuses, Fees & Rents:¹
\$1,783.9 Million

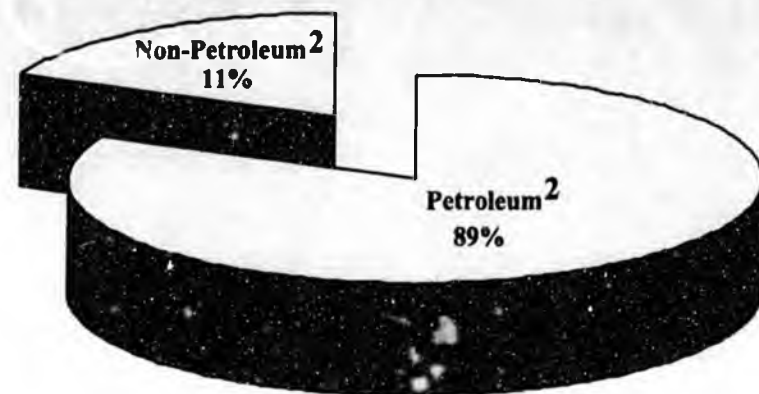
Royalties to Permanent Fund & School Fund:¹
\$610.7 Million

Taxes:

\$1,915.0 Million²

(Oil & Gas Property Tax + Income Tax + Severance Tax)

FY 2006 Unrestricted Revenue

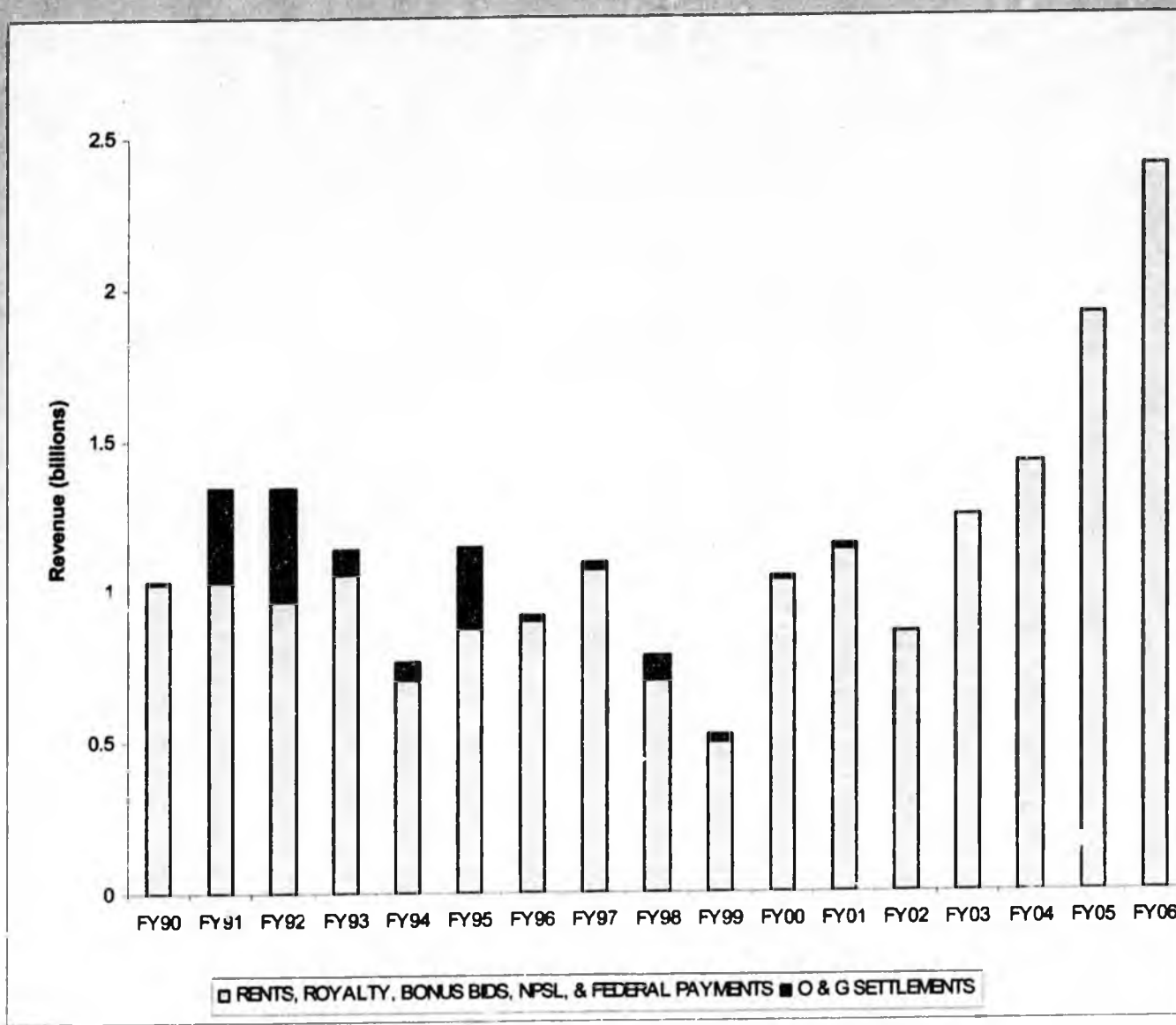


¹ Includes Federally shared rentals + royalties

² Source: DOR Preliminary Fall 2006 Revenue Sources Book

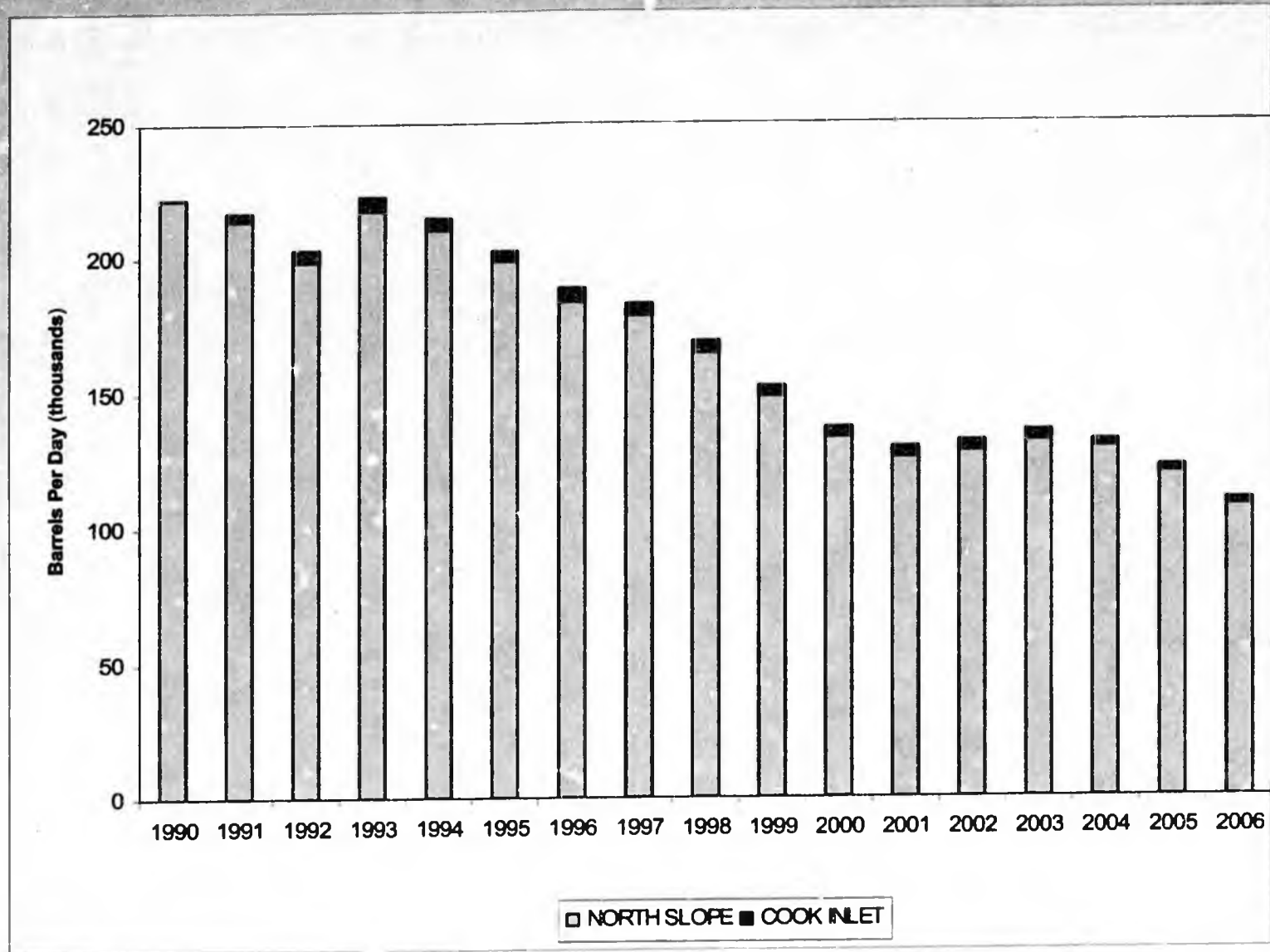
Fiscal Year Oil and Gas Revenue on State Lands

Fiscal Years 1990 - 2006



Annual State Oil Royalty Production

In thousands of barrels per day; fiscal years 1990 - 2006



Achievements in 2006

- Resource Evaluation
- Leasing/Permitting
- Unit Administration
- Royalty Accounting
- Audit
- Commercial

Achievements in 2006

Resource Evaluation

- Evaluated unit applications by analyzing the technical merits of lessees' confidential geological, geophysical, and engineering data
- Evaluated distribution of oil and gas reserves on tracts within participating areas (producing fields)
- Evaluated royalty modification applications in conjunction with the Commercial Section
- Performed technical evaluations on 11 well and 10 seismic applications for DOR Exploration Credit Program.
- Evaluated geological and geophysical data to provide input for areawide lease sales terms

Achievements in 2006

Leasing/Permitting

- Conducted five areawide lease sales in FY 2006, resulting in \$38.2 million in bonus bids
- 1.6 million acres leased, with 402 bids on 360 tracts, and 41 bidding groups participating
- Administered more than 1,200 leases covering nearly 4 million acres generating more than \$7 million in rental income
- Processed more than 1,000 assignments of interests in oil and gas leases

Achievements in 2006

Unit Administration

- Staff managed 38 units producing from 59 participating areas with six new units approved in FY06

- Considered and issued 20 unit and PA decisions in FY 06, including:
 - Six new units
 - Four new PAs
 - One unit expansion
 - Two PA expansions
 - Four unit contractions
 - One PA contraction
 - Two unit terminations

- Currently working on a dozen unit actions in the pre-application phase, including two new units and at least six new PAs

Achievements in 2006

Royalty Accounting

(FY '06)

- Collected \$2,274 million in revenue, including:
 - \$944 million in royalty-in-value;
 - \$1,305 million from royalty-in-kind oil sales, and
 - \$25 million in the state's share of federal rents and royalties

- Processed more than 5,700 production reports

- Reconciled more than 18,900 royalty transactions

Achievements in 2006

Audit

- Staff completed 12 state and federal audits during the past 18 months resulting in the collection of \$2.1 million in additional revenue
- Performed a critical role in the recently completed ExxonMobil royalty re-opener analyzing marine transportation costs
- Audit claims in the amount of \$13 million are currently outstanding

Achievements in 2006

Commercial

- Staff completed a Royalty Settlement Agreement re-opener with ExxonMobil which will result in \$37.9 million in additional revenue to the state, including adjustments to previous RIK oil sales
- Approved a royalty modification for the Ooguruk leases and denied a royalty modification for the Nikaitchuq leases

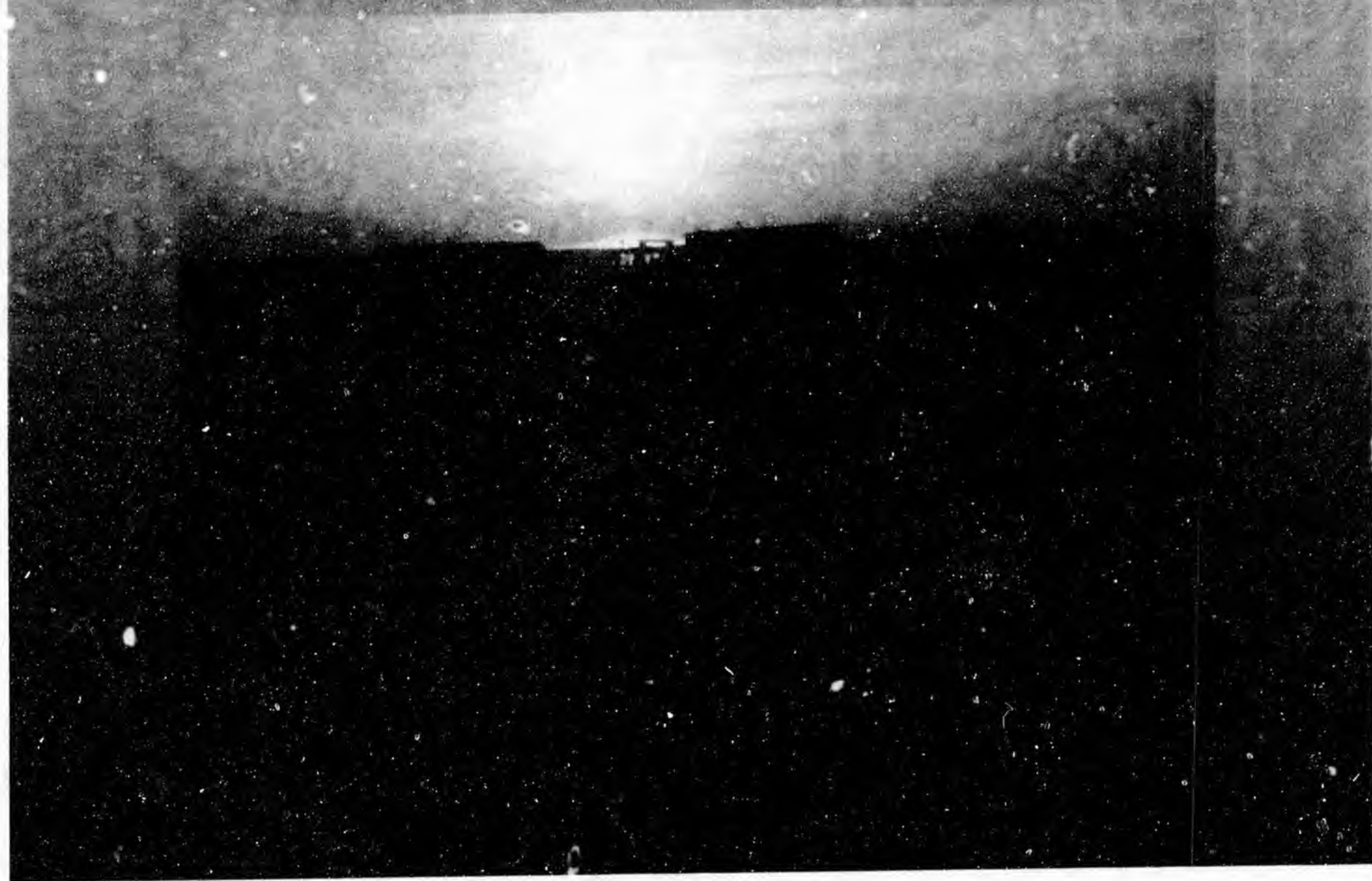
Issues

- North Slope Natural Gas Pipeline
- Point Thomson Unit
- Petroleum Systems Integrity Office
- New Unit Initiatives in Cook Inlet
- Audit and Re-openers

Long-term Issues

- Foster programs to slow North Slope oil production decline
- Facility access

Feedback/Questions



Appendices

Continuing Projects

- Conduct five lease sales per year
- Exploration licensing
- Royalty accounting
- Production accounting
- Data management and GIS systems
- Royalty-in-kind sales
- Royalty reduction requests
- Viscous oil and other challenges related to marginal field development
- Audits and royalty/Net Profit Share settlements
- Royalty settlement re-openers
- Resource evaluation for new units, new and revised participating areas, lease sale areas, and new lease sale areas
- Satellite field development-facility sharing arrangements
- Lease administration-assignments, title and rental
- New units and unit administration
- Pipeline tariffs including TAPS
- Cook Inlet gas: storage and supply
- Permitting for exploration and development activities
- Inspections of oil and gas activities on state lands
- Promote state oil and gas opportunities
- Assist new entrants in start-up activities
- Collaboration with USGS and DGGGS — Gas hydrate research, oil and gas field work
- Cook Inlet DR&R: platforms & pipelines
- TAPS quality bank methodology
- Review technical data submittals and obtain data as required by DOR
- Exploration Incentive Credit programs
- Staff & technical support for DGGGS energy program
- Facilitating reasonable access to existing infrastructure for explorers
- Coordinating and collaborating with federal oil and gas managers — BLM and MMS
- Working with local governments on permitting and zoning concerns
- Evaluating geothermal energy production prospects
- PSIO (Petroleum Systems Integrity Office)

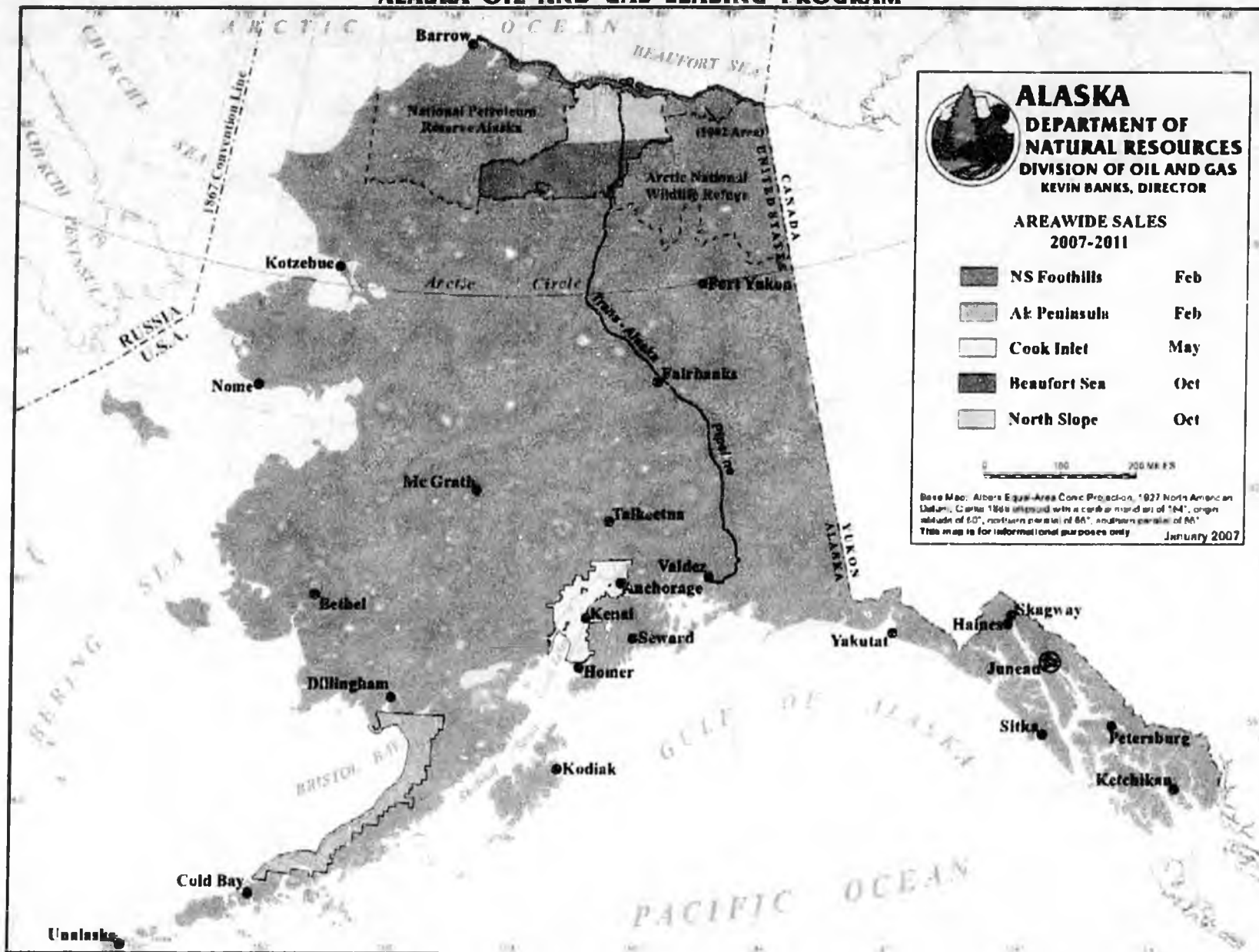
Oil Field Integrity: PSIO

- **Petroleum Systems Integrity Office**
- **Comprehensive oversight program, focusing on proper maintenance**
- **Goal: Increase oversight of oil and gas facilities and activities on state land, ensuring regulatory “gaps” are filled;**
 - **Exercises lease authority through approval and enforcement of Operators’ Quality Assurance Programs;**
 - **State agencies’ existing permitting and enforcement activities continue;**
 - **DNR leads state agencies to ensure comprehensive oversight and coordinated enforcement, as necessary.**

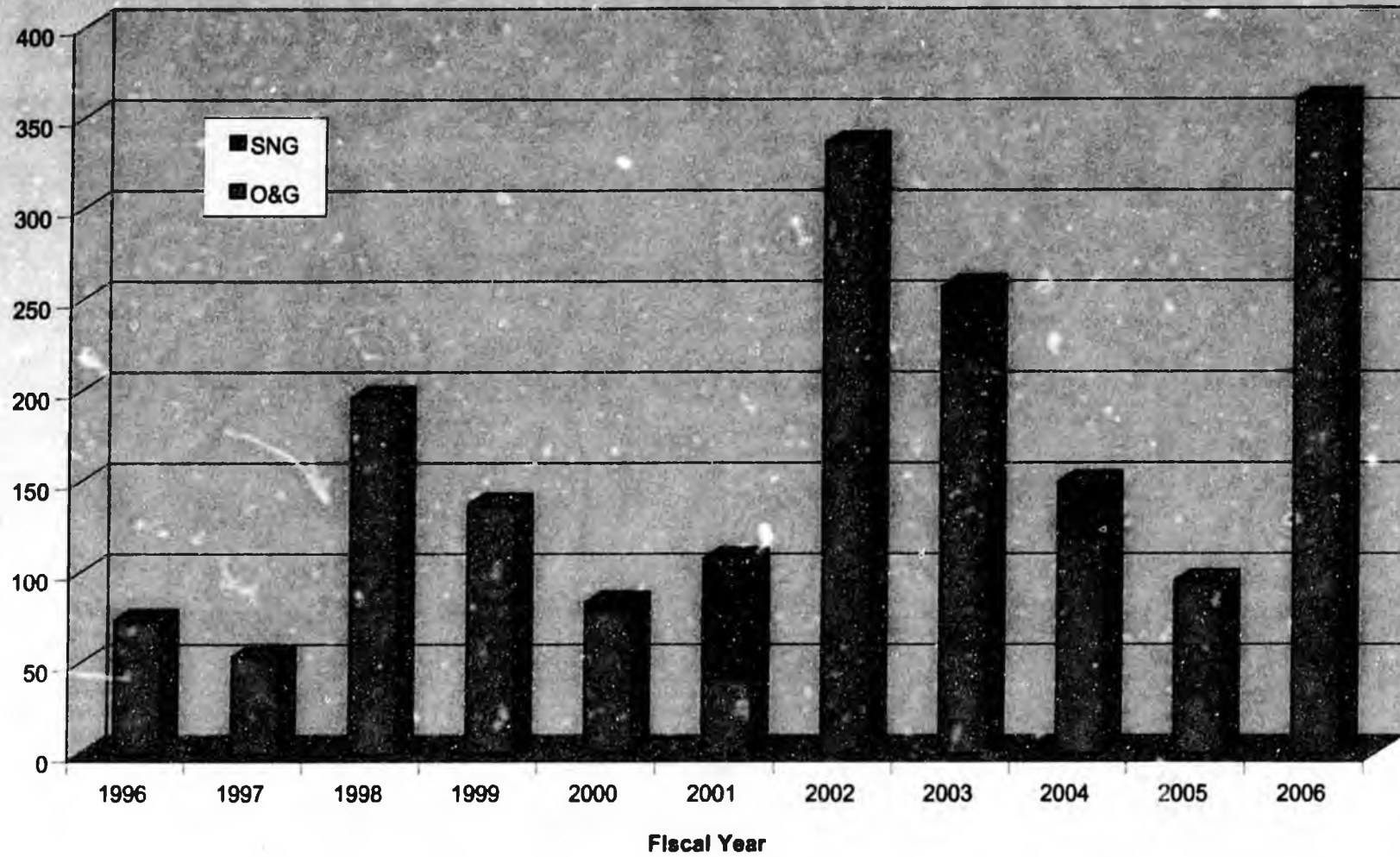
Areawide Oil and Gas Lease Sales

- **Annual Lease Sales:**
 - February: Alaska Peninsula & North Slope Foothills
 - May: Cook Inlet
 - October: North Slope & Beaufort Sea
- **Lease Sizes:**
 - Up to 5,760 acres
- **Maximum Non-unitized state acreage under lease by entity**
 - Offshore – 500,000 acres
 - Onshore – 750,000 acres
- **Term of Lease**
 - 5 to 10 years
- **Annual Rentals**
 - \$1/acre initially, increasing annually by 50¢/acre to maximum of \$3/acre in 5th year

ALASKA OIL AND GAS LEASING PROGRAM



Number of Leases Issued 1996 - 2006



Exploration Licensing Program

- New proposals accepted every April
- Exclusive right to explore for oil and/or gas
- Work commitment, expressed in \$\$
- No rental fees during term of license
- One-time \$1/acre licensing fee
- Right to convert to oil & gas leases (Recently exercised in Copper River license area)

Issued Licenses

Nenana



Nenana Basin
 Licensee: Andex Resources
 Size: 483,175 Acres

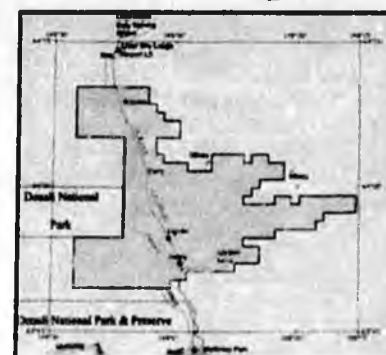
Susitna



Susitna Basin License 1
 Licensee - Forest Oil Corp.
 386,207 Acres
Susitna Basin License 2
 Licensee - Forest Oil Corp.
 471,474 Acres

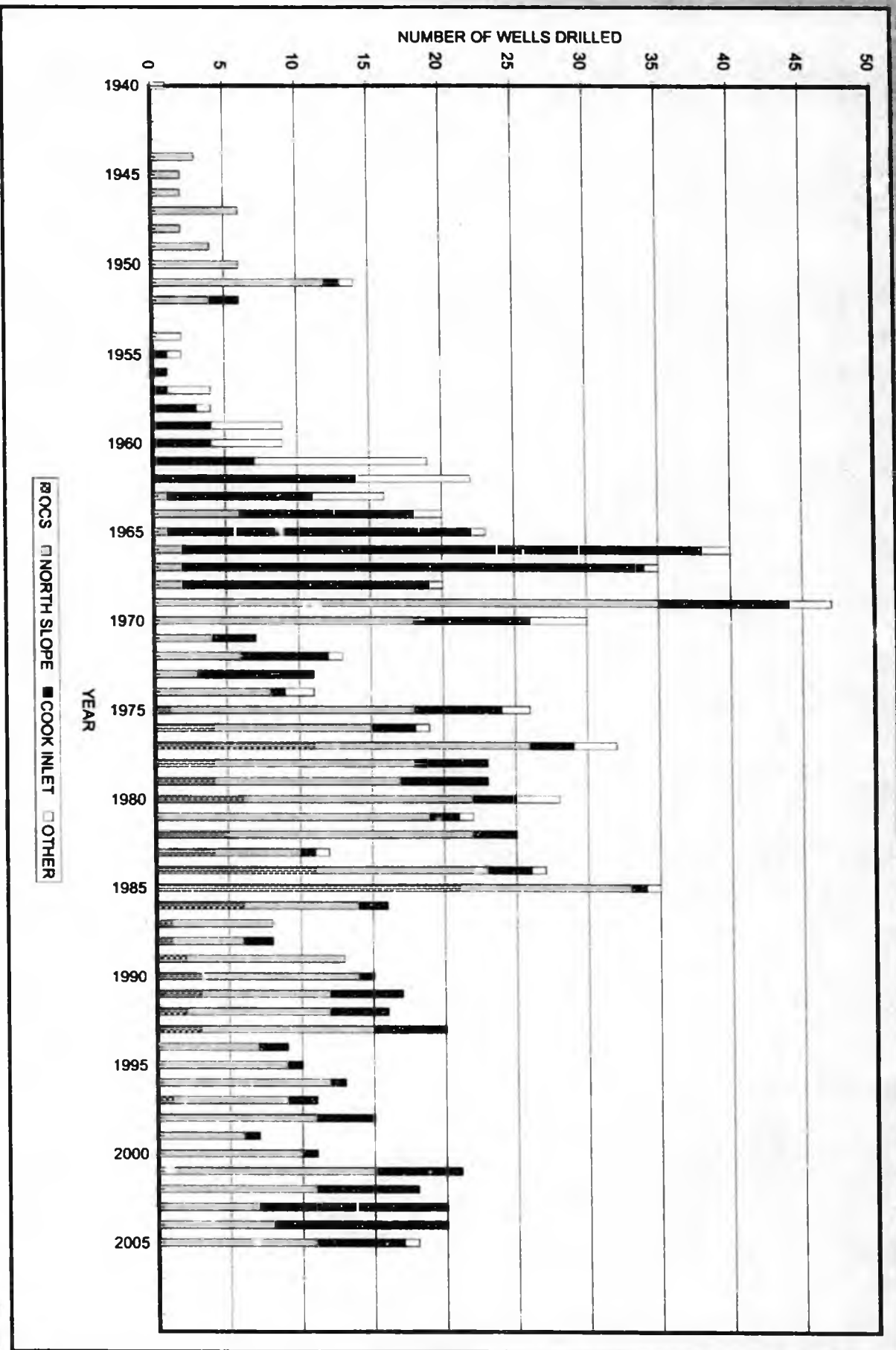
License Proposed

Healy



Healy Basin
 Licensee: Usibelli Coal Mine
 Size: 209,000 Acres

Alaska Exploration Wells



Units

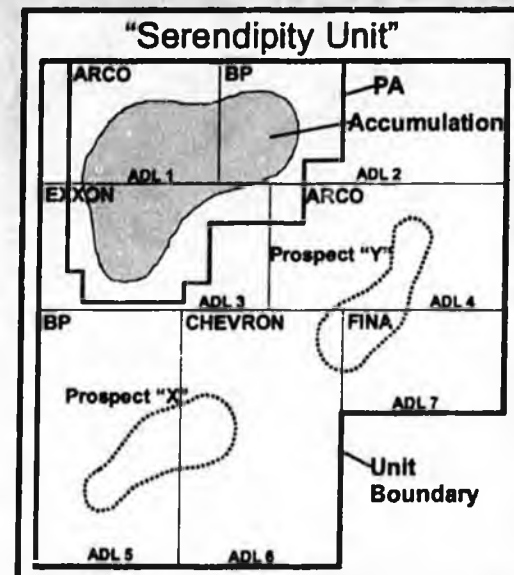
What Are The Common Lease/Unit Administrative Actions?

Unit - Units are groups of leases; units are established to efficiently explore and develop the leases covering one or more potential hydrocarbon accumulations

Participating Area (PA) - That portion of leases in a unit which cover a known or estimated accumulation and to which production is allocated via a unit agreement

Units Actions: Initial Formation
 Technical Evaluations - Reservoir Extent, Paying Quantities
 Negotiations - Unit Agreement
 Work Commitments
 Expansions
 Contractions
 Annual Plan of Exploration or Development

Participating Areas: Initial Formation
 Technical Evaluations - Commerciality
 Tract Allocation Factors
 Field Costs/Processing Costs
 Gas and Gas Liquids
 Fluid Commingling
 Facility Sharing
 Well Test Allocation
 Expansions
 Contractions
 Annual Plan of Development



Growth in Number of North Slope Oil Pools

1996

2006

Endicott

Endicott
Ivishak

Kuparuk River

Kuparuk River
West Sak

Milne Point

Kuparuk River
Schrader Bluff
Sag River

Prudhoe Bay

Lisburne
Niakuk
Prudhoe
N. Prudhoe Bay
West Beach
Point McIntyre

Endicott

Eider
Ivishak

Kuparuk River

Kuparuk River
Tabasco
Ugnu

Milne Point

Kuparuk River
Schrader Bluff

Prudhoe Bay

Aurora
Lisburne
Niakuk
Prudhoe
Raven
Orion Schrader Bluff
N. Prudhoe Bay

Badami

Badami

Colville River

Alpine
Fiord-Kuparuk
Nanuq-Kuparuk

Northstar

Northstar

Ooguruk

Jurassic

Nikaitchuq

Schrader Bluff (pending)

Endicott

Meltwater
Tarn
West Sak

Sag River
Ugnu

Borealis
Midnight Sun
Polaris
Pt. McIntyre
West Beach

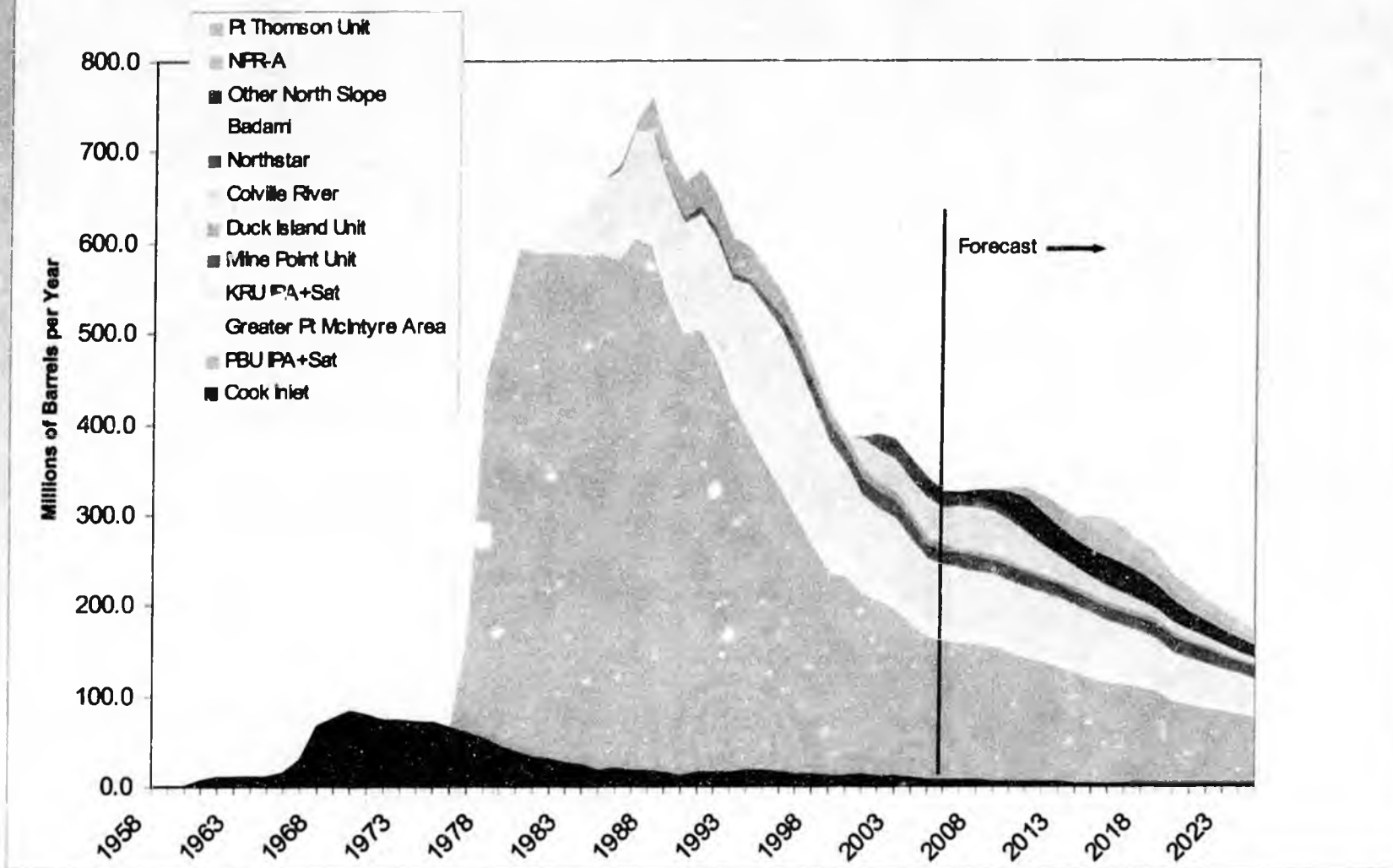
Fiord
Nanuq
Qannik

Kuparuk

Total = 13

Total = 36

Alaska Historic and Projected Oil Production 1958 - 2025



Incentives



Oil and Gas Incentives*

■ Royalty Reduction (DNR)

•AS 38.05.180(j) allows reduction to as low as 5 percent royalty for new production or as low as 3 percent for producing or shut-in fields.

•Reduction in royalties to as low as 5 percent for oil produced from certain Cook Inlet platforms should production fall below specified levels (AS 38.05.180(f)(6)).

■ Exploration Incentive Credits (DNR)

•AS 38.05.180(i) allows up to 50 percent of drilling costs on conventional leases; up to 50 percent of seismic costs on unleased state land.

•AS 41.09.010 allows up to 50 percent of drilling and seismic costs on unleased and licensed lands; up to 25 percent on federal and private lands.

■ Discovery Royalty (DNR)

•AS 38.05.180(f)(4) Cook Inlet Sedimentary Basin. Five percent royalty for 10 years.

•AS 38.05.180(f)(5) applies to the following Cook Inlet fields: Falls Creek, Nicolai Creek, Starichkof, North Fork, Redoubt Shoals, and West Forelands. Five percent royalty on first 25 MM bbls for 10 years or 5 percent royalty on first 35 BCF for 10 years.

■ Exploration Incentive Credits; AS 43.55.025 (DOR)

•Tax credit on wells drilled >25 miles from existing unit boundary (N. Slope*); up to 20%

•Tax credit on wells drilled >3 miles from any existing oil or gas well (N. Slope*); up to 20%

•Tax credit on wells drilled >3 miles from any existing oil or gas well *and* >25 miles from an existing unit boundary (N. Slope*); up to 40%

•Tax credit on seismic exploration activity; up to 40%

■ PPT (DOR)

•AS 43.55.023(a) provides for tax credit for Alaska capex (reinvestment) at 20% rate (may be transferred or carried-forward)

•AS 43.55.023(b) provides for tax credit for 20% of net losses (may be transferred or carried-forward)

•AS 43.55.024 provides a tax credit up to \$12 million for small volume producers, phases out on a sliding scale for large volume producers (not transferable)

*Cook Inlet requirements vary

North Slope Development Activities (1)

2005 - 2006

Project Name	Status	Expected Start-Up Date	Estimated Reserves or Expected Production
BP Gas Hydrate well – Mount Elbert	One exploration well permitted	2007	Not disclosed
CRU Satellite Development: CD3 - Fiord & CD4 - Nanaq. Add 2 Satellite Drill sites for Fiord pool and Nanaq pool	Gravel pads in-place; development drilling started 4th Qtr 2005 and expected to continue through Spring 2008	CD3 - Fiord: August 2006 CD4 - Nanaq: November 2006	CD3 - Fiord: 20,000 - 24,000 BOPD at peak production CD4 - Nanaq: 10,000 - 13,000 BOPD at peak production
CRU ACX-III: Add equipment to optimize Alpine and Alpine Satellites enhanced oil recovery projects and add reserves by recovering and selling heavier condensate components from produced gas stream	Project Completed	December 2006	3,000 - 4,000 BOPD increments!
CRU Satellite Development: CD2 – Qannik	<ul style="list-style-type: none"> • New CD2 gravel in 2006 and facilities installed in 2008 • One well completed and tested 	Mid-2008	Peak annual rate of 4,000 BOPD
Cronus Unit	One exploration well drilled	Evaluating	Not disclosed
Jacob's Ladder	One exploration well permitted	2007	Not disclosed
KRU West Sak	<ul style="list-style-type: none"> • Three multiple tract delineation wells drilled in NE West Sak • Anticipated PA expansion in 2007 	Producing	11,437 BOPD
Kupcake	One exploration well planned	2007 (delayed)	Not disclosed
Liberty Development (OCS)	EIS for onshore extended reach drilling under way	??	120MMBO recoverable (est)
Maggiore #1	One exploration well planned	2007	Not disclosed

North Slope Development Activities (2)

2005 - 2006

Project Name	Status	Expected Start-Up Date	Estimated Reserves or Expected Production
Milne Point Unit - Kuparuk PA	One delineation well planned in 2007	Producing	Not disclosed
Milne Point Unit - Sag River PA	<ul style="list-style-type: none"> • Reprocessing seismic and completing modeling to advance understanding of effective water-flood techniques • C Pad facility upgrade planned • Sag River development wells planned for 2008 	Producing	Not disclosed
Milne Point Unit - Schrader Bluff PA	Two delineation wells planned in 2007	Producing	Not disclosed
Nikaichuq Development	<ul style="list-style-type: none"> • Nikaichuq Unit expansion application to be submitted in 2007 • Two wells drilled in the 2006-2007 season • Currently delineation drilling and constructing facilities 	2008	Not disclosed
Oooguruk Development	<ul style="list-style-type: none"> • Unit expansion application submitted • Island construction complete • Sub-sea pipeline construction under way 	2007	15,000 - 20,000 BOPD
Rock Flour Unit	Two exploration wells planned in 2007	??	Not disclosed
Point Thomson	No development activity - Unit terminated	??	75,000 bbls. condensate/day
Prudhoe Bay Oil and Gas Rim	In 2006 completed facility upgrades and approximately 29-39 rotary drilling penetrations and 16-22 coiled tubing penetrations	Producing	Forecast for initial participating area in 2007 is approx. 350,000 BOPD with downtime and NGLs
PBU Orion and Borealis	Facility expansions and drilling planned over five years as part of WRD expansion	Producing	Forecast approximately incremental 50,000 bopd by 2011 in WRD expansion
(West Sak/Schrader Bluff) Shallow Sands/ Heavy Oil	Continuing drilling and development at PBU/MPU/KRU	Producing	1.0 - 1.5BBO recoverable. 43,000 BOPD current rate 140 MBOPD by 2010 (est)

Cook Inlet Activity Summary - 2006 (1)

- **Beluga River Unit – ConocoPhillips**
 - 3D seismic survey planned for 2006-2007 winter season.
- **Cosmopolitan Unit – Pioneer (Oil discovered in 1967 by Penzoll)**
 - Hansen #1 well P&Aed, successful results.
 - Hansen #1A well completed as oil producer, test production was trucked to Nikisiki refinery.
 - Pioneer intends to drill sidetrack exploration well Hansen #1B to further develop and evaluate unit in 2007.
- **Deep Creek Unit – Chevron**
 - Happy Valley wells drilled in 2004. Some of these wells have been successful, some not.
 - Unocal built gas pipeline connecting Happy Valley pad to Kenai - Kachemak Pipeline (KKPL) . Start-up Nov. 1, 2004.
 - Ongoing gas production from Tyonek and Beluga in the Happy Valley wells.
- **Granite Point – Chevron**
 - Redevelopment of field under way.
- **Kasilof Unit – Marathon**
 - Kasilof South #1 and #1L drilled 2003-2004.
 - Production facilities installed and construction of a 6 inch lateral pipeline from Kasilof South Pad to the KKPL started February 2006. Production started November 2006.
 - A 3D seismic survey over the unit area expected to commence 2006 - 2007 time period.

Cook Inlet Activity Summary - 2006 (2)

- **Middle Ground Shoals Field – Chevron & XTO**

- While XTO continues operations at two platforms, Chevron has ceased operations at this field and placed its two platforms (Baker and Dillon) in lighthouse mode.
- Decision on “decommissioning (REMOVING)” Baker and Dillon platforms still to come.
- (PER BRIAN – Chevron re-evaluating all Cook Inlet development projects)

- **Nicolai Creek Unit – Aurora**

- Field development continues.

- **Nikolaevsk Unit – Chevron**

- Continued evaluation for delineation and development.
- Final year of a three-year plan of exploration.
- No development to date.
- Negotiations under way with Enstar to build pipeline.
- Red #3 planned

- **Ninilchik Unit – Marathon**

- 3 approved Participating Areas within unit area: Falls Creek (FC), Grassim Oskolkoff (GO), and Susan Dionne (SD); 1 new proposed Participating Area: Paxton PA.
 - SD #5 and Ninilchik State #2 wells drilled in 2006.
 - Three new wells planned for 2007.
- Installation of production facilities at the Ninilchik state pad, and construction of a lateral pipeline from Ninilchik pad to KK^{PL} are in progress. These facilities are expected to be operational in early 2007.
- Pad - based compression planned for the G.O. pad in 2007.
- G.O. #4 well completed in 2006.

- **North Cook Inlet Unit – ConocoPhillips**

- Infill drilling and bypassed gas study under way.

Cook Inlet Activity Summary - 2006 (3)

- **North Fork Unit – Gas Pro Alliance**

- Operator considering development.
- Negotiations are underway with Enstar to build a pipeline extension to Homer.
- Two federal leases were recently transferred from BLM to DNR. The unit is now a totally state-managed unit.

- **Redoubt Unit – Forest Oil**

- RU #1, #5a and #7 are currently producing.
- 2004 drilling results indicate the field is more complicated than previously thought.

- **Three Mile Creek Unit - Aurora**

- Unit approved March 25, 2004.
- Unit terminated November 2006 to focus on single lease production.
- Objective is Beluga Formation gas zones bypassed by earlier operator.
- Additional 2-D seismic acquired.
- Three Mile Creek #3 well permitted for 2007.

- **Trading Bay Unit/McArthur River Field – Chevron**

- Chevron refocusing efforts on development in this field.

- **West McArthur River Unit – Forest**

- Continued evaluation of reprocessed 3D seismic data to support additional gas wells.
- New 3D seismic survey acquired – also under evaluation.
- West Foreland #1 and #2 are producing gas on adjacent federal lease, gas allocated to unit.
- Pilot water-flood project to determine potential for additional recovery from the Hemlock reservoir (oil) under consideration.

Cook Inlet Activity Summary - 2006 (4)

- **Aurora**

- Endeavor #1 drilled at Anchor Point, announced as a dry hole.
- Long Lake #2 drilled north of Nicolai Creek Unit, plugged and abandoned.
- Tyonek Reserve #1 and Nicolai Creek #10 permitted.

- **Escopeta**

- Escopeta (and Forest Oil) considering bringing a jack-up rig into the Cook Inlet.
- North Alexander well planned.
- North Alexander Unit proposed.
- Kitchen and East Kitchen Units proposed.

- **Forest**

- Announced intent to sell Cook Inlet producing properties.
- Drilled Middle Lake unit #1A.
- Corsair Unit proposed.

- **Storm Cat Energy**

- Exploration well Northern Dancer #1 drilled in Mat-Su region.

- **Gas Storage**

- Gas storage leases approved at Kenai gas field in 2006 and Pretty Creek in 2005.

- **Recent New Players**

- Storm Cat Energy
- Benchmark Oil and Gas
- Pioneer Natural Resources
- Geo Petro Alliance
- Rutter and Wilbanks

North Slope Reserves & Resources 1/1/2006

Field	Discovery	Produced	Developed In-Place Resource Million Bbls	High In-Place Resource OOIP Million Bbls	Estimated Ultimate Recovery Million Bbls	Cumulative Liquids Million Bbls	Remaining Oil Reserves Million Bbls	Gas Reserves Bcf
Badami <i>BP Exploration</i>	1990	1998	300	500	6	4	2	-
Barrow <i>North Slope Borough</i>	1949	1958						34
Colville River <i>ConocoPhillips</i>	1994	2000	1,264	1,460	647	185	462	400
Endicott <i>BP Exploration</i>	1978	1986	1,157	1,157	585	466	119	843
Kuparuk River <i>ConocoPhillips</i>	1969	1981	7,409	8,492	3,538	2,138	1,400	1,150
Milne Point <i>BP Exploration</i>	1969	1985	2,312	3,062	633	236	397	14
Northstar <i>BP Exploration</i>	1984	2001	250	250	205	90	115	450
Prudhoe Bay <i>BP Exploration</i>			28,807	32,120	15,201	12,203	2,999	24,526
Undeveloped Ugnu & Schrader	1969		-	>10,000				
Pt. Thomson <i>Exxon</i>	1975			400	250		250	8,000
Walakpa <i>North Slope Borough</i>	1988	1992						25
Totals			41,499	57,441	21,059			35,442

North Slope Discoveries & Reserves

1-1-2006

Oil Discoveries Year, Developed In Place Reserves Million Bbls, High In Place Reserves Million Bbls, Estimated Ultimate Recovery Million Bbls, Cumulative Proved Reserves Million Bbls, Remaining Reserves Million Bbls, Gas Reserves Bcf

Field	Year	1990	1996	300	500	6	4	2	2
Reservoir	Year	Million Bbls	Million Bbls	Million Bbls	Million Bbls	Million Bbls	Million Bbls	Million Bbls	Bcf
Badami									
BP Exploration									
Barrow									34
North Slope Borough									
Colville River									400
ConocoPhillips Alaska									
Alpha	2000	1100	1,264	1,480	647	185	482	482	400
Ford - Nechak	2005	60			465	185		280	65
Ford - Kuparuk	2008	20			80	48		48	48
Nansaq	2001	54			170	89	0	88	88
Nansaq - Ripanuk	2000	21			38	28		28	28
Endicott									843
BP Exploration	1978	1,157	1,157	1,157	585	486	119	119	843
Endicott	1985	1130			572	455	117	117	843
Sag Dala North	1988	14			14	8			
Esler	1999	13			13	5	2	2	
Kuparuk River									1,150
ConocoPhillips	1981	7,409	8,482		3,538	2,138	1,400	1,400	1,150
Kuparuk	1981	5100			5,100	2,025	864	864	1,000
West Sak	1971	2000			3,000	481	20	481	180
Tern	1998	138			138	120	73	47	60
Tobacco	1985	48			131	25	11	14	14
Waterloo	2001	125			125	24	10	14	14
Wine Point									14
BP Exploration	1985	2,312	3,082		833	236	397	397	14
Kuparuk	1985	1,000			1,000	382	190	172	14
Schradler Bluff	1989	1,250			2,000	284	46	219	
Sag River	1984	82			82	8	2	8	
Northstar									450
BP Exploration	1984	250	250	250	205	90	115	115	450
Prudhoe Bay									24,578
BP Exploration									
Prudhoe	1969	28,807	32,120	15,201	12,203	2,999	2,999	2,999	24,578
Liburne	1981	3,000	25,000		13,781	11,284	2,487	2,487	23,000
Ohari	2002	1,070	3,000		200	167	43	43	1,000
Aurora	2000	110	1,765		210	205	5	5	
Bovaska	2001	165	150		83	15	49	49	
Polaris	1999	350	280		181	38	114	114	
North Prudhoe	1978	12	12		48	6	43	43	
West Beach	1983	12	12		3	2	1	1	
Nisakut	1984	218	86		9	4	5	5	
Point McIntyre	1983	800	218		106	84	21	21	28
Midnight Sun	1987	40	800		602	397	205	205	500
Undeveloped Ugnu & Schrader	1986		80		28	13	16	16	
PL Thomson	1975								
Exxon									
Waiakpa	1988								
North Slope Borough	1992								25
Totals									
		41,499	57,441	21,039	250	250	250	250	8,000
			>10,000						

Cook Inlet Oil Reserves & Resources

1/1/2006

Field Operator	Reservoir	Discovery Year	Production Year	Remaining Reserves million bbls	Produced (Oil & NGL) million bbls	Estimated Ultimate Recovery million bbls	In-Place Resources million bbls
BEAVER CREEK Marathon Oil Co.	BEAVER CREEK	1972	1973	1	4	6	20
GRANITE PT	total			26	143	169	600
*Union Oil Co of Calif	HEMLOCK UNDEFINED	1965	1992		2		
	MIDDLE KENAI	1965	1967		141		
MCARTHUR RIVER	total			16	631	647	1,530
*Union Oil Co of Calif	HEMLOCK	1965	1967		543		
	MIDDLE KENAI G	1965	1967		63		
	UNDEFINED	1965	1990		0		
	W FORELAND	1965	1969		25		
MIDDLE GROUND SHOAL	total			18	193	211	615
*Union Oil Co of Calif	A	1962	1967		3		
&	BCD	1962	1965		12		
XTO Energy	EFG	1962	1965		178		
REDOUBT SHOAL Forest Oil	UNDEFINED	1968	2002	1	2	3	25
SWANSON RIVER	total						435
*Union Oil Co of Calif	HEMLOCK	1957	1958	1	230	231	
	UNDEFINED						
TRADING BAY	total			3	102	105	385
*Union Oil Co of Calif	G-NE/HEMLOCK-NE	1965	1968		24		
	HEMLOCK	1965	1967		14		
	MID KENAI B	1965	1968		4		
	MID KENAI C	1965	1967		21		
	MID KENAI D	1965	1967		29		
	MID KENAI E	1965	1967		8		
	UNDEFINED	1965	1973		1		
	W FORELAND	1965	1985		0		
W MCARTHUR RIVER Forest Oil	W MCARTHUR RIVER	1991	1993	3	11	14	40
Total				69	2,386	1,386	3,650

*Chevron - dba Union Oil of Calif

Cook Inlet Gas
1/1/2006

<i>Field Operator</i>	<i>Discovery Year</i>	<i>Production Year</i>	<i>Remaining Reserves Bcf</i>	<i>Cumulative Production Bcf</i>	<i>Estimated Ultimate Recovery Bcf</i>
MCARTHUR RIVER <i>*Union Oil Co of Calif.</i>	1965	1967	161	2,314	2,475
KENAI <i>Marathon</i>	1959	1961	140	2,290	2,431
NORTH COOK INLET <i>Marathon</i>	1962	1969	321	1,678	1,999
BELUGA RIVER <i>ConocoPhillips</i>	1962	1963	539	961	1,500
BEAVER CREEK <i>Marathon</i>	1967	1972	36	185	222
KENAI C.L.U. <i>Marathon</i>	1959	1988	69	139	208
IVAN RIVER <i>*Union Oil Co of Calif.</i>	1966	1990	77	77	154
GRANITE PT <i>*Union Oil Co of Calif.</i>	1965, 1993	1967, 1995	13	129	143
MIDDLE GROUND SHOAL <i>*Union Oil Co of Calif.</i>	1962, 1982	1965, 1982	3	125	128
UNDER DEVELOPMENT			266	-	266
Others			121	239	360
Total			1,747	8,139	9,886

*Chevron - dba Union Oil of Calif

Cook Inlet Gas

1/1/2006

Field Operator	Discovery Year	Production Year	Remaining Reserves Bcf	Cumulative Gas Bcf	Estimated Ultima Recovery Bcf
ALBERT KALOA	1968	2004	2	2	4
<i>Aurora Gas</i>					
BEAVER CREEK	1967	1972	36	185	222
<i>Marathon</i>					
BELUGA RIVER	1962	1963	539	961	1,500
<i>ConocoPhillips</i>					
BIRCH HILL	1965			0	0
DEEP CREEK	2003	2004	23	4	27
<i>Marathon</i>					
GRANITE PT	1965, 1993	1967, 1995	13	129	143
<i>*Union Oil Co of Calif</i>					
IVAN RIVER	1966	1990	77	77	154
<i>*Union Oil Co of Calif</i>					
KENAI	1959	1961	140	2,290	2,431
<i>Marathon</i>					
KENAI C.L.U.	1959	1988	69	139	208
<i>Marathon</i>					
KUSTATAN		2005	0	0	0
<i>Forest Oil</i>					
LEWIS RIVER	1975	1984	0	12	12
<i>*Union Oil Co of Calif</i>					
LONE CREEK	1998	2003	2	4	5
<i>Aurora Gas</i>					
MCARTHUR RIVER	1965	1967	16	2,314	2,475
<i>*Union Oil Co of Calif</i>					
MIDDLE GROUND SHOAL	1962, 1982	1965, 1982	3	125	128
<i>*Union Oil Co of Calif</i>					
MOQUAWKIE	1965	1967	2	3	4
<i>Aurora Gas</i>					
NICOLAI CREEK	1966	1968	2	3	6
<i>*Union Oil Co of Calif</i>					

Cook Inlet Gas

1/1/2006

Field	Discovery Year	Production Year	Remaining Reserves Bcf	Cumulative Gas Bcf	Estimated Ultimate Recovery Bcf
NINILCHIK	1961	2003	51	30	80
<i>Marathon</i>					
NORTH COOK INLET	1962	1969	321	1,678	1,999
<i>ConocoPhillips</i>					
NORTH FORK	1965			0	0
PRETTY CREEK	1979	1986	0	9	9
<i>Union Oil Co of Calif</i>					
PIONEER	1999		0	0	0
<i>Evergreen</i>					
REDOUBT SHOAL	1968	2003	1	1	2
<i>Forest Oil</i>					
STERLING	1961	1962	6	6	13
<i>Marathon</i>					
STUMP LAKE	1978	1990	-	6	6
<i>Union Oil Co of Calif</i>					
SWANSON RIVER	1957, 1960	1958	9	63	72
<i>Union Oil Co of Calif</i>					
THREE MILE CREEK		2005	4	0	5
<i>Aurora Gas</i>					
TRADING BAY	1965, 1979	1967, 1980	9	83	92
<i>Marathon</i>					
WEST FORELAND	1962	2001	8	5	13
<i>Forest Oil</i>					
WEST FORK	1960	1962	1	4	5
<i>Marathon</i>					
W MCARTHUR RIVER	1991	1993	1	3	4
<i>Forest Oil</i>					
WOLF LAKE	1998	2001	0	1	1
<i>Aurora Gas</i>					
UNDER DEVELOPMENT			266	-	266
Chevron - dba Union Oil of Calif			1,747	8,139	9,886



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2/12/07

OVERVIEW:

DGGS - AK

GAS COOK

INLET

ALASKA STATE LEGISLATURE
House Resources Committee

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FAX

To: TIM BRADNER From: DEBRA HIGGINS
Fax: 563-4744 Phone: 465-3715
Date: 3/26/07 CC:
Re: HOUSE RESOURCES PRESENTATION FROM 2/12/07
Pages With Cover: 26

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TIM,
ATTACHED IS A COPY OF THE PRESENTATION THAT
BOB SWENSON FROM THE AIC, DIVISION OF GEOLOGICAL
& GEOPHYSICAL SURVEY MADE ON 2/12/07.

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RESOURCES @ 465-4709 MIGHT HAVE A PDF COPY
SHE CAN SEND YOU FROM THEIR 1/31/07 HEARING.
THANKS.

Committee Meetings



(S)RESOURCES
Jan 29 Monday 3:30 PM
*+ SB 46

STANDING COMMITTEE *
BUTROVICH 205
COASTAL MANAGEMENT PROGRAM
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-- Public Testimony --

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Jan 31 Wednesday 3:30 PM
+

STANDING COMMITTEE *
BUTROVICH 205
Presentation: by Division of Geological
& Geophysical Surveys
Cook Inlet Gas: Reality & Exploration
Potential
-- Testimony <Invitation Only> --

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(S)RESOURCES
Feb 02 Friday 3:30 PM

STANDING COMMITTEE *
BUTROVICH 205
No Meeting Scheduled

Bill Root:

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*Tim Bradner -
Pres*

o U.S.G.S.

tim.bradner@alaskajournal.com

Ask Shane

Fax: Tim

563-4744

Debra Higgins

From: Melanie Lesh [melanie_lesh@dnr.state.ak.us]
Sent: Friday, February 09, 2007 3:51 PM
To: Debra Higgins
Subject: House Resources Attachment

Debbie,
Here are directions on how to download to your desktop (or the Print Shop's) this very large file. Open Internet Explorer to this website: ftp.state.ak.us you don't need to use "http" or "www". You should see a window with two folders: INCOMING and TRANSFER. Double click on TRANSFER and you should see a bunch of files. Look for my presentation--it is called "CI Expl Potential_House07". Now just drag this file onto your desktop, and it should copy over. It will take a few minutes. Please wait a couple minutes for me to quit fiddling with it before you try this!

=====
Melanie Lesh
Legislative Liaison
Alaska Department of Natural Resources
Office of the Commissioner
400 Willoughby Ave., Suite 500
Juneau, AK 99801
ph: 907.465.4730 | fax: 907.465.3886
=====

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Printing - Cook ... and lease?
Retention of parcel to facilitate priority?
Flights - change of policy to reflect current mission
Retention?
10% of specific lease target
85% account
Total Budget for public response

Bob Swenson

Alaska Gas Exploration Potential The Cook Inlet and Other Basins

**Alaska Division of Geological & Geophysical Surveys
House Resources**

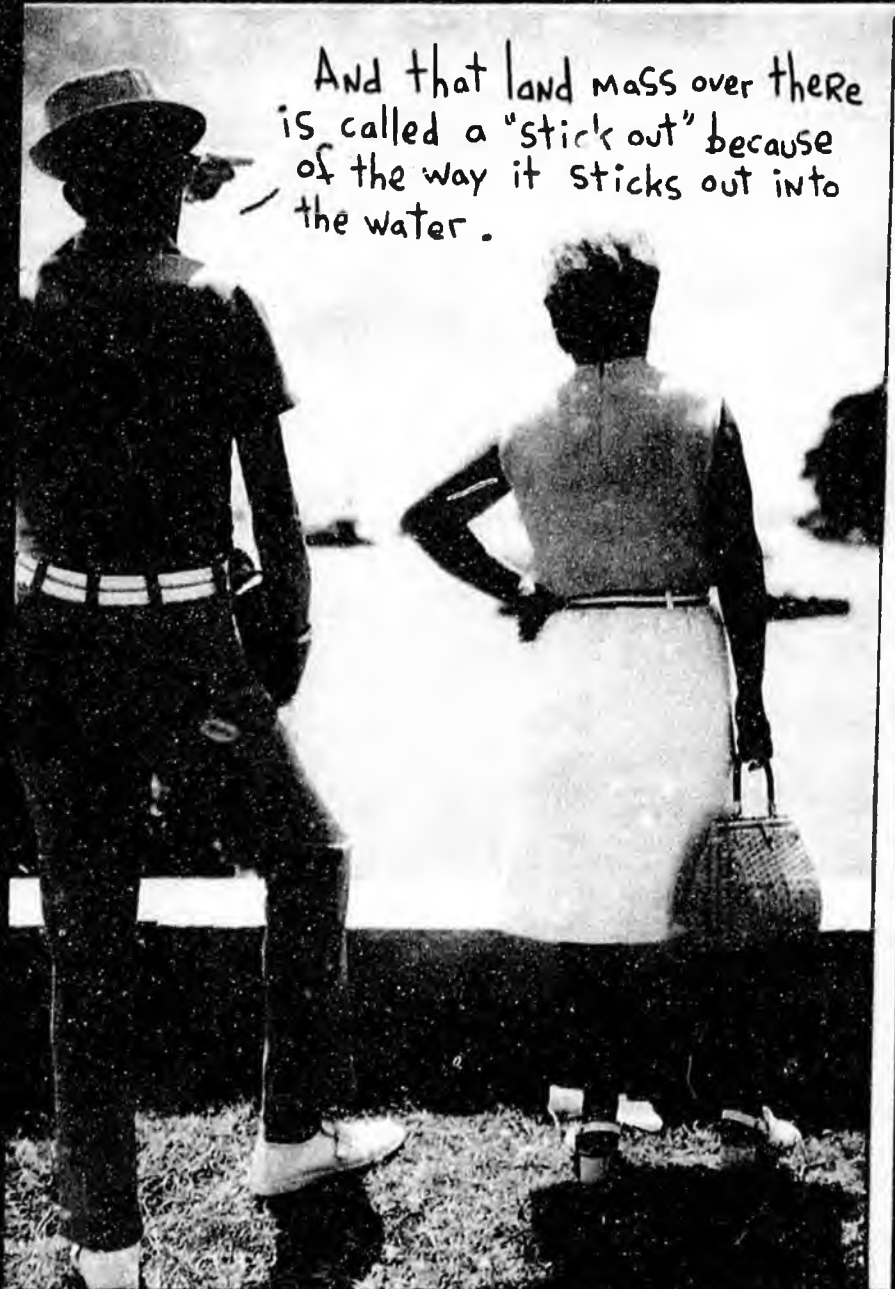


**Bob Swenson
State Geologist
Monday, February 12, 2007**

Take Home Points

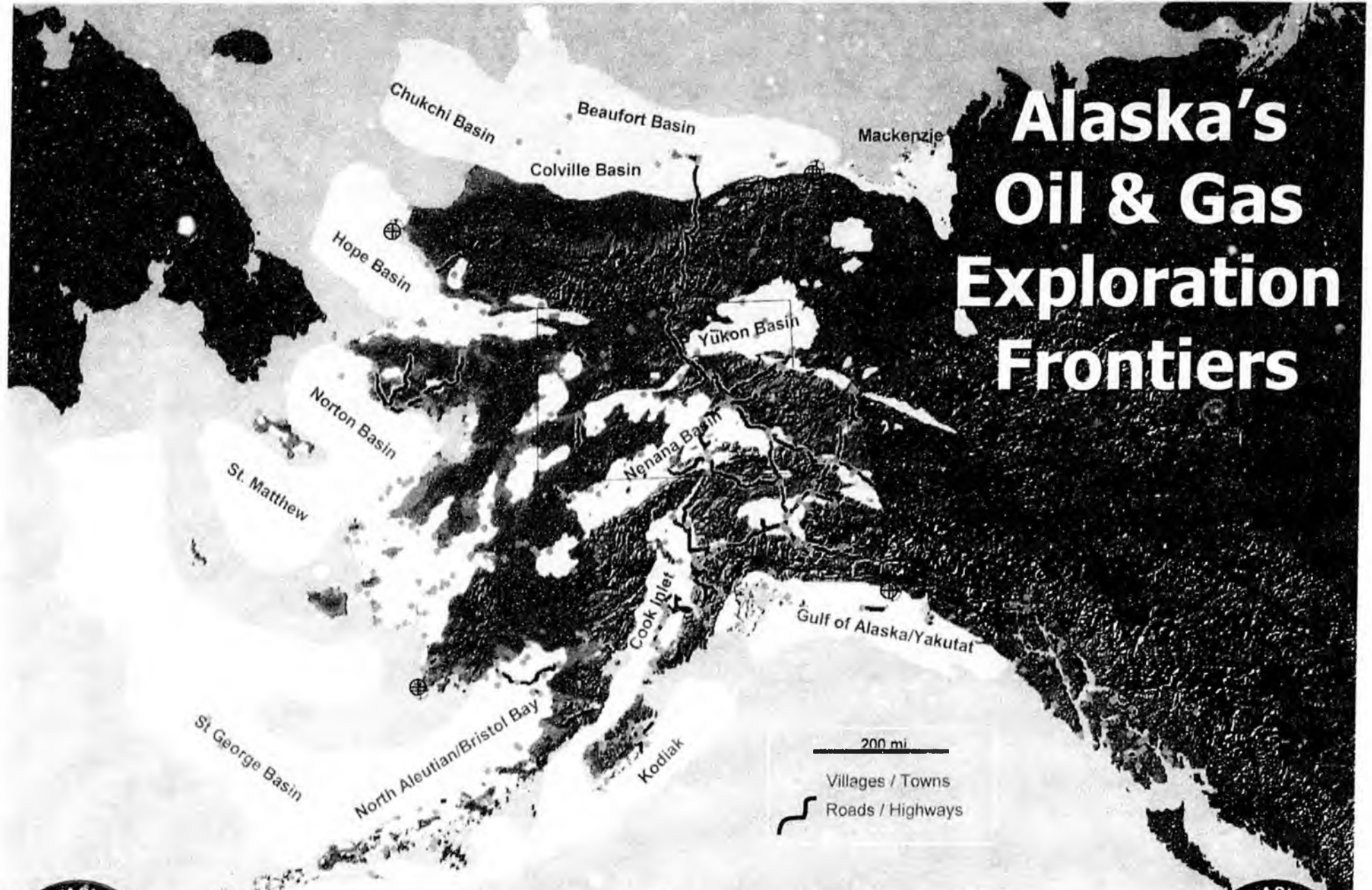
- ▶ Because of market issues, focused exploration for natural gas in Alaskan basins is in its infancy
- ▶ Of the 36+ TCF of gas reserves, nearly all was discovered while looking for oil
- ▶ Published resource assessments often have very large associated 'error bars'
- ▶ Significant exploration potential exists in a number of basins across the state, however economics and access to market will play key role in level of activity
- ▶ In the Cook Inlet, most of the "easy" (inexpensive) gas has been found and delineated

Things You Should Know About Geologists



- They know how to dress for any occasion
- They are usually at the back of the crowd, constantly throwing out trivial geologic information that no-one else cares about
- Are never at a loss for descriptive jargon to show their extreme grasp of the natural world
- There will be many "stick outs" in this presentation

Alaska's Oil & Gas Exploration Frontiers



Sedimentary Basins of Alaska

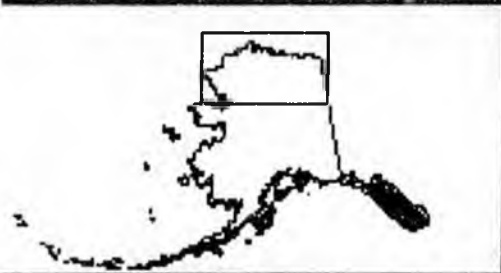
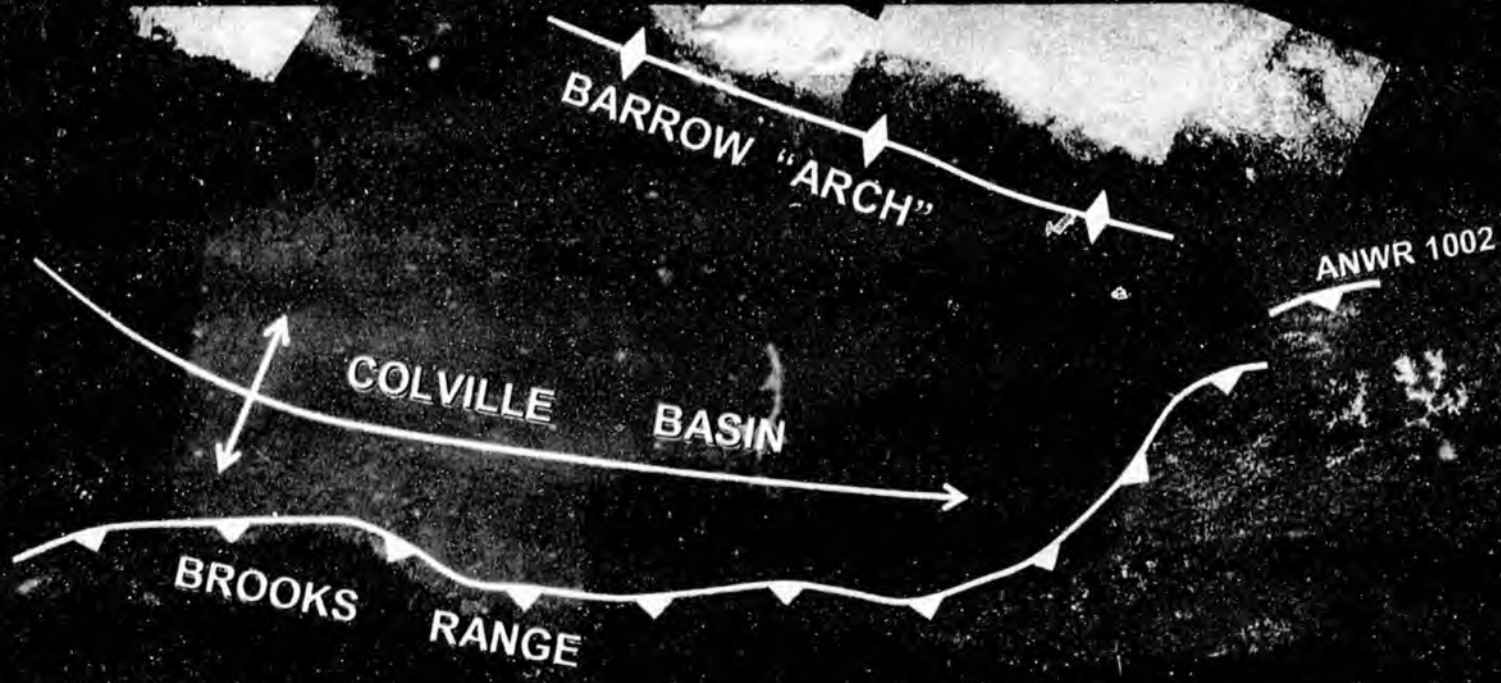
Alaska Division of Geological & Geophysical Surveys

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North Slope

Overview of Regional Geology



Brooks Range Geologic Mapping

Alta Layer

Alta Layer

Panorama Foot

Chlorstone

Upper Panhandle

Lower Panhandle

Alta Layer

Alta Layer

Alta Layer

Alta Layer

DGGS ENERGY SECTION
GEOLOGIC MAPPING
Eastern Brooks Range Foothills

2,053,606