

State of Alaska
Division of Oil and Gas

Oil and Gas Activities

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Acting Director

January 2008



Alaska Department of
**Natural
Resources**

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

The State Revenue Pie

Petroleum Revenue Sources, (FY 2007)

Total Royalties, Bonuses, Rents & Settlements:¹

\$2,158.3 Million

General Fund Royalties, Bonuses & Rents:
\$1,613.3 Million

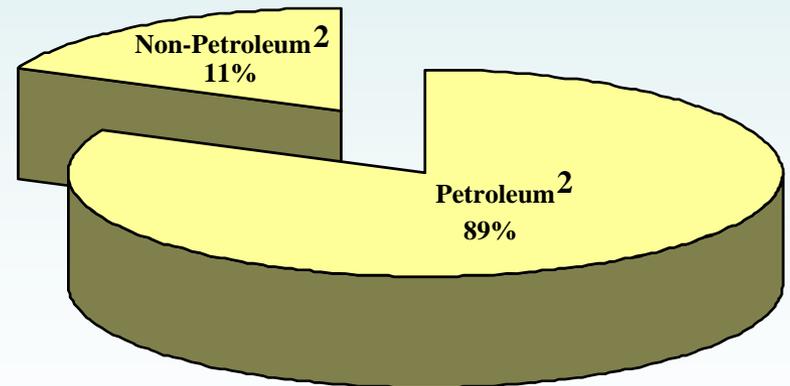
Royalties to Permanent Fund & School Fund:
\$545.0 Million

Taxes:

\$2,952.3 Million²

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

FY 2007 Unrestricted Revenue

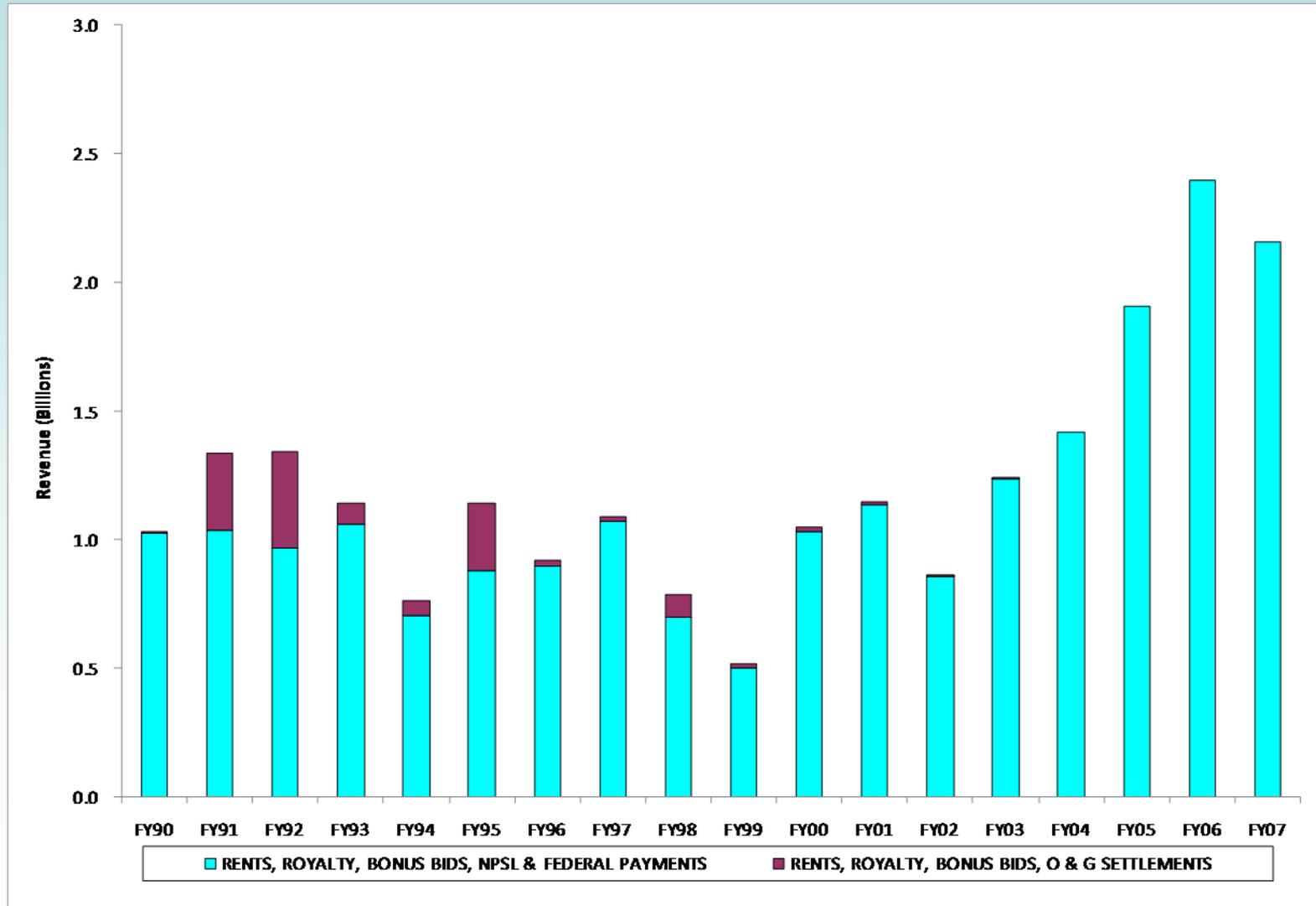


¹ Includes Federally shared rentals + royalties

² Source: DOR Fall 2007 Revenue Sources Book

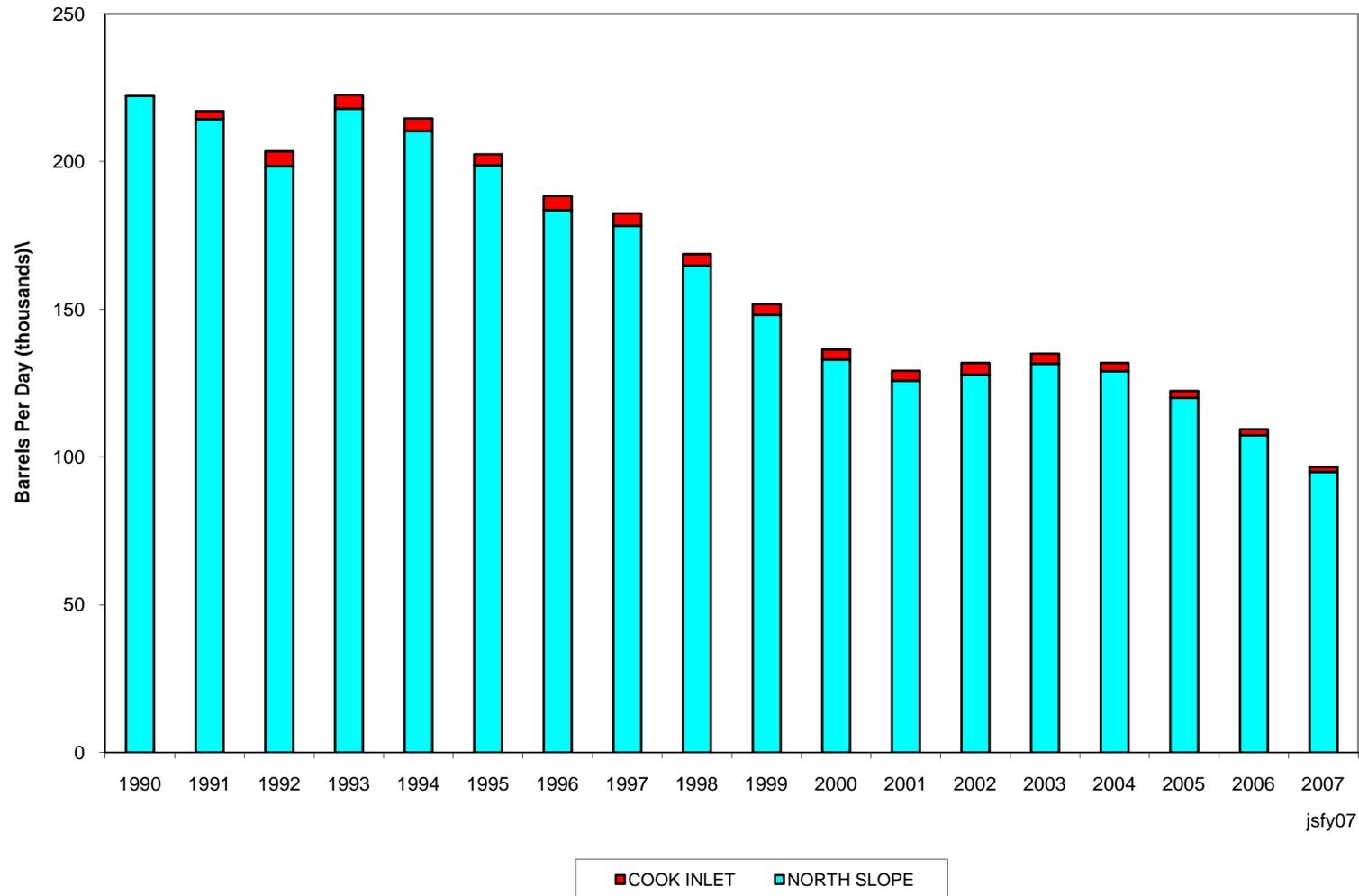
Fiscal Year Oil and Gas Revenue on State Lands

Fiscal Years 1990 - 2007



Annual State Oil Royalty Production

In thousands of barrels per day; fiscal years 1990 - 2007



Achievements in 2007

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

Resource Evaluation

- Geological field work to promote exploration
- Outreach to attract new explorers
- Working closely with new Cook Inlet and North Slope explorers to facilitate exploration activities
- Study of the Prudhoe Bay reservoir and economic impacts associated with gas “offtake”
- Preparation and dissemination of an information package providing independent operators comprehensive information regarding activities in Alaska

Leasing/Permitting

- Hold regularly scheduled lease sales
- Consider and evaluate exploration license proposals
- Rapidly process lease assignments
- Effectively administer oil and gas leases
- Assist smaller companies and new companies through permitting process
- Responsive permitting on time-sensitive projects, to the greatest extent possible
- Interagency coordination on special requests/considerations, to facilitate project approvals by other agencies

Unit Administration

- Adjudicate unit actions in a timely manner
- 86 unit actions adjudicated in FY 07
- Modify Alaska's model unit agreement to encourage development of higher risk projects and accommodate units with multiple royalty owners
- Assist smaller companies through the unit application process
- Increase in number of satellite wells
- Facility sharing

Royalty Accounting

(FY '07)

- Collected \$2.16 billion in revenue:
 - \$1.26 billion in royalty in-kind
 - \$901.4 million in royalty in-value, federal payments, rents, bonuses

- Processed more than 8,600 production reports

- Reconciled more than 33,000 royalty transactions

Audit

- Ensure that the state receives royalty value in accordance with the lease and any subsequent agreements
- Most audits are concluded faster than in previous years:
 - Cook Inlet audits are up to date
 - ExxonMobil and ConocoPhillips are up-to-date
- Provide assistance to new companies regarding the audit and royalty accounting systems so that there are no surprises and the companies can build models correctly
- Assisted Department of Revenue drafting AGIA regulations on qualified expenditures

Commercial

- Royalty Reduction - AS 38.05.180(j)
- Royalty in-Kind
- Gas Pipeline
- Exploration and Production Incentives

PSIO

Petroleum Systems Integrity Office

PSIO: Petroleum Systems Integrity Office

Responsibilities:

AO 234 establishes three primary tasks for the PSIO:

- 1) A comprehensive assessment of agency authorities, jurisdictions and practices, commonly referred to as the “Gap Analysis;”
- 2) Establishment of industry quality assurance programs, and compliance checks; and;
- 3) Coordination of state and federal agency efforts on oil- and gas-related activities and issues in the state, as necessary.

PSIO: Petroleum Systems Integrity Office

Accomplishments to Date:

1. A three-phase approach is established for the Gap Analysis; Phase I of the Gap Analysis will be released for agency review and comment in February 2008;
2. Structure of the industry Quality Assurance program is established; coordination of next steps will proceed in early 2008;
3. Testimony was presented to the U.S. House of Representatives relative to the Prudhoe Bay Unit events of 2006, and coordination of relevant issues continues;
4. Coordination with federal partners regarding remedial actions in the Prudhoe Bay Unit are reaching conclusion;
5. Coordination with state and federal partners is ongoing relative to system integrity issues in five major investigations.

PSIO: Petroleum Systems Integrity Office

Plan for FY09 and beyond:

Accomplishment of identified tasks from AO 234 will proceed:

1) Phase II of the Gap Analysis, development of alternatives to address gaps or duplications, will be initiated in late FY 08.

Completion of Phase II and Phase III, selection of alternatives, development of action plans, and implementation are planned in FY 09.

2) Establishment of the state's umbrella Quality Assurance (QA) program requirements will enable evaluation of operator QA programs, and corrective action where necessary. Frequent compliance checks will be performed to ensure implementation of approved programs is effected.

3) Ongoing work efforts relative to investigations is expected.

Issues

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

Long-term Issues

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

Feedback/Questions



Appendices

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



ALASKA
DEPARTMENT OF
NATURAL RESOURCES
DIVISION OF OIL AND GAS
 KEVIN BANKS, DIRECTOR

AREAWIDE SALES
2007-2011

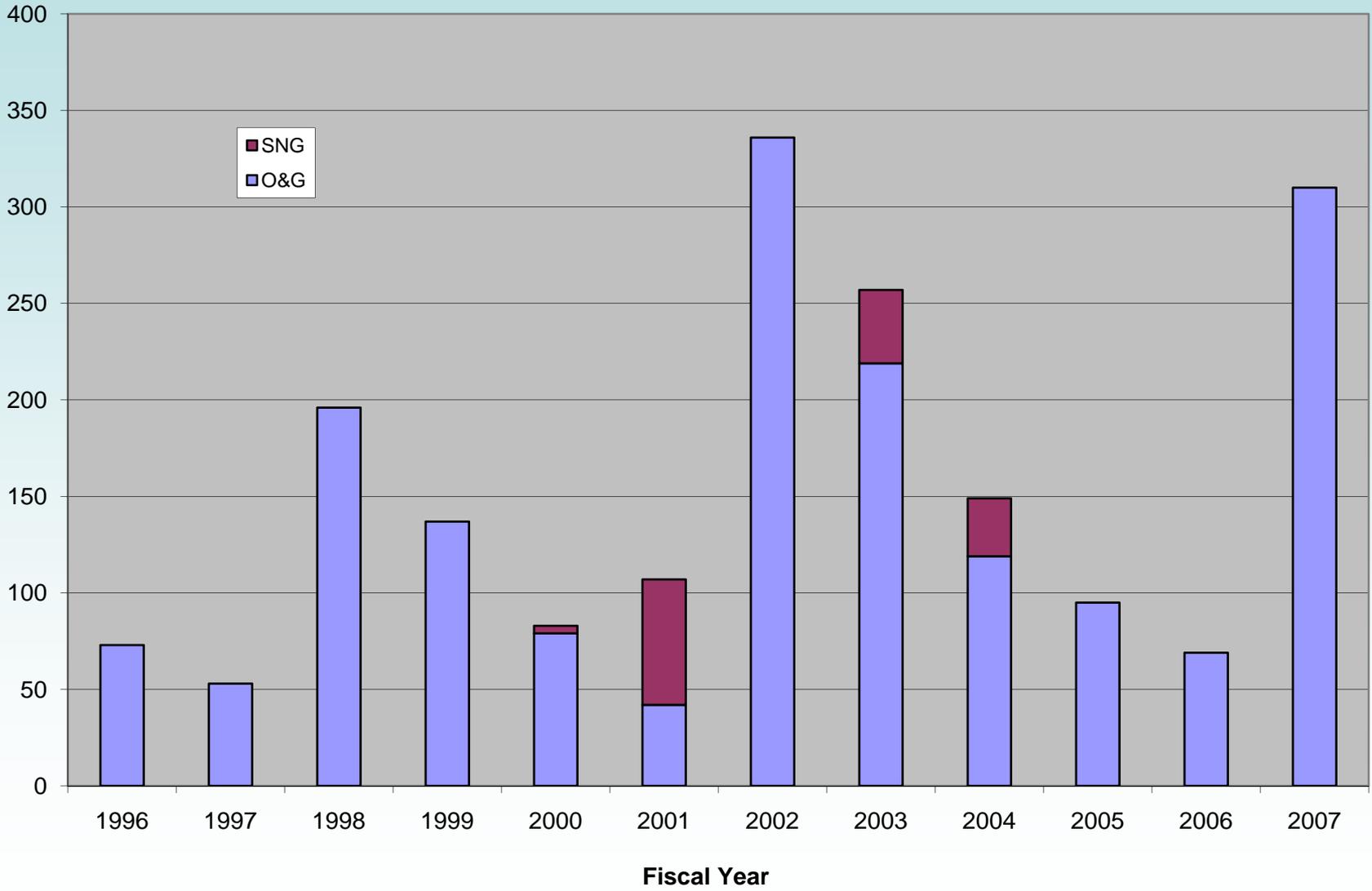
	NS Foothills	Feb
	Ak Peninsula	Feb
	Cook Inlet	May
	Beaufort Sea	Oct
	North Slope	Oct

0 100 200 MILES

Base Map: Albers Equal-Area Conic Projection, 1927 North American Datum, Clarke 1866 ellipsoid with a central meridian of 154°, origin latitude of 50°, northern parallel of 65°, southern parallel of 55°. This map is for informational purposes only. January 2007



Number of Leases Issued 1996 - 2007

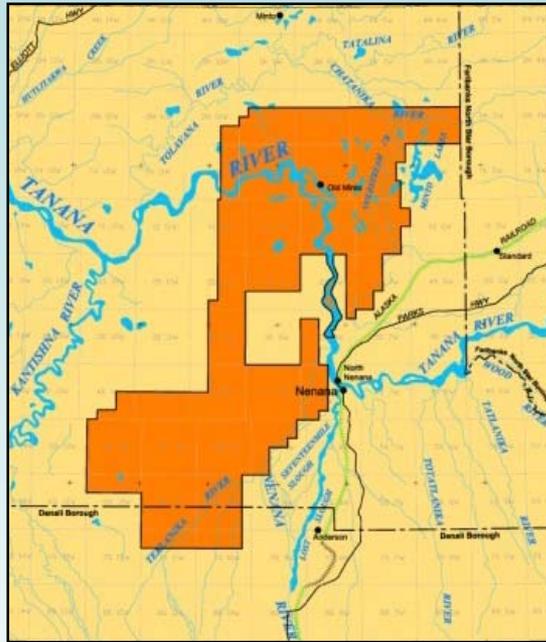


Exploration Licensing Program

- 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 and gas leases (recently exercised in Copper River license area)

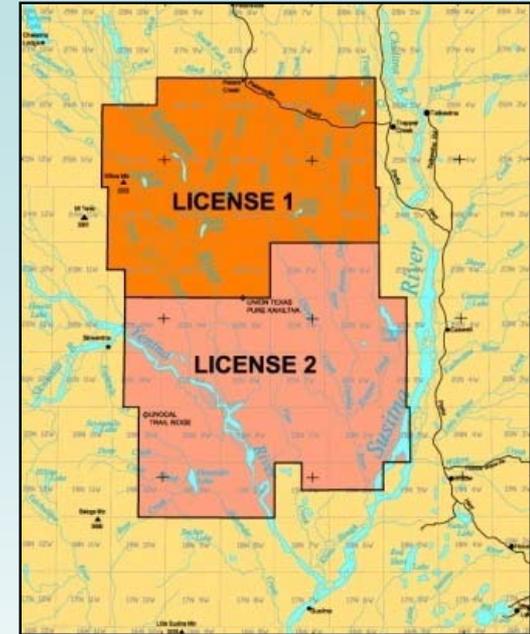
Exploration Licenses

Nenana



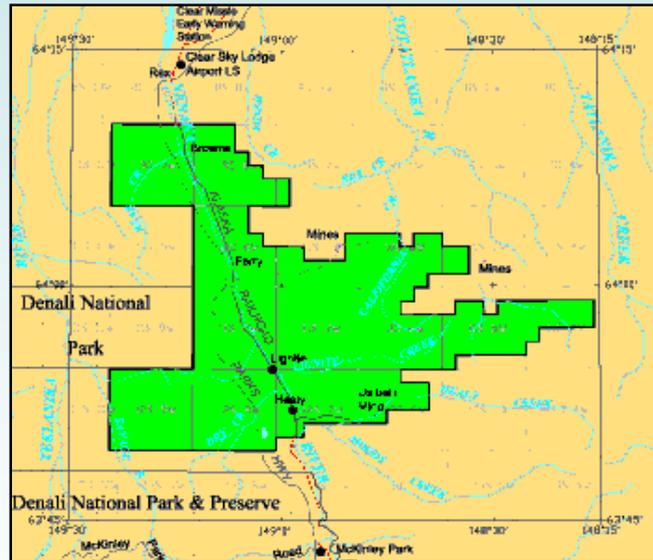
Nenana Basin License
 Licensee: An dex Resources
 483,175 Acres

Susitna



Susitna Basin License I
 Licensee - Forest Oil Corp.
 386,207 Acres
Susitna Basin License II
 Licensee - Forest Oil Corp.
 471,474 Acres

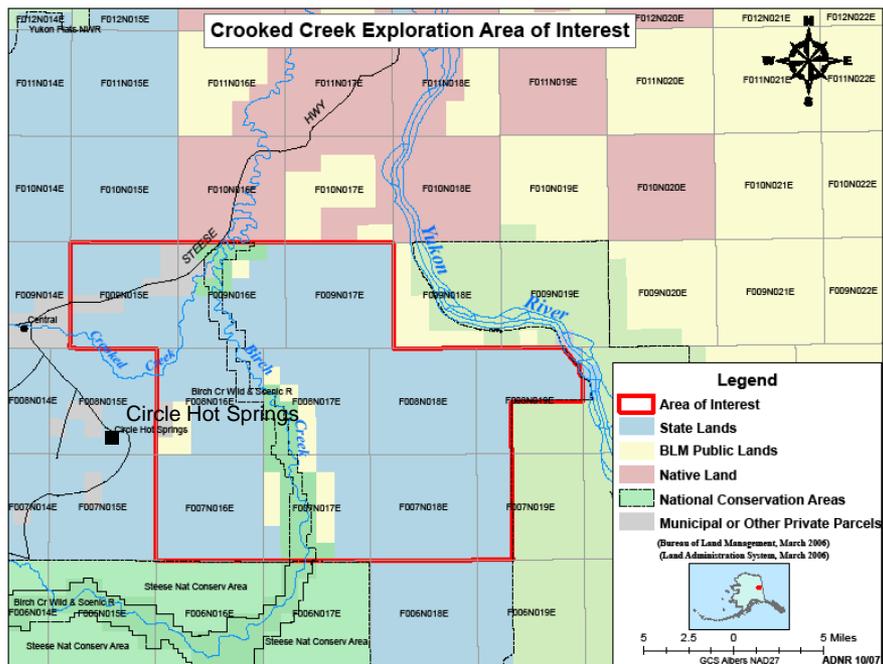
Proposed Healy License



Licensee: Usibelli Coal Mine, Inc.
 209,000 Acres

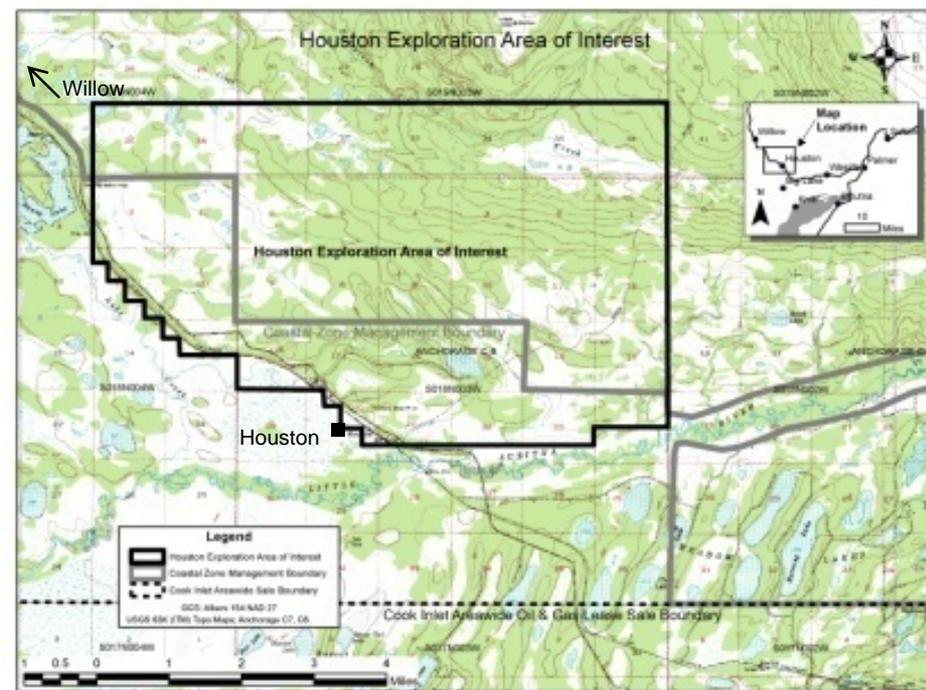
Exploration Licenses

Crooked Creek-Circle Application



Licensee: To be determined
72,443 Acres

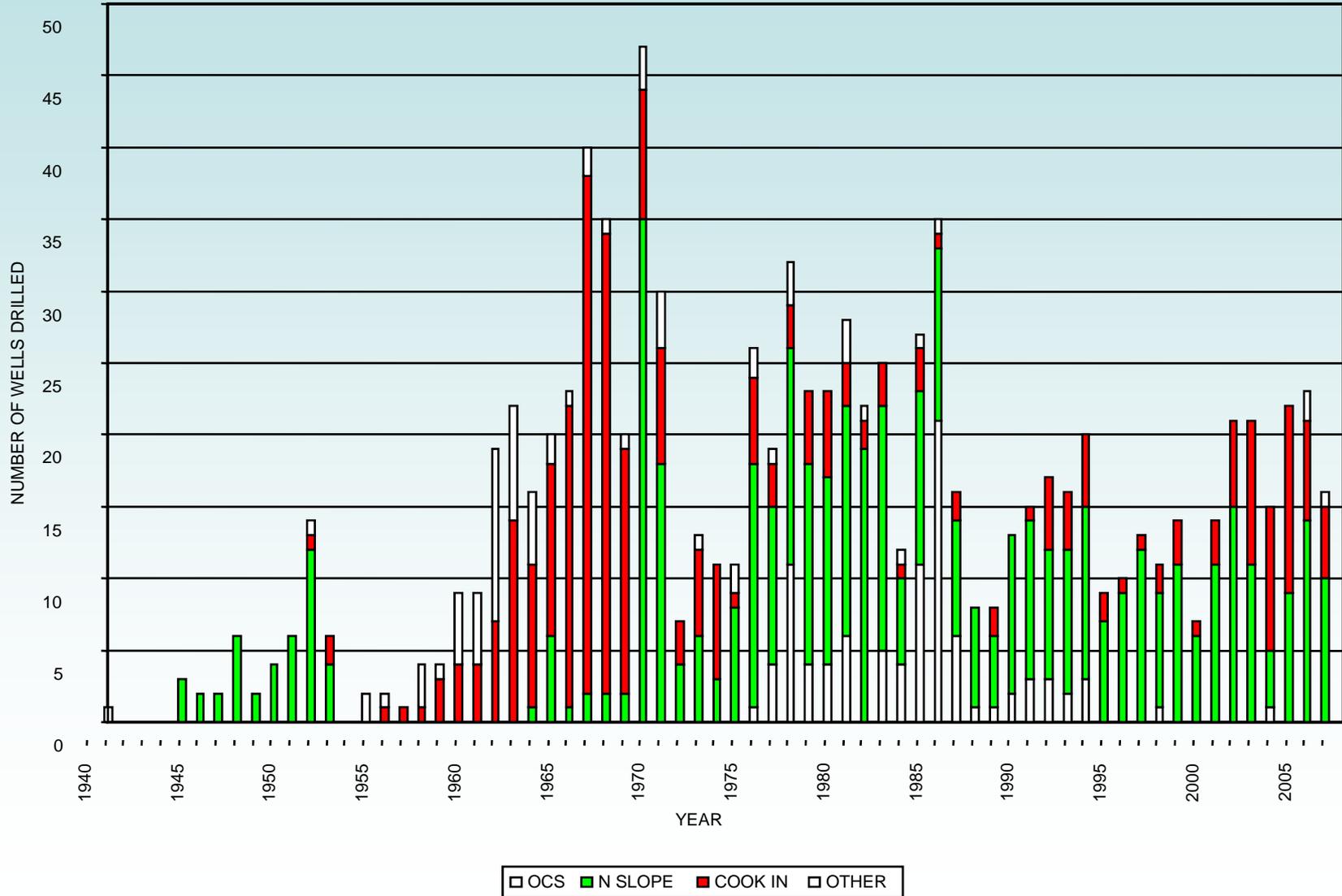
Houston-Willow Application



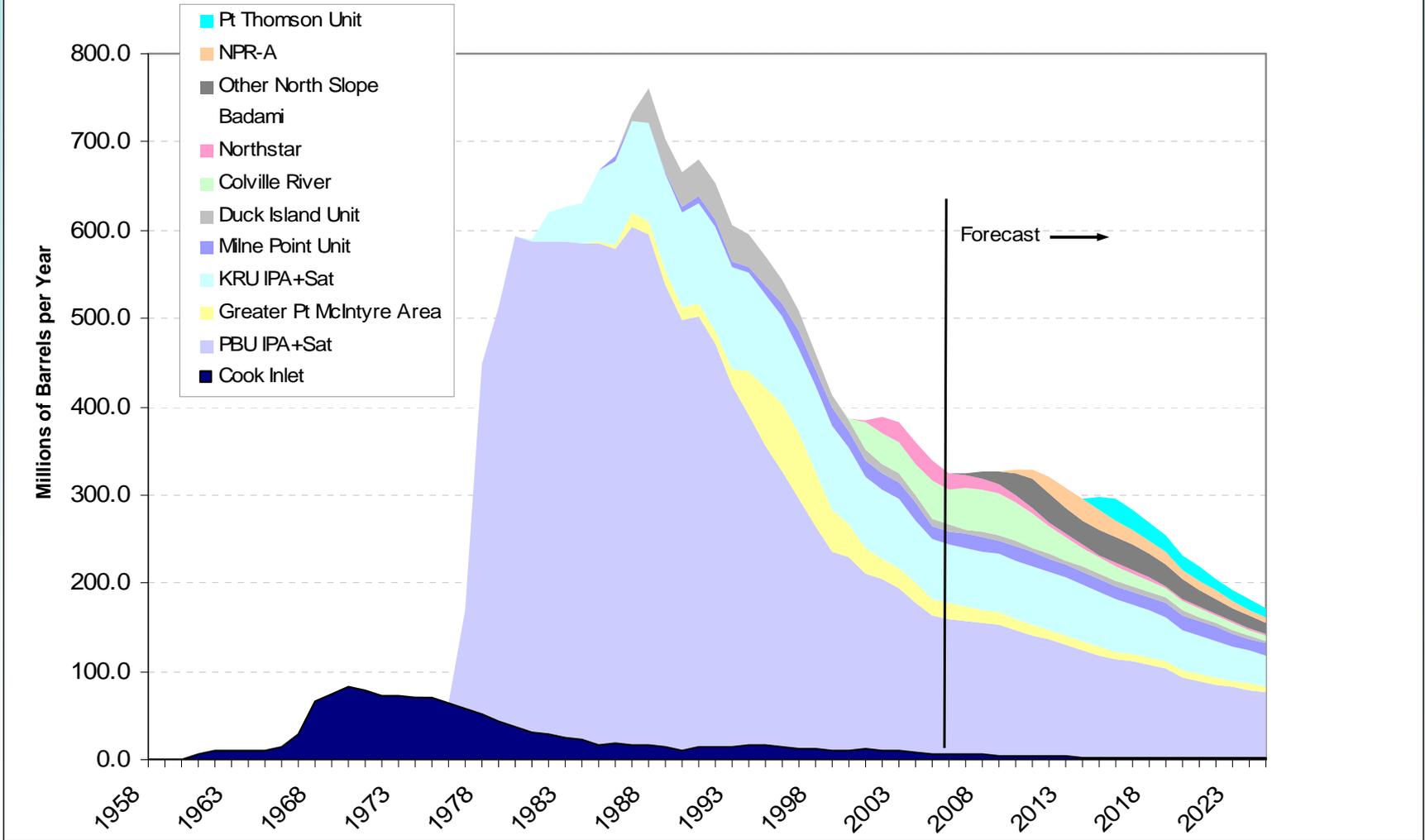
Licensee: To be determined
21,240 Acres

Alaska Exploration Wells

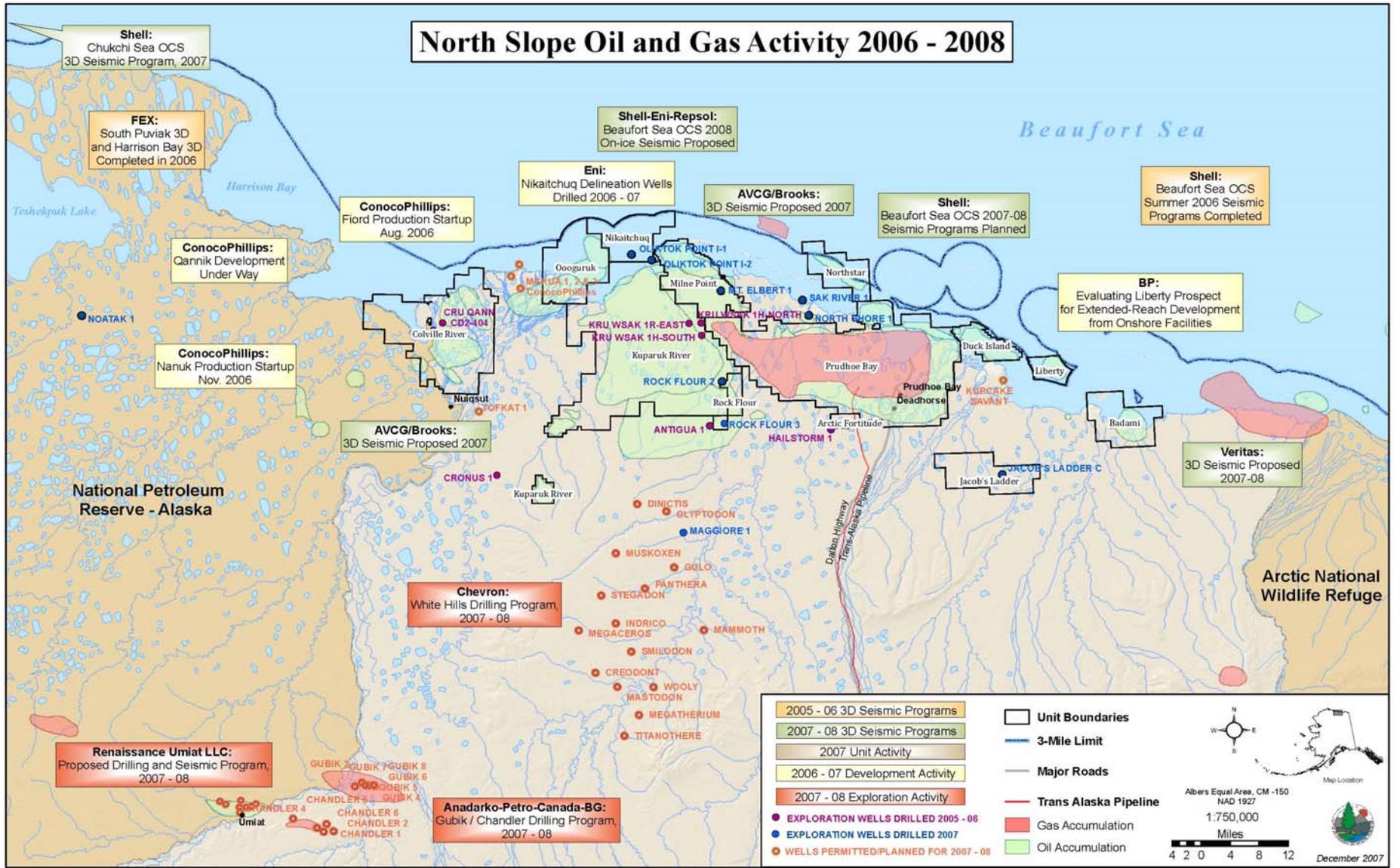
Grouped by Area



Alaska Historic and Projected Oil Production 1958 - 2025



North Slope Oil and Gas Activity 2006 - 2008



North Slope Unit Activity Update 2006 – 2007

- **CRU, Colville River Unit**
 - CRU Fiord Satellite: (Kuparuk C and Nechelik Sandstone reservoirs)
 - The Fiord Satellite was placed on production in August 2006
 - Oil in place estimates for Kuparuk is 20-60 MMSTB, with total recovery expected around 11-48 MMSTB.
 - Oil in place estimates for Nechelik is 60-130 MMSTB, with total estimated recovery around 21-65 MMSTB.
 - Peak production for the Fiord satellite is estimated to range between 14,000-41,000 BOPD. Waterflood injection is expected to increase the oil rate to 23,000 to 59,000 BOPD. Miscible hydrocarbon gas injection rates are expected to peak between 16-42 MMSCFPD.
 - CRU Nanuq Satellite (Kuparuk C and Nanuq reservoirs)
 - Oil production began November 27th .
 - Qannik: Test well CD2-404 in June 2006.
 - Conoco Phillips tested the 25-foot thick Qannik Sandstone (4,000 feet to 3,000 feet above the Alpine sandstone)
 - The Qannik sandstone tested at a rate of 1,200 BOPD of 30-degree API gravity oil.
 - CPAI plans to expand CD2 pad to accommodate up to 18 Qannik wells.
- **Duck Island Unit**
 - Endicott will implement ‘the first ever low-salinity waterflood’ to increase oil production in a \$100MM dollar pilot project starting up in 2007 (not operational until 2008). If successful the Lo-Sal technology has huge implications for recovering more oil from existing wells across the North Slope. (Petr. News AK 1/29/2006 and 11/26/2006)

North Slope Unit Activity Update 2006 – 2007

- **Kuparuk River Unit**

- Conoco Phillips continued development drilling of the viscous oil West Sak (Schrader Bluff equivalent) reservoir. Conoco Phillips application to expand the West Sak participating area to the south was submitted and approved in 2007.
- Conoco Phillips drilled eight development wells in the Tarn reservoir within the KRU and based on the drilling results, has applied for an expansion of the Tarn PA.

- **Milne Point Unit**

- LIVEANO_#1 Well; Ugnu / Schrader Bluff appraisal well drilled from Ice Pad.
- PESADO_#1 Well; Schrader Bluff appraisal well drilled from Ice Pad.
- Mt. Elbert #1; Gas hydrate test well funded by the Department of Energy (DOE). Completed 2/21/07, status P&A'd. Straight hole: total depth 3000' feet. Gas hydrates encountered and recovered in core.
- Viscous Vision 3D Seismic survey shoot completed over the entire Milne Point Unit.

- **Nikaichuq / Tuvaq Unit**

- Kerr McGee / Anadarko, now ENI is the 100% owner/operator as of 4/11/2007
- 1Oliktok Point I-1; Schrader Bluff delineation well (pilot hole) drilled from Oliktok Point pad. Well completed 12/31/06, status suspended. The total depth was 8990 ft md (3912 ft. tvd).
- 2Oliktok Point I-2; Schrader Bluff pilot hole and horizontal lateral drilled from Oliktok Point pad. Well was completed and suspended.

North Slope Unit Activity Update 2006 - 2007

- **Oooguruk Unit**

- Pioneer completed construction of a six-acre offshore drill site and a two-acre onshore pad in the winter of 2006.
- A 5.7 mile buried subsea flowline and 2.4 miles of onshore flow line has been installed and hydro-tested.
- The drilling rig is on location and first development well is expected to spud in mid-December 2007.
- Pioneer has applied for pool rules for the Oooguruk-Kuparuk and Oooguruk-Nuiqsut reservoirs.
- Expected gross reserves for the project are 50 - 90 million barrels of oil equivalent with expected peak flow rate of 15,000 – 20,000 barrels per day.
- A total of 35 horizontal development wells are planned.
- First oil production is expected in 2008. Planned production is expected to be processed through KRU facilities. Facility share agreement with the KRU owners has not been signed as of December 18, 2007.

- **Prudhoe Bay Unit**

- BP drilled an 'I-Pad' well and sidetrack from an ice pad in early 2006. I-Pad was supposed to be built as a gravel pad for Orion and Borealis development several years ago and was postponed when then Governor Murkowski changed the ELF structure.
- The I-100PB1 Orion Schrader Bluff appraisal well successfully found net oil pay in the Nb, OA, and Oba Schrader Bluff sands. The well proved up Schrader Bluff oil in westernmost Orion PA of the Prudhoe Bay Unit.
- The I-100 Orion well was drilled to appraise the Kuparuk C sandstone in the in northwestern part of the PBU Borealis PA. The well encountered oil in the Kuparuk C sandstone.
- V-121 Borealis injector permitted 3/14/2007.

North Slope Activity Exploration Wells 2006 – 2007

- **Anadarko Jacob's Ladder Well (Southeast of Prudhoe Bay)**
 - Anadarko plans to re-enter the JLU C well during the 2007/2008 winter drilling season and drill a deviated hole to Lisburne target.
- **Brook Range Petroleum Co. (Part of AVCG)**
 - North Shore No.1: Exploration well, Gwydyr Bay area. Status: Suspended.
 - From Petroleum News; well TD'd @ 13,309 ft. md (10,319 ft. tvd) through the Ivishak sandstone. Well encountered 70 ft. of oil charged Ivishak formation.
 - A full testing program of the well is planned for the 2008 winter season. Division has not yet received any data.
 - The North Shore well is a virtual twin of the Mobil Gwydyr Bay South No. 1 well drilled in 1974 that tested at an average rate of 2,263 BOPD. The size and commerciality of the structural closure will be further evaluated by Brooks Range from the 130 square miles of seismic data that they acquired over the prospect this winter. Kuukpik Veritas completed the seismic acquisition on March 31st.
 - Brooks Range originally acquired the lease from which North Shore 1 was drilled through a farmout agreement with Exxon, Chevron, and Conoco Phillips.
 - Sak River No. 1: Exploration well, near Gwydyr Bay. Status suspended.
 - From Petroleum News; "Well reached a total depth of @13,110 ft. md (11348 ft. tvd) but did not encounter hydrocarbons. The joint venture partners have suspended the well, pending further evaluation, for the possibility of drilling an exploratory sidetrack during the 2008 winter drilling season." The division has not received any data yet.

North Slope Activity Exploration Wells 2006 – 2007

- **ENI (Rock Flour)**
 - Rock Flour #2; Exploration well, just to the southeast of the Kuparuk River Unit.
 - Rock Flour #3; Exploration well, just south of the Kuparuk River Unit.
 - Maggiore #1; Exploration well, located approximately 15 miles south of the Kuparuk River Unit.
- **Pioneer**
 - Hailstorm 1: completed drilling well in February, 2006. The well was plugged and abandoned.
 - All exploration targets were wet according to Petroleum News Alaska (March 12, 2006). This was the first well to be drilled in Pioneer's NE Storms Unit located directly south of Prudhoe Bay unit. (Sadlerochit appears wet, the Kuparuk section looks silty and shaly and the Shallow Sands do not look promising.)
 - Pioneer elected to terminate the NE Storms well, effective September 1, 2007.
 - Cronus No. 1: drilled well in March of 2006.
 - The well encountered a thick, oil-bearing sand section in the Torok and a thin, oil-bearing sand, that Pioneer labeled as a 'Jurassic-aged Kuparuk C' sandstone.
 - Upon further analysis, Pioneer determined that the hydrocarbon bearing zones were too tight to produce and declared the well a dry hole.

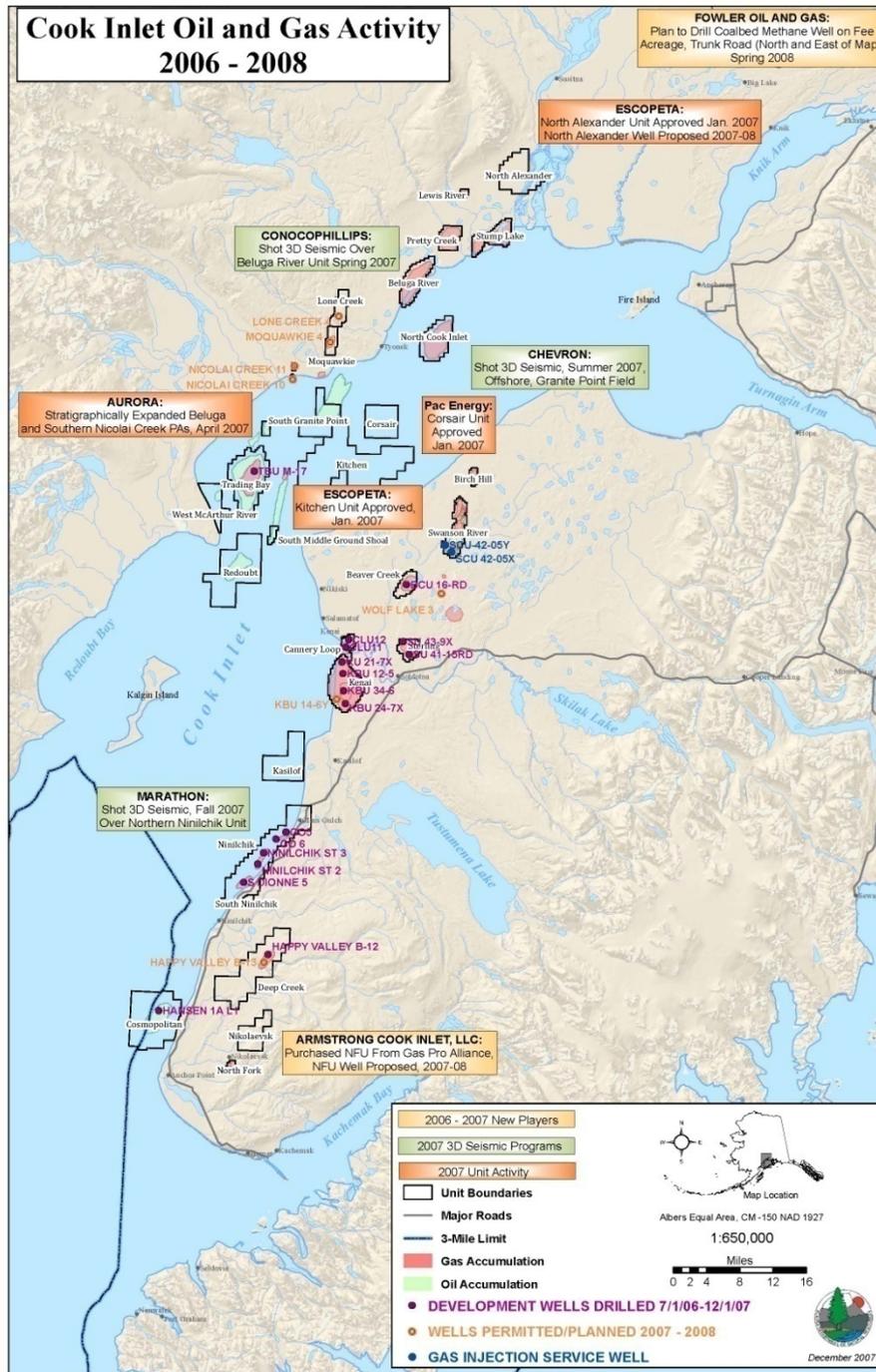
NPRA Activity -- Exploration Wells 2006 – 2007

- **Exploration Wells Drilled in NPRA this winter**
 - The state will receive the well data from the NPRA wells if the companies apply for the DOR EIC program under 43.55.025. FEX is planning on applying for EIC's under this program for their 3 wells. It is unknown whether Conoco Phillips will apply.
- **FEX drilled 3 wells in NPRA: All 3 wells encountered hydrocarbon-bearing sandstones in several formations**
 - Amagaq 2: drilled with the Arctic Wolf drilling rig.
 - Talisman spokesperson Barry Nelson said Amagaq No. 2 was a subcommercial well. (May 13, 2007 PNA)
 - Aklaqyaaq 1
 - Aklaq 6 (West of Puviaak well)
- **Conoco Phillips drilled 2 wells in NPRA both wells were termed non-commercial**
 - Intrepid 2: South of the Barrow and Walakpa gas fields.
 - Noatak 1

North Slope Seismic Activity 2006 – 2007

- **Seismic Activity**
 - The Shell 'Research' Seismic data is being acquired now (Fed Permit 07-02 / State Permit 06-014-01)
 - The permit for the Shell Summer '07 seismic is still under review by the MMS (Fed Permit 07-04)
- **EIC's 2006 Seismic:**
 - Fairweather NE-NPRA 3D (NPRA): A speculative survey shot by Fairweather.
 - FEX Puviaq South 3D (NPRA)
 - FEX Harrison Bay 3D (NPRA)

Cook Inlet Oil and Gas Activity 2006 - 2008



Cook Inlet Oil & Gas Activity July 1, 2006 – Dec. 1, 2007

- Beluga River Unit – ConocoPhillips (Gas)
 - Shot 3D seismic program in Spring 2007.
- Cannery Loop Unit – Marathon (Gas)
 - Drilled two wells, CLU #11 & CLU #12.
- Cosmopolitan Unit – Pioneer (Oil)
 - Drilled 1 well, Hansen 1AL1. Targeting Lower Tyonek.
 - Plan to flow test well by end of year.
- Deep Creek Unit (Happy Valley) – Chevron (Gas)
 - Chevron installed compression at Happy Valley A Pad in 2006.
 - Currently drilling Happy Valley B-12. Plan to drill Happy Valley B-13. Beluga and Tyonek objectives.
- Granite Point – Chevron (Oil and Gas)
 - Shot 3D seismic program offshore, Summer 2007.
 - Setting up rig on Anna platform to spud new oil well. Gas well planned for 2nd quarter of 2008.
- Kasilof Unit – Marathon (Gas)
 - Two miles offshore; Extended reach drilling (17,000 ft).
 - Kasilof S #1 well turned on for winter production only, Tyonek Formation.
- Kenai Unit – Marathon (Gas)
 - Drilled 4 wells, KU 21-7X, KBU 12-5, KBU 34-6, KBU 24-7X.
 - Permitted 1 well, KBU 14-6Y, plan to spud in early December.

Cook Inlet Oil & Gas Activity July 1, 2006 – Dec. 1, 2007

- Nicolai Creek Unit – Aurora Gas (Gas)
 - Stratigraphically expanded Beluga Participating Area and Southern Participating Area (Tyonek) in April 2007.
 - Permitted 2 wells, Nicolai Creek #10 and Nicolai Creek #11.
- Nikolaevsk Unit – Chevron (Gas)
 - Continued evaluation for delineation and development.
 - 2nd POE expires March 31, 2008.
- Ninilchik Unit – Marathon (Gas)
 - Drilled 5 wells, GO #5, GO #6, SD #5, Ninilchik State #2, and Ninilchik State #3. Tyonek Formation.
 - Shot 3D seismic program, Fall 2007.
 - Chevron is 40% working interest owner in unit.
- North Alexander – Escopeta (Gas)
 - Plan of Exploration states that Escopeta will drill one exploration well, Alexander #1, in the winter of 2007/2008.
- North Fork Unit – Armstrong (Gas)
 - New Operator: Armstrong Cook Inlet.
 - Amended 42nd POD commits to drilling delineation well by March 31, 2008.
- Redoubt Unit – Pac Energy (Oil)
 - Forest assigned working interest to Pac Energy.
 - Conducting a waterflood in the Hemlock Formation.

Cook Inlet Oil & Gas Activity July 1, 2006 – Dec. 1, 2007

- Trading Bay Unit/ McArthur River Field– Chevron (Oil & Gas)
 - Chevron refocusing efforts to develop this field.
 - Drilling 1 well, TBU M-17, targeting gas in Tyonek Formation.
- West McArthur River Unit– Pac Energy (Oil & Gas)
 - Forest assigned working interest to Pac Energy.
 - Continued evaluation of reprocessed 3D seismic data to support additional gas wells.
 - 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.
- Additional Activity – (Oil & Gas)
 - Fowler Oil and Gas plan to drill a coal bed methane well at corner of Trunk Road & Bogard Road in Wasilla in the Spring 2008 on fee acreage.
 - Corsair Unit Plan of Exploration requires drill rig commitment by December 31, 2007.
 - Kitchen Unit Plan of Exploration requires drilling by December 31, 2007.
- Activity in Units managed by Federal Government or CIRI
 - Beaver Creek Unit (Marathon): 1 well drilling for gas, Beaver Creek Unit 16RD.
 - Lone Creek Unit (Aurora): 1 well permitted for gas, Lone Creek 4.
 - Moquawkie Unit (Aurora): 1 well permitted for gas, Moquawkie 4.
 - Sterling Unit (Marathon): 2 wells drilled for gas, SU 43-9X & SU 41-15RD.
 - Swanson River Unit (Chevron): 2 wells drilled for gas storage, SCU 42-05X & SCU 42-05Y.
 - Wolf Lake Unit (Marathon): 1 well permitted for gas, Wolf Lake 3