Alaska Department of
NATURAL RESOURCES
DIVISION OF OIL & GAS

# Annual Report 2011

# contents

# mission

The Division of Oil and Gas
manages lands
for oil, gas,and geothermal
exploration and development
in a fair and transparent manner
to maximize prudent use of resources
for the greatest benefit of all Alaskans.

# introduction

The Division of Oil and Gas fulfills a challenging mission:

"The Division of Oil and Gas manages lands for oil, gas, and geothermal exploration and development in a fair and transparent manner to maximize prudent use of resources for the greatest benefit of all Alaskans."

In practical terms, the Division is involved in every stage of oil, gas and geothermal exploration and development, performed by a diverse set of industry participants with international credentials.

This work takes place under the direction of Governor Parnell's five-point strategy to Secure Alaska's Future. The Division of Oil and Gas employees provide the expertise to manage this world-class business with a strong sense of professionalism and a healthy respect for the fact that nearly 90% of State revenues are received due to their efforts.

The following pages describe these efforts in more detail, and introduce to you some of the accomplishments of the Division of Oil and Gas in 2011.

It is a unique and talented group of professionals who manage the development of the State of Alaska's oil, gas and geothermal resources. I am proud to consider them my colleagues, and I look forward to both our challenges and our accomplishments in 2012.

Sincerely,

William C. Barron
Director
Division of Oil and Gas

The Governor's Five-Point Strategy to

# Secure Alaska's Future

to increase the flow through the Trans-Alaska Pipeline System to 1 million barrels per day in a decade

1. Enhancing Alaska's global competitiveness and investment climate
2. Ensuring that the permitting process is structured and efficient to accelerate resource development
3. Facilitating and incentivizing the next phases of North Slope development
4. Unlocking Alaska's full resource development potential by promoting constructive partnerships between the state and key stakeholders
5. Promoting Alaska's resources and positive investment climate to world markets

# strategic plan

Over the past two years, the Division of Oil and Gas has been working on a Strategic Plan with the goal of making an already well-functioning division of highly qualified professionals into an even more efficient team.

The strategic planning effort has involved employees on all levels, and offered everyone the opportunity to give their input on where the Division can improve our internal work routines as well as services to our customers, inside and outside state government.

The resulting Strategic Plan is a living document that will guide our work over the next few years.

Over the past year, the Division has engaged in a large-scale project of mapping our work flow, and tying everything we do back to our mission, and our guiding statutes and regulations.

The process mapping project has resulted in improved internal communication and efficiencies already.

The continued work on refining processes and creating "desk manuals" for appropriate positions and tasks will not only increase our efficiency but also make onboarding of new employees easier.

Contiuously invoking the laws guiding our work is also a guarantee that we do exactly what we are asked to do, and do not waste valuable time doing things not within our authority.

The Strategic Plan sets up long-term goals with objectives to be reached within the next year.

Developing and improving the Division's people, processes, internal and external communication, and products are all key to making effective use of our resources and managing our work in the most efficient way possible.

## Goals

***GOAL 1 (Product): The Division will strive to produce high quality data, analyses and interpretations, and decisions that are relevant, consistent, defensible, and timely.***

***GOAL 2 (Communication): The Division will foster an environment of open communication with all stakeholders.***

***GOAL 3 (People): The Division will cultivate and support a diverse workforce of highly-skilled employees.***

***GOAL 4 (Process): The Division will develop a detailed map of workflow process to help identify critical functions and optimize operation efficiencies.***

***GOAL 5 (Leadership): The Division will work to inspire confidence in decision making and guidance while promoting continuous improvement and developing new leaders.***

# division of oil and gas

The Division of Oil and Gas is the agency within state government that is responsible for the leasing of state lands for oil, gas, and geothermal exploration.

We do this by implementing innovative new programs to encourage exploration on state and private lands, and by working with other agencies, local communities, and industry to fulfill the Alaska Constitution's mandate to "encourage the settlement of its land and the development of its resources by making them available for maximum use consistent with the public interest."

The Alaska Constitution also calls on us to utilize and develop our natural resources "on the sustained yield principle, subject to preferences among beneficial uses."

From the beginning of statehood, Alaska has welcomed and encouraged responsible resource development, which is today evidenced both in the responsible methods our oil and gas industry conducts its exploration and development across the state, and in the way the Division of Oil and Gas, a single piece of the inter-agency network, works with industry and the public to educate and inform all parties of what we require, so that resource development can be performed in a predictable, safe, and environmentally responsible context and manner.

The Division of Oil and Gas ensures the continued in-flow of approximately 86% of state revenues through monitoring and auditing lease and unit agreement operations, including oil and gas rental and royalty payments and promotion of new opportunities for the development of royalty oil and gas.

The Division of Oil and Gas manages the state's oil and gas resources with a current staff of 100, consisting of highly specialized technical experts with many years of experience in industry.

Led by the Director's Office, the Division works in asset teams, pulling together the experts needed from different sections in order to manage each different task or issue.

Among our professionals are: Petroleum Land Managers, Petroleum Geophysicists, Petroleum Geologists, Petroleum Engineers, Petroleum Economists, Commercial Analysts, Attorneys, Accountants, Auditors, and Biologists.

2011 was a year that brought a certain amount of change to the Division of Oil and Gas. For the first time, the Division was handling exploration permits for the state's first shale oil development, after the 2010 North Slope lease sale. A record number of unit applications put increased pressure on our unit managers as well as our resource evaluation section. The charge to "fill the pipeline" led to changes in lease terms, originating with the division's leasing and commercial sections. With the increased workload, the Division has also worked on optimizing available and developing new technology in an effort to make our work more efficient and better serve our customers, internal and external.

For overview purposes, our 2011 achievements are listed section by section. While primary responsibility for leading any particular project usually resides within one specific section in the division, many projects are the result of a collaborative effort between many different sections. So, for example, while the Leasing Section's report includes results from the five 2011 lease sales, preparation for every lease sale includes work by the commercial section and the resource evaluation section.

## resource evaluation

***Providing the Geological, Geophysical, and Engineering Data***

The Resource Evaluation section's goal is to achieve "regulatory and research excellence through geological, geophysical, and engineering analysis". The experts in this section of the Division of Oil and Gas provide objective and in-depth interpretations of technical data relating to oil and gas and geothermal exploration and production throughout Alaska, supplying the solid scientific basis needed for the Division to make decisions on managing state lands. The group collects and maintains a vast and diverse collection of both confidential and public domain data. It uses this data, within the strict confidentiality guidelines defined by law, to enhance both internal and public understanding of Alaska's fossil energy and geothermal resources.

Key regulatory functions of the Resource Evaluation section include analyzing industry applications regarding Units and Participating Areas; evaluating the prospectivity of lands included in lease sales, exploration licenses, or other land management actions; collecting, interpreting, and managing geotechnical exploration data submitted under the terms of state land use permits and production tax credits; and performing technical reviews for royalty modification applications. When appropriate, Resource Evaluation works with consultants to build and audit static and dynamic reservoir models to understand the distribution of in-place and recoverable hydrocarbons – the basis for determining equitable production allocations. In addition, the section's technical expertise informs dozens of other steps in the Division of Oil and Gas' land management process. The Resource Evaluation section works closely with the Division's Units, Leasing & Permitting, and Commercial sections, as well as with the Department of Revenue's Tax Division, developing the technical findings that factor into numerous oversight and incentive decisions.

From a research perspective, Resource Evaluation geoscientists and engineers execute special projects as needed to inform both the public and policy makers within state and federal government. Recent examples include reports and briefing presentations on remaining natural gas resources in the Cook Inlet region, the potential for shale oil resource development on the North Slope, and the impact of changing technology on exploring and developing the ANWR coastal plain.

Finally, geologists and geophysicists from the Resource Evaluation section engage in ongoing collaborative research projects led by geologists from the Energy Section of the Alaska Division of Geological & Geophysical Surveys. These efforts rely on a powerful synthesis of detailed stratigraphic and structural outcrop studies, surface geologic mapping, and subsurface well and geophysical interpretation to generate valuable new insights into Alaska's resource

potential. Recent and current projects have focused on the North Slope foothills and Colville foreland basin, the Alaska Peninsula back-arc basin, and the Mesozoic to Cenozoic evolution of the Cook Inlet forearc basin and the adjoining Susitna basin. Additional studies are planned in Alaska's Interior, to evaluate sedimentary basins as potential in-state sources of natural gas. These integrated field and subsurface studies promote exploration, and serve as the basis for much of the section's outreach efforts to inform new potential explorers about the rich untapped resources in our state.

***2011 achievements***

Of the section's many duties, analyzing oil and gas resources in the subsurface of lands managed by the Division is its chief regulatory function. The section's geologists, geophysicists, and engineers evaluated the data and developed technical recommendations necessary for the Division to issue decisions on the dozens of Unit and Participating Area actions summarized in the accompanying table (see 2011 Unit Actions).

In June, 2011, the Division of Oil and

Gas issued its report titled "Cook Inlet Natural Gas Production Cost Study", an interdisciplinary analysis of the commerciality of exploring for and tapping known natural gas supplies in south-central Alaska. This report was a follow-up to the study "Preliminary Engineering and Geological Evaluation of Remaining Cook Inlet Gas Reserves" released in December, 2009. The 2011 study culminated with economic analyses by the Division's Commercial section, but both studies drew heavily on the expertise of the Resource Evaluation section's geologists, geophysicists, and engineers.

- Collected, inventoried, and verified completeness of technical datasets submitted to the Division in association with tax credit incentive applications for 58 exploration wells and 7 geophysical/geological surveys. Provided memos of completeness to Department of Revenue Tax Division to issue the corresponding credits.

- Addressed the Alaska Legislature in committee hearings on three occasions during 2011. Topics included oil and gas reserves, undiscovered resources, North Slope shale oil development potential, and Cook Inlet oil and gas activity, resource base, and commercial outlook. In addition, the group worked with others in the Division to provide written responses to dozens of inquiries posed by legislators throughout the year.
- Briefed the Commissioner of Natural Resources on multiple occasions regarding oil and gas resource potential associated with areawide lease sales and exploration license areas.
- Provided written analyses of the oil and gas potential for numerous tracts across Alaska where excess State-selected lands were under consideration for relinquishment.

• Analyzed and documented the petroleum potential of proposed exploration license areas in the Healy basin and Crooked Creek sub-basin, and contributed corre sponding chapters to the Division's best interest findings.

• Evaluated and documented the oil and gas potential likely to be explored and developed along various alternative alignments of the proposed Foothills West Transportation Corridor.

• Led the way with the State's internal and public effort to prepare for possible shale oil development on the North Slope. Organized and assumed leadership of the State's Shale Task Force, an interagency group committed to anticipating and resolving impediments to responsible development of shale-hosted petroleum resources.

• Led the Division's industry outreach effort by hosting exhibits booths at NAPE and AAPG, technical conference presentations at Arctic 3P in Halifax, and scheduling meetings with more than 20 companies interested in learning more about Alaska's oil and gas exploration and production potential.

• Provided evaluation of resource potential to the Division's interdisciplinary work group tasked with designing area-wide lease sale terms, optimizing tract sizes, bundling and work commitments of key tracts, etc.

• Collaborations with DGGS and USGS: outcrop-based field studies, using subsurface data to improve surface geologic mapping and basin models both on the North Slope and in Cook Inlet.

• Continued to evaluate potential CO2 sequestration targets statewide.

• Provided written comments to protect the State's interest in several proposed federal land management actions, including the National Petroleum Reserve – Alaska integrated activity plan, the Eastern Interior Region management plan, revisions to the Arctic National Wildlife Refuge comprehensive conservation plan, and other areas.

## exploration licenses & best interest findings

***Research and Public Input on Possible Exploration and Development***

In April of each year, the Division welcomes applications for exploration licenses for oil, gas, and geothermal energy. After an application is received, the Division starts a fact-finding process to determine whether it is in the best interest of the state to award such a license. The result of this process, which involves information gathered by the Division's own experts and information from other agencies, municipalities, Native corporations, non-government organizations, and the public, is called a Best Interest Finding. In this, the Division evaluates the possible results of issuing the requested exploration license and issues a preliminary finding on whether to award the license.

The preliminary finding is subject to a public comment period of at least 60 days. During this period, the Division often conducts public meetings to provide an opportunity for residents in the

proposed license area to submit their comments orally. Comments may also be submitted in writing. All comments become part of the public record and are included in the Final Best Interest Finding. After all public comments have been given due consideration, the Director issues his Final Finding on whether to issue an exploration license.

Exploration licenses can be awarded for areas of the state outside of the Division's five existing oil and gas development areas. Exploration licenses that are issued evaluate the impact of suggested exploration and provide measures to mitigate any reasonably expected impact on the area.

The Division offers different programs authorizing Exploration Incentive Credits (EICs) to encourage exploration on state land.

Areas where oil and gas development is already in existence are covered by Areawide Best Interest Findings. These are the Alaska Peninsula, Cook Inlet, Beaufort Sea, the North Slope, and the North Slope Foothills. The Division publishes a new Best Interest Finding for each of these areas every ten years. These Findings, and the process of writing them, are subject to the same statutes and regulations as the Best Interest Findings for exploration licenses, except that they are subject to annual updates and revisions in light of any new and substantial information that might come available.

## lease sales & lease administration

***Conveying State Lands for Exploration and Development and Performing Landlord Functions***

To provide predictable circumstances for resource development in known resource areas, the Division conducts annual scheduled Lease Sales for tracts of land that are available for leasing within the Areawide Lease Sale Areas.

The five annual Areawide Lease Sales convey state land for exploration and development.

After a Lease Sale, the Division initiates the title work, legal descriptions, and survey reviews of the tracts which have received bids. Once all regulatory requirements are met, the lease is issued.

Once a lease is issued, the Division's Lease Administration section performs "landlord functions" through tracking lease payments, handling revenue and billing, assignments, segregation or segmentation of leases, and expiration, surrender, and termination of leases.

***Lease Administration***

During 2011, the Division issued 182 leases, and administered a total of 1427 active leases. The Division received 49 releases back through relinquishments. A total of 36 leases expired, and 2 leases were terminated by the Division.

Lease Administration staff also

- Issued two exploration licenses for $2.75 million in work commitments on 260,244 acres.
- Processing three exploration license applications for $1.25 million in work commitments on 139,409 acres

- Processed assignments for $600+ million assets transfer from Union Oil Company of California to Hilcorp Alaska, LLC
- Issued two gas storage leases, Ivan River Gas Storage and the Cook Inlet Natural Gas Storage Alaska lease, both located within the Cook Inlet Areawide sale area.

***Geothermal***

Geothermal leasing and prospecting permits are handled differently. Based on available geologic information and indications of interest, land may be designated for a competitive lease sale or for noncompetitive prospecting permits for geothermal exploration and development.

DNR has held a total of three geothermal lease sales, all for areas along the southern flanks of Mount Spurr, located about 40 miles northwest of Tyonek. The first two sales, held in 1983 and 1986, did not result in any development. In 2006, amid renewed interest in Alaska's geothermal resource potential, DNR received requests from industry to make Mt. Spurr available for geothermal leasing again. On September 10, 2008, DNR held the Mount Spurr Geothermal Lease Sale No. 3, and received 20 bids on all 16 available tracts, generating $3,527,073.34 in bonus bids.

Ormat Technologies, Inc. acquired 15 geothermal leases, located approximately 75 miles west of Anchorage on the flanks of Mt Spurr volcano, in the 2008 lease sale.

Since that time Ormat has diligently conducted geological and geophysical reconnaissance work (summer 2009), drilled two core holes, each to approximately 1,000 ft. (summer 2010), and drilled one thermal gradient well to approximately 4,000 ft. (summer 2011). Although preliminary shallow drilling in 2010 yielded promising results, drilling

in 2011 encountered an unexpectedly thick succession of conglomerate, a rock type that does not conduct heat particularly well. The 2011 drilling effort was unable to penetrate the base of this conglomerate unit.

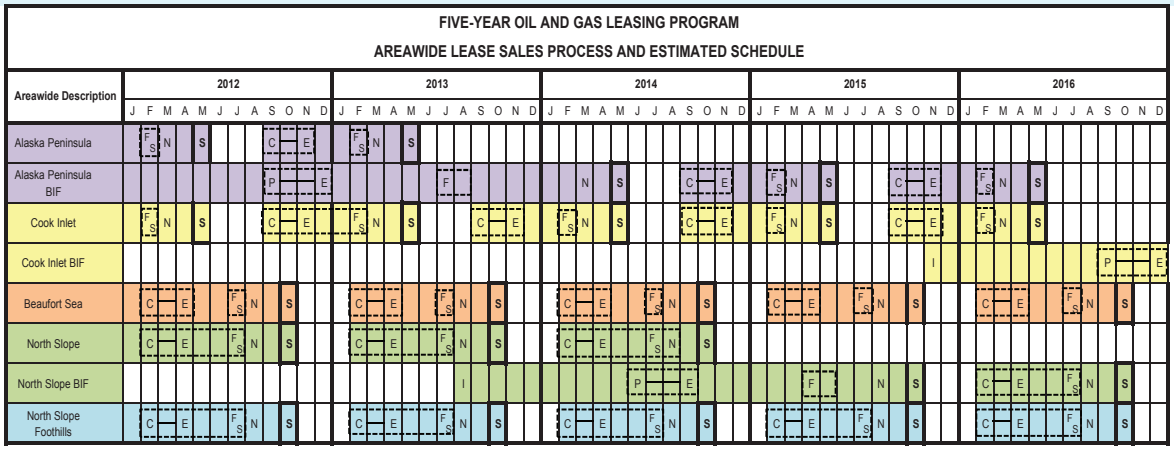
In spite of significant effort, including about $3 million spent on exploration, Ormat has not yet encountered the minimum downhole temperature needed for what they would consider a viable geothermal system, capable of supporting a 50-100 megawatt power plant. In addition to Ormat's $3 million, the State has thus far contributed $2 million to exploration and appropriated another $12.5 million for the 2012 fiscal year. In addition, a $2 million Alaska Energy Authority (AEA) grant has not yet been used.

Ormat is currently analyzing the most recent results and refining their geologic model. Future plans have not been finalized, but the possibility of using a larger rig to drill a much deeper well in 2012 is being considered.

DNR has also received interest in geothermal resource development on Augustine Island, located in lower Cook Inlet. DNR is currently in the process of evaluating the area. A finding to determine whether it is in the state's best interest to offer the area for geothermal leasing is in progress.

### *Best Interest Findings*

In 2011, the leasing section issued a new 10-year best interest finding for the North Slope Foothills lease sale area. The section also incorporated supplements into existing best interest findings to include substantial new information and lessee advisories. Updated information provides potential and current lessees with valuable knowledge and further protects the lease area. The best interest finding release schedule was revised to publish a new 10-year best interest finding every two years:




BIF = New best interest finding
C = Call for new information (beginning of public comment)
E = Public comment period ends
F = Issue final finding
FS = Issue supplement to the finding (if any)
I = Request information from agencies
N = Publish notice of sale and terms
P = Issue preliminary best interest finding (beginning of public comment)
S = Hold sale
[ ] = Public process

**Ten-Year Best Interest Finding Release Schedule**

2013 Alaska Peninsula
2015 North Slope
2017 Cook Inlet
2019 Beaufort Sea
2021 North Slope Foothills

### *Lease Sales*

A rise in interest in areawide lease sales in 2011 increased tract sales with 35 bidding groups participating with bids on 365 sale tracts. The section processed 418 valid bids totaling over $32 million in fees and payments

| Sale | Date | Number of Valid Bids | Tracts Sold | Acres Sold | Sum of High Bonus Bids | Status |
|---|---|---|---|---|---|---|
| Cook Inlet | June 22 | 110 | 109 | 575,202 | $11,125,064 | Pending title/ survey review |
| Alaska Peninsula | June 22 | 0 | 0 | 0 | 0 | No Bids Received |
| North Slope Foothills | Dec. 7 | 0 | 0 | 0 | 0 | No Bids Received |
| North Slope | Dec. 7 | 219 | 178 | 334,969 | $14,110,290.87 | Pending title/ survey review |
| Beaufort Sea | Dec. 7 | 89 | 78 | 281,095 | $6,874,657 | Pending title/ survey review |
| **Totals:** | | **418** | **365** | **1,191,266** | **$32,110,011** | |

## permitting

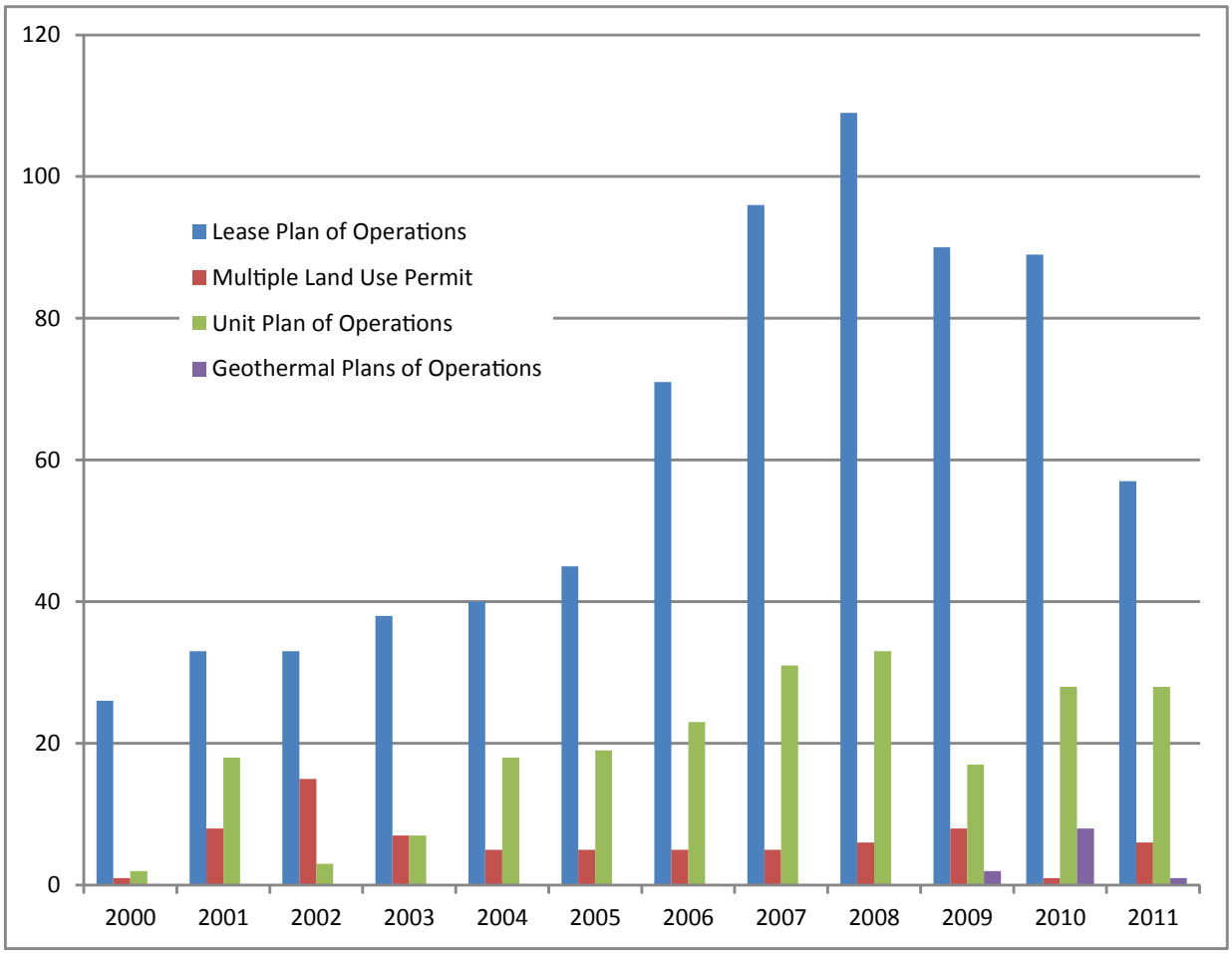
***Ensuring That Oil and Gas Activities Comply with Land Management Statutes and Regulations, and the Terms of the Oil and Gas Lease***

When a company wants to initiate exploration or development on state land, it must submit a Plan of Operations. The Division is responsible for determining the completeness of the plan and issuing approvals with appropriate conditions for environmental protection and safe operations.

These practices apply to oil, gas and geothermal activities on exploration licenses, leases or within units, and .ensures the proposed activity addresses all the mitigation measures identified in the lease or Best Interest Finding. Routine site inspections are conducted to monitor compliance with approvals.

This section is also responsible for ensuring that proper bonds or other securities are in place before surface activities are started. Lease Plans of Operations generally require a $100,000 bond for individual lease operations, or a statewide bond of $500,000. Additional bonding

## authorizations for surface activities



requirements may be applied in unusual circumstances relative to abandonment obligations.

***2011 achievements***

The permitting section administers 747 active case files representing 444 unique facilities. During 2011, the division finalized one easement; issued an amended plan of operations for geothermal exploration at Mt. Spurr; issued 57 new or amended lease plans of operation; issued 28 new or amended unit plans of operation; and issued 6 miscellaneous land use permits for geophysical exploration activities.

## units

***Promoting Conservation, Preventing Waste, and Protecting All Parties***

When lessees propose to commit leases to a unit, Unit Managers in the Division evaluate the unit application and negotiate the terms of the Unit Agreement in order to promote conservation of all natural resources; prevent economic and physical waste; and protect all parties of interest. Unit managers consider environmental costs and benefits, geological, geophysical and engineering characteristics of the reservoir, prior exploration activities, and economic costs and benefits to the state.

Unit managers review updated unit plans of exploration and development, approve contraction and expansion of Participating Areas, tract allocations, and other unit issues. They also oversee expansions, contractions, and termination of units.

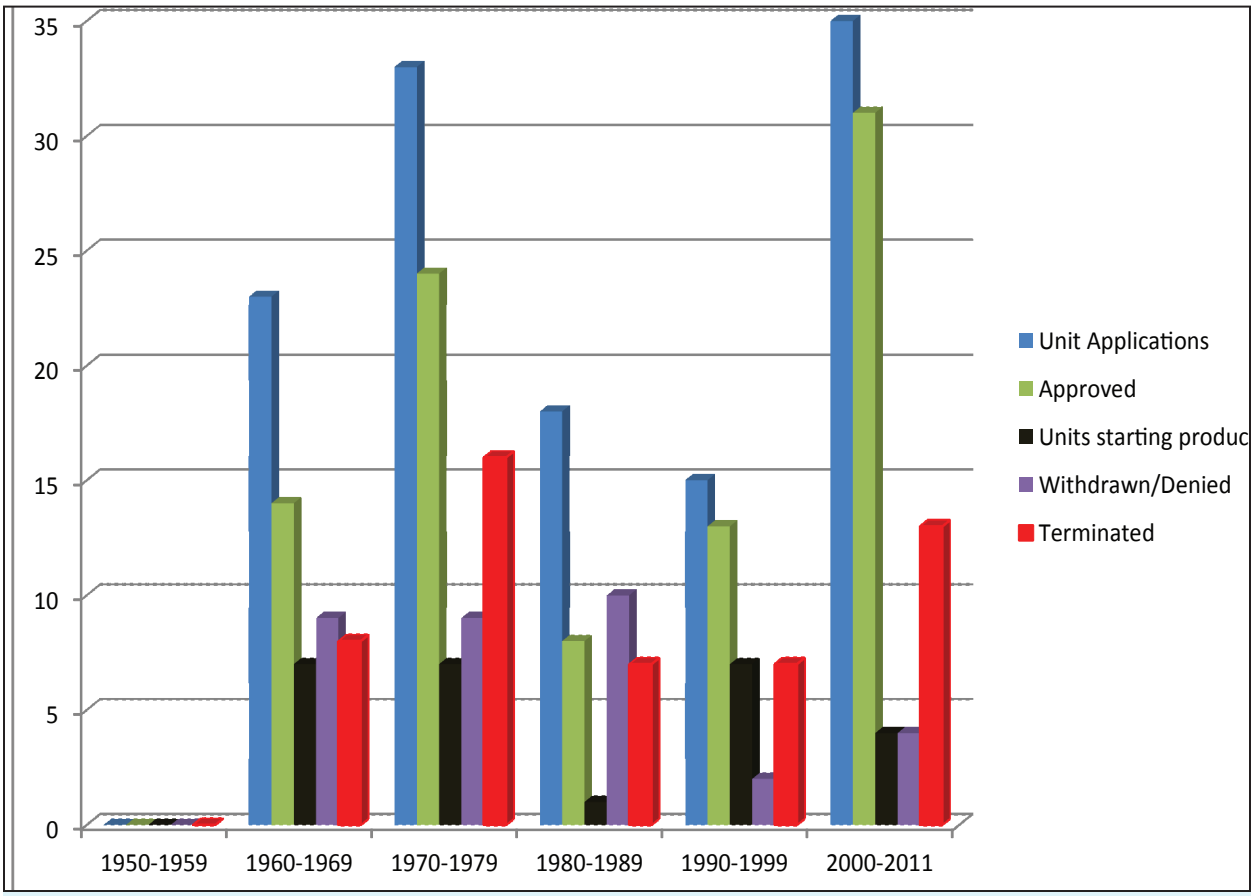
***2011 achievements***

Unit actions involve not only the units section, but are a cooperative effort between several different sections, including (but not always limited to) the units, commercial, resource evaluation, permitting, and leasing sections.

The total number of units applications processed in 2011 equals the number of applications processed between 2000 and 2010.

- Unit applications: 10 (six approved, two denied, one withdrawn, one in progress)
- Unit expansions/contractions: 10
- Unit terminations: 2 voluntary, 1 final ized
- Unit extension: 1 approved
- PA Applications: 4 (2 approved, 1 denied, 1 pending)
- PA Expansions/Contractions: 6
- PA Redeterminations: 6 (4 approved, 2 ongoing)
- Plans of Exploration/Plans of De velopment: 45 (All either approved or pending)
- Plans of Tract/Lease Operations: 7 (Approved, ongoing)

## statewide unitization and production
## 1960-2011




The North Slope has nine (9) units currently in production from a total of 58 processed unit applications from 1968-2011

Since 1968,

- Average time to production for a North Slope Unit has been 54 months (includes high and low outliers)
- Out of 43 formed Units on the North Slope, 30 have been terminated (4 Units exist without production)
- 18 Unit applications were either denied or withdrawn

## • commercial section

***Helping Maximize Value***

The Commercial Section provides cross-cutting support to the Division in its entirety to fulfill the constitution's goal of maximizing the use of Alaska's natural resources by providing economic expertise.

The overall mission of the Commercial Section is to maximize value given the state's ownership, regulatory, and legal positions. Primary responsibilities of the Commercial Section include royalty modification, gasline support work, Royalty-in-Kind contract negotiations, Royalty Settlement Agreements, supporting state tariff litigation and settlements, and improving the competitive environment.

The Commercial section also provides economic analysis such as project economics, market structure, optimization

and price and cost assessments. It also supplies the expertise to support policy, legislative, and regulatory decisions by analyzing market implications of laws, regulations, and contract provisions, and works on negotiation strategy and support.

***2011 achievements***

The Commercial Section settled two Royalty Settlement Agreement reopeners with ConocoPhillips during 2011.

Royalty Settlement Agreement reopeners are the result of provisions in the three primary ANS royalty settlement agreement, allowing the state and its lessees the opportunity to change portions of the royalty oil valuation methodology, and to resolve disputes and avoid costly and time-consuming litigation.

The State or the affected producer may exercise some of these reopeners at any time with no limits on when, or how many times, a reopener can be initiated. Other reopeners may only be exercised once every one to three years.

When the royalty oil valuation methodology is changed as the result of a reopener, usually a limited retroactive payment to the State or refund to the producer may be required. The new methodology will also be imposed prospectively and affect future State royalty revenues.

The Commercial section was the project lead on the Division's Cook Inlet Cost Study, done in collaboration with the Resource Evaluation Group.

The Commercial section published draft Royalty Modification regulations, and is currently working with the Department of Law on changes and edits to the proposed regulations in response to public comments.

As previously mentioned, the Commercial Section provides suggested lease

terms for the State's oil and gas lease sales. During 2011, the section developed innovative lease terms for both Spring and Fall lease sales to encourage more timely development .

## royalty audit

***Making Sure the State Receives Full Value of Royalty Payments***

The Division's Audit Section is tasked with making sure the state receives the full value associated with royalty payments.

This section conducts audits under a number of different authoritative guidelines including Royalty Settlement Agreements, Lease Agreements, Statutes and the Alaska Administrative Code. Audits examine volumes, values, and costs claimed as deductions against a lessee's royalty or Net Profit

Share lease filing such as, marine operating and capital expenses, lease operating and capital expenses, and pipeline tariffs.

The Royalty Audit section also con-

ducts federal audits and compliance reviews through a contract with the Department of Interior's Office of Resources Revenue.

These audits are conducted under authoritative guidelines and standards that apply to federal leases, such as Government Auditing Standards and the Code of Federal Regulations. This program ensures that lessees correctly pay the royalties due from oil and gas production on federal leases where the state has a revenue share.

The Division of Oil and Gas obtained the authority to audit in 2003. Since then, 51 audits have been issued, and an additional $141.7 million has been collected as a result.

The Division of Oil and Gas Audit Section conducts audits of State royalties and net profits and Federal royalties received from leases within Alaska. AS 38.05.036 provides the authority to conduct State royalty and net profit audits. Federal royalty audits are conducted under a contract with the Department of Interior's Office of Natural Resources Revenue. The State receives 27% - 90% of the federal royalty payments from federal leases within Alaska.

Royalties owing the State and the Federal governments are calculated under a variety of leases, agreements, statutes and regulations. Because a royalty filing provides information at a summary level, It is important to audit the details that support the filing to ensure that royalties have been correctly calculated and reported in the royalty and net profit payments. In conducting an audit an Auditor may look at oil and gas valuation, costs associated with the transportation of oil and gas, and exploration, development and production costs.

There are currently seven Oil and Gas Revenue Auditors and one Audit Manager in the Division of Oil and Gas Audit Section. In FY 2011 the Section issued

14 audits and collected an additional $45.4 million in royalties and net profits. Audit recoveries in FY 2011 represent 32% of the total royalty and net profit audit recoveries since 2003.

Six audits were initiated or opened in calendar year 2011, and payments received against audit claims over the calendar year totalled $27 million.

## petroleum systems integrity office (psio)

***Coordinate oversight, identify areas of improvement, introduce quality management practices***

The Petroleum Systems Integrity Office (PSIO) within the Department of Natural Resources is charged by Administrative Order 234 with three primary functions:

1. To coordinate: local, state and federal agencies with respect to the oil and gas industry in the state of Alaska.

2. To identify: opportunities for improvement in State of Alaska petroleum system oversight

3. To introduce and apply: quality management principles and practices

to state oversight of the oil and gas industry.

***Coordination***

One of the primary purposes of PSIO is to enhance coordination and information sharing between state and federal agencies regarding petroleum system integrity issues across the state. PSIO strongly believes that better communication will directly result in a more efficient use of state resources. To bring about this increased coordination, PSIO has teamed with the following agencies through a single point of contact designated as a PSIO Liaison.

State Agencies

- Alaska Oil and Gas Conservation Commission
- Department of Environmental Conservation
- Department of Fish and Game
- Department of Public Safety
- Department of Natural Resources
- Regulatory Commission of Alaska
- Department of Revenue
- Department of Labor and Workforce Development
- Department of Law
- AGIA Coordinator's office
- Governor's Washington, D.C. office

Federal agencies

- Pipeline and Hazardous Material Administration
- Department of Homeland Security
- Office of the Federal Coordinator

During 2011, PSIO, along with our liaisons, have continued to coordinate efforts on the following issues on an ongoing and as needed basis:

- Monthly Liaison Meetings
- Incident Information Sharing
- Industry employee concerns coordination
- Coordinating "one voice" response to Industry and Public queries

Through these activities PSIO has not only developed a closer relationship with our liaison agencies but we have also strengthened our relationships with Industry as we have worked with them to understand any concerns or incidents that occurred during the year.

***Continuous improvement***

The liaison agencies and PSIO coordinate to identify opportunities to improve the effectiveness of oversight and enforcement; to reduce oversight activities that are duplicative or that conflict with those of another state or federal agency; and to identify any known deficiencies in existing authority or jurisdiction.

2011 Activities: The comprehensive assessment of state agency jurisdictions, standards, and practices on matters subject to Admin order 234 is progressing and PSIO is actively engaging with other DNR agencies to identify and address any opportunities for improvement.

***Quality Management Principles and Practices***

PSIO is tasked with identifying current industry practices including the quality control, quality assurance, monitoring, inspection, and other practices used to ensure the integrity and reliability of oil and natural gas facilities, equipment and activities.

2011 Activities: PSIO has developed a draft model for evaluating the effectiveness of industry quality management systems and sponsored training to agency and industry on how to audit quality systems. PSIO has also been actively involved in helping the division with process development and optimization efforts.

## geographic information systems (GIS)

The GIS Section is a tech-support group for the Division of Oil and Gas and produces digital maps, presentations and other cartographic products.

The GIS team began 2011 with a new hire, GIS/Analyst Programmer, joining our team. This position is a much appreciated and undervalued part of the GIS work which we are tasked. The programming skills give our team that extra edge to create and maintain accurate geospatial data. The data we maintain is represented on maps and other presentation materials, created for the Division and the Department.

Our GIS team plays a role in DOGs Annual Areawide Lease Sales. The lease and unit geospatial data is presented on maps for our Areawide Lease Sales. These maps are used by potential bidders in their bidding decisions. On lease sale day, the sealed bids are opened and read aloud, as a slide presentation created by our team, displays the leases.

In August, the Cartographer Class was reclassified to GIS Analyst Class. This reclassification aids in retention and recruitment for the profession.

Our team created map and presentation material for the AAPG conference and NAPE conferences. The maps, supporting graphics, and DVDs, give potential lessee's, and others interested in oil and gas development, take-home material from these conferences.

Our year ended with another new hire, GIS Analyst II, joining our team. This position brings additional expertise to our skilled team.

## information technology (IT)

The past year was a busy year for the Information Technology Team within the Division of Oil & Gas. Two primary activities consume the better of available technology resources: Royalty Accounting, and Lease Sales.

Over the course of the last twelve months the IT Team continued to provide support to the Royalty Accounting section, implementing new automated royalty validation functions, and processing of millions of individual royalty filing records.

Additionally, recent changes in the biannual lease sale required systems that allow frontline staff to administer and manage sales in completely different ways than had historically been done.

Over the next year the IT Team looks forward to enhancing and streamlining the permitting processes conducted by the Division of Oil & Gas, and to find new ways to meet both old and new business challenges.

## royalty accounting

***Tracking Payments Due the Landowner***

The Royalty Accounting Section maintains all records for reported values and volumes of oil and gas produced in the state. It processes royalty reports from lessees and unit operators, monitoring monthly production volumes, royalty values, and amounts paid to the state. Royalty Accounting keeps track of royalty ownership and makes sure the state receives its proper allocation of royalty revenue from each producing property.

Royalty Accounting is also responsible for reconciling a plethora of different reports, and reports monthly allocations and distributes revenue to the General Fund, School Fund, Permanent Fund, and Constitutional Budget Reserve Fund.

The "Oil and Gas Royalty" chapter (page 23) explains our work as well as lists our 2011 achievements.

# oil and gas royalty

## introduction

The state of Alaska receives a royalty of approximately 12.5 percent of the oil and gas produced from its leases. The state may take its royalty share of production "in kind" or "in value." When the state takes its royalty share in kind (RIK), it assumes possession of the oil or gas and sells it directly to a refinery or other end user. The Commissioner of Natural Resources may sell the RIK oil or gas in a competitive auction or through a noncompetitive sale negotiated with a single buyer. When the state takes its royalty in value (RIV), the state's lessees who produce the oil or gas market the state's share along with their own share of production. The lessees remit cash payments on a monthly basis for the state's RIV share. The value assigned to the State's RIV is determined either under a royalty settlement agreement formula or under the terms of the lease.

Over the last 30 years the state has taken about one-half of its royalty oil as RIK and sold it to in-state refineries. Pricing terms are targeted to provide the state a value that is higher than would have been received had the royalty been taken in value. Volumes to be delivered are typically cast as targets within a defined range, rather than precise specifications of barrels. Lease terms require that when the state elects to take RIK it must provide 90-180 days' notice (depending upon the lease) of a percentage of royalty to be taken in kind, rather than a specific number of barrels to be taken in kind; the uncertainty as to future production volumes makes a precise specification of RIK deliveries impossible.

These in-state sales have provided an important supply security, thereby stimulating Alaska's refining industry by providing long-term supplies of oil to each of the state's four refineries.

***Royalty-in-Kind Policy***

When disposing royalty oil or gas, the commissioner is bound by AS 38.05.182 and AS 38.05.183. Further, the Legislature established the Alaska Royalty Oil and Gas Development Board (Royalty Board) under AS 38.06 to oversee the department's RIK program. Regulations under Title 11, Chapters 3 and 26 govern the actual disposition of royalty and the sale of RIK. (See http://www.legis.state.ak.us/folhome.htm for more information).

The rules that govern the sale of RIK may be reduced to a few principles:

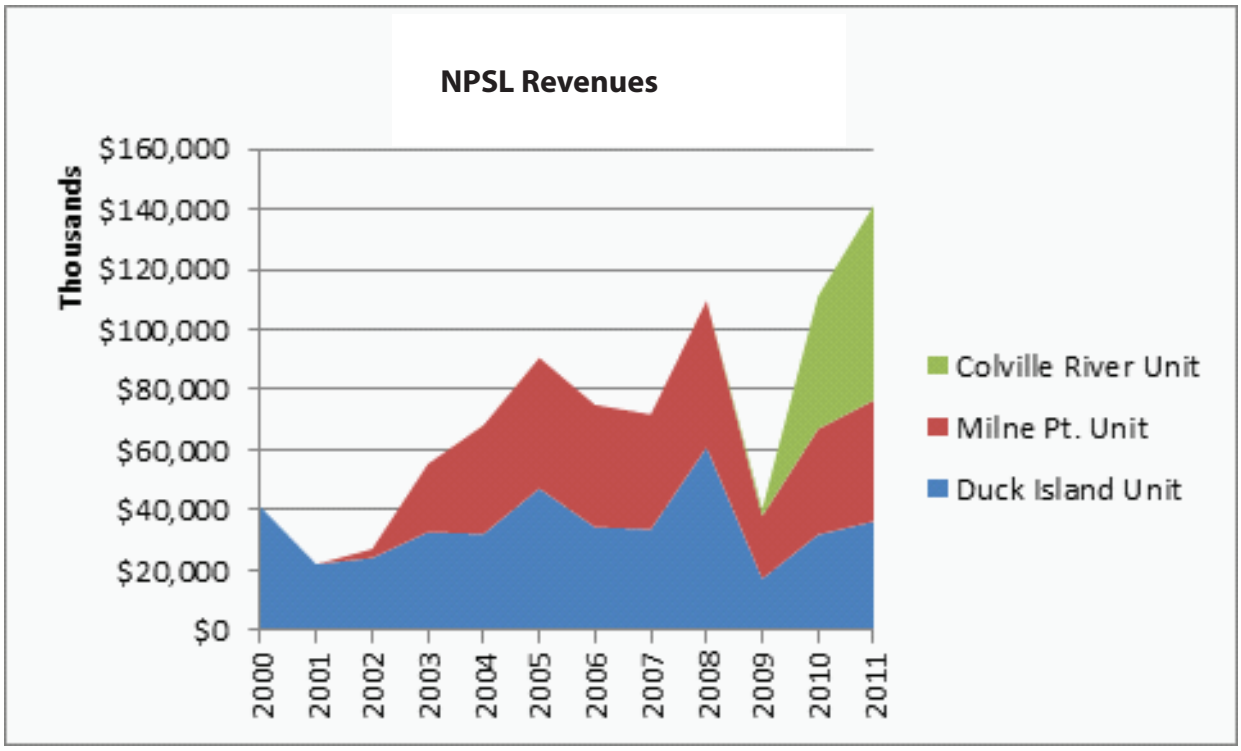
- Any disposition of the state's royalty must be in the state's best interest. The state should sell its royalty rather than take it in value as long as the best interests of the state are served.
- The state must receive a price for its RIK that is at least as much as it receives when the state takes its royalty in value.
- Under certain circumstances, the state may sell its oil in a negotiated sale, but competitive sales are preferred.
- Although the price of RIK must equal or exceed the price of RIV, a review of each sale must consider economic, social, and environmental effects. In this way, benefits may be attributed to the sale of RIK to local refineries that would not be generated by sales to outside purchases.
- The public is a part of the process. Depending on the terms of the sale, the commis-

sioner will publish best interest findings and solicit comments on the sale from the public.

- The Royalty Board must be notified of any disposition of RIK. For supply contracts of more than one year, the Royalty Board must evaluate the economic, social, and environmental effects of the sale, convene a public hearing, and recommend approval of the sale to the Legislature.
- The Legislature approves long-term contracts by enacting legislation
- The near-universal practice of the Department is to make its sales at or near the location of production. The RIK buyers take title upstream of necessary transportation infrastructure, and must arrange for transportation themselves. In this way, transportation risks are borne by the purchaser, and the state minimizes its need for staffing to administer RIK sales.

***Net Profit Share Leases***

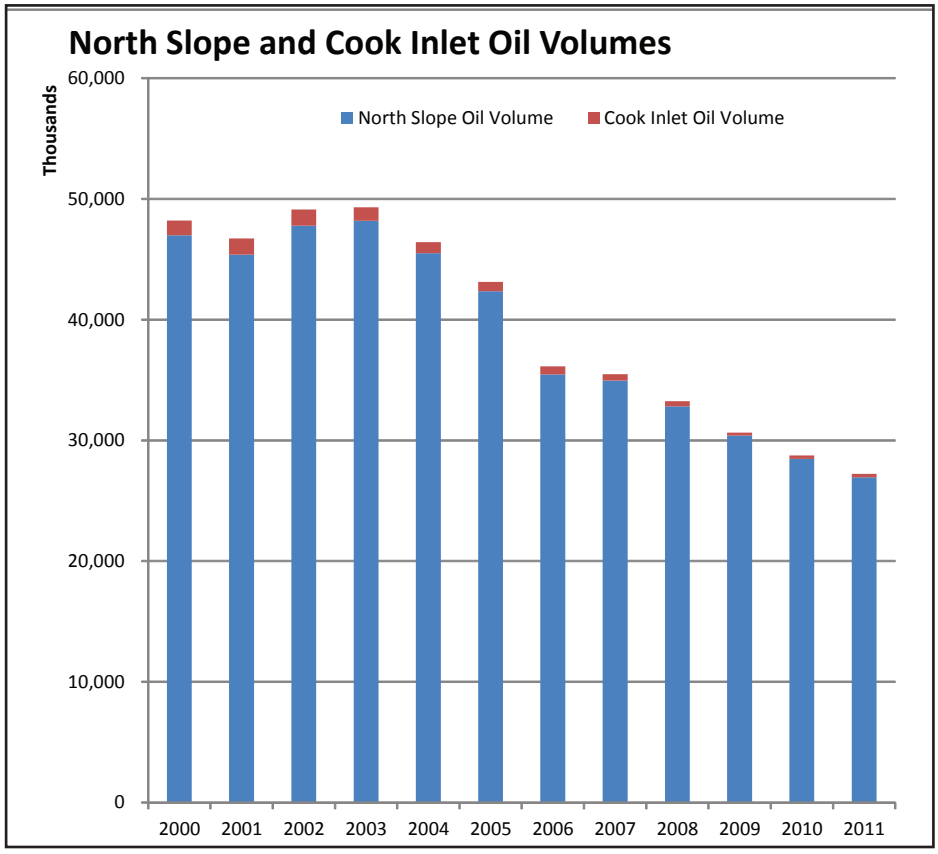
The State has approximately 20 active net profit share (NPS) leases. These leases provide, in addition to royalty revenues, a percentage of lease net profits after all development and operating costs are recouped. As of the end of 2011, ten of the NPS leases have reached payout status and the State is receiving a monthly payment of its share. The net profit leases that have reached payout are in the Duck Island Unit, the Milne Point Unit and the Colville River Unit. The graph below indicates the revenues received from NPS leases between 2000 and 2011. Active NPS leases that have not yet reached payout are in the Kuparuk River Unit, the Oooguruk Unit and the Nikaitchuq Unit.

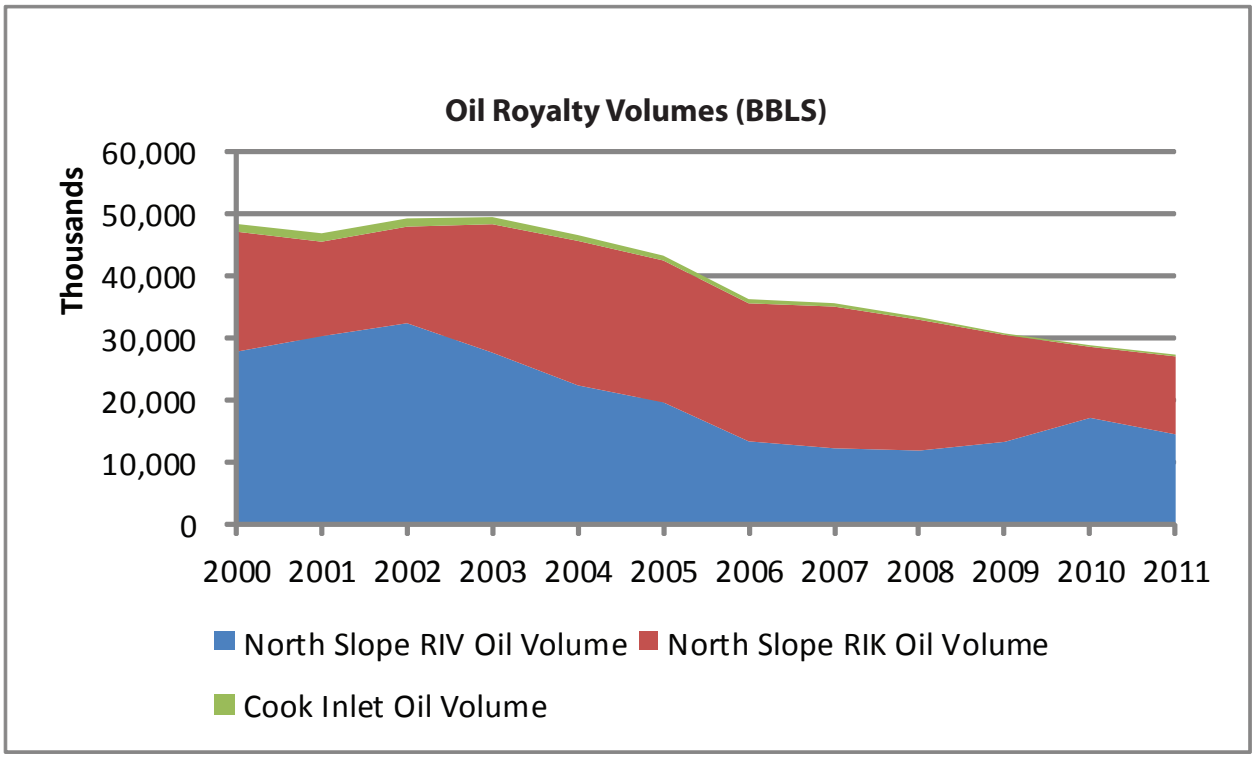


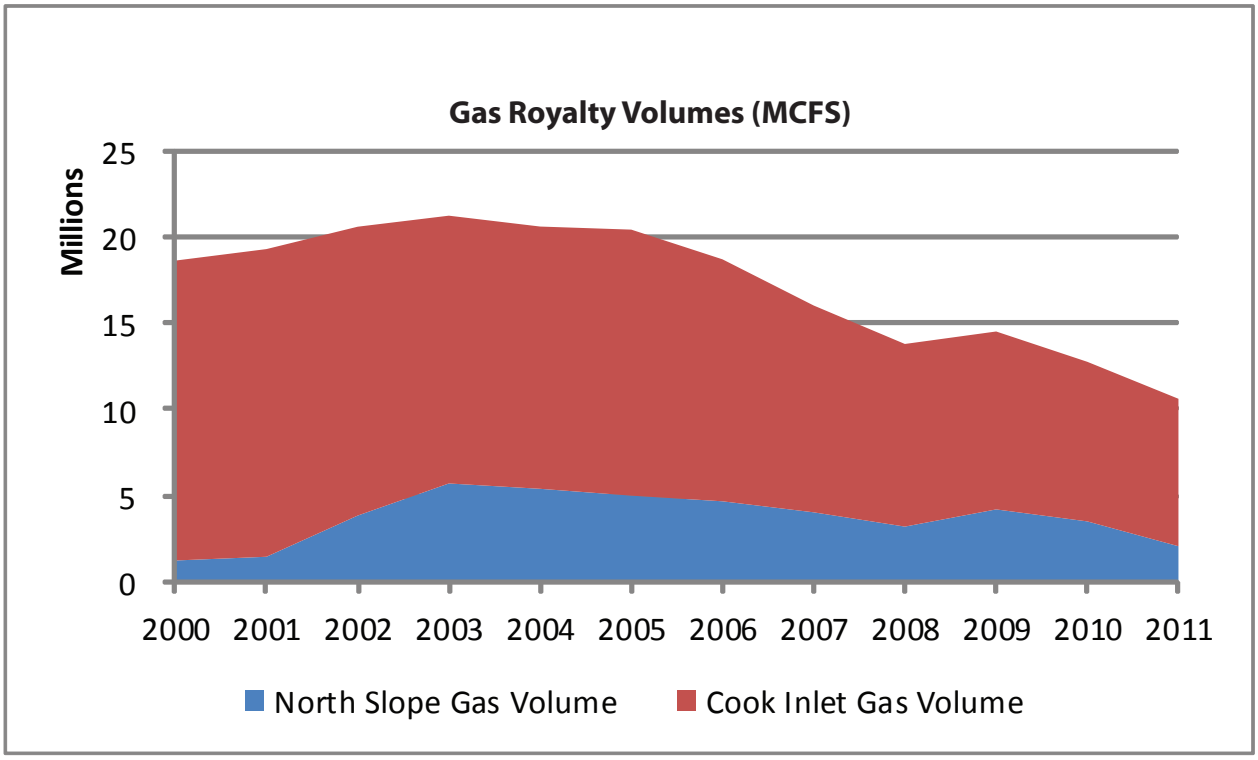

*PLEASE NOTE that the graphs on this and following (pages 24-31) contain numbers for December 2011 extrapolated from expected production, as firm numbers for the last month of the year were not available at the time of this publication.*

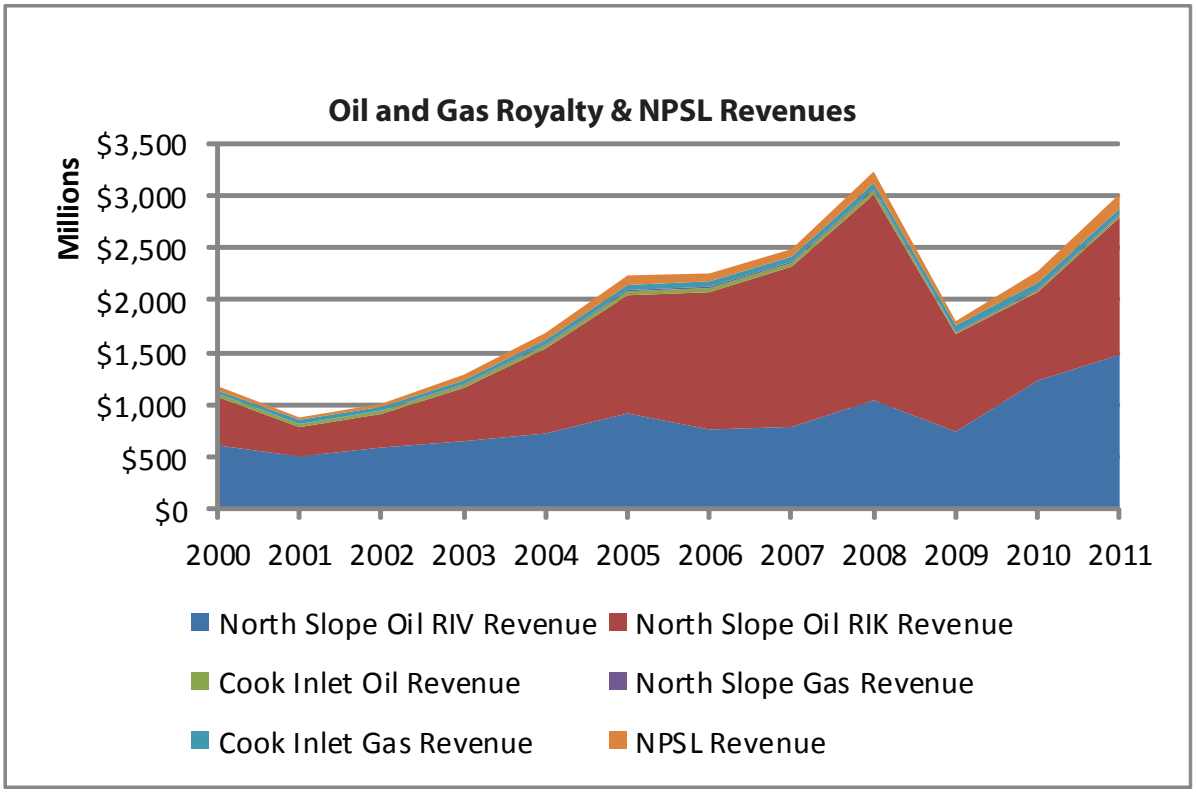
***Royalty Volumes and Values***

The following graphs depict oil and gas volumes and values for calendar years 2000 through 2011. The first graph "North Slope and Cook Inlet Oil Volumes" indicates the decline in oil production through this time period.




Oil Royalty Volumes (BBLS)
Thousands
60,000
50,000
40,000
30,000
20,000
10,000
0
2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011
North Slope RIV Oil Volume
North Slope RIK Oil Volume
Cook Inlet Oil Volume

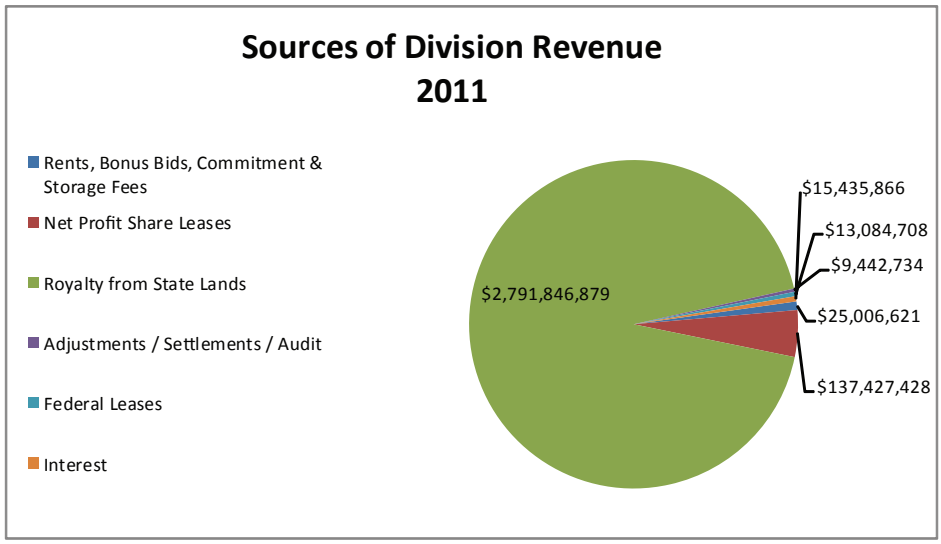

Gas Royalty Volumes (MCFS)
Millions
25
20
15
10
5
0
2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011
North Slope Gas Volume
Cook Inlet Gas Volume



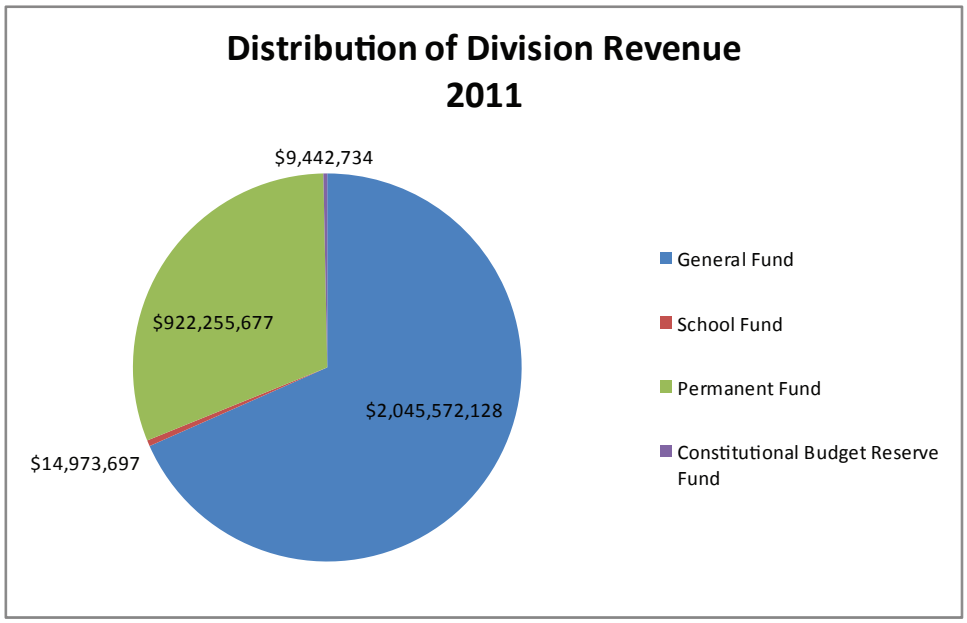

The graph titled "Oil and Gas Royalty & NPSL Revenues illustrates the revenues received from royalty and NPS leases. The graph highlights the precipitous rise and fall in oil prices in 2008. This graph also reflects the relative value that the State has received for its RIK oil sales compared to RIV oil, RIV gas and NPS leases.

***Sources and Distributions of Division Revenues***

The Division's primary sources of revenues are from royalty from state lands and NPS lease payments. Other sources are rents, bonus bids and commitment and storage fees which are received through the leasing section. Other sources are royalties and rentals from federal lands and interest on amounts due. The pie chart below depicts the composition of the $2.992 billion in total revenues received by the Division during calendar year 2011.

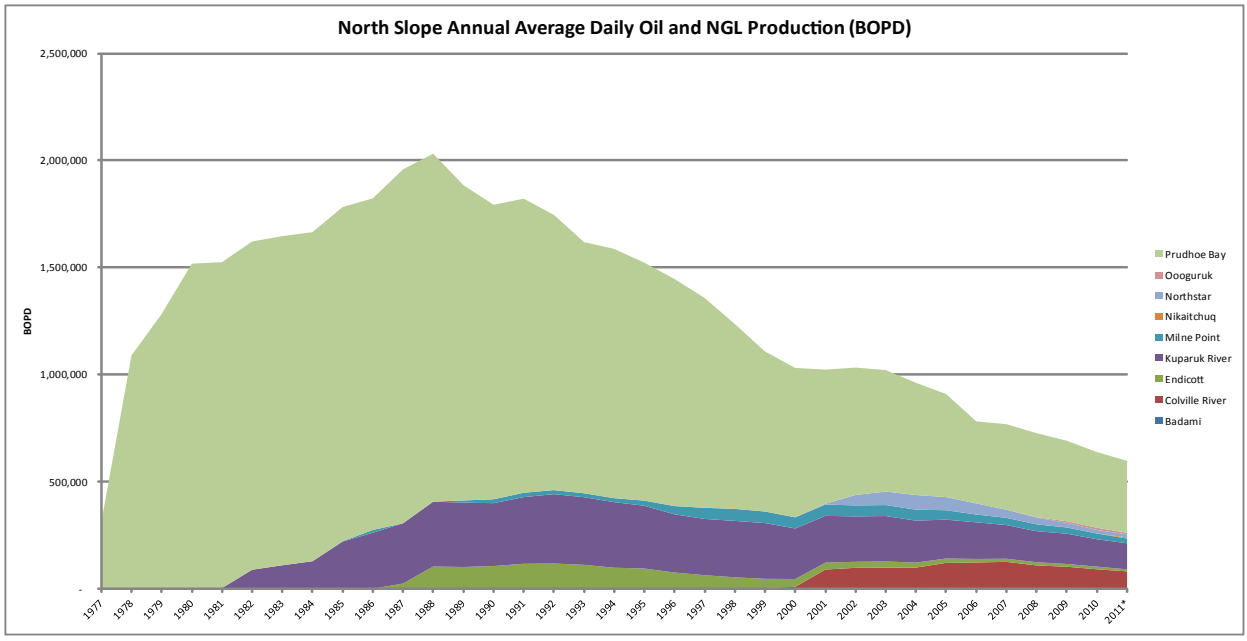


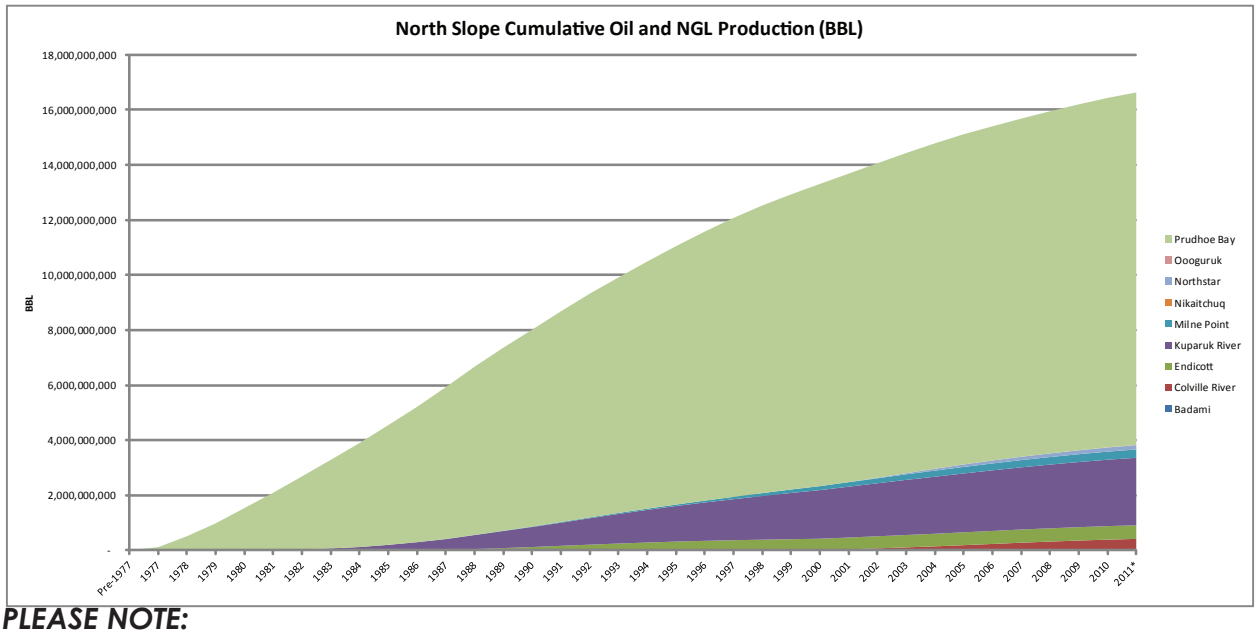

The Division is responsible for the correct allocation of revenues to the various state funds in accordance with statute and regulation. Royalty and lease revenues are allocated among the general, permanent, school and constitutional budget reserve funds based on a number of factors. The graph below depicts how the 2011 calendar year revenues of $2.992 billion were distributed.



# production

## north slope



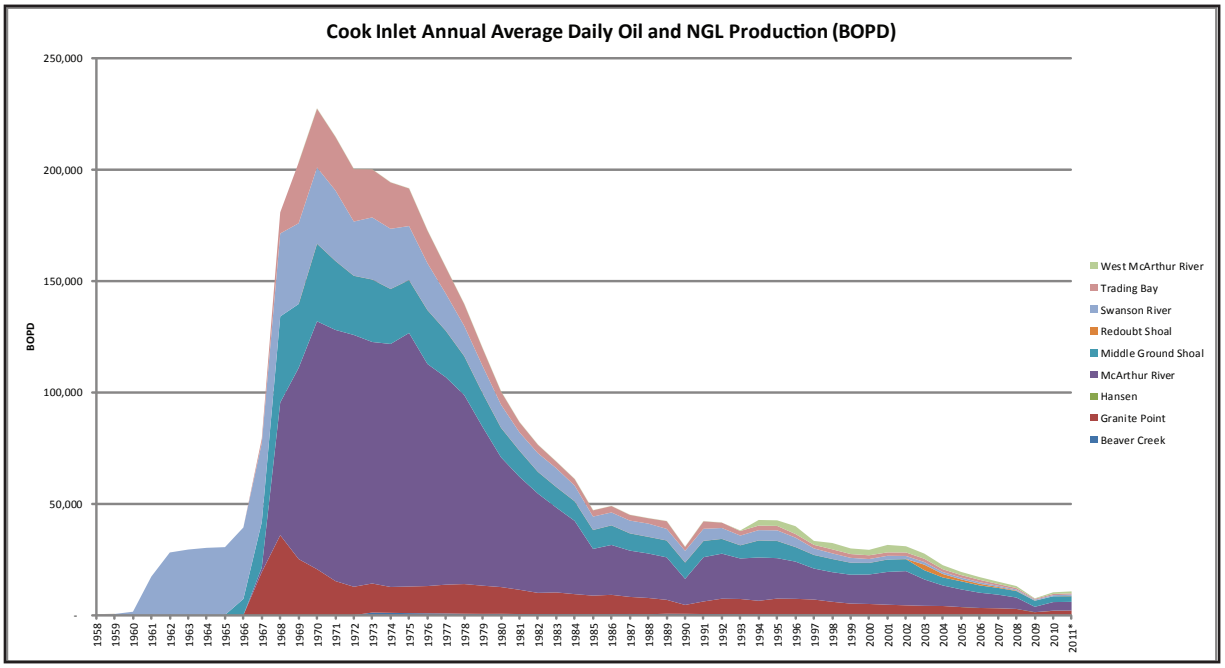



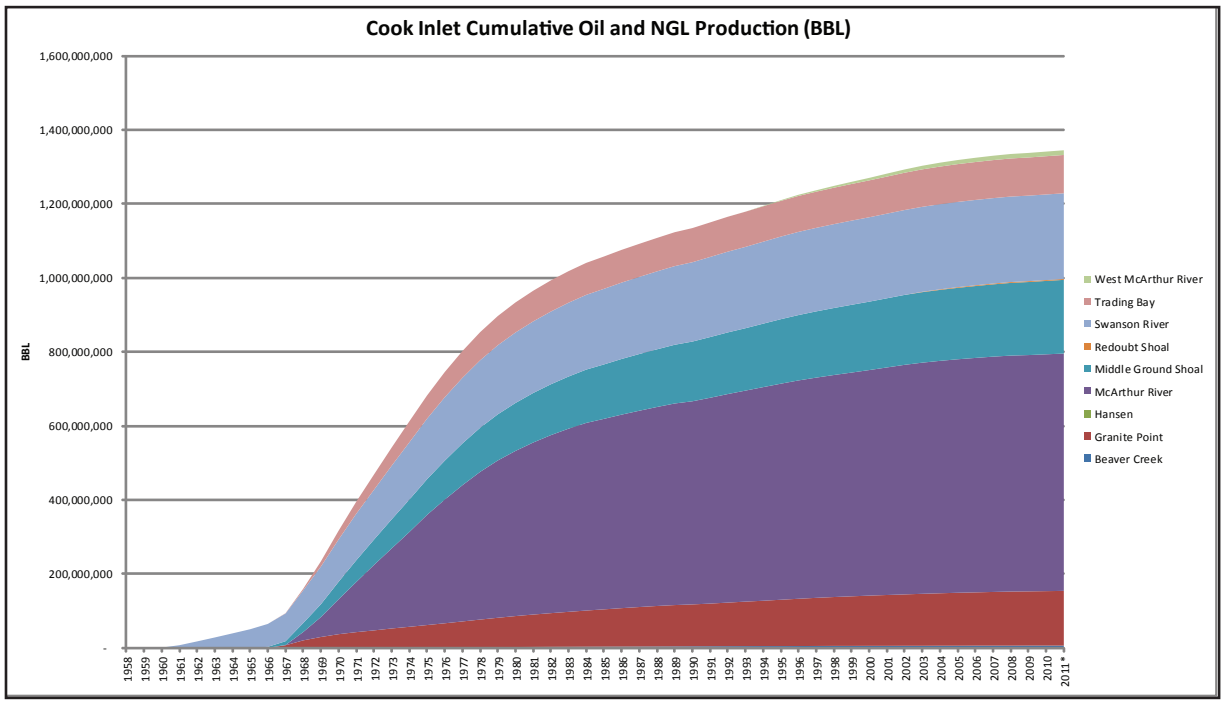

***PLEASE NOTE:***

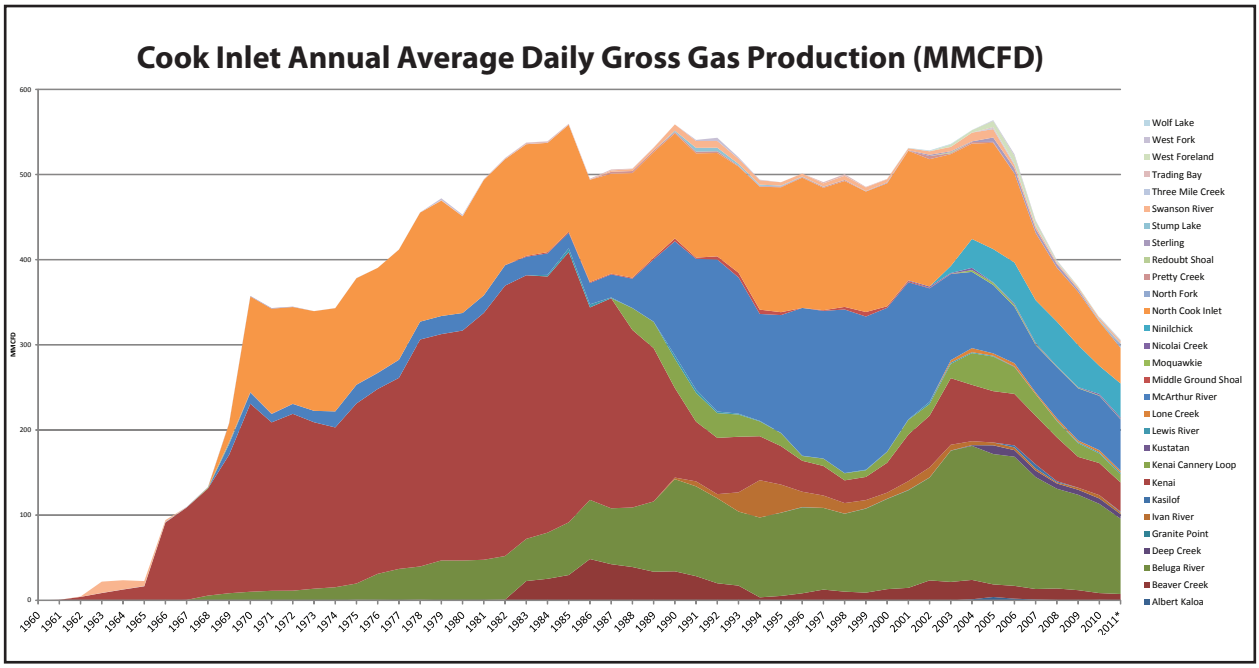
***1) The Division of Oil and Gas does not maintain production numbers or make forecasts. The official source for production numbers is the Alaska Oil and Gas Conservation Commission (http://doa.alaska.gov/ogc/index.html). The official state source for production forecasts is the Department of Revenue (http://dor.alaska.gov/).***

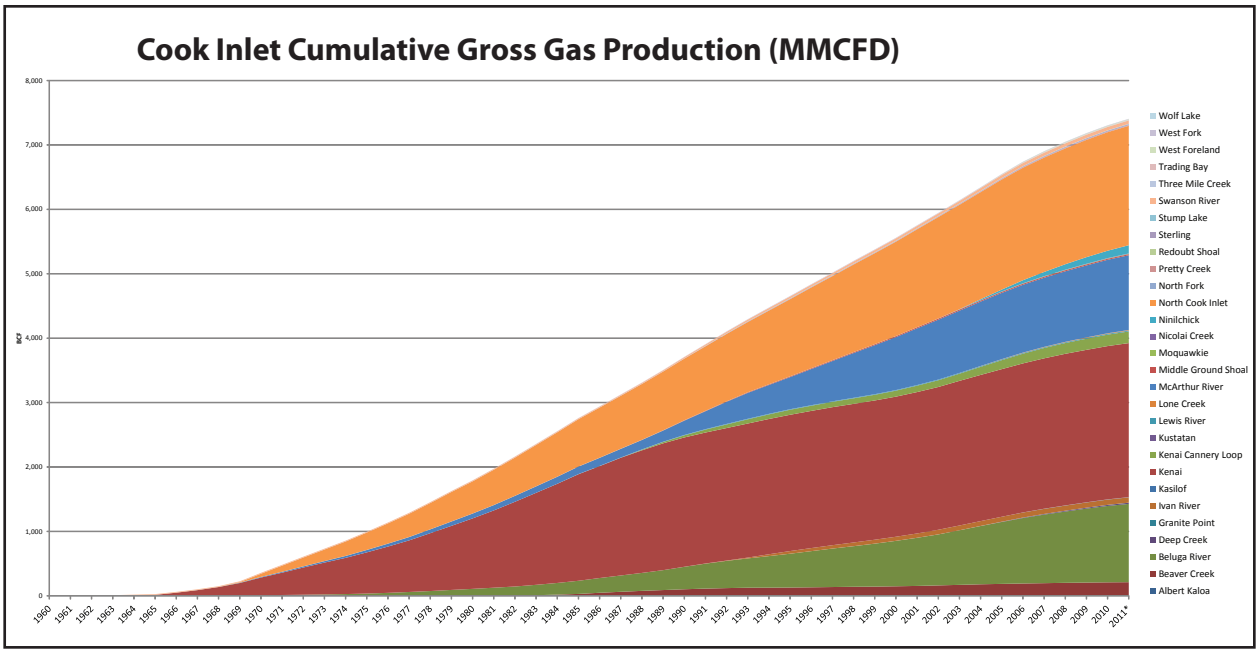
***2) Production numbers on pages 29-31 are based on estimated production for December 2011, as those numbers were not yet available at the time of this publication.***

# cook inlet


Cook Inlet Annual Average Daily Oil and NGL Production (BOPD)
BOPD
250,000
200,000
150,000
100,000
50,000
-
1958 1959 1960 1961 1962 1963 1964 1965 1966 1967 1968 1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011*
West McArthur River
Trading Bay
Swanson River
Redoubt Shoal
Middle Ground Shoal
McArthur River
Hansen
Granite Point
Beaver Creek

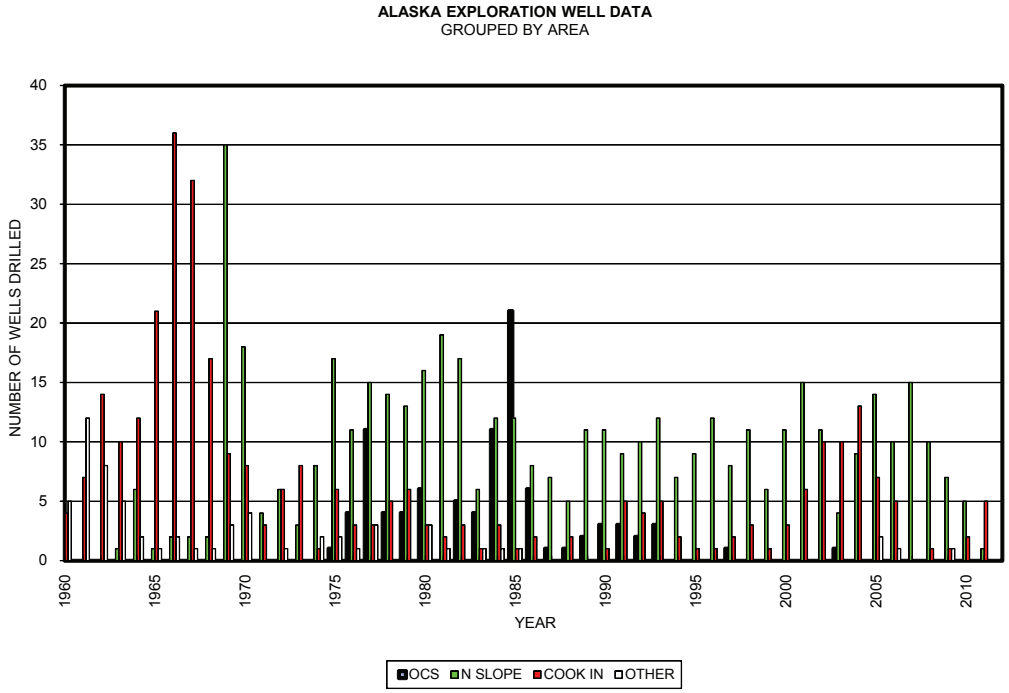

Cook Inlet Cumulative Oil and NGL Production (BBL)
BBL
1,600,000,000
1,400,000,000
1,200,000,000
1,000,000,000
800,000,000
600,000,000
400,000,000
200,000,000
-
1958 1959 1960 1961 1962 1963 1964 1965 1966 1967 1968 1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011*
West McArthur River
Trading Bay
Swanson River
Redoubt Shoal
Middle Ground Shoal
McArthur River
Hansen
Granite Point
Beaver Creek

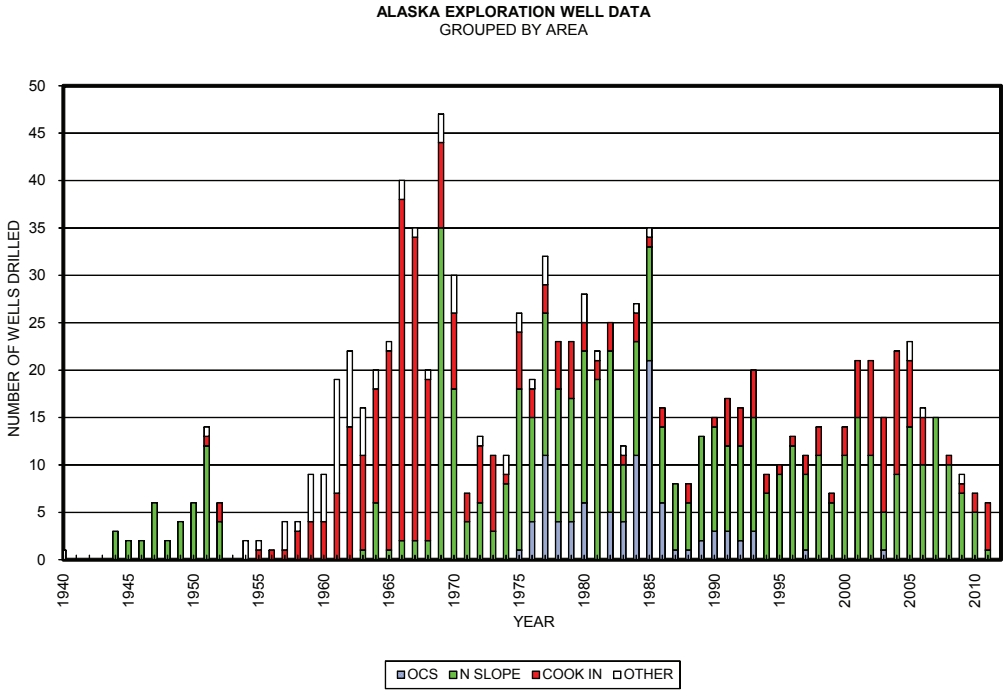



***Please note: The graphs above show gross production and does not include storage.***

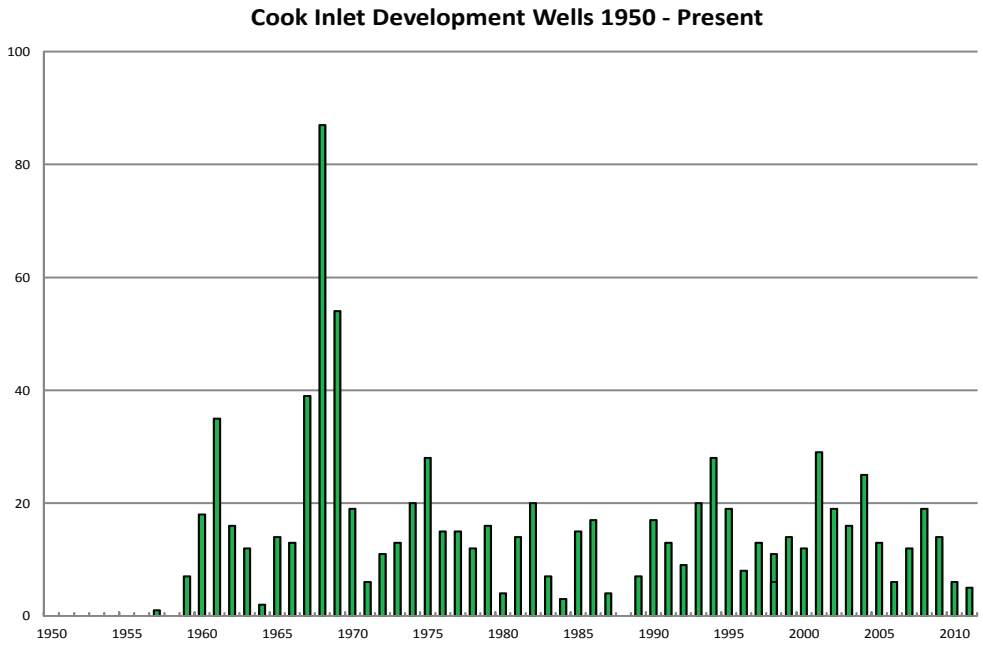
# exploration wells

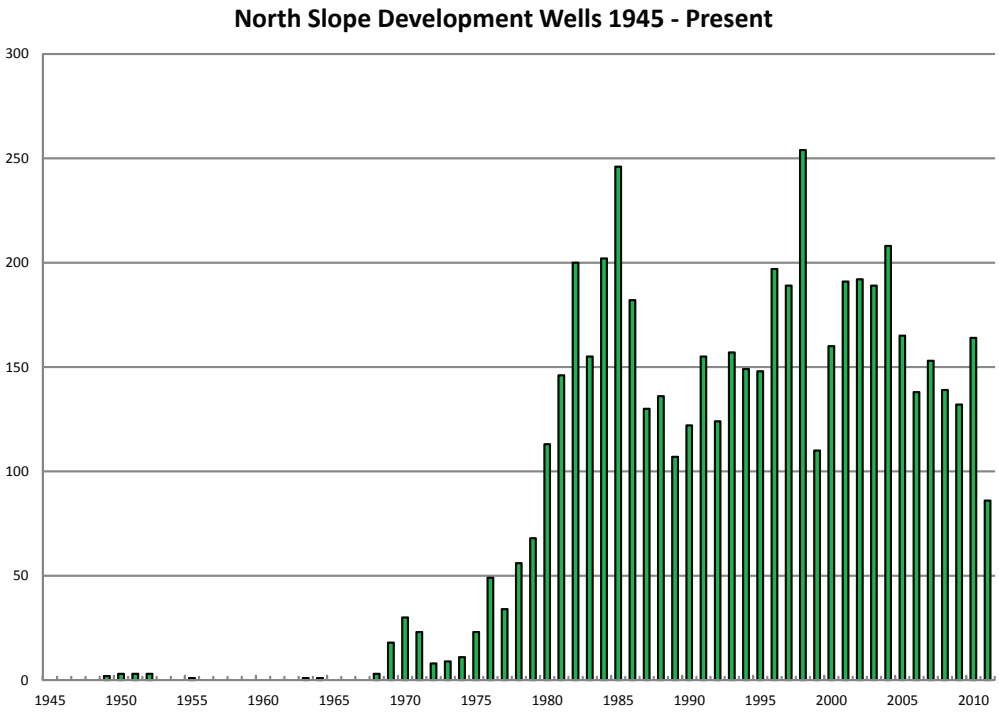



***Please note: Data sets for both graphs are the same; only presentation of data differs.***

# development wells



# Alaska Statewide Summary of Assessments of Undiscovered, Technically Recoverable Resources, Conventional Oil and Gas[1]

| Region and Assessment Segment | | Oil, MMSTB (million stock tank barrels) Probabilty Distribution F95 | Mean | F05 | Gas, BCF (billion cubic feet) Probabilty Distribution F95 | Mean | F05 | Marginal Probability[4] | Reference |
|---|---|---|---|---|---|---|---|---|---|
| **North Slope Onshore & State Waters[2]** | | | | | | | | | |
| Central North Slope | *Oil & Associated gas* | 2,565 | 3,984 | 5,854 | 2,681 | 4,198 | 6,092 | 1.00 | *USGS, 2005: Open-File Rpt 2005-1182* |
| | *NGL & Non-associated gas* | --[3] | 478 | --[3] | 23,939 | 33,318 | 44,873 | | *USGS, 2005: Open-File Rpt 2005-1182* |
| Nat'l Petrol Reserve Alaska | *Oil & Associated gas* | -- | 896 | -- | -- | -- | -- | 1.00 | *USGS, 2010: Fact Sheet 2010-3102* |
| | *NGL & Non-associated gas* | --[3] | -- | --[3] | -- | 52,839 | -- | | *USGS, 2010: Fact Sheet 2010-3102* |
| ANWR coastal plain[2] | *Oil & Associated gas* | 5,724 | 10,360 | 15,955 | -- | 4,764 | -- | 1.00 | *USGS, 1999: Open-File Rpt 98-34 (entire assessment area, includes native lands and state waters)* |
| | *NGL & Non-associated gas* | --[3] | 190 | --[3] | 0 | 3,841 | 10,852 | | *USGS, 1999: Open-File Rpt 98-34 (entire assessment area, includes native lands and state waters)* |
| total - North Slope Onshore | | --[3] | 15,908 | --[3] | --[3] | 98,960 | --[3] | | |
| **Arctic Alaska Outer Continental Shelf (OCS)** | | | | | | | | | |
| Chukchi Shelf | *Oil & all gas* | 2,320 | 15,380 | 40,080 | 10,320 | 76,770 | 209,530 | 1.00 | *BOEM, 2011 National Assessment Factsheet; MMS, 2007 Alaska OCS Assessment* |
| Beaufort Shelf | *Oil & all gas* | 410 | 8,220 | 23,240 | 650 | 27,640 | 72,180 | 1.00 | *BOEM, 2011 National Assessment Factsheet; MMS, 2007 Alaska OCS Assessment* |
| Hope Basin | *Oil & all gas* | 0 | 150 | 600 | 0 | 3,770 | 14,980 | 0.40 | *BOEM, 2011 National Assessment Factsheet; MMS, 2007 Alaska OCS Assessment* |
| total - Arctic OCS (offshore) | | --[3] | 23,750 | --[3] | --[3] | 108,180 | --[3] | | |
| **TOTAL - Arctic Alaska** | | --[3] | ***39,658*** | --[3] | --[3] | ***207,140*** | --[3] | | |
| **Interior Alaska (USGS Assessments)** | | | | | | | | | |
| Yukon Flats Basin[5] | *Oil & all gas* | 0 | 173 | 592 | 0 | 5,463 | 14,629 | 0.81 | *USGS, 2004: Fact Sheet 2004-3121* |
| Central AK -- multiple basins[6] | -- | -- | -- | -- | -- | -- | -- | -- | *USGS, 1996: 1995 National Assessment, Digital Data Series DDS-30* |
| Kandik Basin | *Oil & all gas* | 0 | 61 | 312 | -- | 178 | -- | 0.42 | *USGS, 1996: 1995 National Assessment, Digital Data Series DDS-30* |
| Copper River Basin[7] | -- | -- | -- | -- | -- | -- | -- | 0.02 | *USGS, 1996: 1995 National Assessment, Digital Data Series DDS-30* |
| **TOTAL - Interior Alaska** | | --[3] | ***234*** | --[3] | --[3] | ***5,641*** | --[3] | | |
| **Southern Alaska** | | | | | | | | | |
| Southern Cook Inlet OCS | *Oil & all gas* | 60 | 1,010 | 2,850 | 30 | 1,200 | 3,480 | 1.00 | *BOEM, 2011 National Assessment Factsheet; MMS, 2007 Alaska OCS Assessment* |
| Northern Cook Inlet | *Oil & all gas* | 108 | 599 | 1,359 | 4,976 | 19,037 | 39,737 | 1.00 | *USGS, 2011:Fact Sheet 2011-3068* |
| Alaska Peninsula Onshore | *Oil & all gas* | 0 | 9 | 53 | -- | 188 | -- | 0.32 | *USGS, 1996: 1995 National Assessment, Digital Data Series DDS-30* |
| North Aleutian OCS | *Oil & all gas* | 20 | 750 | 2,500 | 400 | 8,620 | 23,280 | 1.00 | *BOEM, 2011 National Assessment Factsheet; MMS, 2007 Alaska OCS Assessment* |
| Gulf of Alaska OCS | *Oil & all gas* | 0 | 630 | 2,040 | 0 | 4,040 | 13,870 | 0.80 | *BOEM, 2011 National Assessment Factsheet; MMS, 2007 Alaska OCS Assessment* |
| Other OCS basins[8] | *Oil & all gas* | -- | 460 | -- | -- | 9,410 | -- | 0.40-0.60 | *BOEM, 2011 National Assessment Factsheet; MMS, 2007 Alaska OCS Assessment* |
| **TOTAL - Southern Alaska** | | --[3] | ***3,458*** | --3 | --[3] | ***42,495*** | --[3] | | |
| **TOTAL STATEWIDE** mean undiscov., tech recov | | | **43,350 MMSTB** | | | **255,276 BCF** | | | |

**Notes:**

[1] *All numbers are probabilistic estimates of undiscovered, technically recoverable resource. Because these estimates include oil and gas resources in small, non-economic accumulations, these mean volumes are unlikely to ever be produced.*

[2] *North Slope figures used here include State waters and Native lands within the assessment areas (e.g., ANWR coastal plain includes inholdings, not just Federal 1002 lands).*

[3] *Because only the means of different distributions can be summed, table contains blanks for F95 and F05 totals (except where source provides figures for aggregated distributions).*

[4] *Marginal probability is likelihood (0-1) that assessed play or area is capable of producing at least one technically recoverable accumulation (areas with discoveries automatically assigned 1.0). Area is given highest probability of assessed plays.*

[5] *Yukon Flats figures include four plays, but are overwhelmingly dominated by the conventional Tertiary sandstone play.*

[6] *1995 assessment of Central AK lumped multiple basins together (Yukon Flats, Minchumina, Nenana, Holitna, Bethel, Innoko, Galena, & Kotzebue basins), but total estimate was less than the more recent 2004 estimate of Yukon Flats Basin alone, so the 1995 results are not tabulated here.*

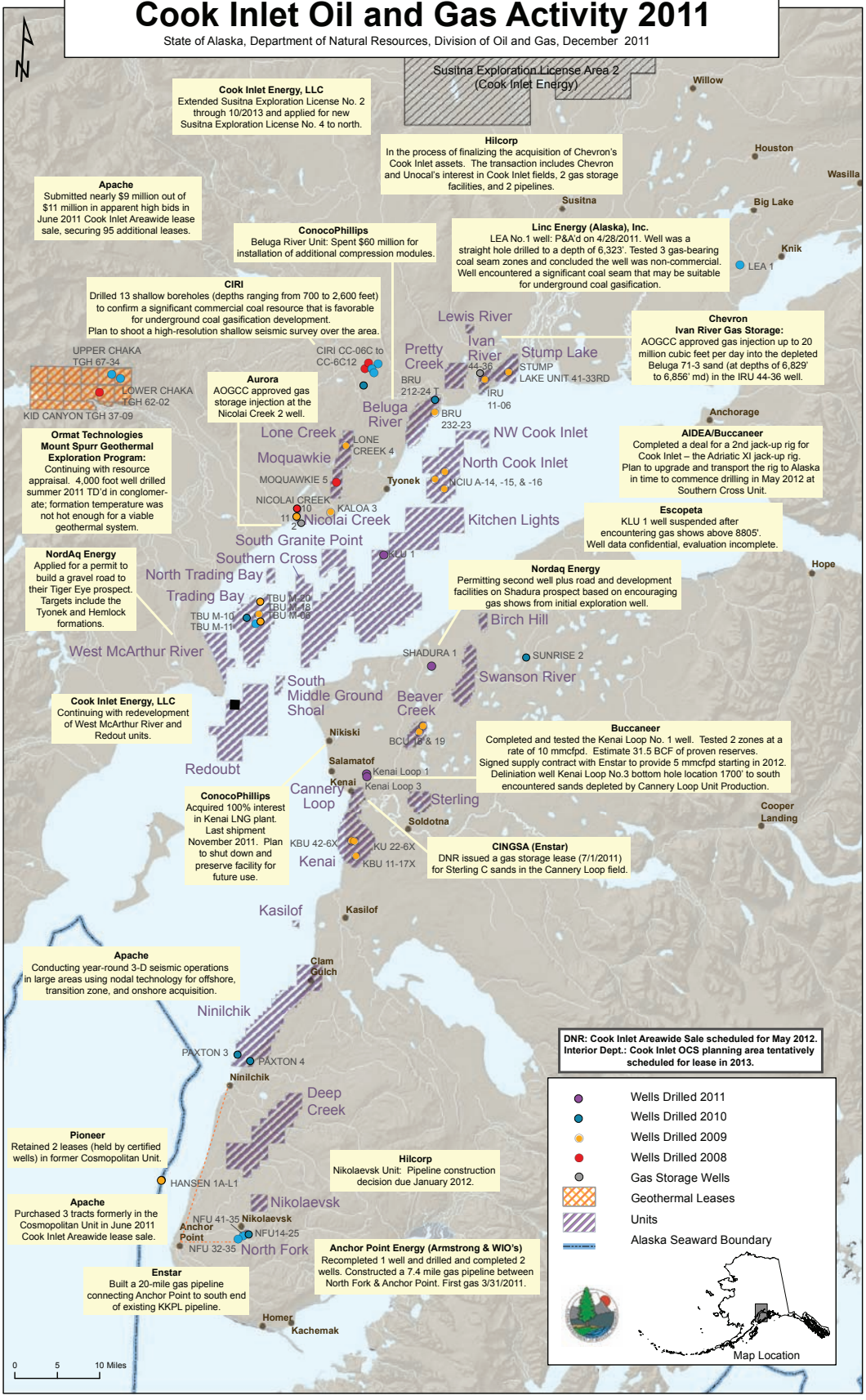
[7] *Copper River Basin resource not volumetrically assessed. Mesozoic oil & Cenozoic biogenic gas plays given only 2% probability of producing at least one technically recoverable accumulation.*

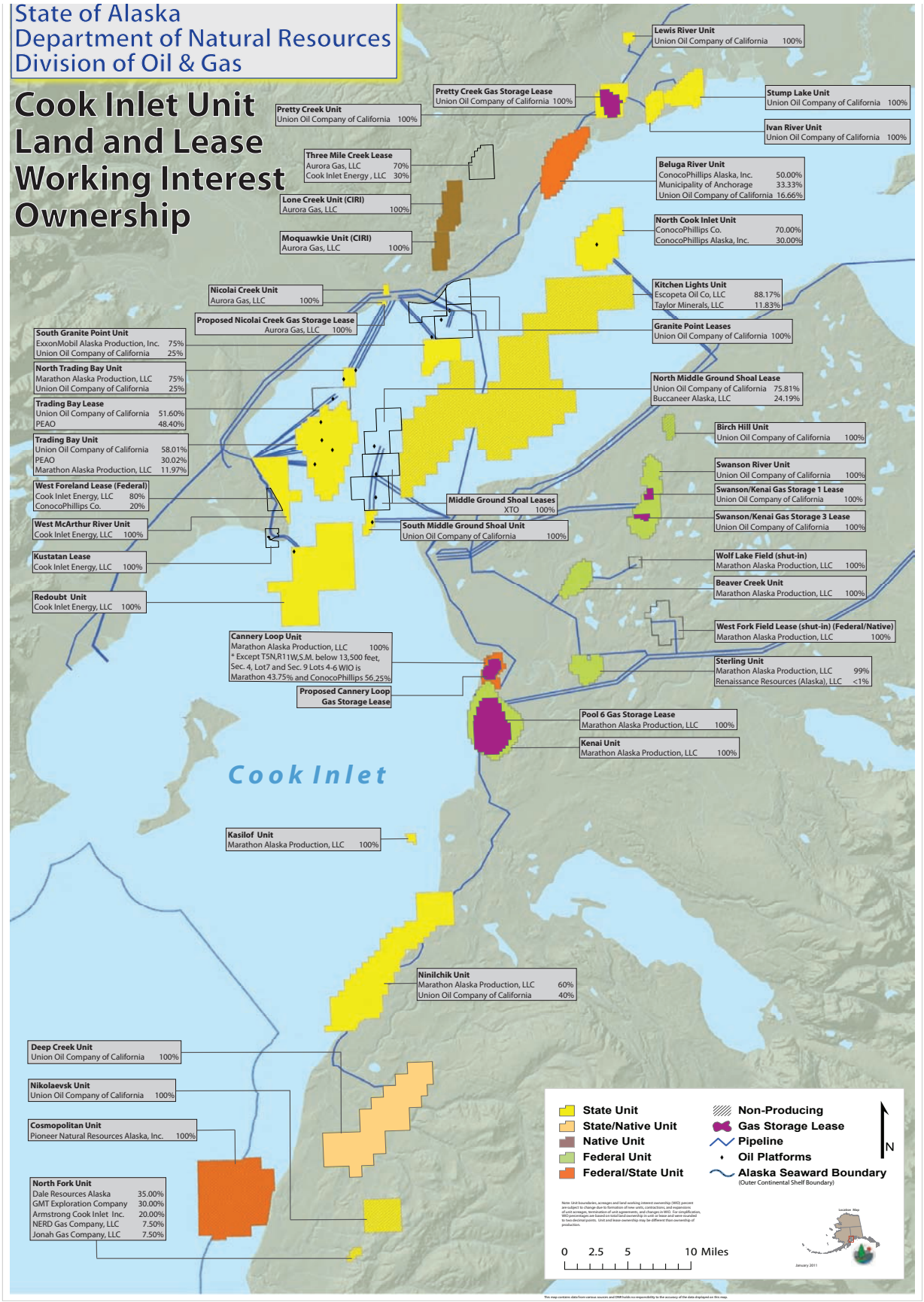
[8] *Other OCS includes Navarin Basin, St. George Basin, Norton Basin, Shumagin, and Kodiak planning areas.*

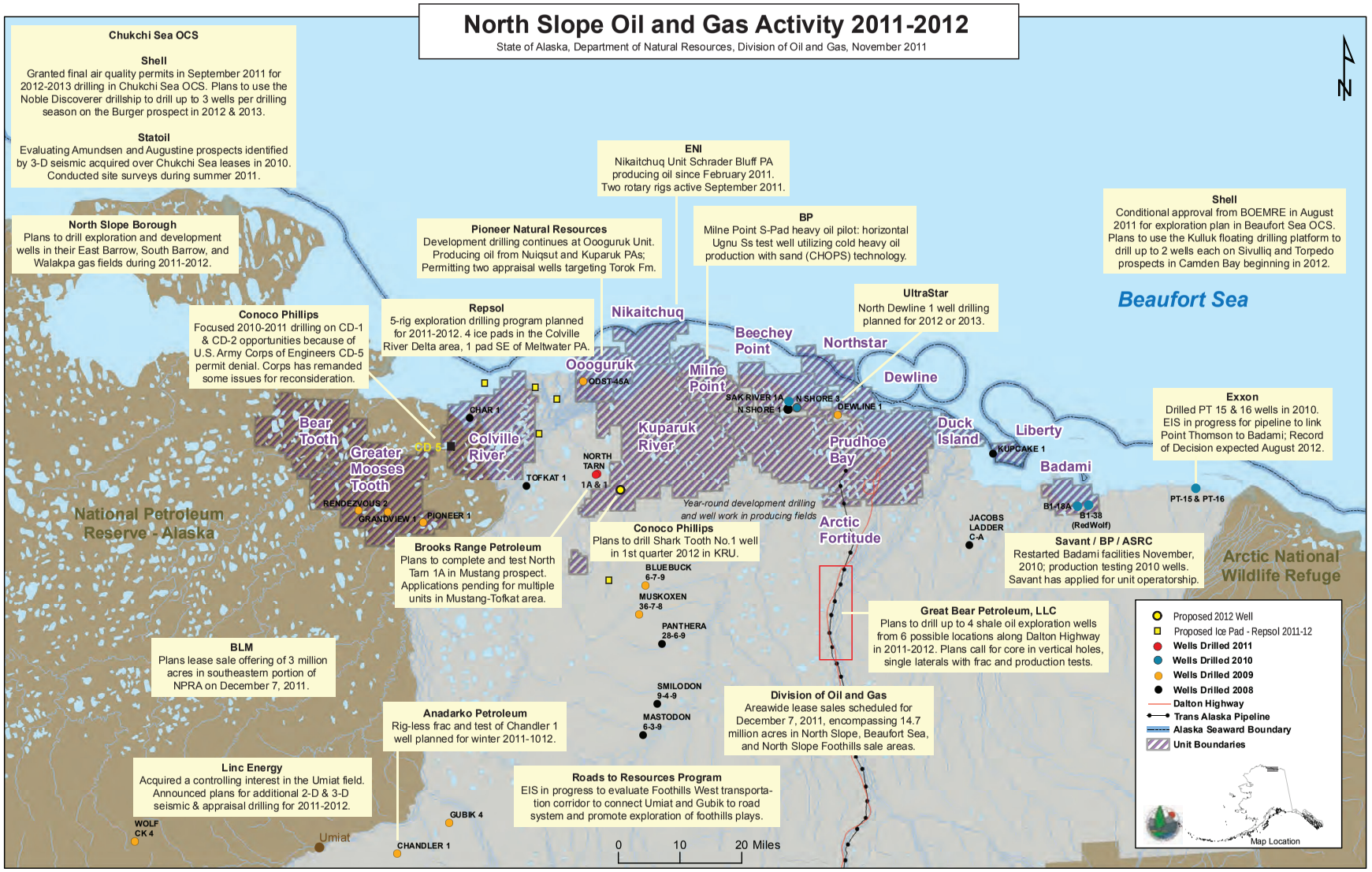
*compiled by Alaska Division of Oil and Gas (pld), updated November, 2011 BOEM updates)*

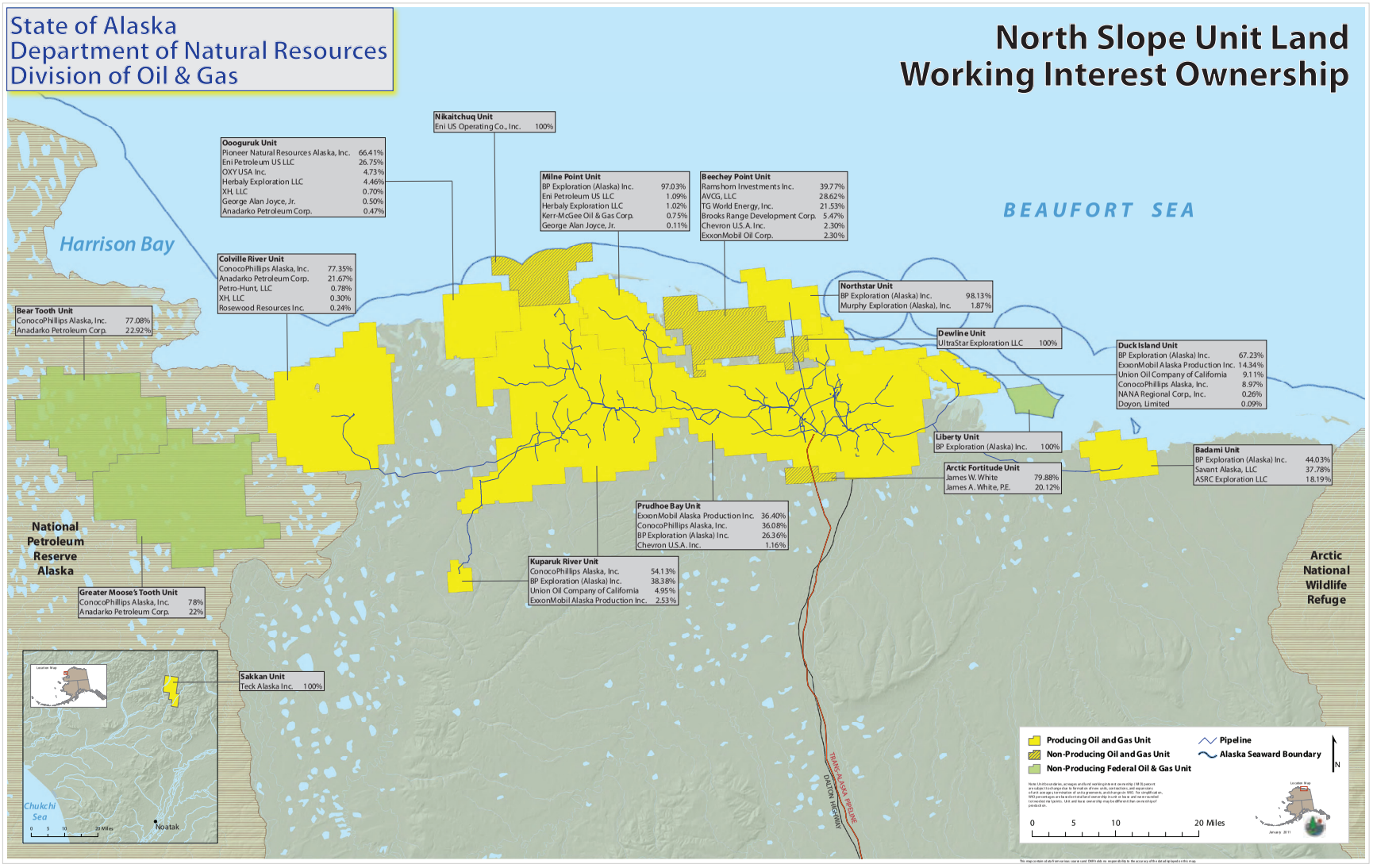
# Cook Inlet Oil and Gas Activity 2011

State of Alaska, Department of Natural Resources, Division of Oil and Gas, December 2011




State of Alaska
Department of Natural Resources
Division of Oil & Gas
Cook Inlet Unit
Land and Lease
Working Interest
Ownership
Lewis River Unit
Union Oil Company of California 100%
Pretty Creek Gas Storage Lease
Union Oil Company of California 100%
Pretty Creek Unit
Union Oil Company of California 100%
Stump Lake Unit
Union Oil Company of California 100%
Ivan River Unit
Union Oil Company of California 100%
Three Mile Creek Lease
Aurora Gas, LLC 70%
Cook Inlet Energy , LLC 30%
Beluga River Unit
ConocoPhillips Alaska, Inc. 50.00%
Municipality of Anchorage 33.33%
Union Oil Company of California 16.66%
Lone Creek Unit (CIRI)
Aurora Gas, LLC 100%
North Cook Inlet Unit
ConocoPhillips Co. 70.00%
ConocoPhillips Alaska, Inc. 30.00%
Moquawkie Unit (CIRI)
Aurora Gas, LLC 100%
Nicolai Creek Unit
Aurora Gas, LLC 100%
Kitchen Lights Unit
Escopeta Oil Co, LLC 88.17%
Taylor Minerals, LLC 11.83%
Proposed Nicolai Creek Gas Storage Lease
Aurora Gas, LLC 100%
Granite Point Leases
Union Oil Company of California 100%
South Granite Point Unit
ExxonMobil Alaska Production, Inc. 75%
Union Oil Company of California 25%
North Trading Bay Unit
Marathon Alaska Production, LLC 75%
Union Oil Company of California 25%
North Middle Ground Shoal Lease
Union Oil Company of California 75.81%
Buccaneer Alaska, LLC 24.19%
Trading Bay Lease
Union Oil Company of California 51.60%
PEAO 48.40%
Birch Hill Unit
Union Oil Company of California 100%
Trading Bay Unit
Union Oil Company of California 58.01%
PEAO 30.02%
Marathon Alaska Production, LLC 11.97%
Swanson River Unit
Union Oil Company of California 100%
West Foreland Lease (Federal)
Cook Inlet Energy, LLC 80%
ConocoPhillips Co. 20%
Swanson/Kenai Gas Storage 1 Lease
Union Oil Company of California 100%
Middle Ground Shoal Leases
XTO 100%
Swanson/Kenai Gas Storage 3 Lease
Union Oil Company of California 100%
West McArthur River Unit
Cook Inlet Energy, LLC 100%
South Middle Ground Shoal Unit
Union Oil Company of California 100%
Kustatan Lease
Cook Inlet Energy, LLC 100%
Wolf Lake Field (shut-in)
Marathon Alaska Production, LLC 100%
Redoubt Unit
Cook Inlet Energy, LLC 100%
Beaver Creek Unit
Marathon Alaska Production, LLC 100%
West Fork Field Lease (shut-in) (Federal/Native)
Marathon Alaska Production, LLC 100%
Cannery Loop Unit
Marathon Alaska Production, LLC 100%
* Except T5N,R11W,S.M. below 13,500 feet,
Sec. 4, Lot7 and Sec. 9 Lots 4-6 WIO is
Marathon 43.75% and ConocoPhillips 56.25%
Sterling Unit
Marathon Alaska Production, LLC 99%
Renaissance Resources (Alaska), LLC <1%
Proposed Cannery Loop
Gas Storage Lease
Pool 6 Gas Storage Lease
Marathon Alaska Production, LLC 100%
Kenai Unit
Marathon Alaska Production, LLC 100%
Cook Inlet
Kasilof Unit
Marathon Alaska Production, LLC 100%
Ninilchik Unit
Marathon Alaska Production, LLC 60%
Union Oil Company of California 40%
Deep Creek Unit
Union Oil Company of California 100%
Nikolaevsk Unit
Union Oil Company of California 100%
Cosmopolitan Unit
Pioneer Natural Resources Alaska, Inc. 100%
North Fork Unit
Dale Resources Alaska 35.00%
GMT Exploration Company 30.00%
Armstrong Cook Inlet Inc. 20.00%
NERD Gas Company, LLC 7.50%
Jonah Gas Company, LLC 7.50%
State Unit
State/Native Unit
Native Unit
Federal Unit
Federal/State Unit
Non-Producing
Gas Storage Lease
Pipeline
Oil Platforms
Alaska Seaward Boundary
(Outer Continental Shelf Boundary)
N
0 2.5 5 10 Miles
January 2011


North Slope Oil and Gas Activity 2011-2012
State of Alaska, Department of Natural Resources, Division of Oil and Gas, November 2011
Chukchi Sea OCS
Shell
Granted final air quality permits in September 2011 for 2012-2013 drilling in Chukchi Sea OCS. Plans to use the Noble Discoverer drillship to drill up to 3 wells per drilling season on the Burger prospect in 2012 & 2013.
Statoil
Evaluating Amundsen and Augustine prospects identified by 3-D seismic acquired over Chukchi Sea leases in 2010. Conducted site surveys during summer 2011.
North Slope Borough
Plans to drill exploration and development wells in their East Barrow, South Barrow, and Walakpa gas fields during 2011-2012.
ENI
Nikaitchuq Unit Schrader Bluff PA producing oil since February 2011. Two rotary rigs active September 2011.
Pioneer Natural Resources
Development drilling continues at Oooguruk Unit. Producing oil from Nuiqsut and Kuparuk PAs; Permitting two appraisal wells targeting Torok Fm.
BP
Milne Point S-Pad heavy oil pilot: horizontal Ugnu Ss test well utilizing cold heavy oil production with sand (CHOPS) technology.
Shell
Conditional approval from BOEMRE in August 2011 for exploration plan in Beaufort Sea OCS. Plans to use the Kulluk floating drilling platform to drill up to 2 wells each on Sivulliq and Torpedo prospects in Camden Bay beginning in 2012.
Beaufort Sea
Conoco Phillips
Focused 2010-2011 drilling on CD-1 & CD-2 opportunities because of U.S. Army Corps of Engineers CD-5 permit denial. Corps has remanded some issues for reconsideration.
Repsol
5-rig exploration drilling program planned for 2011-2012. 4 ice pads in the Colville River Delta area, 1 pad SE of Meltwater PA.
UltraStar
North Dewline 1 well drilling planned for 2012 or 2013.
Exxon
Drilled PT 15 & 16 wells in 2010. EIS in progress for pipeline to link Point Thomson to Badami; Record of Decision expected August 2012.
Nikaitchuq
Oooguruk
Beechey Point
Northstar
Milne Point
Dewline
Kuparuk River
Prudhoe Bay
Duck Island
Liberty
Bear Tooth
Greater Mooses Tooth
Colville River
CD 5
CHAR 1
ODST-45A
SAK RIVER 1A
N.SHORE 1
N.SHORE 4
DEWLINE 1
KUPCAKE 1
Badami
B1-18A
B1-38 (RedWolf)
PT-15 & PT-16
NORTH TARN 1A & 1
TOFKAT 1
RENDEZVOUS 2
GRANDVIEW 1
PIONEER 1
Year-round development drilling and well work in producing fields
National Petroleum Reserve - Alaska
Arctic National Wildlife Refuge
Brooks Range Petroleum
Plans to complete and test North Tarn 1A in Mustang prospect. Applications pending for multiple units in Mustang-Tofkat area.
Conoco Phillips
Plans to drill Shark Tooth No.1 well in 1st quarter 2012 in KRU.
BLUEBUCK 6-7-9
MUSKOXEN 36-7-8
PANTHERA 28-6-9
Arctic Fortitude
JACOBS LADDER C-A
Savant / BP / ASRC
Restarted Badami facilities November, 2010; production testing 2010 wells. Savant has applied for unit operatorship.
Great Bear Petroleum, LLC
Plans to drill up to 4 shale oil exploration wells from 6 possible locations along Dalton Highway in 2011-2012. Plans call for core in vertical holes, single laterals with frac and production tests.
BLM
Plans lease sale offering of 3 million acres in southeastern portion of NPRA on December 7, 2011.
Anadarko Petroleum
Rig-less frac and test of Chandler 1 well planned for winter 2011-1012.
SMILODON 9-4-9
MASTODON 6-3-9
Division of Oil and Gas
Areawide lease sales scheduled for December 7, 2011, encompassing 14.7 million acres in North Slope, Beaufort Sea, and North Slope Foothills sale areas.
Linc Energy
Acquired a controlling interest in the Umiat field. Announced plans for additional 2-D & 3-D seismic & appraisal drilling for 2011-2012.
Roads to Resources Program
EIS in progress to evaluate Foothills West transportation corridor to connect Umiat and Gubik to road system and promote exploration of foothills plays.
GUBIK 4
WOLF CK 4
Umiat
CHANDLER 1
0 10 20 Miles
Proposed 2012 Well
Proposed Ice Pad - Repsol 2011-12
Wells Drilled 2011
Wells Drilled 2010
Wells Drilled 2009
Wells Drilled 2008
Dalton Highway
Trans Alaska Pipeline
Alaska Seaward Boundary
Unit Boundaries
Map Location


State of Alaska
Department of Natural Resources
Division of Oil & Gas
North Slope Unit Land
Working Interest Ownership
BEAUFORT SEA
Harrison Bay
National Petroleum Reserve Alaska
Arctic National Wildlife Refuge
Chukchi Sea
Noatak
TRANS-ALASKA PIPELINE
DALTON HIGHWAY
Nikaitchuq Unit
Eni US Operating Co., Inc. 100%
Oooguruk Unit
Pioneer Natural Resources Alaska, Inc. 66.41%
Eni Petroleum US LLC 26.75%
OXY USA Inc. 4.73%
Herbaly Exploration LLC 4.46%
XH, LLC 0.70%
George Alan Joyce, Jr. 0.50%
Anadarko Petroleum Corp. 0.47%
Milne Point Unit
BP Exploration (Alaska) Inc. 97.03%
Eni Petroleum US LLC 1.09%
Herbaly Exploration LLC 1.02%
Kerr-McGee Oil & Gas Corp. 0.75%
George Alan Joyce, Jr. 0.11%
Beechey Point Unit
Ramshorn Investments Inc. 39.77%
AVCG, LLC 28.62%
TG World Energy, Inc. 21.53%
Brooks Range Development Corp. 5.47%
Chevron U.S.A. Inc. 2.30%
ExxonMobil Oil Corp. 2.30%
Colville River Unit
ConocoPhillips Alaska, Inc. 77.35%
Anadarko Petroleum Corp. 21.67%
Petro-Hunt, LLC 0.78%
XH, LLC 0.30%
Rosewood Resources Inc. 0.24%
Bear Tooth Unit
ConocoPhillips Alaska, Inc. 77.08%
Anadarko Petroleum Corp. 22.92%
Northstar Unit
BP Exploration (Alaska) Inc. 98.13%
Murphy Exploration (Alaska), Inc. 1.87%
Dewline Unit
UltraStar Exploration LLC 100%
Duck Island Unit
BP Exploration (Alaska) Inc. 67.23%
ExxonMobil Alaska Production Inc. 14.34%
Union Oil Company of California 9.11%
ConocoPhillips Alaska, Inc. 8.97%
NANA Regional Corp., Inc. 0.26%
Doyon, Limited 0.09%
Liberty Unit
BP Exploration (Alaska) Inc. 100%
Badami Unit
BP Exploration (Alaska) Inc. 44.03%
Savant Alaska, LLC 37.78%
ASRC Exploration LLC 18.19%
Arctic Fortitude Unit
James W. White 79.88%
James A. White, P.E. 20.12%
Prudhoe Bay Unit
ExxonMobil Alaska Production Inc. 36.40%
ConocoPhillips Alaska, Inc. 36.08%
BP Exploration (Alaska) Inc. 26.36%
Chevron U.S.A. Inc. 1.16%
Kuparuk River Unit
ConocoPhillips Alaska, Inc. 54.13%
BP Exploration (Alaska) Inc. 38.38%
Union Oil Company of California 4.95%
ExxonMobil Alaska Production Inc. 2.53%
Greater Moose's Tooth Unit
ConocoPhillips Alaska, Inc. 78%
Anadarko Petroleum Corp. 22%
Sakkan Unit
Teck Alaska Inc. 100%
Producing Oil and Gas Unit
Non-Producing Oil and Gas Unit
Non-Producing Federal Oil & Gas Unit
Pipeline
Alaska Seaward Boundary
N
0 5 10 20 Miles