



Division of Oil and Gas Annual Report 2013



Alaska Department of
**NATURAL
RESOURCES**

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On the cover: The Spartan 151 drill rig continued work in Cook Inlet and enabled Furie Alaska, LLC, to plan for a new offshore platform in developing the Kitchen Lights Unit during 2013.

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letter from the director

“The Division of Oil and Gas manages state 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.”

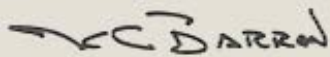
This mission, based on statutes created by the Alaska Legislature, means the Division is involved in every stage of oil, gas, and geothermal exploration and development from identification of potential resources through leasing, exploration, and development, unitization, production, and dismantlement, removal, and restoration of state lands. We work through areawide leasing programs and region specific exploration proposals to ensure the resources are managed appropriately in a cradle to grave approach.

Our oil and gas work is guided by Governor Sean Parnell’s comprehensive strategy to stem the declining flow of oil through the Trans-Alaska Pipeline and 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 over 90 percent of the State’s unrestricted revenues are due to their efforts. This year our work scope included supporting the Governor’s efforts to advance opportunities to bring North Slope gas to Interior Alaska and international markets.

This Annual Report describes our efforts in more detail, and introduces to you some of the accomplishments of the Division of Oil and Gas in 2013. The work we do is in an environment where technological advances and fluctuations in world markets create an ever-changing context. This provides us with ongoing opportunities to expand our horizons and improve our performance as we fulfill our constitutional mandate to manage Alaska’s resources in the best interests of the state.

I am proud to consider the team at the Division of Oil and Gas my colleagues, and look forward to another year of improving the way we meet the challenges of rapidly changing technologies and markets in the global oil and gas sector.

Sincerely,



William C. Barron
Director, Division of Oil and Gas

in memory of david edmunds



The Division takes great pride in the team that makes our work successful day in and day out. Our employees exemplify an outstanding commitment to ensure that Alaska's oil, gas and geothermal resources are managed in the best interests of Alaskans. When one of our team passes, it is with great sadness that we accept the loss, but praise their contributions.

This page is dedicated to the memory of David Edmunds, a Natural Resource Specialist in our Permitting Section. David led our North Slope planning and permitting efforts, as well as serving as Section Chief when delegated. He was particularly effective in this role, as he had a solid, field-oriented knowledge of what it takes to get a project done on Alaska's

North Slope. Having been a member of 3-D seismic crews that surveyed state-leased lands for private companies, David worked to make sure that information was clearly communicated from the companies and understood by his co-workers. His knowledge made him particularly effective at moving projects through the approval process on behalf of our customers, the explorers and developers of Alaska's petroleum resources.

However, excellence in work is not just about getting things done. It is also about being a part of the greater good by making the workplace a place one wants to work. David exemplified this with his smile, his style, and his welcoming ways. All of us found that working through a project with David would always be interesting, and communication would be clear, with thoughtful consideration of the discussion at hand. Solutions would be found, projects completed and everyone would move forward confident in the work completed. As always, once completed, David would be ready to move on to the next project, knowing who to bring to the table and what needed to be done. We will miss our colleague, and will always think of him with fondness and respect.

missions and measures

In support of the Governor's strategy to secure Alaska's future by having more production from Alaska's North Slope and increase the flow through the Trans-Alaska Pipeline System and the interest in expanded oil and gas production from Cook Inlet, the Division works to provide access to state lands for the purpose of responsible oil, gas, and geothermal exploration and development. The Division's missions and measures are to:



- *Evaluate the geological, geophysical, and engineering aspects of Alaska's resource endowment to promote effective development, protect all parties, and determine the state's royalty share*
- *Manage Alaska's oil, gas, and geothermal resources for responsible exploration and development for maximum benefit to the state*
- *Make oil, gas, and geothermal lands available for licensing or leasing*
- *Ensure that exploration, leasehold, and unit-related operations are conducted in a timely and responsible manner*
- *Educate industry, public, and decision-makers on oil, gas, and geothermal resources through outreach to promote resource potential and serve as technical and policy advisors for the State*
- *Ensure the state's oil and gas resources are developed through a competitive process*

The Division also works to ensure the state receives the maximum rates and payments for oil and gas resources responsibly developed on state lands.

- *Maximize financial benefit of oil, gas, and geothermal production to the state*
- *Maximize royalty from oil and gas production*
- *Account for state and federally-shared bonus, rent, and royalty revenues and allocate to the proper revenue funds*
- *Track reporting services for Alaska North Slope West Coast crude oil value to ensure appropriate royalty valuation*

Our results are shared throughout the sections of this Annual Report.

improving our operations

In 2013, the Division of Oil and Gas continued implementing our strategic goals to use our tools, talents and technologies to help “Secure Alaska’s Future”

by increasing production of oil and gas from both the North Slope

and Cook Inlet. Through a continuous quality improvement focus and a project management approach, we strive to provide the best opportunity for industry to succeed while managing our oil and gas resources in the best interests of Alaska and its residents. Several statutory improvements were passed in 2013 which will help us in fulfilling our mission.

Lease Extensions

Until the passage of House Bill 198, now Alaska Statute 38.05.180(m), leases were limited in how they could be extended beyond primary term. The lease could be held by having a well either “producing in paying quantities” or “capable of producing in paying quantities,” or having the lease “committed to a unit approved by the commissioner.” While the statutes gave some discretion to the commissioner for drilling activities beyond the expiration date, the Division recognized the importance of business decisions between the state and the lessee in extending the term of leases originally issued for less than 10 years. AS 38.05.180(m) allows for a business approach between the lessee and



Photo: George Sikat III

Annually, competitive lease sales are held for the five areawide sale areas. During 2013, the Leasing Section improved the lease award process which allowed lands to be leased to the winning bidder within 90 days.

the Division in the terms associated with requesting and granting a one-time lease extension, the lessee must demonstrate they have been prudent and diligent in exploration activities on or affecting the leases, provide a clear proposal of the work commitment to be completed during the extension, including the experience and financial capability to complete the work within the period, post a DNR established performance bond and may be required to pay an increased rental. The extension allows the commissioner to exercise discretion in assessing the level of rent, based on the diligence of the lessee to explore and develop the lease during the primary term. Together, this allows the Division and the lessee to agree on the best way to bring our leased lands to production in the best interests of the state and the success of the lessee within the 10 year time constraint.

Standard Activities by Phase, Specific Geographic Areas

While the Division manages five areawide sale areas, the North Slope, Beaufort Sea, North Slope Foothills, Cook Inlet, and Alaska Peninsula, each area covers significantly more land than is generally of interest to the companies.

To facilitate efficiency and protect public interests as the companies move their leases through the exploration and development phases to production, the Division proposed to identify smaller geographic areas within each sale area and consider public input on the routine exploration or development activities which could occur in the area.

The Legislature recognized the Division's proposal and passed House Bill 129, now Alaska Statute 38.05.035(o), allowing geographic area decisions to address the typical types of activities which could proceed during exploration or development in the area. The proposed decisions would be open to public comment, and if approved, would allow for exploration or development under specified terms. We are confident this approach will help to encourage more exploration and development activity by the lease holders and will ensure the public has an earlier and broader understanding of the anticipated activities. Efficiency and timely approval of routine activities is an important step in bringing our oil and gas resources to production.

Regulations Updates

In improving our operations, the Division took a comprehensive look at ways to improve our regulations by emphasizing a business approach, while protecting the public's and state's interests. A plan for updating the Division's regulations is moving forward so as to keep pace with changing statutes, commercial interests, and legal



Photo: Lori Yares, DOG

Kuparuk field as seen from the air exemplifies the value of a long-term approved production phase.

questions. This year we completed an update to our regulations pertaining to Net Profit Share Leases to ensure consistency with governing legislation, started the process on proposed regulations for geographic areas, discussed above, and received public input on questions to consider associated with the dismantlement, removal or restoration of Cook Inlet platforms. The Division will continue to consider these and other regulations to improve how we regulate activities to serve the best interests of the state and the public while allowing a strong working relationship with the industry in bringing our oil and gas resources to market.

2013 sections and achievements

2013 was a year of continued improvement for the Division. In 2013, we worked to improve performance on state leases and units by focusing on lease requirements and work commitments to ensure that the goal of increasing production of oil from the North Slope and oil and gas from Cook Inlet could be achieved.

We planned and executed five successful lease sales, resulting in significant revenue to the state. Division staff worked on overseeing the State's interest in the management of Cook Inlet oil and gas activities as industry activities continued to increase. Well workovers and new drilling, including by the jack-up rigs in new offshore locations assured that gas reserves could be expanded to meet market demand in line with the Administration's efforts to boost North Slope oil production. The Division has engaged in a significant outreach effort to industry and investors, providing information and education on the State's world-class hydrocarbon resources through trade shows, webinars, and personal meetings with industry representatives. Royalty contracts were approved with in-state refiners to continue to produce fuels from our oil for the benefit of Alaskans. And, in support of the Governor's interest in access to Alaska oil and gas resources, whether state or federal, the Division developed a proposed 3-D seismic survey of the Arctic National Wildlife Refuge (ANWR) Coastal Plain, which the Governor brought forth to the Department of the Interior during summer 2013.

We continued our commitment to a project management model for those projects that are not already mapped out and handled as repeating



Photo: Lori Yares, DOG

Division personnel often travel to areas where the industry is actively involved in developing and producing Alaska's oil and gas resources.

processes. Updating the Division's regulations proved to be an excellent example of this as we developed a schedule to complete the net profit share lease (NPSL) regulation update and plan five additional regulation package updates. We further optimized our project management model so that our work is more efficient and better serves our customers, both internal and external.

For overview purposes, our 2013 achievements are listed section by section. While primary responsibility for leading any particular project resides with technical specialties in the Division, many projects benefit from a collaborative effort between many different sections. So, for example, while the Units Section's report counts the number of unit applications handled in 2013, each unit application evaluation is handled by a team consisting of staff from Units, Leasing, Permitting, and Resource Evaluation. As an example, 2013 saw an increased need for planning for the future of the Cook Inlet Platforms. This fostered collaboration between the Commercial Section and PSIO that allowed many questions to be researched on financial assurances and options to dismantle, remove and restore (DR&R) present platforms to

protect the interest of the state and enable decisions to bring new platforms to the Inlet for new fields.

resource evaluation

Providing the Geological, Geophysical, and Engineering Data to Manage State Lands

The Resource Evaluation Section's goal is to achieve "regulatory and research excellence through geological, geophysical, and engineering analysis." The experts in this section 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 – or the basis



Photo: Paul Decker, DOG

View to the north on the Iniskin Peninsula, southwestern Cook Inlet, showing outcrops of Tuxedni Group conglomerate, sandstone, and siltstone in the foreground and middle distance; Mount Iliamna volcano dominates the distant skyline to the north of Chinitna Bay. The Division of Oil and Gas and Division of Geological and Geophysical Surveys geologists conducted several weeks of geologic mapping in the area during 2013.

for determining equitable production allocations. In addition, the section's technical expertise informs dozens of other steps in the Division's 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, to develop 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.



Photo: Courtesy of DOG

Interest in 3-D seismic surveys remains high as survey teams explore lands and submerged lands on Alaska's North Slope and Cook Inlet.

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.

2013 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. During the 2013 fiscal year, the section's geologists, geophysicists, and engineers provided the subsurface technical evaluations underpinning unit action decisions signed by the director or commissioner. Such actions include applications to form new units; unit expansions, contractions, and terminations; Participating Area expansions and contractions; redeterminations of tract allocations; and applications for exploration licenses. The number of such decisions varies from year to year due to factors that are out of the Division's hands, but virtually all require subsurface technical understanding.

- New Unit Applications: Five (5) decisions, including two (2) approvals (Tiger Eye and West Eagle Units) and three (3) denials (Angel, Kenai Loop and Otter proposed units)
- Unit Expansions and Contractions: Four (4) actions, including three (3) expansion approvals (North Fork, Trading Bay and Badami Units) and one (1) denial (Placer proposed Unit)
- PA Expansions and Contractions: Three (3) expansions (North Fork, Oooguruk: Nuiqsut and Oooguruk: Torok PA)
- PA Redeterminations: One (1) redetermination Colville River Unit Alpine PA
- Exploration License Applications: Zero (0) decisions

Additional achievements of the Resource Evaluation Section in 2013:

The section is responsible for DNR's adjudication of applications for Department of Revenue tax credits

to incentivize oil and gas exploration. Support staff monitor projects and applications, collect and inventory data, and issue completeness determination memos for technical datasets submitted to the Division in association with these applications. Of 80 completeness determinations issued in the 2013 fiscal year, 66 were for exploration well or geological field work applications and 14 were for geophysical survey applications. Additional adjudication efforts are not captured by this count, such as preparing pre-qualification findings, and reviews of multi-year and other incomplete projects not yet ready for final determinations.

AOGCC records show 150 development and service wells and 21 exploration and stratigraphic test wells were completed in Alaska during the 2013 fiscal year. During the year, Resource Evaluation technicians logged in and archived 2,424 individual well data items (for example, CDs or DVDs containing multiple well logs or reports), reflecting the steady stream of technical data flowing into the Division.

The section provided technical testimony to the Alaska legislature in committee hearings on a variety of resource development issues. The section also responded to requests for input on new legislation, for example, providing analysis of oil reserves and production forecasts to inform consideration of oil production taxes.

Resource Evaluation provided written analyses summarizing the oil and gas potential of parcels throughout Alaska, where excess State-selected lands were under consideration for relinquishment by multiple agencies.

Geologists analyzed and documented the petroleum potential of State lands in areas subject to Best Interest Findings updates.

The section continued the Division's outreach to industry, investors, and the Alaska public, providing technical presentations, distributing supporting information, and organizing small-group discussions to forge connections with companies interested in learning more about Alaska's oil and gas resources. Much of this effort has been conducted in Houston, Texas, targeting both U.S. and international companies ranging in size from small independents to super-majors.

Geoscientists provided evaluation of resource potential to the Division's interdisciplinary work group tasked with designing areawide lease sale terms, optimizing tract sizes, bundling and work commitments of key tracts, etc.

The section advanced collaborations with geologists from the Alaska Division of Geological and Geophysical Surveys and U.S. Geological Survey, in particular outcrop-based field studies, using subsurface data to improve surface geologic mapping and basin model. Emphasis during 2013 continued to focus on Cook Inlet Mesozoic and Tertiary petroleum systems, with several technical publications released through DGGS during the year, with more to follow in 2014 and 2015.

Resource Evaluation staff worked with others in the Division to represent the State's interest in federal land management actions. Examples include supporting the Governor's proposals to acquire 3-D seismic data to better understand the resource potential of the ANWR coastal plain, and providing written comments on the Bureau of Land Management's expansive Central Yukon Resource Management Plan.

leasing and licensing

Conveying State Lands for Exploration and Development and Performing Landlord Functions

In order to allow leasing of state land to industry, the state must first research this land and its characteristics in order to determine if leasing, for purposes of exploration and development, is in the state's best interests. The development of the resulting "Best Interest Finding," if the result is positive, is to allow leasing to proceed, and is effective for 10 years. 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 five established Areawide Lease Sale Areas. The Best Interest Finding for each Areawide Lease Sale Area must be examined annually for necessary updates. A "Call for New Information" is issued, and based on the results, the Best Interest Finding may be updated, or a "Decision of No Substantial Information" may be issued. In 2013, the Leasing section issued decisions of no substantial new information for all of its existing best interest findings, and continued

developing a new finding for the Alaska Peninsula areawide.

Following 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" such as tracking lease payments, handling revenue and billing, assignments, segregation or segmentation of leases, and expiration, surrender, and termination of leases.

In 2013 the Leasing section also continued to develop regional exploration license determinations, with consideration of petroleum potential used to define the determination areas. The regions are defined as southcentral, interior, northwest, and delta areas. Currently, staff are drafting a preliminary determination for the southcentral region of the state, covering lands from Yakutat to the Susitna region.

It is expected to take up to 18 months to produce a final determination. Once a determination is in place however, it remains in effect until withdrawn by the

Lease Sales

During 2013, the Beaufort Sea, North Slope and Cook Inlet Areawide lease sales saw 119 tracts leased for \$8,644,080 dollars. No bids were received for the North Slope Foothills and Alaska Peninsula Areawide lease sales.

Sale	Date	Acres Leased	High Bonus Bids	Status
Alaska Peninsula 2013	May 8, 2013	0	\$0	No bids received
Beaufort Sea 2013W	November 6, 2013	2,560	\$52,403	Final
Cook Inlet 2013W	May 8, 2013	197,795	\$6,865,835	Final
North Slope 2013W	November 6, 2013	162,163	\$5,510,260	Preliminary
North Slope Foothills 2013	November 6, 2013	0	\$0	No bids received
Totals:		265,045	\$8,644,080	

commissioner. Determinations will form the basis for exploration license proposal findings.

The Division received two exploration license proposals in April 2013, for the North Nenana and Southwest Cook Inlet areas. Notices of intent to evaluate the proposals, solicit comments, and requests for competing proposals were published May 30, 2013. The Division received one competing proposal for the Southwest Cook Inlet area.

The Nenana Basin exploration license expired in September 2012, and the Susitna Basin II exploration license expired in October 2013. The Division has nearly completed converting most of these two license areas to leases.

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 four geothermal lease sales, three in areas along the southern flanks of Mount Spurr, located about 40 miles northwest of Tyonek, and one at Augustine Island, located in lower Cook Inlet. The first two sales, held in 1983 and 1986, did not result in 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.

In 2013 Ormat relinquished 5 of its leases, totaling 10,423.51 acres.

DNR also received interest in geothermal resource development on Augustine Island, located in lower Cook Inlet. DNR evaluated the area and determined it to be in the state's best interest to offer the area for geothermal leasing. A written finding of the director was issued January 14, 2013, and the Augustine Island Geothermal Lease Sale No. 4 was held May 8, 2013. A bonus bid of \$2,544.90 was received on one tract.

permitting

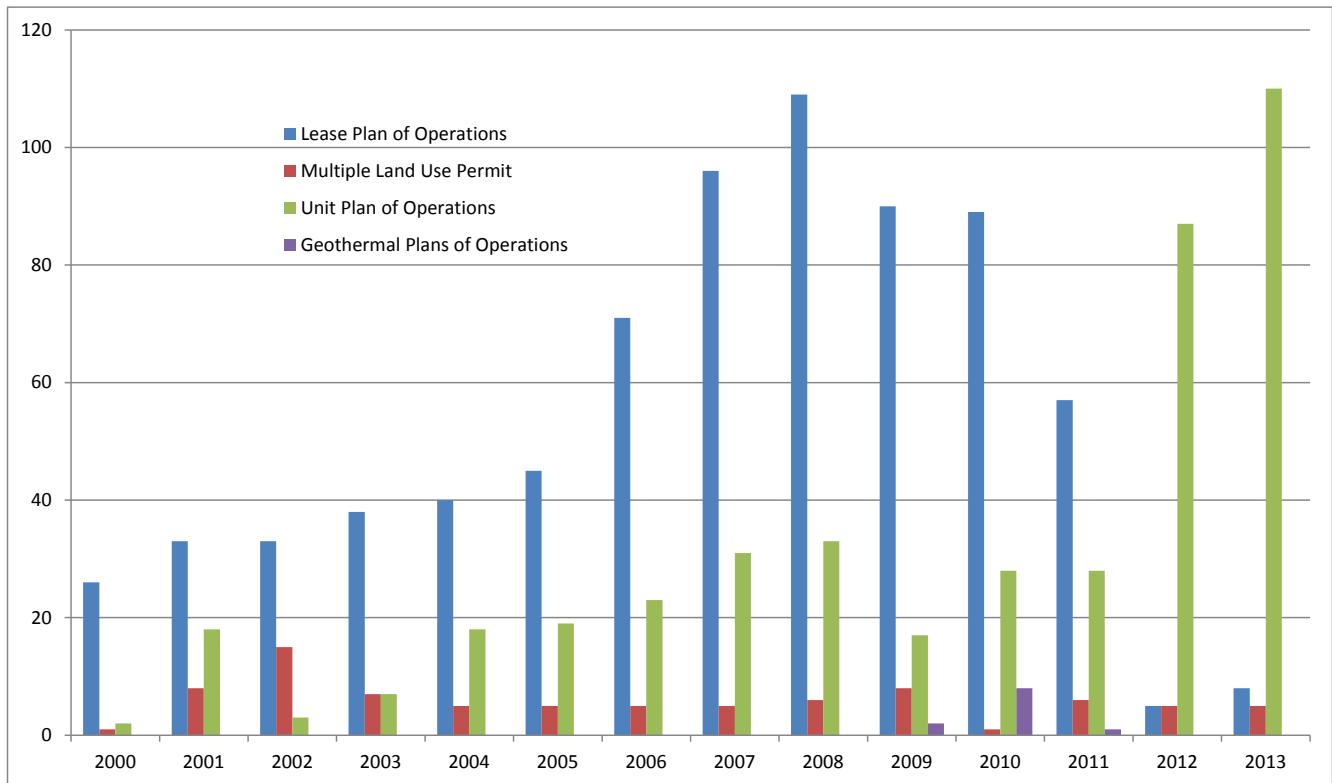
Ensuring Oil and Gas Activities Comply with Laws, Regulations, and Lease Terms

When a company intends to explore or develop on state land, it must submit a Plan of Operations. The Division is responsible for determining the completeness of the plan and issuing authorizations with appropriate conditions for environmental protection and safe operations.

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

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

authorizations for surface activities



units

Promoting Conservation, Preventing Waste, and Protecting All Parties

The Division's Units Section (covering January through November, 2013) manages all state unit agreements in accordance with AS 38.05.180(p) and 11 AAC 83.300. Unit actions include unit and participating area formation, expansion and contraction, review of unit and lease plans of exploration and development, unit term extension, unit plans of abandonment and gas storage lease plans of development. The Units Section is also responsible for leading a diverse multidisciplinary team to conduct equity negotiations and revisions to division of interest ("Redeterminations"). Unit actions involve not only the Units Section, but

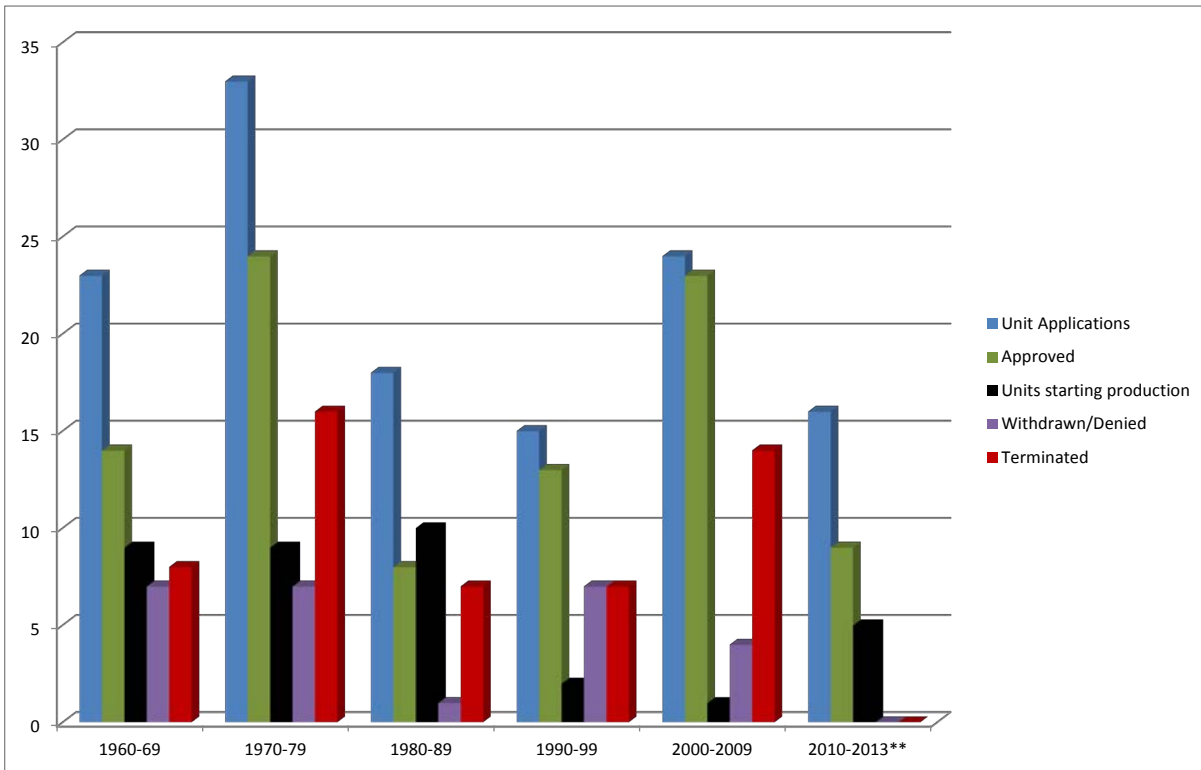
are a cooperative effort between several different sections, including the Commercial, Leasing, Permitting, Resource Evaluation and Royalty Accounting Sections, among others.

2013 achievements

The North Slope has nine units producing from 37 participating areas. The Cook Inlet has 24 units producing from 39 participating areas.

- Unit Formation: 3 total -1 approved, 2 denied
- Unit Expansion: 3 total -2 approved, 1 denied
- Unit Contraction: 0
- Unit Termination: 0
- Unit Term Extension: 0
- Participating Area Formation: 0

statewide unitization and production 1960-2013



- Participating Area Expansion: 2 Approved
- Participating Area Contraction: 0
- Participating Area Redeterminations: 2 completed, one ongoing
- Unit Plan of Exploration/Development: 42 Total, Cook Inlet: 24 North Slope: 18
- Unit Plan of Abandonment: 0
- Lease Plan of Development: Cook Inlet: 6 North Slope: 0
- Gas Storage Lease Plan of Development: Cook Inlet: 4, North Slope: 0

The Units Section also monitors the current Working Interest Owners on the North Slope and Cook Inlet, as displayed

in the "Production" section.

commercial section

Helping Maximize Value

The Commercial Section was successful in negotiating a five-year contract with Flint Hills Refinery and a one-year extension with Tesoro Refinery for the use of Alaska North Slope crude oil to support Alaska's energy demands. The Commercial Section provides cross-cutting support to the Division by providing economic expertise to fulfill the constitution's goal of maximizing the use of Alaska's natural resources.

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, gasoline support work, Royalty-in-Kind contract negotiations, Royalty Settlement Agreements, Royalty Audits, supporting state tariff litigation and settlements, and improving the competitive environment.

The Commercial Section provides economic analysis on project economics, market structure, optimization, financial risk management, 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 to support the State in negotiation strategy.

2013 achievements

As of December 1, 2013, the Commercial Section is negotiating one Royalty Settlement Agreement reopener with ConocoPhillips. Royalty Settlement Agreement reopeners are the result of provisions in the three primary Alaska North Slope (ANS) royalty settlement agreements, 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 assets change hands, the associated risk profile may also change. The Commercial Section provided analysis on several occasions to the DNR commissioner to support the negotiation of the financial assurances appropriate to manage the State's financial exposure.



Photo courtesy of Tesoro.

Last year the Commercial Section was successful in negotiating contracts and contract extensions with Alaska refiners. In October, the section concluded negotiations for continued operation of the Tesoro refinery for in-state refining of the State's Alaska North Slope royalty oil in support of Alaska's energy needs.

The State and the Producers continue to pursue commercial terms whereby all stakeholders can feel comfortable enough with the allocation of risk and reward to continue to progress the project. The Commercial Section provided commercial analysis and project management of third party consultants. The negotiations are likely to be stage gated so that as the project progresses through various stages towards the final investment decision (FID) and full project definition, more and more commercial project terms will be agreed to by the various commercial parties. The Commercial Section will continue to support this process as directed by the DNR commissioner.

royalty accounting

Tracking Payments Due the State

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. The Royalty Accounting staff also invoices our royalty-in-kind oil purchaser for all amounts due.

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

The "Oil and Gas Royalty" section explains our work and lists our 2013 achievements.

royalty audit

Making Sure the State Receives Full Value of Royalty Payments

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

The 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.

The Division obtained the authority to audit in 2003. Since then, 60 audits have been issued and an additional \$156.3 million in state revenue has been collected as a result.

This section conducts audits under a number of different authoritative guidelines including Royalty Settlement Agreements, Lease Agreements, Alaska 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.

Royalties owing the State and the Federal governments are calculated

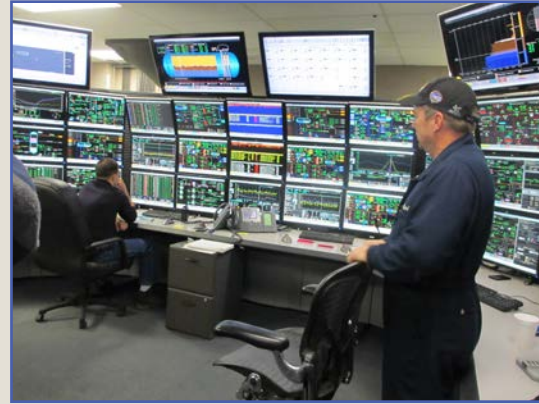


Photo: Lori Yares, DOG

Oil production is monitored to ensure safety and accuracy in the reporting of oil produced from Alaska state subsurface estate.

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 and net profit share payments have been correctly calculated, reported and paid. 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.

Federal royalty audits are conducted under a contract with the Department of the Interior's Office of Natural Resources Revenue. The State receives 27% - 90% of the federal royalty payments from federal leases within Alaska. 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.

In 2013, the Section issued 4 audits and collected an additional \$1.1 million in royalties and net profits. Eight audits were initiated or opened in calendar

year 2013.

In 2013, the Section issued four audits and collected an additional \$1.1 million in royalties and net profits. Eight audits were initiated or opened in calendar year 2013.

petroleum systems integrity office (psio)

Ensuring Safe and Reliable Petroleum Development In Alaska

The Petroleum Systems Integrity Office (PSIO) is the lead state agency for oversight of facilities, equipment, and infrastructure for the sustained production and transportation of oil and natural gas resources in the state.

The goal of PSIO is to provide a comprehensive and cost-effective approach to statewide oil and gas oversight activities. PSIO is tasked with ensuring that overarching quality management programs are in place and followed, both within the industry and within the involved state agencies. PSIO makes recommendations to the DNR commissioner regarding its research, findings, and issues that address the reliability and system integrity of oil and gas infrastructure.

Coordination is the key

PSIO leads interagency efforts to evaluate industry system integrity performance. In 2013, PSIO coordinated with both state and federal agencies in its efforts to evaluate industry oversight, maintain effective interagency cooperation, and communicate knowledge of the status, including regulatory status, of existing and proposed infrastructure. PSIO began management of a project with existing DNR agencies to unify oversight over all petroleum pipelines. PSIO continues to support the development of DNR electronic case files to track and manage data and develop a pool of



Photo: Dave Norton

PSIO staff join Alyeska Pipeline staff to inspect the trans-Alaska pipeline for damage at a dig site near Keystone Canyon.

cross-agency expertise to provide technical oversight along with land-use oversight.

Additionally, PSIO led efforts in 2013 to examine DNR requirements for dismantlement, removal, and restoration (DR&R) of infrastructure at the end of useful life and sought ideas and discussion with interested parties at a public workshop. PSIO also clarified the “practice of engineering” as defined in Alaska Statute 08.48.341 for operator submittals to DNR that include engineering documentation to ensure system integrity by requiring oil and gas facilities, including pipelines, to be designed using industry-accepted engineering codes and standards by Alaska professional engineers.

PSIO looks to the future

After the 2012 reorganization of PSIO by Coordinator Dave Norton, PSIO increased its engineering and legal expertise by hiring two new staff. Adding to the PSIO’s assets, PSIO

engaged the Mary Kay O'Connor Process Safety Center at Texas A&M University (MKOPSC) led by Dr. Sam Mannan to provide technical assistance for the next three years on a number of projects, including independent root cause analyses, investigation protocols, a management systems assessment program, and a plan for tracking and trending system infrastructure conditions. Recently, the federal Bureau of Safety and Environmental Enforcement selected the MKOPSC and Dr. Mannan to manage the Ocean Energy Safety Institute, which will provide a forum for dialogue, shared learning and cooperative research among academia, government, industry and other non-government organizations in offshore-related technologies and activities that help ensure environmentally safe and responsible offshore operations. Dr. Mannan has already called on PSIO for assistance with the new Institute, which will provide PSIO and other agencies additional resources to help ensure safe oil and gas operations in Alaska's waters.

information technology

Providing IT Tools and Expertise to Manage Data and Manage and Present Information

The Information Technology Section spearheads design, development and maintenance of innovative and business friendly IT solutions to support daily activities of the Division. The past year was a busy one for the IT section as we worked to improve the Division's processes by improving the IT toolbox.

Two primary activities consumed the better part of available technology resources: Royalty Accounting and implementing project management applications for various sections within the Division. Additionally, the IT team

continued providing enhancements and maintenance for lease sales and lease administration systems.

One of the top priorities of IT is to support and enhance the Royalty Accounting and Filing system. IT team is instrumental in implementing new automated royalty validation systems and processing millions of individual royalty filing records crucial for generating revenue for the State.

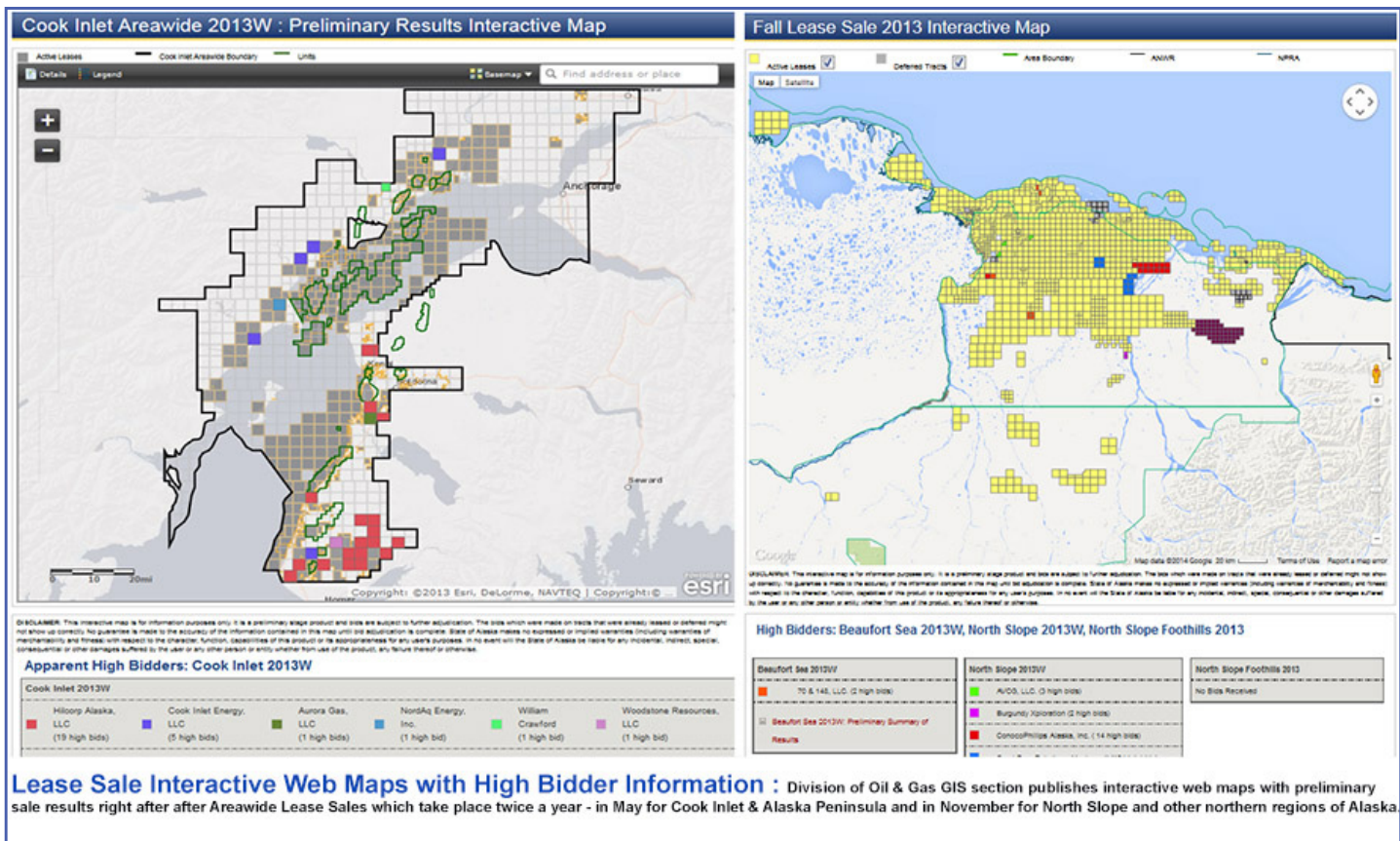
Design and development of a project management dashboard prototype application started off as a solution to improve and streamline the permitting processes conducted by the Division. The success of the Permitting project dashboard and later Units project management application have led to requests for similar project management apps across the Division. The IT team is in the process of analyzing business work flows, projects and tasks unique to each section and designing optimum technology management solutions for each.

Over the next year the IT Team looks forward to continuing to enhance and streamline oil and gas processes conducted by the Division and to find new ways to meet both old and new business challenges.

geographic information systems (GIS)

Creating Map Products and Interactive Real-Time Visual Aids for Alaska's Oil and Gas Development

The GIS Section is responsible for maintenance, development, management and coordination of the Division's spatial data in the form of GIS databases, cartographic print products and map presentations. As a technical support group for the Division, the GIS group works with all Sections to provide geospatial data and services that help



manage the State's oil and gas assets in the most efficient manner possible.

Our goal is to provide accurate geographical, database, and related information services and make cartographic tools available to help DOG staff make better decisions. The GIS team plays an essential role in the Annual Areawide Lease Sales. The maps produced by the Division representing lease and unit geospatial data are used by potential bidders in making their bidding decisions.

On lease sale day, the sealed bids are opened and read aloud, as a presentation created by our team, displays the lease sale tract map. Our team also creates public outreach material for national conferences and exhibitions in which the Division representatives participate. The material, supporting graphics, posters and DVDs we create for the North American Petroleum Expo (NAPE) and the American Association of Petroleum

Geologists (AAPG) conferences become useful take-home items for potential lessees and others interested in oil and gas development in Alaska.

We maintain a daily updated GIS page on the Division website which serves as an easy access portal for the public to download oil and gas spatial layers. Over the past year, we have been busy creating more interactive web mapping applications for specific oil and gas events like lease sales and petroleum conferences, thus providing access and dynamic spatial information to the public in real-time over the web.

Looking forward, the top priorities of the GIS section are creating cross platform maps and applications with enhanced spatial data interactivity and ease of use for the end user, while continuing to provide tried and tested mapping solutions to support DOG's day to day operations and information exchange.

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 takes 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 share of production as 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. Unit agreements require that when the state elects to take part of its royalty share as RIK it must provide 90 days’ notice 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.

Over the years these in-state sales have provided an important supply

security, thereby stimulating Alaska’s refining industry by providing long-term supplies of oil to the state’s refineries for the Alaska market.

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 FY 2013, nine of the NPS leases have reached payout status and the State is receiving a monthly payment for its share of the profit. Active NPS leases that have reached payout are in the Duck Island Unit, Milne Point Unit, and the Colville River Unit.

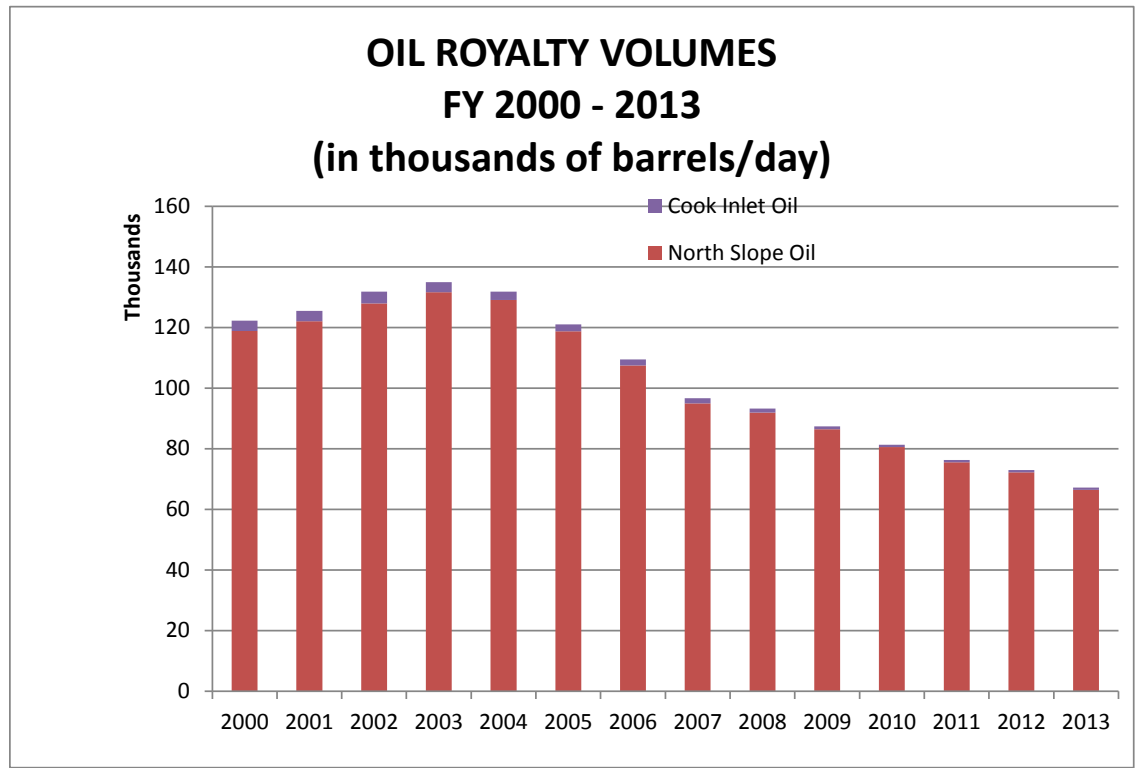
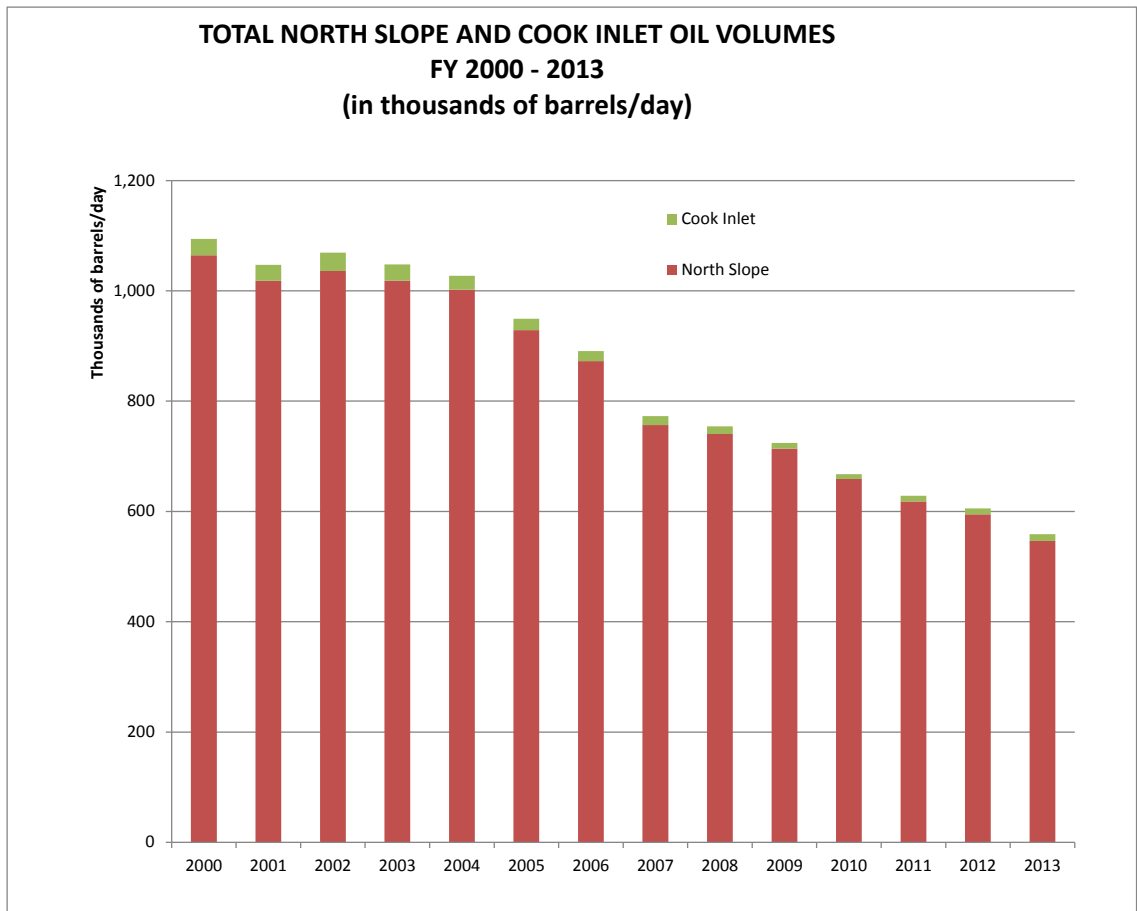
Royalty

The following graphs depict oil and gas volumes for FY 2000 through FY 2013. The first graph “North Slope and Cook Inlet Oil Volumes” indicates the decline in oil production through this time period.

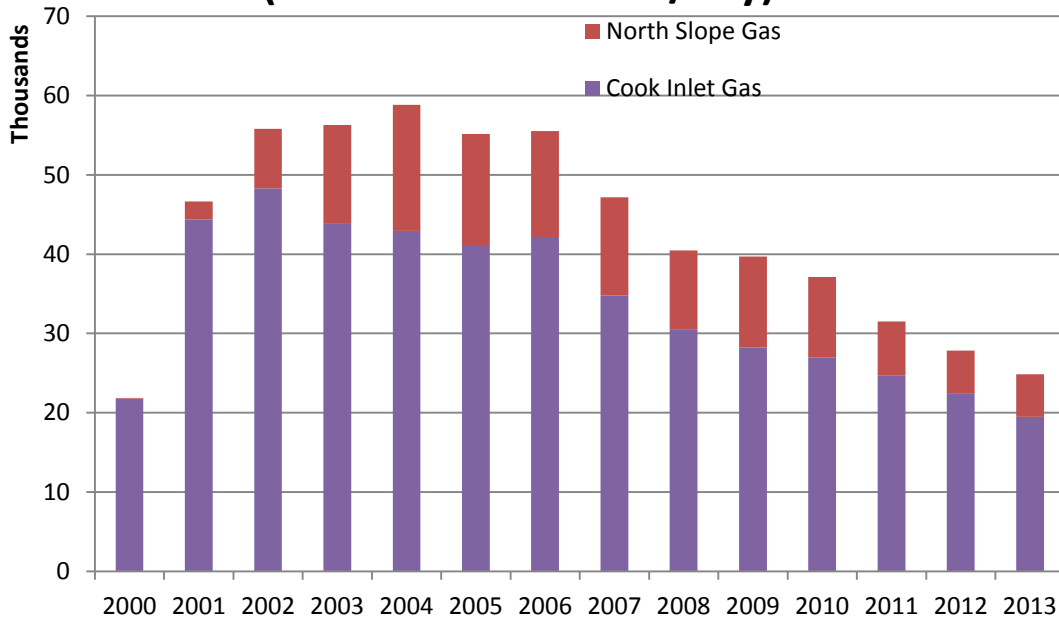
Sources and Distributions of Division Revenues

The Division’s primary sources of revenues are royalty from state lands and NPS lease payments. Other revenue sources from state lands are rents, bonus bids and commitment and storage fees, which are received through the Leasing section. Non-state revenue sources are royalties and rentals from federal lands, and interest on amounts due. The pie chart below depicts the composition of the \$2.8 billion in total revenues received by the Division during fiscal year 2013.

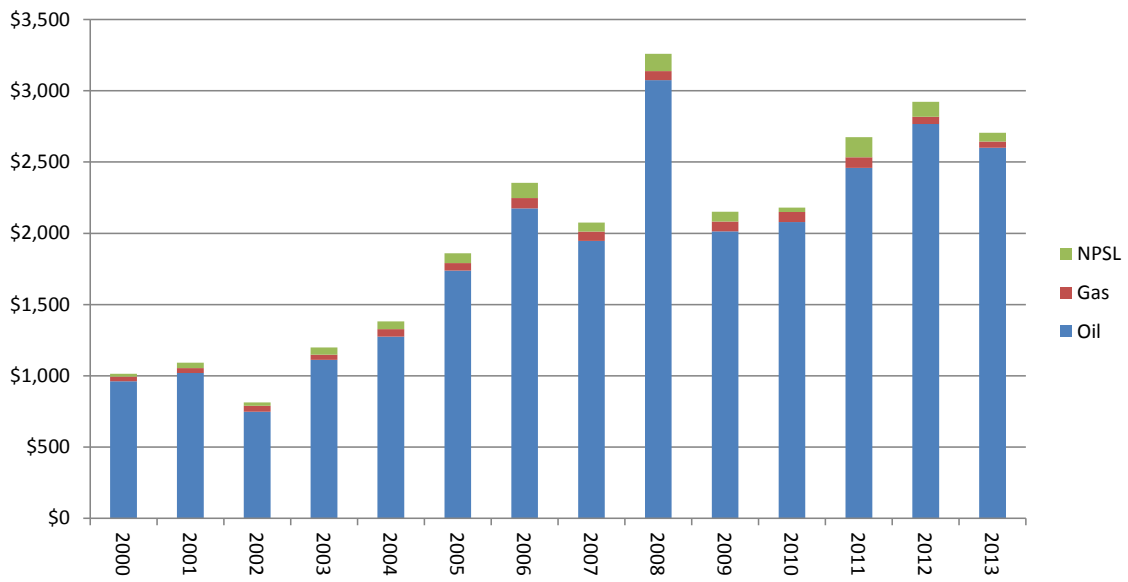
PLEASE NOTE that the graphs on the following pages (pages 22-25) in this section contain numbers for Fiscal Year 2013, while most other graphs show numbers for Calendar Year 2013. The reason for this is that production and revenue numbers for Calendar Year 2013 are not finalized and available for publication until March 2014.



GAS ROYALTY VOLUMES FY 2000 - 2013 (in thousands of mcf/day)

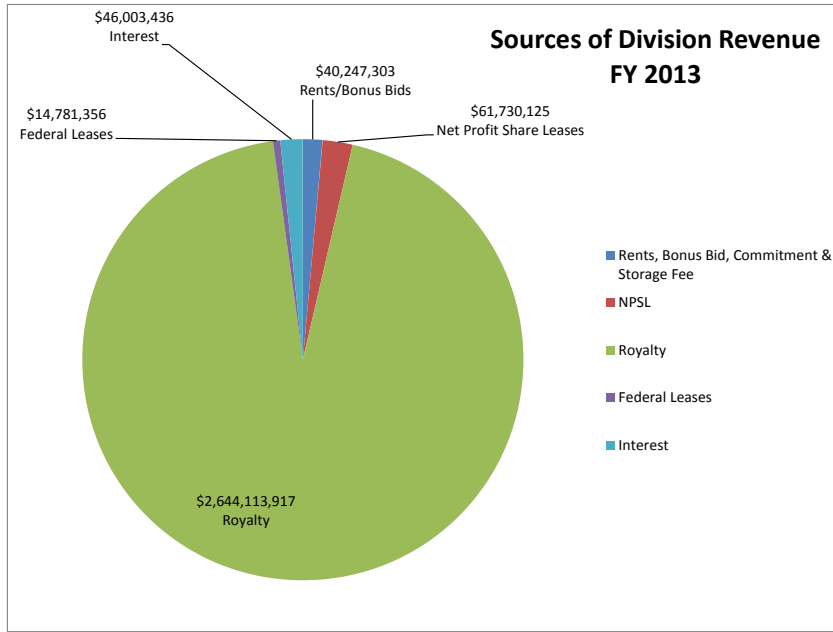


DIVISION OF OIL AND GAS ROYALTY AND NPSL REVENUE FY 2000 - 2013 (in millions of dollars)

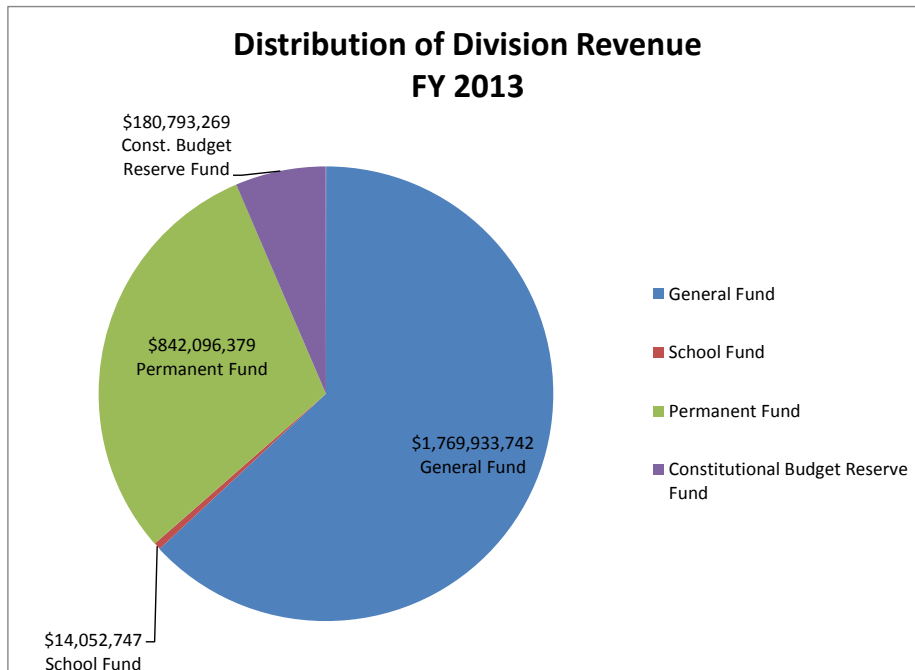


Sources and Distributions of Division Revenues

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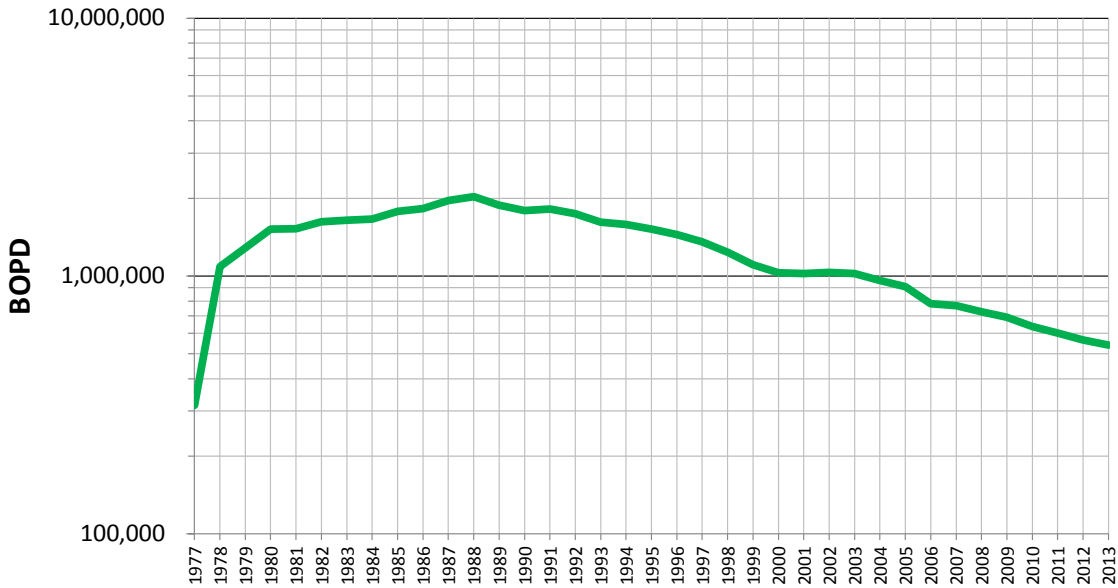
The Division is responsible for the correct allocation of revenues to the various state funds in accordance with statute and regulation. Royalty and lease revenues are allocated among the general, permanent, school and constitutional budget reserve funds based on a number of factors. The graph below depicts how the 2013 fiscal year revenues of \$2.8 billion were distributed.



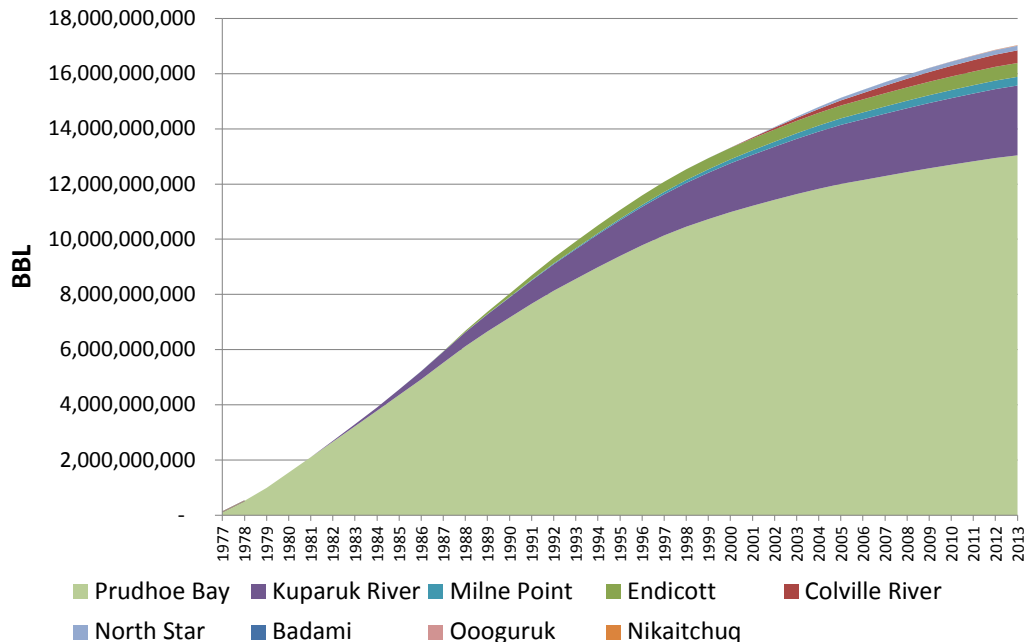
north slope production

The Resource Evaluation section reviews reports on the development of and production from Alaska's oil and gas fields as part of its resource evaluation responsibility. The official source for production numbers is the Alaska Oil and Gas Conservation Commission.

North Slope Combined Annual Average Daily Oil and NGL Production (BOPD) Through October 2013

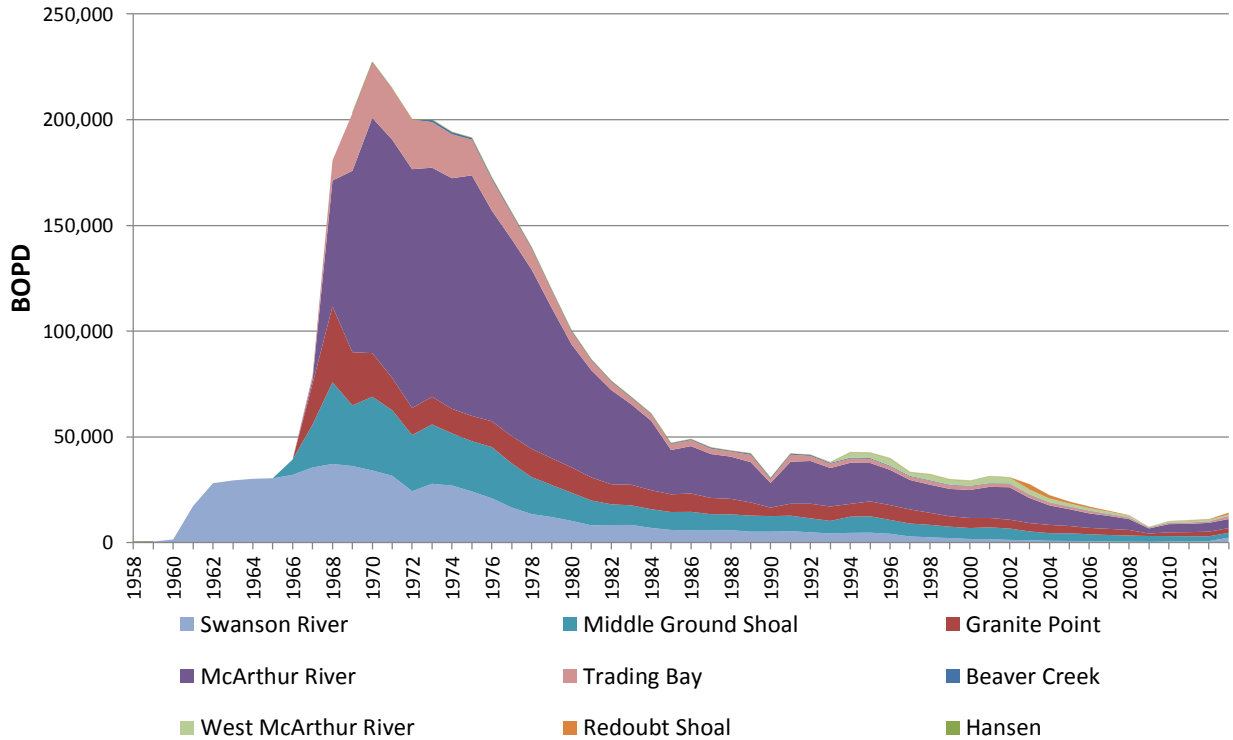


North Slope Cumulative Oil and NGL Production (BBL) Through October 2013

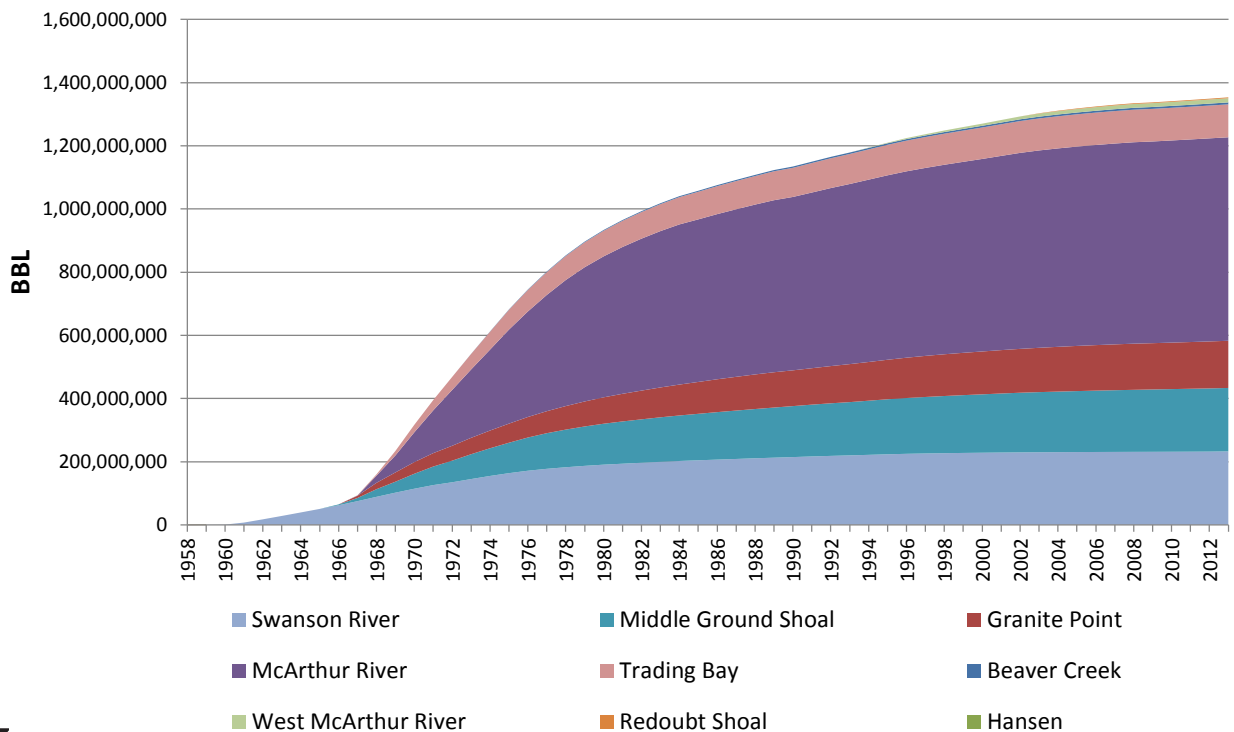


cook inlet production

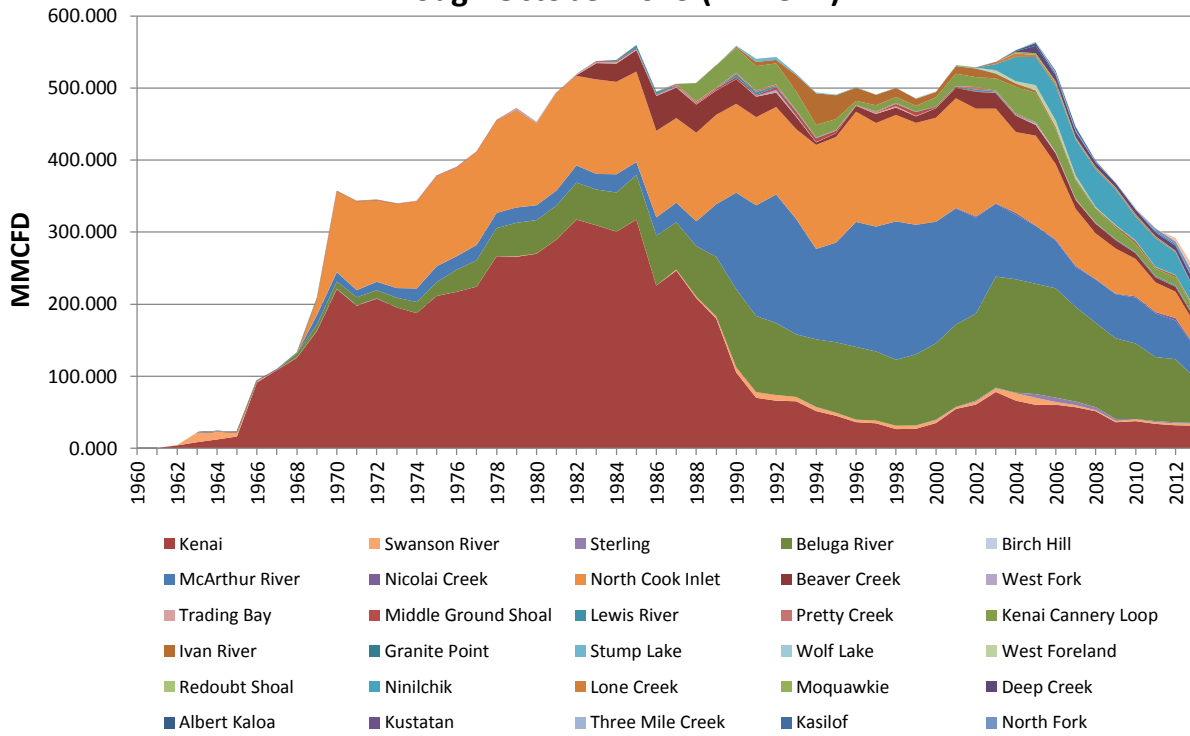
**Cook Inlet Annual Average Daily Oil and NGL Production (BOPD)
Through October 2013**



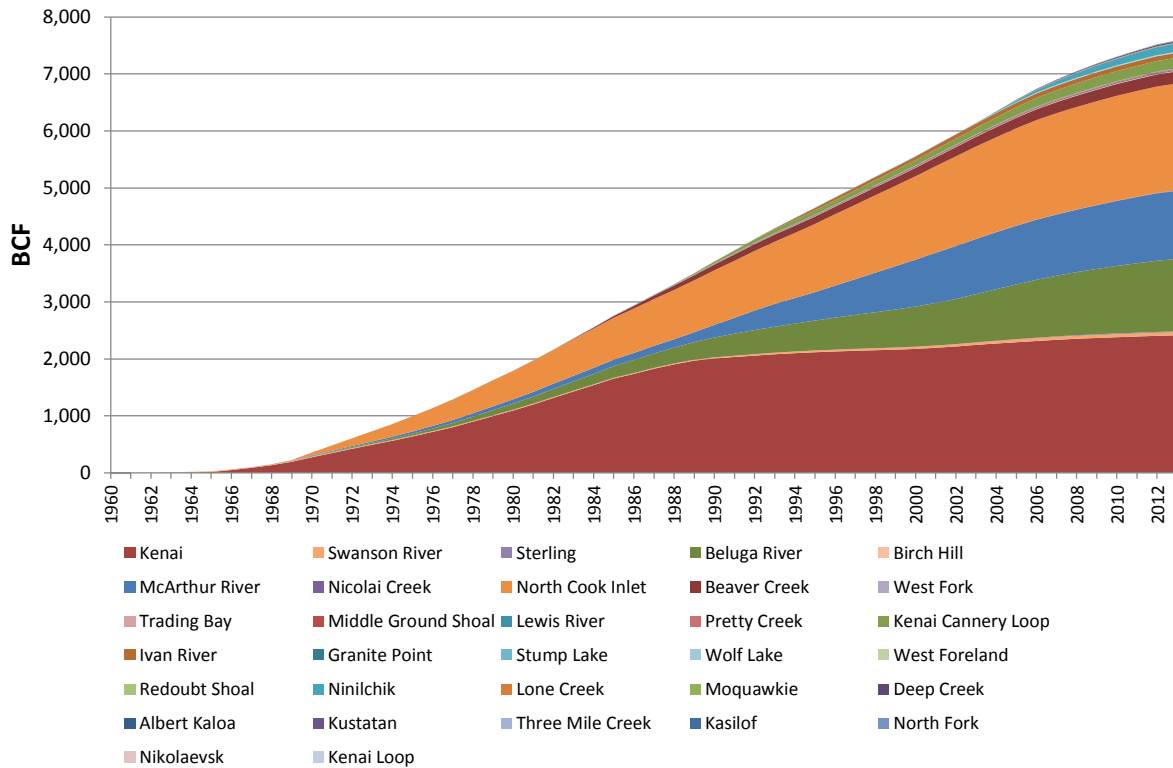
**Cook Inlet Cumulative Oil and NGL Production (BBL)
Through October 2013**



Cook Inlet Annual Average Daily Gross Gas Production Through October 2013 (MMCFD)



Cook Inlet Cumulative Gross Gas Production Through October 2013 (BCF)

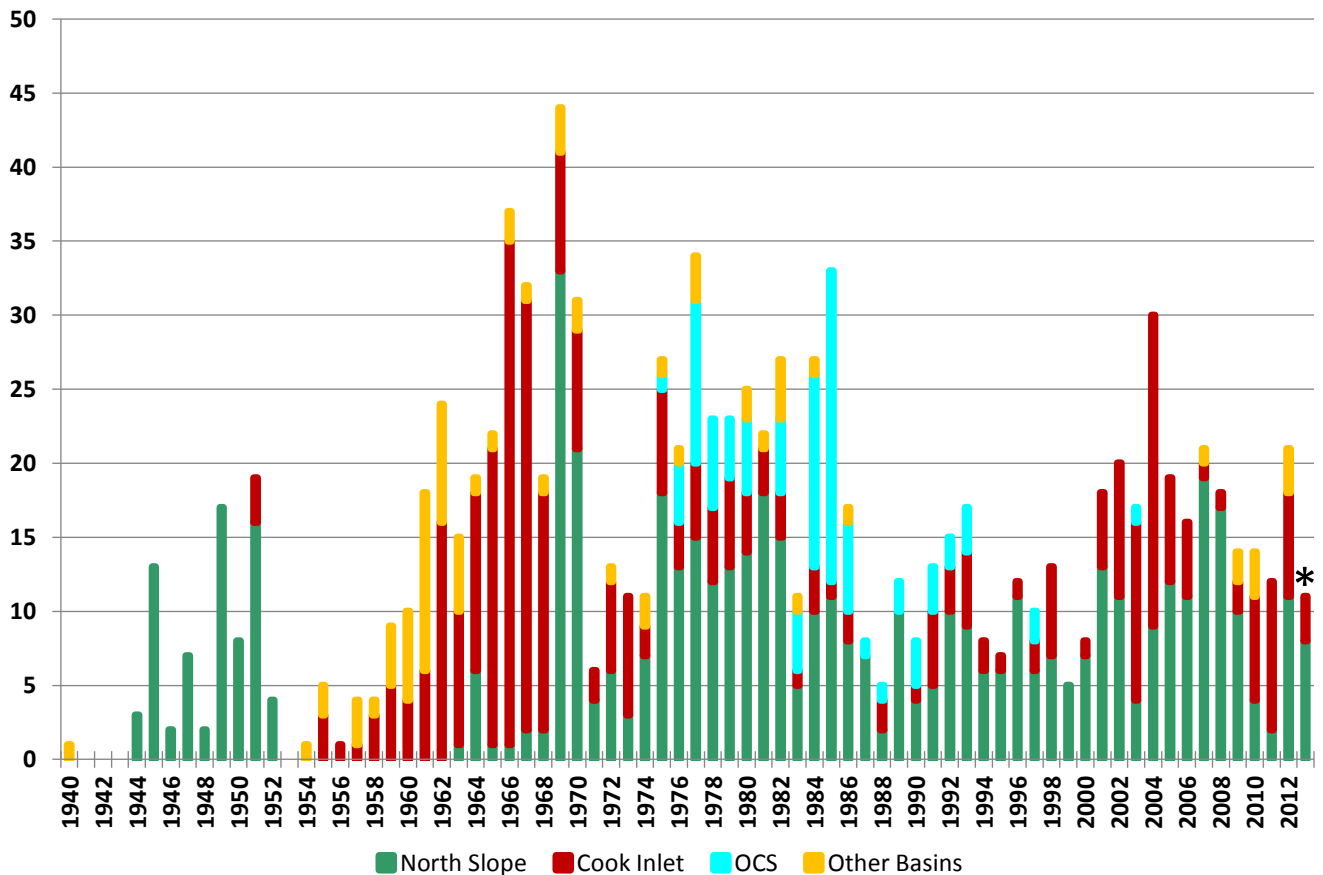


exploration and development wells

• exploration wells

The Resource Evaluation Section tracks well activity as industry interests complete exploration wells and work through the Division for developing the oil and gas resources of Cook Inlet and the North Slope, as shown in the following graphs. These graphs highlight industry interest in developing the resource potential of Alaska, as determined by the USGS. The activities and working interest owners of Cook Inlet and the North Slope show the breadth of activity and industry interest in state oil and gas resources that are managed by the Division's sections.

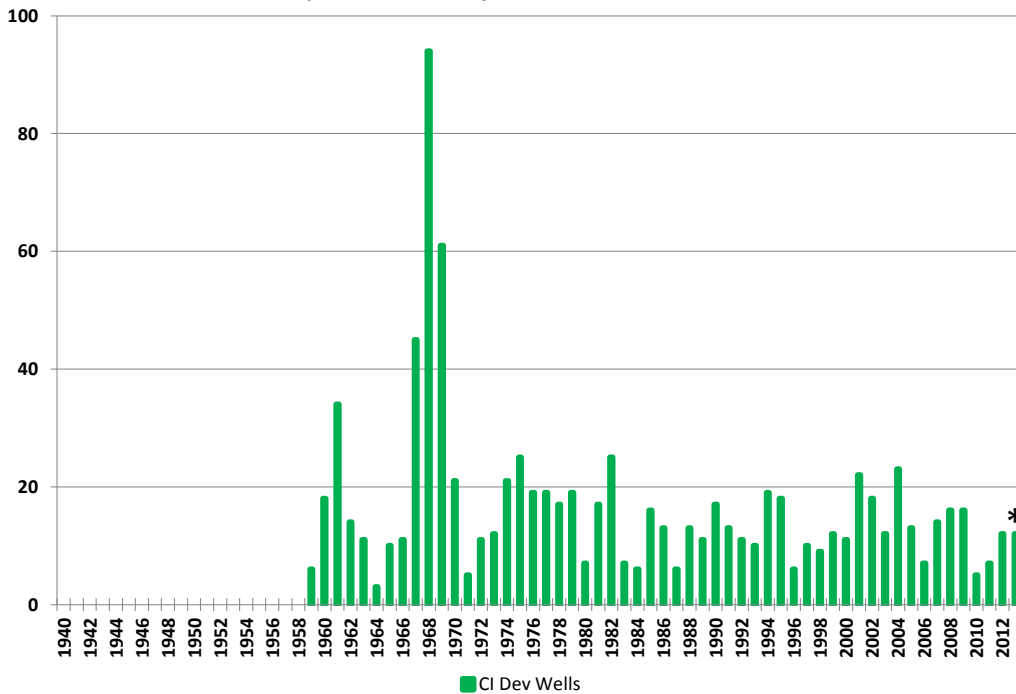
Alaska Exploration Wells: 1940 to Present (as of October 2013*)



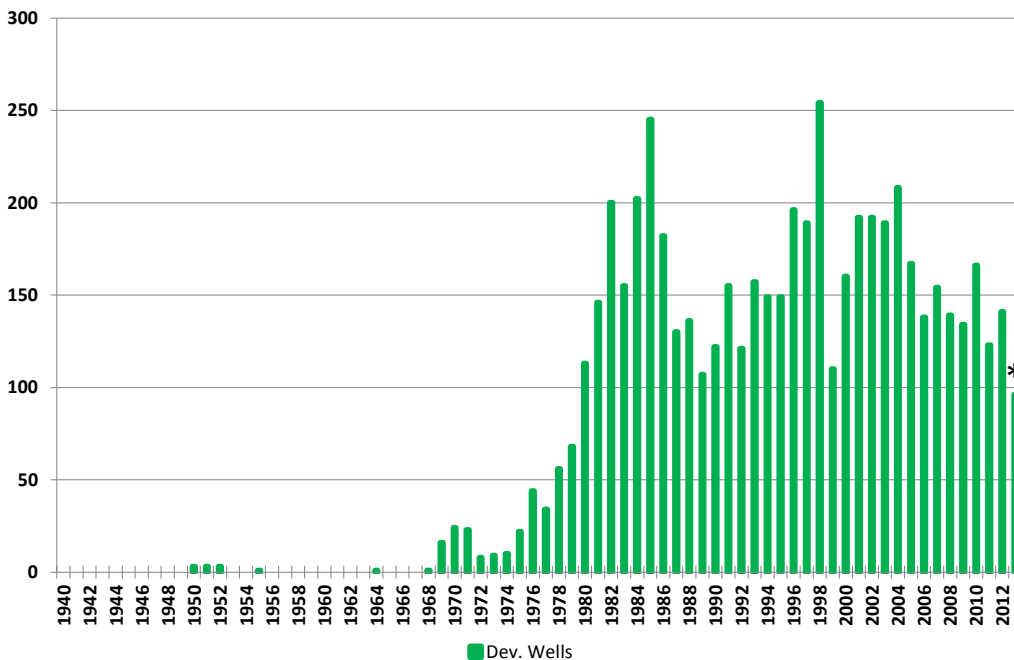
exploration and development wells

- development wells

Cook Inlet Development Wells by Year (as of October 2013*)



North Slope Development Wells by Year (as of October 2013*)



Alaska Statewide Summary of Assessments of Undiscovered, Technically Recoverable Oil and Gas¹

Region and Assessment Segment	Oil, MMSTB (million stock tank barrels)			Gas, BCF (billion cubic feet)			Marginal Probability ⁴	Reference
	F95	Mean	F05	F95	Mean	F05		
North Slope Onshore & State Waters²								
Central North Slope	2,565	3,984	5,854	2,681	4,198	6,092	1.00	USGS, 2005: Open-File Rpt 2005-1182
Nat'l Petrol Reserve Alaska	--	478	--	23,939	33,318	44,873	1.00	USGS, 2005: Open-File Rpt 2005-1182 USGS, 2010: Fact Sheet 2010-3102
ANWR coastal plain ²	5,724	10,360	15,955	--	52,839	--	1.00	USGS, 1999: Open-File Rpt 98-34 (entire assessment area, includes native lands and state waters) USGS, 1999: Open-File Rpt 98-34 (entire assessment area, includes native lands and state waters)
total - North Slope Onshore	--	190	--	0	4,764	10,852		
	--	15,908	--	--	98,960	--		
Arctic Alaska Outer Continental Shelf (OCS)								
Chukchi Shelf	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	410	8,220	23,240	650	27,640	72,180	1.00	BOEM, 2011 National Assessment Factsheet; MMS, 2007 Alaska OCS Assessment
Hope Basin	0	150	600	0	3,770	14,980	0.40	BOEM, 2011 National Assessment Factsheet; MMS, 2007 Alaska OCS Assessment
total - Arctic OCS (offshore)	--	23,750	--	--	108,180	--		
TOTAL - Arctic Alaska	--	39,658	--	--	207,140	--		
Interior Alaska (USGS Assessments)								
Yukon Flats Basin ³	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	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	--	234	--	--	5,641	--		
Southern Alaska								
Southern Cook Inlet OCS	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	108	599	1,359	4,976	19,037	39,737	1.00	USGS, 2011-Fact Sheet 2011-3068; includes unconventional gas plays.
Alaska Peninsula Onshore	0	9	53	--	188	--	0.32	USGS, 1996: 1995 National Assessment, Digital Data Series DDS-30
North Aleutian OCS	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	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	--	460	--	--	9,410	--	0.40-0.60	BOEM, 2011 National Assessment Factsheet; MMS, 2007 Alaska OCS Assessment
TOTAL - Southern Alaska	--	3,458	--	--	42,495	--		
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, Hollna, Bethel, Imoko, 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 (pd), updated November, 2011 BOEM updates)

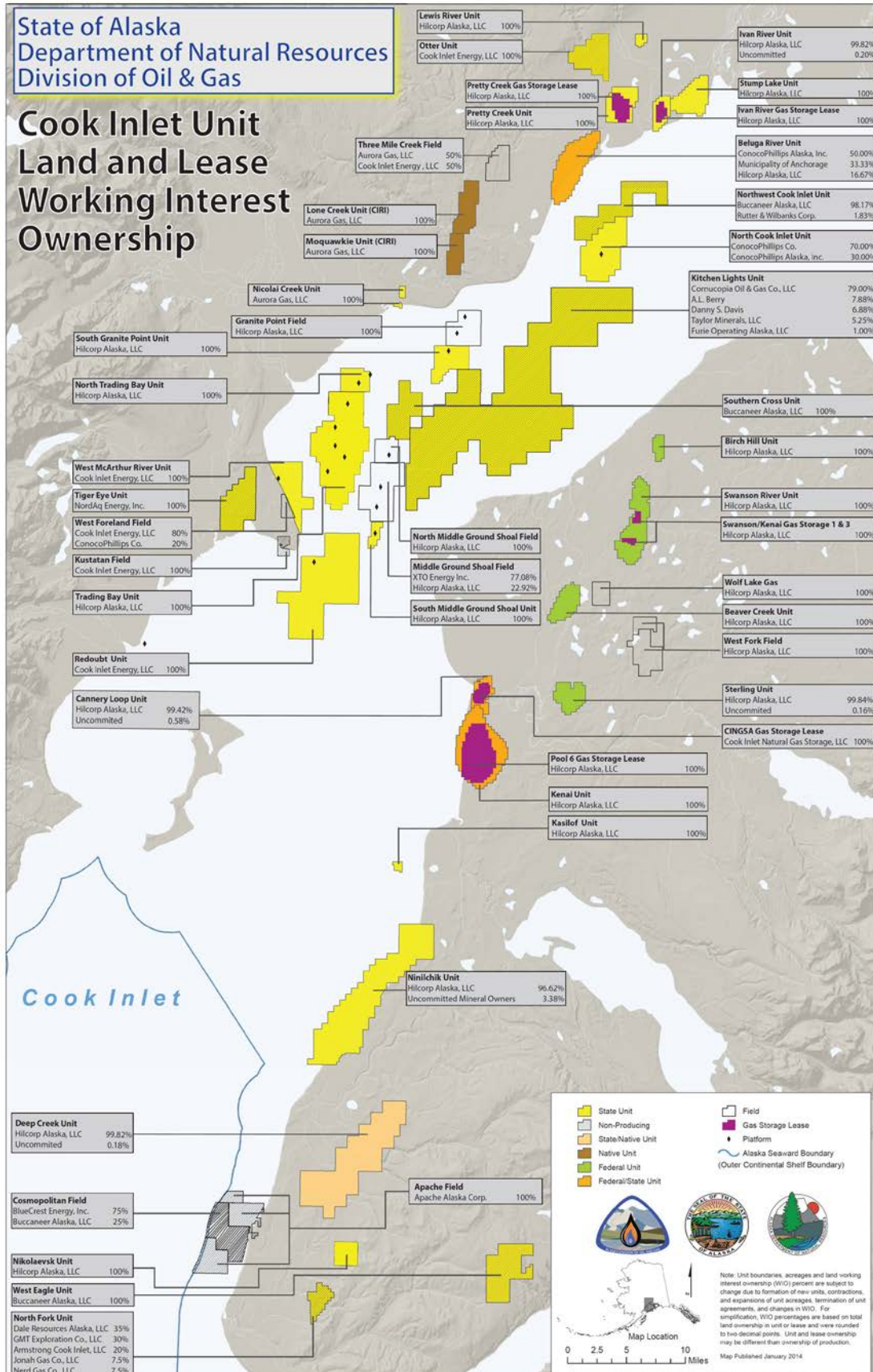
Cook Inlet Oil and Gas Activity

State of Alaska, Department of Natural Resources, Division of Oil and Gas, December 2013



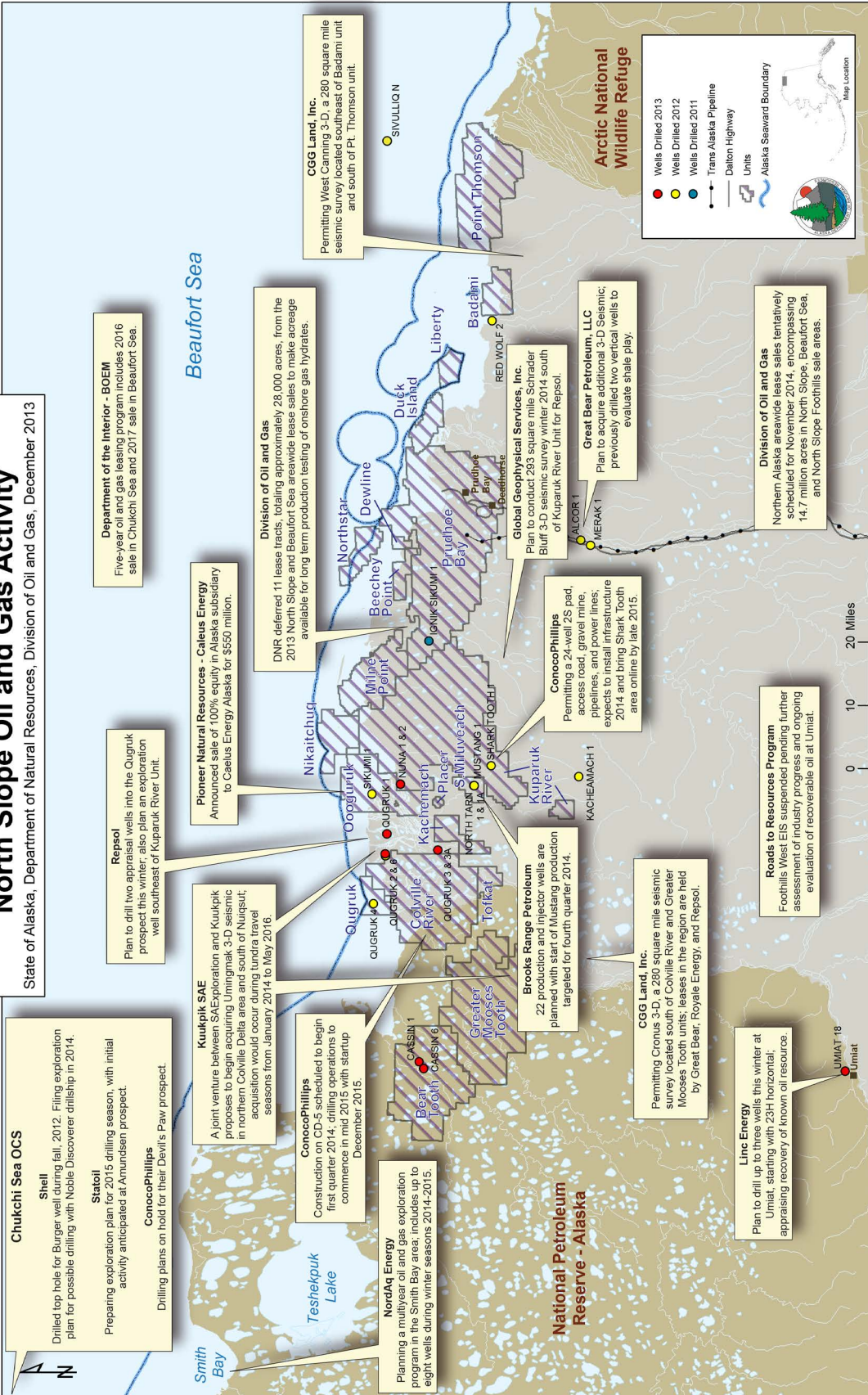
State of Alaska
Department of Natural Resources
Division of Oil & Gas

Cook Inlet Unit Land and Lease Working Interest Ownership



North Slope Oil and Gas Activity

State of Alaska, Department of Natural Resources, Division of Oil and Gas, December 2013



Chukchi Sea OCS
Shell
Drilled top hole for Burger well during fall, 2012. Filing exploration plan for possible drilling with Noble Discoverer drilship in 2014.

Statoli
Preparing exploration plan for 2015 drilling season, with initial activity anticipated at Amundsen prospect.

ConocoPhillips
Drilling plans on hold for their Devil's Paw prospect.

Kuukpik SAE
A joint venture between SAE Exploration and Kuukpik proposes to begin acquiring Umingmak 3-D seismic in northern Colville Delta area and south of Nuqsut; acquisition would occur during tundra travel seasons from January 2014 to May 2016.

ConocoPhillips
Construction on CD-5 scheduled to begin first quarter 2014; drilling operations to commence in mid 2015 with startup December 2015.

NordAq Energy
Planning a multiyear oil and gas exploration program in the Smith Bay area; includes up to eight wells during winter seasons 2014-2015.

Brooks Range Petroleum
22 production and injector wells are planned with start of Musang production targeted for fourth quarter 2014.

CGG Land, Inc.
Permitting Cronus 3-D, a 280 square mile seismic survey located south of Colville River and Greater Mooses Tooth units; leases in the region are held by Great Bear, Royale Energy, and Repsol.

Linc Energy
Plan to drill up to three wells this winter at Umiat, starting with 23H horizontal; appraising recovery of known oil resource.

Repsol
Plan to drill two appraisal wells into the Ougruk prospect this winter; also plan an exploration well southeast of Kuparuk River Unit.

Pioneer Natural Resources - Calceus Energy
Announced sale of 100% equity in Alaska subsidiary to Calceus Energy Alaska for \$550 million.

Division of Oil and Gas
DNR deferred 11 lease tracts, totaling approximately 28,000 acres, from the 2013 North Slope and Beaufort Sea areawide lease sales; to make acreage available for long term production testing of methane gas hydrates.

ConocoPhillips
Permitting a 24-well ZS pad, access road, gravel mine, pipelines, and power lines; expects to install infrastructure 2014 and bring Shark Tooth area online by late 2015.

Global Geophysical Services, Inc.
Plan to conduct 293 square mile Schraeder Bluff 3-D seismic survey winter 2014 south of Kuparuk River Unit for Repsol.

Great Bear Petroleum, LLC
Plan to acquire additional 3-D seismic; previously drilled two vertical wells to evaluate shale play.

Division of Oil and Gas
Northern Alaska areawide lease sales tentatively scheduled for November 2014, encompassing 14.7 million acres in North Slope, Beaufort Sea, and North Slope Foothills sale areas.

Department of the Interior - BOEM
Five-year oil and gas leasing program includes 2016 sale in Chukchi Sea and 2017 sale in Beaufort Sea.

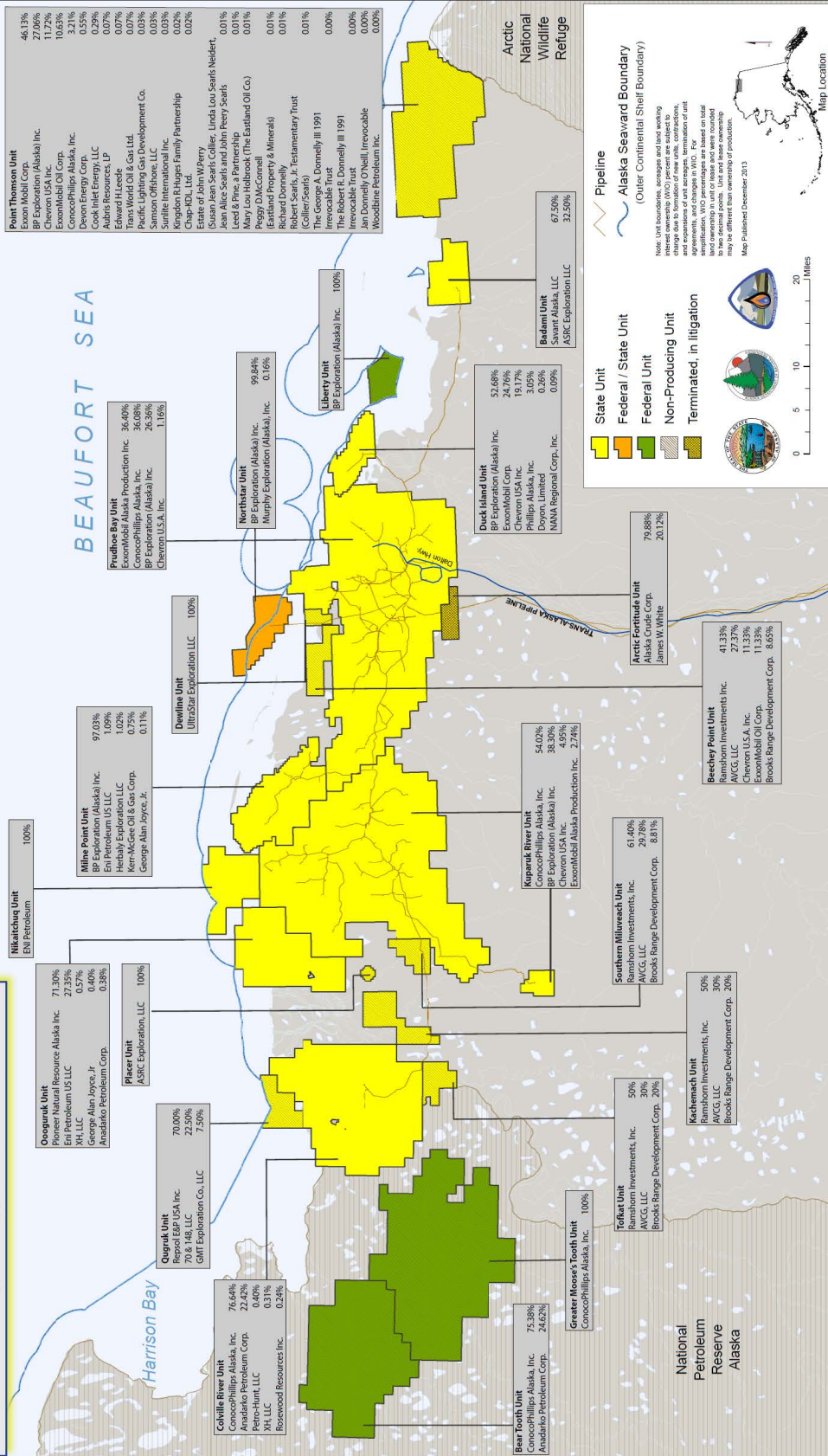
CGG Land, Inc.
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North Slope Unit Land Working Interest Ownership

State of Alaska Department of Natural Resources Division of Oil & Gas



State Unit
Federal / State Unit
Federal Unit
Non-Producing Unit
Terminated, in litigation

Pipeline
Alaska Seaward Boundary
 (Other Continental Shelf Boundary)

Map Location

Map Scale
 0 5 10 20 Miles

Notes: Unit boundaries, acreages and land working interests are subject to change due to formation of new units, consolidation and expansion of unit acreages or other changes in unit boundaries. WVO percentages are based on total acreage in the unit. WVO percentages may differ from ownership percentages shown on maps. Use and these percentages may differ from ownership percentages shown on maps.

Map Published December 2013