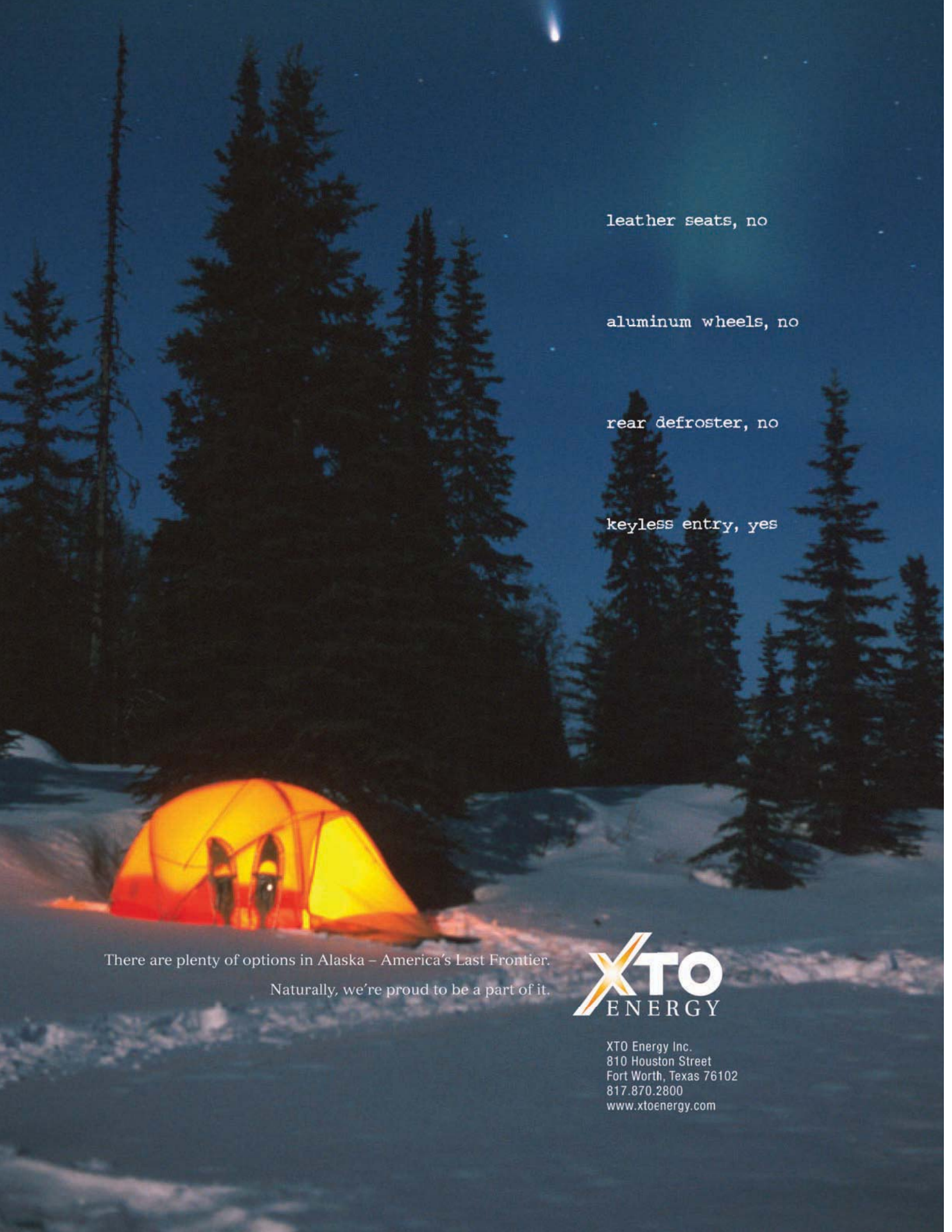
The Explorers

Oil & gas companies investing in Alaska's future

The Explorers, an annual publication from Petroleum News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Alaska exploration on the rise

By MARTI REEVE
Petroleum News special publications director

Welcome to The Explorers, an annual magazine from Petroleum News.

This year the news is all good.

Last winter one exploration well was drilled on Alaska's North Slope.

Earlier in October, I would have said there were more wells planned for the upcoming North Slope exploration season than ever before — 34 wells, as compared to the record 33 wells that were drilled in 1969, following the discovery of the giant Prudhoe Bay field.


MARTI REEVE

But by the end of October, some drilling plans were in jeopardy.

Following are the companies that originally planned to drill between November of 2011 and November 2012, the maximum number of wells they were looking at, and the status of their drilling programs per information gathered by Petroleum News Publisher and Executive Editor Kay Cashman:

- Brooks Range Petroleum: 1 rig, 2 wells/on schedule.
- Great Bear Petroleum and Halliburton's proof of concept programs: 1 rig, 8 wells/drilling startup could be delayed by permitting until spring.
- Linc Energy (Renaissance Umiat): 1 rig, 5 wells/company said Oct. 31, "Rigs are tight but we are making headway."
- Pioneer: 1 rig, 2 wells/on schedule.
- Repsol: 5 rigs, 15 wells/on schedule but there's an outside chance permitting challenges could delay part of the program until next winter.
- Savant 1 rig, 1 well/subject to rig availability, likely will be delayed until next winter.
- UltraStar: 1 rig, 1 well/subject to rig availability, likely will be delayed until next winter.

Cashman said if Repsol's drilling program for this coming winter is reduced, then one or more of its rigs would presumably be available for other operators.

Cashman does not think the 1969 "North Slope/nearshore" drilling record will be broken this winter, but "next winter is another story. It is likely to be even more active," she predicted, with Repsol leading the pack.

Equally exciting news comes from the Cook Inlet basin, with Apache Corp. and Escopeta Oil tied for first place in significance to the future of the region's oil and gas development.

After years of trying, Escopeta brought a jack-up rig into Cook Inlet: The first since 1994, and a piece of equipment that is vital to drilling the largely unexplored offshore part of the basin. Escopeta is drilling Corsair, the first of four prospects in its upper Cook Inlet Kitchen Lights unit, expecting to ultimately discover another Kuparuk-sized field in one of its Kitchen prospects, as well as enough natural gas to supply Southcentral Alaska for decades.

And if plans of Buccaneer Energy work out, there will be a second jack-up rig in Cook Inlet next year.

Apache's entry into the Cook Inlet basin about a year ago also has long-ranging, positive impacts for the region's industry. It has more than 800,000 acres in the basin, where it is targeting oil.

After successfully testing wireless nodal seismic technology on and offshore in the basin, the independent recently kicked off a 3-year, 3-D seismic acquisition program across the entire basin, with plans to drill its first Cook Inlet exploration well in 2012.

Bob Swenson, director of Alaska's Division of Geological and Geophysical Surveys, told Petroleum News that Apache's successful testing of the relatively new nodal technology in Cook Inlet was "going to be a game changer" for the basin.

Apache said the technology's high quality data, combined with the cable-free recording nodes ability to get accurate imaging from the transition areas between land and sea, where there is strong tidal action, AND its ability to acquire images of structural and stratigraphic features at depths of up to 20,000 feet across all of the three defined target areas, were key to discovering and delineating new plays in the Southcentral Alaska basin.

Good times ahead…

CONTENTS

The Explorers

Released Nov. 16, 2011

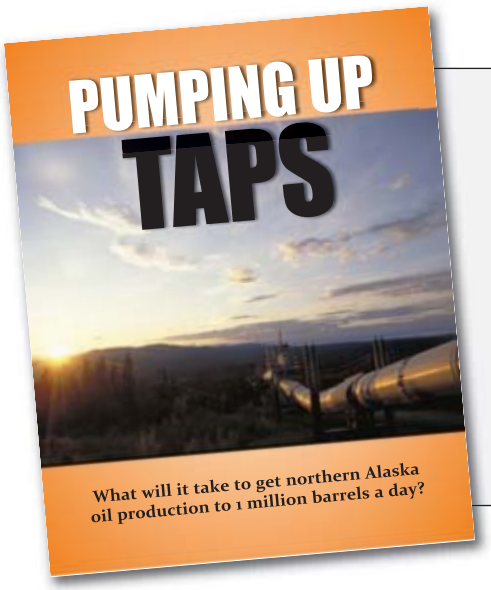
THE EXPLORERS is a special annual supplement to Petroleum News, which is owned by Petroleum Newspapers of Alaska LLC.

MAILING ADDRESS:
PO Box 231647
Anchorage, AK 99523-1647
Phone: (907) 522-9469
Fax: (907) 522-9583
Email:
circulation@PetroleumNews.com
Web page:
www.PetroleumNews.com

To order additional copies of this special publication, contact Clint Lasley, Petroleum News general manager and circulation director, at clasley@petroleumnews.com

Cover photos:
Top photo by Thomas Koenig, courtesy Escopeta Oil & Gas
Bottom photos courtesy of Judy Patrick Photography

Printed by Journal Graphics, Portland, Oregon



PUMPING UP TAPS

Alaska's governor has set a goal to have the trans-Alaska oil pipeline operating at 1 million barrels per day. Can it be done? If so, how? Where will the oil come from? Are regulatory and tax changes necessary? Those are some of the questions Petroleum News answers in Pumping up TAPS, a magazine that will be released in early January, in time for the next session of the Alaska Legislature.

Want to know more? Call Marti Reeve, Petroleum News special publications director, at 907-522-9469.

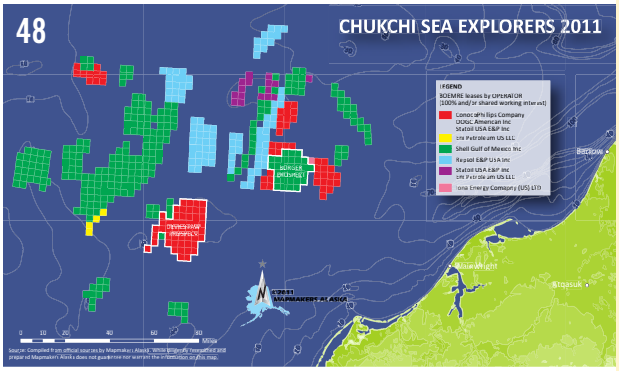
Petroleum news

Ad Index

Comment

Maps

On Deadline



Other

MARTI REEVE
SPECIAL PUBLICATIONS DIRECTOR

ALAN BAILEY
SENIOR STAFF WRITER

ERIC LIDJI
CONTRIBUTING WRITER

WESLEY LOY
CONTRIBUTING WRITER

STEVEN MERRITT
PRODUCTION DIRECTOR

MAPMAKERS ALASKA
CARTOGRAPHY

KAY CASHMAN
PUBLISHER & EXECUTIVE EDITOR

MARY MACK
CHIEF FINANCIAL OFFICER

KRISTEN NELSON
EDITOR-IN-CHIEF

CLINT LASLEY
GENERAL MANAGER

SUSAN CRANE
ADVERTISING DIRECTOR

BONNIE YONKER
ADVERTISING SPECIALIST

TOM KEARNEY
ADVERTISING DESIGN

HEATHER YATES
BOOKKEEPER

DEE CASHMAN
CIRCULATION REPRESENTATIVE

JUDY PATRICK
CONTRACT PHOTOGRAPHER

EPA issues air permits for Shell

By ALAN BAILEY
Petroleum News, Oct. 30, 2011

The U.S. Environmental Protection Agency has issued a final air permit for Shell's planned use of its Kulluk floating drilling platform for exploration drilling in the Beaufort Sea starting in July 2012.The permit comes about a month after the issue of similar permits for the use of the drillship Noble Discoverer in both the Chukchi and Beaufort Seas.

"EPA's final permit significantly reduces the potential air pollution from Shell's drilling operations and protects the National Ambient Air Quality Standards," EPA said on Oct. 21 when announcing its issuance of the permit for the Kulluk."Strict pollution controls in the permit include selective catalytic reduction units and catalytic oxidation reduction units on some engines, use of low-sulfur diesel fuel fleet-wide, and limits on operational hours."

Public appeals for review of the permit must be received by the Environmental Appeals Board by Nov. 28, EPA said.The agency published a draft version of the permit in July and after a public review period made a number of technical changes before issuing the final version.

Read more at http://bit.ly/sffTOm

Court allows exploration plan review

On Oct. 26 the U.S. District Court in Alaska lifted its injunction against lease related activities in the Chukchi Sea, so that the Bureau of Ocean Energy Management can proceed with its review of Shell's Chukchi Sea exploration plan.The court imposed the injunction in 2010 as part of a ruling in an appeal against the environmental impact statement for the 2008 Chukchi Sea lease sale in which Shell purchased its leases. Shell wants to drill up to six wells in the Chukchi Sea, starting in the summer open water season of 2012 and submitted an exploration plan to the Bureau of Ocean Energy Management, Regulation and Enforcement, predecessor agency to BOEM, in May for approval. BOEMRE had placed its review of the plan on hold because of the court injunction.

On Oct. 3 BOEM submitted to the court a new supplementary environment statement and an accompanying record of decision affirming the 2008 lease sale — the court had ordered the Department of the Interior to correct three deficiencies in the original lease sale EIS, with the injunction to remain in place pending a new lease sale record of decision.

Read more at http://bit.ly/sffTOm

INBRIEF

Apache taps Hendrix for Alaska ops

Apache Corp. said Oct. 24 that John Hendrix has been appointed general manager of the company's Alaska operations and will be based in Anchorage.

Hendrix, who grew up in Homer, Alaska, and has a bachelor's degree in civil engineering, has been general manager of Apache's Qarun Petroleum Co. joint venture in Egypt since 2006. He joined Apache in 2005 as production engineering manager of the Gulf Coast region.

"John brings a range of onshore, offshore, arctic and deepwater experience as well as deep Alaska roots; he will help Apache establish a new operating base in the Cook Inlet," said John Bedingfield, Apache's vice president of worldwide exploration and new ventures.

■ Read more at http://bit.ly/rAucXj

State adds 200,000 acres to fall sales

The Alaska Department of Natural Resources said Oct. 25 that it has added a significant amount of previously leased acreage to the state's North Slope areawide oil and gas lease sale in December.

An increased 200,000 acres will be available for lease in the vicinity of Point Thomson and in the Beaufort Sea due to lease expirations and other administrative actions.

"We expect interest in these areas and hope that exploration will soon follow," Bill Barron, director of DNR's Division of Oil and Gas, said in a statement.

Thirty tracts are being added in the Point Thomson area, eight tracts formerly part of the Point Thomson unit and 22 tracts previously deferred due to their proximity to the unit, a combined 72,000 acres.

■ Read more at http://bit.ly/rAIuD2

BRPC keeps some Greater Bullen leases

Despite surrendering a significant chunk of acreage in the region, a joint venture led by Brooks Range Petroleum Corp. is not giving up entirely on the eastern North Slope.

The local operating arm of Kansas-based independent Alaska Venture Capital Group kept the leases in the northernmost of the six proposed exploration blocks at its proposed Greater Bullen unit and plans to apply for a unit of that acreage this coming January, vice president for land and external affairs Jim Winegarner recently told Petroleum News.

The company kept the nine leases in the "N" block, also known as the Telemark prospect located between the Badami and Point Thomson units, as well as 16 other leases spread across the remainder of the proposed unit area that are set to expire on July 31, 2012.

Telemark would target a Brookian-age reservoir in the Flaxman sand, the company said.

■ Read more at http://bit.ly/vVZp2m

Repsol applies for Qugruk unit

By KRISTEN NELSON
Petroleum News, Oct. 30, 2011

Repsol E&P USA Inc. has applied to the Alaska Department of Natural Resources for formation of the 98,852-acre Qugruk on the North Slope. (See map on page 18 at http://bit.ly/sjXPJc.)

Repsol, 70 & 148 LLC and GMT Exploration Co. LLC jointly proposed formation of the unit. The three together hold 91.5 percent of the working interest within the proposed unit area.

Other leaseholders in the proposed unit are: Pioneer Natural Resources Alaska Inc., Anadarko Petroleum Co., ConocoPhillips Alaska Inc., Paul L. Craig and Peter G. Zamarello. The unit agreement has been executed by Repsol, 70 & 148 and GMT. Repsol said it has offered the other leaseholders the right to join the unit and is awaiting their response.

The proposed unit, in somewhat of a "T" shape, is between the Colville River unit to the south and west, the Oooguruk unit to the south and east and the proposed Placer and South Miluveach units to the south. The northern limit of the proposed unit is the boundary between state waters and the federal outer continental shelf.

One-year plan

The initial plan of exploration is for one year and includes four wells. Repsol proposed a bond payable to DNR to ensure that work begins, with DNR to release the bond to Repsol when the first exploration well spuds. Repsol said the unit working interest owners agree to having the unit terminate if the first well is not drilled during the 2011-12 drilling season.

Prospective intervals to be tested by the exploration program include — but are not limited to — the Cervelo, Judy Creek, Nechelik, Nuiqsut and Alpine sandstones within the Jurassic Kingak shale, and the Cretaceous Kuparuk C sandstone (Kup "C"), Torok formation and Nanushuk Group.

The four planned wells are the Qugruk 1 in section 28 of township 13 north, range 6 east, Umiat Meridian, with a proposed true vertical depth of 7,100; the Qugruk 2, in section 25 of township 13 north, range 6 east, UM, with a proposed TVD of 7,000 feet; Qugruk 3, in section 31, township 12 north, range 6 east, UM, with a proposed TVD of 7,150 feet; and Qugruk 4, in section 15 of township 13 north, range 4 east, UM, with a proposed TVD of 8,300 feet.

Repsol said the sequence in which the wells are drilled may be changed and the location and drilling depth of subsequent wells may be adjusted following drilling of prior wells.

In its permitting paperwork Repsol has indicated that it may drill one vertical well and as many as two sidetracks at each location. It is also permitting the Kachemach exploration well farther south — outside of the proposed unit area — and just east of the Meltwater participating area of the Kuparuk River unit.

Kingak, Kup "C", Nanushuk group

There have been many exploration wells drilled in the area surrounding the proposed unit, including six wells within the proposed unit, beginning in 1966 and extending through to 2008, Repsol said in its unit application.

Primary objectives for the proposed unit are "sands within the upper portion of the Jurassic Kingak Shale, the Cretaceous Kup 'C' sand and several sands within the Cretaceous Nanushuk Group." Two sands in the J-2 interval of the Kingak shale are informally termed the Cervelo and Judy Creek sands, the Nechelik sand, the Nuiqsut sand and the Alpine "A" and "C" sands.

■ Read more at http://bit.ly/tHbbds

Savant takes over at Badami unit

By ERIC LIDJI
For Petroleum News, Oct. 23, 2011

Savant Alaska is now the operator of the Badami unit.The Alaska Department of Natural Resources approved the designation on Oct. 14, making the Denver-based independent the smallest operator-producer on the North Slope.

It also makes Savant the only privately held operator-producer on the North Slope.

BP Exploration (Alaska) Inc. formed Badami in 1995, but after more than a decade of stops and starts at the eastern North Slope unit the company partnered with Savant in 2008 to see if horizontal drilling and hydraulic fracturing could boost production.

"As BPXA struggled with the unit, we have searched for an opportunity to transfer the unit to another company or companies that saw more potential in Badami than BPXA. … It is BPXA's desire to take the next step in this transition by allowing farmees to take an active role in unit operations," the company wrote to state officials in late August.

2010 restart

After three years of renewed operations, Savant restarted Badami in November 2010 and the unit is currently producing 1,300 barrels per day, well below the 30,000 to 35,000 bpd that BP originally expected but more than the unit has produced in years.

With the decision, there are now five producer-operators on the North Slope: BP, ConocoPhillips, Pioneer Natural Resources, Eni Petroleum and Savant Alaska.

Originally, BP simply farmed-out the leases at the unit to Savant, but earlier this year BP transferred four Badami leases to Savant and partner ASRC Exploration LLC.

Although Savant is now the operator of the unit, BP is retaining its responsibility to decommission the existing Badami facilities and to plug and abandon all wells that aren't transferred to Savant and ASRC through previous farm-out agreements. If BP relinquishes its working interest in the remaining Badami leases, though, the Division of Oil and Gas might require BP and Savant to work out a "financial assurance agreement."

With the decision, there are now five producer-operators on the North Slope: BP, ConocoPhillips, Pioneer Natural Resources, Eni Petroleum and Savant Alaska.

BP, ConocoPhillips and Eni are all giant multinational companies, and Pioneer is a large independent with nearly $10 billion in assets in Alaska, the midcontinent and Africa.

INBRIEF

DNR forms four units for BRPC

Brooks Range Petroleum Corp. applied to form two units on state and Native leases east of the Colville River in the central North Slope. Instead, it got four.

In separate decisions in late October, the Alaska Department of Natural Resources divided the proposed Putu unit into the smaller Tofkat and Putu units, and the proposed Southern Miluveach unit into the smaller Kachemach and Southern Miluveach units.

BRPC applied to form the Putu unit in July over 39 leases, including 28 owned jointly by the State of Alaska and Arctic Slope Regional Corp., covering some 39,993 acres.

The original unit included three exploration blocks — North, Southwest and Southeast — but the state ultimately decided to break those three areas into two units. The North block is now the Tofkat unit, while the Southwest and Southeast blocks are now the Putu unit.

The Tofkat unit includes 21 leases owned jointly by the state and ASRC covering around 9,131 acres, while the Putu unit includes nine state leases covering around 21,946 acres.

Under the agreement for the Tofkat unit, BRPC must drill, test and complete the Tofkat No. 2 well and the Tofkat No. 2-A sidetrack into the Kuparuk formation by May 31, 2013, and the

continued on page 97

State says no to Donkel Oil & Gas offshore unit

By KRISTEN NELSON
Petroleum News, Sept. 11, 2011

The Alaska Department of Natural Resources' Division of Oil and Gas has denied an application from Donkel Oil and Gas LLC to form a unit offshore the Arctic National Wildlife Refuge east of the Point Thomson unit. (See "Donkel proposes new unit off ANWR coast," in Sept. 11, 2011 Petroleum News at http://bit.ly/uY1Yrl.)

The Aug. 31 decision, signed by both division Director Bill Barron and DNR Commissioner Dan Sullivan, said formation of a unit "is not necessary or advisable to protect the public interest."

The decision said the only benefit of formation of the Donkel unit would be to the leaseholders (Samuel Cade holds a 75 percent working interest in the leases and Donkel Oil and Gas LLC holds the remaining 25 percent), because it would extend the primary lease term of five of the seven leases proposed for the unit. Those leases expired May 31; the other two leases expire Aug. 31, 2016.

In a discussion of decision criteria, the decision said a proposed unit may be approved if it will "(1) promote conservation of all natural resources, including all or part of an oil or gas pool, field, or like area; (2) promote the prevention of economic and physical waste; and (3) provide for the protection of all parties of interest including the state."

One of the leases is the location of the 1989 ARCO Alaska Inc. Stinson No. 1 well, which did not find oil at its primary or secondary objectives, but did find what the decision describes as "a significant zone of hydrocarbon shows and flow" beginning at 12,500 feet, with an open hole test at 14,863-15,194 feet achieving a flow of 430 barrels per day of crude oil and 7.1 million cubic feet per day of natural gas.

ARCO plugged and abandoned the well in 1990; ConocoPhillips relinquished the lease in 2008.

Can be done on leases

The decision said that the activities in the plan of exploration proposed by Donkel Oil and Gas "would not be conducted any differently as a unit than as individual leases."

The four-year exploration plan proposed by Donkel Oil and Gas included seismic with a well to be drilled by Aug. 31, 2015, the fourth year of the exploration plan, but there was no plan to bring the unit into production.

Donkel Oil and Gas "has not submitted a plan to bring the proposed unit into production during the unit's five year term," the decision said.

■ Read more at http://bit.ly/sXsD7X

Anadarko returning to Gubik Complex

After two seasons without drilling independent resumes search for gas in Brooks Range foothills

By ERIC LIDJI
For Petroleum News

What a difference two years makes. When Anadarko Petroleum Corp. began exploring for natural gas in the foothills of the Brooks Range in 2008 many policymakers saw the Houston independent as a savior, but as the company returns to the region this winter it is overshadowed by other activity.

Anadarko drilled four exploration wells in 2008 and 2009 over a wide expanse of state, federal and Native lands and found natural gas at all four, but did not drill in 2010 and 2011. This winter, Anadarko plans to conduct further testing at one of those wells, but is not, as of yet, planning any additional drilling in what it calls the Gubik Complex.


MARK HANLEY

While most independents come to Alaska in search of smaller fields overlooked by the majors, Anadarko arrived in the state in the early 1990s looking for a big "anchor." Its goal remains essential the same: to determine whether the large but not massive gas fields in the foothills can be economically developed as a group. "The determining factor? If we can find three fields to make it that might work," Anadarko official Mark Hanley told lawmakers in early 2009. "If it's going to take us seven that might not be economic."

NAME OF COMPANY:
Anadarko Petroleum Corp.
COMPANY HEADQUARTERS:
The Woodlands, Texas
ALASKA OFFICE: 3201 C St., Suite 603, Anchorage, AK 99503
TOP ALASKA EXECUTIVE: Mark Hanley
TELEPHONE: 907-273-6300
COMPANY WEBSITE: www.anadarko.com
ALASKA OIL PRODUCTION, NET: Current net production of oil: ~15,000 bpd

Early partnerships remain

Anadarko arrived in Alaska in the early 1990s, just after North Slope oil production peaked, looking to develop a large field that would make it a major player in the state.

The company began by partnering with the existing operators on the North Slope, offering its agility as an independent in return for experience in the Arctic.

The most successful of those partnerships remains in effect today.

Anadarko and Phillips Alaska (now ConocoPhillips Alaska) brought the Alpine field into production in 2000, and steadily brought three satellites online over the decade that followed, but plans for a fourth satellite are currently hampered by permitting delays.

Aside from a very small ownership interest in Pioneer Natural Resources' Oooguruk unit, Alpine constitutes Anadarko's entire production in Alaska, some 15,000 barrels per day, and the company spent $24 million on its operations in the state in the first half of 2011.

Over the past two decades, though, Anadarko also pursued other projects to varying levels of success. The Altamura No. 1 well in the National Petroleum Reserve-Alaska found oil, but also encountered low permeability. A well at the geologically unique Jacob's Ladder prospect just southeast of the Prudhoe Bay unit found "no commercial hydrocarbons." The Lone Creek No. 1 in Cook Inlet discovered commercial quantities of natural gas, but Anadarko ultimately sold its Cook Inlet assets in 2002.

Pioneering search for gas

During that time, Anadarko gradually accumulated millions of acres across hundreds of miles of the foothills of the Brooks Range and in late 2007 the company announced plans to drill the first exploration wells in northern Alaska to specifically target natural gas.

In early 2008, it completed the Gubik No. 3 well and drilled halfway to target depth at the Chandler No. 1 well. Both wells sit on Arctic Slope Regional Corp. land east of the Colville River near Umiat, and both wells targeted gas, but from different formations.

continued on page 16

ANADARKO *continued from page 14*

In early 2009, Anadarko completed Chandler No. 1, and drilled the Gubik No. 4 well some two miles southeast of Gubik No. 3, and the Wolf Camp No. 1 well in the NPR-A.

Anadarko plans to return to conduct a "rigless test" at Chandler No. 1.

Although Anadarko remains mostly mum about those wells, a former partner on the program said all encountered gas and one flowed at 15 million cubic feet per day, encouraging news but not enough information to determine the success of the venture.

This winter, Anadarko plans to return to conduct a "rigless test" at Chandler No. 1.

A different landscape

With no major natural gas infrastructure in North Alaska, the initial campaign struck some as a vote of confidence for renewed efforts to build a natural gas pipeline from the North Slope to markets outside the state, including the Alaska Gasline Inducement Act.

And because Anadarko began that search so energetically, some policymakers believed the company could meet the energy needs of Alaska residents and businesses — replacing heating oil in the Interior and replacing declining production in Southcentral.

Alaska is a different place today than it was in 2009, though.

When Anadarko began drilling, two separate joint ventures had each announced plans to build a North Slope natural gas pipeline, but one of those players has since dropped out after failing to secure enough customers and the other is still in talks with potential shippers.

When Anadarko drilled its last exploration well in the foothills, Enstar Natural Gas Co. and the Alaska Natural Gas Development Authority had each proposed a pipeline from the North Slope to Southcentral to serve local markets, briefly joined forces at the request of the Palin administration and ultimately backed away from their plans after the Alaska Legislature formed the Alaska Gasline Development Corp. to manage the project, now known as the Alaska Stand Alone Pipeline, or (in an optimistic acronym) ASAP.

The Alaska Gasline Development Corp. believes an in-state pipeline could be economically feasible, despite its capacity restrictions and limited end-user demand.

Also over the past two years, one of the largest consumers of gas in Alaska, the liquefied natural gas export facility in Kenai, announced plans to go into warm shutdown. While that decision continues to be postponed, there is no indication that it will be reversed.

The energy marketplace also changed in the past two years.

In the United States, shale formations from Pennsylvania to Texas continue to drive up domestic natural gas supplies, creating uncertainty about whether Alaska natural gas will be needed anytime soon. In Asia, an earthquake and tsunami that damaged a nuclear reactor in Fukushima is increasing Japanese demand for liquefied natural gas imports.

Anadarko is now active in the natural gas liquids and oil rich Eagle Ford shale of South Texas and in the prolific northeast corridor of the Marcellus shale of Pennsylvania. The company also recently announced positive drilling results from Ghana and Mozambique.

Anadarko is also managing partner problems in Alaska and Outside.

Before launching its exploration campaign in the foothills, Anadarko brought on Petro-Canada and BG Group with much success, but in mid-2009 Suncor Energy acquired Petro-Canada and subsequently showed much less interest in Alaska than its predecessor.

Outside, Anadarko got caught up in the Deepwater Horizon oil spill as a partner of operator BP and a 25 percent owner in the Macando well that blew out in April 2010. In October 2011, Anadarko announced that it would pay BP $4 billion to settle all claims in the incident.

A different policy landscape

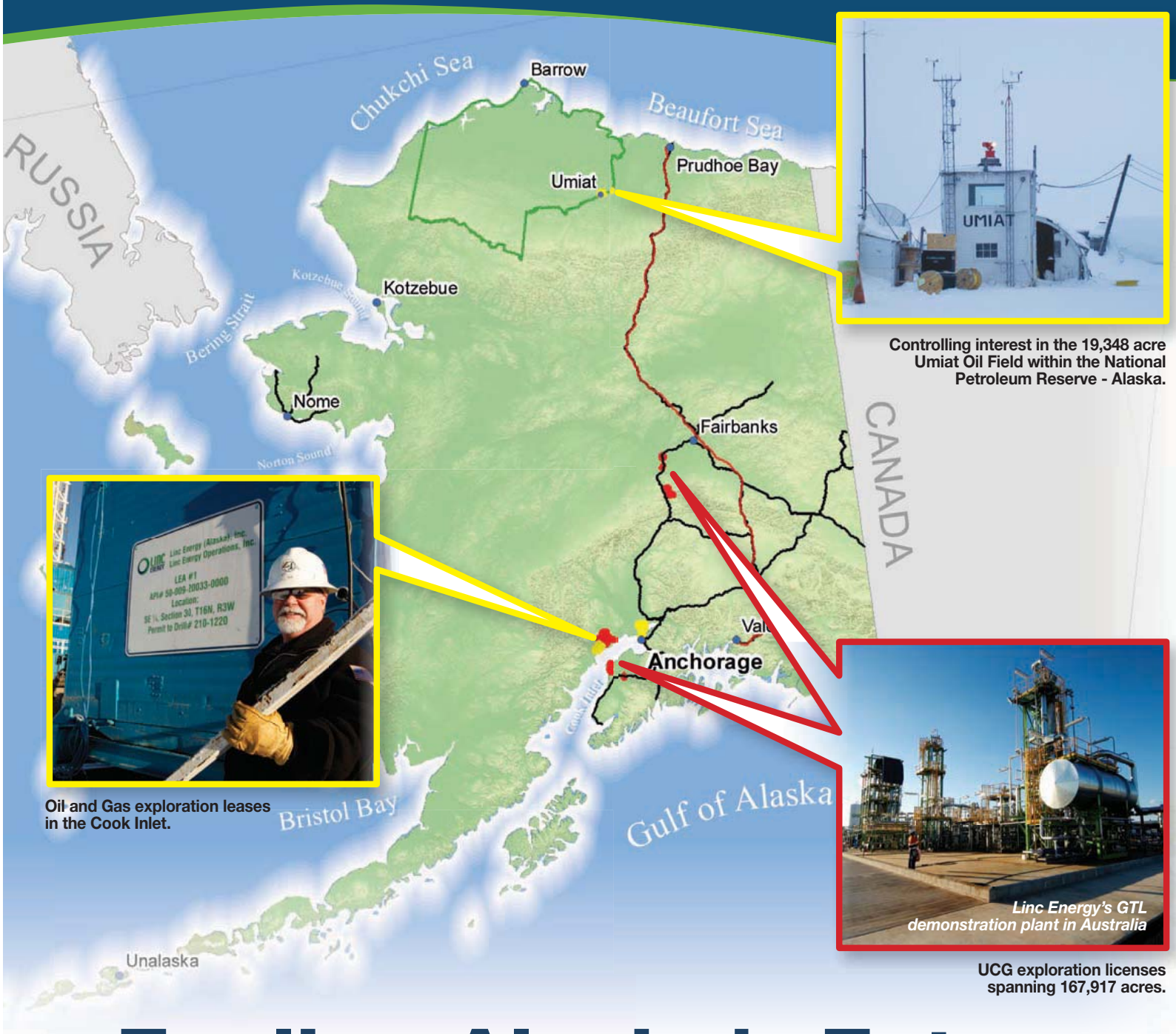
Politically, Alaska is in different hands now, too.

After Anadarko completed its exploration work in early 2009, then-Gov. Sarah Palin ran for vice president and eventually resigned as governor, while her successor, then-Lt. Gov. Sean Parnell finished her term and eventually got elected to a full term of his own. While both Palin and Parnell believe the government can play a role in resource development, they took different approaches to crafting policies based on that shared philosophy.

While Palin pushed for major pipeline projects, Parnell is proposing a road to Umiat to improve the economics of Gubik and other nearby prospects. And while Palin increased the tax rate, Parnell now wants to give producers more of the upside when prices rise.

Those changes could be enough to keep Anadarko interested in Alaska, or the company could be gathering enough information to make its assets attractive to another interested party. Since it last drilled an exploration well in Alaska in early 2009, the company dropped more than 100 leases in the region, but it is unclear whether that is the first step out the door or merely an attempt to refine its portfolio before renewing its efforts.

Contact Eric Lidji at ericlidji@mac.com



Controlling interest in the 19,348 acre Umiat Oil Field within the National Petroleum Reserve - Alaska.

Oil and Gas exploration leases in the Cook Inlet.

Linc Energy's GTL demonstration plant in Australia

UCG exploration licenses spanning 167,917 acres.

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Apache eyes overlooked Cook Inlet oil

After North Sea, Egypt successes, Houston independent believes Alaska could be next revived basin

By ERIC LIDJI
For Petroleum News

When Apache Corp. arrived in Alaska in July 2010 many believed the independent heralded the future of exploration and production the Cook Inlet basin, but early work of the Houston company suggests Apache is seeking an alternative version of the past.

The Cook Inlet region started out as an oil exploration play, culminating in the discovery of the Swanson River oil field in 1957, but the region quickly became an important natural gas basin as companies found numerous shallower gas fields in the search for oil.


STEVEN FARRIS

With the discovery of the Prudhoe Bay oil field on the North Slope in 1968, exploration dollars moved to northern Alaska, but now, 54 years after the discovery of Swanson River, Apache plans to conduct the oil exploration that never took place in the Cook Inlet region in the belief that it can discover millions of overlooked barrels from the basin.

Apache is kicking off a three-year 3-D seismic campaign across the Cook Inlet basin, but could start drilling as soon as early 2012 based on seismic information gathered to date.

Although declining natural gas production and deliverability in Southcentral is a pressing concern for utilities, oil production in the region is also falling. The region produced 83 million barrels at its peak in 1970, but less than 5 million barrels per year in recent years.

Oil is also the more valuable commodity. And, just like natural gas, there is a hungry local market for crude oil: the Tesoro Alaska Corp. oil refinery in Nikiski is currently supplementing local supplies with imports from foreign sources to meet local demand.

NAME OF COMPANY: Apache Corp.
COMPANY HEADQUARTERS: Houston, Texas
MAIN COMPANY TELEPHONE: 713-296-6000
COMPANY WEBSITE: www.apachecorp.com

On top of that, Apache is primarily an oil company.

Apache earned a reputation as an innovative explorer through its work at international oil prospects: increasing estimates of the oil in place at the Forties Oil Field in the North Sea — the largest discovery in the history of the United Kingdom — by 800 million barrels, and increasing oil production from the Western Desert of Egypt by 16 percent in 2010.

Success at aging fields

Because of that history of extending the life of older fields, Alaska perked up as soon as speculation mounted in mid-2010 that Apache officials were sniffing around the state.

That speculation and the excitement around it were bolstered by the fact that Apache was on a buying spree, spending $10 billion on acquisitions over the previous decade.

The speculation began after Apache formed a local business unit and executives attended a technical conference in Anchorage about Alaska geology. While in town, those executives also spent time talking to officials from Alaska Department of Natural Resources about topics beyond the scope of the technical conference. The speculation increased after news broke that Apache made an offer to buy Cook Inlet assets from Escopeta Oil and other leaseholders in the region, and hit a fever pitch when London's Sunday Times published a story, based on an anonymous source, claiming that BP plc planned to sell "stakes in its Alaska oil fields" to Apache for $10 billion to $12 billion.

That sale seemed possible at the time because BP, struggling through the aftermath of a major oil spill in the Gulf of Mexico, said it would sell some assets to raise cash.

That sale ultimately didn't happen.

Instead, Apache arrived in Alaska in a more unusual fashion, buying nearly 200,000 acres from independent investors including Dan Donkel and Samuel Cade, in July 2010.

The leases covered a huge area. The acreage went as far north as Wasilla and as far south as Anchor Point, and included both the west and east side of the Inlet. Over the following year, Apache more than quadrupled its holdings through lease sales and acquisitions.

The company spent $1.2 million on nearly 63,000 acres in an Alaska Mental Health Land Trust lease sale in December 2010, included leases west of Point Mackenzie, the onshore area around Nikiski and between Kenai and Soldotna. In June 2011, Apache spent nearly $9 million on some half a million acres in a State of Alaska lease sale. That acreage included offshore leases east of the Kitchen Lights unit and North Cook Inlet unit, onshore leases along the Susitna River north of Cook Inlet, onshore leases near Bachatatna Creek on the west side of Cook

Inlet and leases around Sterling and Kasilof.

Apache also picked up the Cosmopolitan prospect, a known oil accumulation Pioneer Natural Resources relinquished earlier in the year. Alaska's Division of Oil and Gas placed special bidding terms on those three leases because of their known prospectivity, making both sales among the most profitable ever in the region. Now, Apache says it holds some 800,000 acres in Alaska, the most of any leaseholder in the Cook Inlet.

Ramping up exploration

In preparation for A year-round 3-D seismic acquisition across much of the Cook Inlet basin, Apache's announced a 2-D seismic program to test a new nodal technology. The survey covered onshore target up to 20,000-feet deep, offshore targets and "transition zone" targets. Apache ran two seismic recording systems side-by-side, a conventional recorder and the nodal recorder, a coffee-can-sized wireless unit.

Those tests proved encouraging.

"So we tried it. It worked," Lisa Parker, president of Parker Horn Co., Apache's contract representative in Alaska, told Petroleum News after the June lease sale.

As a result, Apache launched a three-year 3-D seismic program from the Susitna Flats to Anchor Point that involves marine work from April to November, transition work as the ground freezes but before sea ice arrives, from September to December and from March to May, depending on sea ice, and onshore work from September to April. This year, the company plans to cover a 1,050 square mile area on the west side of Cook Inlet.

But Apache is also ready to drill, CEO Steven Farris said in August: "It's an exploration play but the guys have wowed me enough for me to believe that it's a real opportunity."

On the Web

Previous Petroleum News coverage:

- "Apache could drill inlet well in '12; starting 3-D seismic shoot," in the Aug. 14, 2011, issue at http://www.petroleumnews.com/pnads/695491497.shtml
- "Apache eyes new opportunities in underexplored CI basin," in July 3, 2011, issue at http://www.petroleumnews.com/pnads/348853128.shtml
- "Apache picks up Cade-Donkel inlet leases," in July 25, 2010, issue at http://www.petroleumnews.com/pnads/464500656.shtml

As a result, the company could drill as soon as early 2012, Ferris said.

Where its initial drilling will take place remains unknown, but Apache holds acreage in several promising fairways in Cook Inlet, according to Robert Swenson, director of the Alaska Division of Geological and Geophysical Surveys.

Those include Cosmopolitan, the region around the North Fork unit and the offshore region east of North Cook Inlet and Kitchen Lights, Swenson said. He surmised that Apache is going after "more subtle" structures in the Mesozoic source rocks than companies could identify with seismic technology in the 1960s. "There is a lot of playing room between the big, big structures," Swenson told Petroleum News in July 2011.

Alaska is now waiting to see where Apache will decide to play first.

Contact Eric Lidji at ericlidji@mac.com

Armstrong does it again on North Slope

A new producer of gas on the southern Kenai Peninsula, the Denver independent aims to repeat previous successes in the northern part of the state by bringing in Repsol as a partner

By ERIC LIDJI
For Petroleum News

Denver-based Armstrong Oil and Gas is behind some of the most important exploration and development projects in Alaska over the past decade.

Through its drilling in the first half of the decade, the independent helped prove up the two newest Beaufort Sea near-shore oil fields: the Oooguruk unit operated by Pioneer Natural Resources Alaska and the Nikaitchuq unit operated by the Italian oil major Eni Petroleum.The developments were the first two producing fields in northern Alaska that were not operated by BP or ConocoPhillips.


BILL ARMSTRONG

In 2007,Armstrong expanded its focus to Southcentral Alaska's Cook Inlet basin, where it put a small gas field into production earlier this year.

This year Armstrong snagged its biggest deal yet: Spanish mega-major Repsol as a partner in 494,211 acres on and near-shore the North Slope.The companies have talked about a minimum of 12 separate developments.

This winter Armstrong is helping oversee a 15-well, five-pad exploration project on the acreage it shares with Repsol and a smaller partner, GMT Exploration. It will be the largest winter exploration program by an operator in northern Alaska.

Operator with smaller investors

Armstrong prefers to operate without debt. In northern Alaska, where the investment and potential payoff is big, the small independent brought in partners with deep pockets.

Its Oooguruk and Nikaitchuq deals likely gave Armstrong the money to acquire the North Fork field leases in the southern Kenai Peninsula, where it brought in small partners to help shoulder the risk, but retained the role of operator.

North Fork is one of the many prospects discovered during the early days of Cook Inlet exploration, but left undeveloped because natural gas didn't command as much as oil and because smaller fields didn't interest companies that could go after North Slope giants.

Standard Oil Co. of California discovered the accumulation in 1965, but didn't pursue development.The field lay fallow until the 1990s, when a series of independents attempted to bring the field online.Although none of those efforts proved successful, they did lay the groundwork for establishing potential supply contracts in the region.

Armstrong drilled the North Fork 34-26 well in the summer of 2009 and discovered enough natural gas to justify additional drilling and negotiating a supply contract with Enstar Natural Gas Co.Armstrong drilled the NFU No. 14-25 and NFU No. 32-35 in the summer of 2010 to delineate the reservoir and test the oil potential of the leases.

Alongside four smaller partners — GMT Exploration Co., Dale Resources Alaska, Nerd Gas Co. and Jonah Gas Co. — Armstrong formed a small midstream outfit called Anchor Point Energy LLC to connect the field to the grid.The company built the 7.4-mile North Fork Pipeline from the unit to Anchor Point, where it connects to the new Anchor Point Pipeline that Enstar built to extend the terminus of the Kenai Kachemak Pipeline.

NAME OF COMPANY:
Armstrong Oil and Gas
COMPANY HEADQUARTERS:
1421 Blake St., Denver, CO 80202
CHIEF EXECUTIVE OFFICER:
Bill Armstrong, president
TOP ALASKA EXECUTIVE: Ed Kerr, vice president
TELEPHONE: 303-623-1821
ALASKA OIL PRODUCTION, NET: ~540 million cubic feet of gas total through August, 2011

Producing at North Fork

Following some regulatory maneuvering,Armstrong finally brought the field online in April 2011, giving Enstar up to 1.2 billion cubic feet a year and 10 bcf altogether.

The North Fork unit improves the economics of other prospects in the region, including the Nikolaevsk unit, the West Eagle prospect, the Cosmopolitan prospect and the acreage Apache Corp. recently acquired in the region.The nearby city of Homer is anxious to get connected to the natural gas system enjoyed by the rest of the Southcentral region and hopes the North Fork area will provide supply.And by building a dual pipeline to Anchor Point,Armstrong opens the door to oil development from North Fork in the future.

"It is our opinion that the Cook Inlet is a vastly underexplored province and with good science there's a tremendous amount of gas yet to be found in the area," Ed Kerr, vice president for land and business for Armstrong, told Alaska lawmakers in June 2009.

Working with Repsol

While Armstrong worked to bring North Fork online, it also gradually re-established a presence on the North Slope through its new subsidiary, 70 & 148 LLC. Named, in a karmic nod, after the coordinates of the Prudhoe Bay unit, the company currently holds nearly 150,000 net acres across the central North Slope, both onshore and offshore.

Alongside partner GMT, 70 & 148 brought another big name to Alaska, this time Repsol.

Through a deal announced in March 2011, Repsol picked up a 70 percent stake in on and offshore leases from north of the Colville unit to Oooguruk, and then south between existing units and veering east around the south end of the Kuparuk unit, including the White Hills prospect.

Of the $768 million Armstrong and GMT received in the deal, $750 million will be spent on exploration and development.

With "more than a dozen ideas outside of existing producing units" on its project list, according to Kerr, Armstrong could be busy in northern Alaska for quite a while.

Contact Eric Lidji at ericlidji@mac.com

Pfoff focuses on Aurora Exploration

Building healthy mix, including wildcat wells; stars and planets for Cook Inlet basin aligned now

By ALAN BAILEY
Petroleum News

Having purchased a couple of leases in the State of Alaska's June Cook Inlet lease sale, Aurora Exploration is still deciding on its plan of action for the leases while it waits for the state to formally issue the lease assignments, company President Scott Pfoff told Petroleum News Sept. 2. The leases include the North Alexander and Wolverine natural gas prospects, both on the west side of Cook Inlet

The company is trying to locate all of the existing seismic data available for the leases tracts before deciding on what new seismic it needs to shoot, Pfoff said.


SCOTT PFOFF

New seismic needed

The quality of existing seismic data for the Cook Inlet basin, typically acquired quite a few years ago, tends to be of marginal quality, especially given the difficulty of obtaining clear seismic images from the challenging Cook Inlet geology. And the two prospects that Aurora Exploration is interested in are rank wildcat prospects, with no history of previous exploration drilling.

"Regardless of what we find with existing seismic, I have almost no doubt that we will have to run more seismic to get these prospects to a drillable state," Pfoff said. And at this point Aurora Exploration has not determined whether to acquire new 2-D seismic or whether to shoot some strategically placed 3-D data — 3-D would be preferable but is more expensive to obtain, he said.

"One thing we have learned, and sometimes the very hard way up here, is that you're better off a lot of times investing money up front to get good seismic, rather than drilling based on multiple vintages of older seismic. That has scorched us a few times," Pfoff said. "It's a very difficult puzzle to try to put together without modern seismic techniques."

Multiple interpretations

For example, there are multiple interpretations of the old seismic for the North Alexander prospect, the larger of Aurora Exploration's two prospects, with some interpretations placing the prospect squarely within the North Alexander lease that Aurora Exploration has purchased, while other interpretations place the prospect at a location that crosses into adjacent leases, either to the south or to the west, Pfoff explained, commenting that he has been familiar with this particular prospect for the better part of 15 years.

Pfoff said that he is trying to work with adjacent leaseholders to find a path forward to future drilling. He anticipates exploration at North Alexander being quite challenging, given the prospect's remote location and the prevalence of wetlands in the area.

Wolverine, the smaller of Aurora Exploration's two prospects, sometimes referred to as the "East Lewis River prospect," is relatively close to existing infrastructure, being adjacent to Chevron's Lewis River unit.

NAME OF COMPANY: Aurora Exploration
COMPANY HEADQUARTERS: Houston, Texas
TELEPHONE: 713-977-5799
TOP ALASKA EXECUTIVE: Scott Pfoff, president

Company activated

Aurora Exploration, as a company, dates back a number of years as an unused 100 percent owned subsidiary of Aurora Power Services, a Southcentral Alaska natural gas company. Pfoff and business colleague David Boelens decided to activate Aurora Exploration, to bid for leases in the June Cook Inlet lease sale. Pfoff has an 85 percent ownership interest in Aurora Power, and with David Boelens and his father Floyd Boelens having recently completed the acquisition of the remaining 15 percent, Pfoff and the two Boelens are now joint owners of both Aurora Power and Aurora Exploration.

Until he resigned from that position on Aug. 1, Pfoff had for quite a number of years been president of Cook Inlet gas producer Aurora Gas, another member of the Aurora family of companies that have shared a common purpose of developing and marketing Cook Inlet hydrocarbon resources. The other member of the Aurora family is Aurora Well Services, the owner and operator of the AWS No. 1 drilling rig that has done most of Aurora Gas's Cook Inlet drilling, as well as providing drilling services for other companies in the Cook Inlet region.

Aurora Power has a one-third ownership stake in Aurora Well Services, with the Boelens family owning the remaining two thirds, Pfoff said.

Aurora Gas is primarily owned by Kaiser Francis Oil Co. But with Kaiser Francis mainly interested in the development of known resources rather than exploring for new oil and gas, the company has been trying to sell Aurora Gas, waiting for a purchaser willing to pay what Kaiser Francis believes the business to be worth. Apache Corp. is rumored to be a potential purchaser.

New opportunities

Pfoff said that for the past couple of years he has been looking to move into a position where he can seek new business expansion possibilities.

"I've been wanting to make this move and focus more on opportunities in Cook Inlet and outside of Alaska," Pfoff said, referring to his new position in Aurora Exploration and adding that Aurora Power owns an acreage position in Colorado.

However, Pfoff doesn't see the future as entirely focused on the drilling of wildcat wells, but wants a "healthy mix" of wildcatting and the pursuit of other opportunities in the Cook Inlet region. He declined to say what those other opportunities might be.

But Aurora Exploration will be seeking partners or investors to help fund its business activities, including seismic surveying and drilling in its Cook Inlet gas prospects, Pfoff said.

Optimistic

And Pfoff feels very optimistic about the current business cli-

continued on page 25

Aurora Gas keeps up field production

Drilling wells, using state-of-the-art fracking to push up flow rates from Cook Inlet gas fields

By ALAN BAILEY
Petroleum News

Aurora Gas, the small independent producer that specializes in Cook Inlet natural gas, has been busy recently, continuing to work its gas fields on the west side of the inlet to maintain gas production levels. The company operates five modest-sized fields and has been trying some novel techniques to drive up production from some of its wells.


ED JONES

In the fall of 2010 the company used hydraulic fracturing in one of the wells in its Three Mile Creek field to boost production. That exercise having proved fairly successful, the company anticipates using the same technique in a new well planned for that same field, Ed Jones, Aurora Gas executive vice president, oil and gas, told Petroleum News in early September.

NAME OF COMPANY: Aurora Gas
COMPANY HEADQUARTERS: Houston, Texas
ALASKA OFFICE: 1400 W. Benson Blvd., Ste. 410, Anchorage, AK 99503
ALASKA PHONE: 907-277-1006
TOP ALASKA EXECUTIVE: Ed Jones, executive vice president, oil and gas
ALASKA OIL & GAS PRODUCTION, NET: 5-6 million cubic feet per day

Multiple pays

The fracturing involves identical techniques to those used for the development of shale gas wells in the Lower 48 except that, unlike typical shale gas wells, Aurora's wells are not horizontal, Jones said. The target for the "fracking," by the pumping of high pressure fluid into the well, is the Beluga formation, which contains between 12 and 15 separate sand pay zones in the Three Mile Creek field, with each zone being anywhere from about 10 to 30 feet thick, he said. The Beluga sands tend to contain quite a bit of silt and clay, making it difficult for gas to flow through them and rendering gas production from some of the deeper sands rather ineffective, Jones said. Hydraulic fracturing of the sand bodies opens up channels for gas to flow to the well.

In a procedure exactly analogous to what is termed "multistage fracking" in shale gas wells, Aurora Gas separately fracked five separate zones in the Three Mile Creek well. With some sand units being quite closely spaced, some frac zones straddled more than one unit — there were eight sand layers in total involved in the fracking exercise, Jones said.

"That seemed to work quite well and the results were encouraging," he said.

The new well to be drilled at Three Mile Creek will involve a step out from the existing productive area of the field, bringing more pay into production. Another new well, the Nikolai Creek No. 10 in the Nikolai Creek field, was being completed in mid-September — that well penetrated some deeper pay sands in that field. The deeper zone had been identified from a 3-D seismic survey that Aurora Gas shot about six years ago. The deeper pays are already producing in some parts of the field, but represent a new development in the section of the field where the new well is located, Jones said.

Although Aurora Gas's fields are now pretty much developed, a further well, stepping out into a new area of reservoir, is possible at either Nikolai Creek or Three Mile Creek, Jones said.

Removing sand

In another initiative to boost production, Aurora Gas has been using coiled tubing to flush sand from some of its wells in the Nikolai Creek and Moquawkie fields. Over time, loose sand from the poorly consolidated Cook Inlet basin sandstones tends to flow into gas production wells. In fact one of Aurora Gas's well had become so plugged with sand that production had all but stopped, Jones said.

"So we ran in coiled tubing to clean it out and restored production to that well. We've done that on a couple of wells," he said.

Coiled tubing consists of a continuous length of relatively small diameter steel tubing, normally used to drill sidetrack wells out from the sides of conventional well bores.

continued on next page

AURORA GAS *continued from page 24*

Recently, production from Aurora Gas's five fields has been running at 5 million to 6 million cubic feet per day, supplying fuel gas to a couple of Cook Inlet oil producers and supplying utility gas to Fairbanks Natural Gas, for shipping as liquefied natural gas to Fairbanks. Jones said that he hopes that the two new development wells will boost production to around 10 million cubic feet per day. Typically a new well gives a sharp boost to production before fading off a bit, he said.

Aurora Gas recently signed a new gas supply agreement with Enstar Natural Gas Co., the main Southcentral Alaska gas utility. However, this contract, which has been submitted to the Regulatory Commission of Alaska for approval, simply enables Aurora to bid to meet any of Enstar's unmet needs during peak winter demand if Aurora has gas available.

Gas storage

For the past couple of years or so Aurora Gas has been pursuing the possibility of using part of its Nicolai Creek field as a gas storage facility, to help bolster utility gas deliverability during peak winter demand. The company wants to operate the facility for third party use, renting out storage capacity to utilities or other businesses that need to warehouse gas. The facility would be particularly suitable for the support of brief periods of especially high gas demand, with the facility having a fairly modest storage capacity but the ability to deliver gas rapidly.

Aurora Gas conducted an open season for the facility in the summer of 2009, and in May 2010 the Alaska Oil and Gas Conservation Commission approved the use of the facility for storage. However, Aurora Gas has yet to sign up any gas storage customers.

Aurora has some ideas for perhaps expanding the storage capacity somewhat, but for now the project is on hold, waiting for customers, Jones said.

"It's still a good project and it's not going away," he said.

Exploration prospects

In addition to its operational gas fields, Aurora Gas has several exploration prospects under lease, both on the west side of the Cook Inlet and on the Kenai Peninsula. And, although the company is currently fully focused on development activities in its fields, it hopes at some time to find an industry partner for some new exploration. The company has been looking to shoot a new 3-D seismic survey and re-enter an old well in the Cohoe prospect, near Kasilof on the Kenai Peninsula, but Alaska's Division of Oil and Gas has recently turned down Aurora's application to form a Cohoe unit, thus allowing the Cohoe leases to expire. Aurora may appeal the division's decision.

Aurora Gas is 90 percent owned by Kaiser Francis Oil Co., a company whose interest in investing in the Cook Inlet oil and gas industry, especially in new exploration, has tended to wax and wane over the years. Kaiser has on occasion tried to sell its Aurora Gas interests, with recent rumors of negotiations with Apache Corp. However, although Kaiser would be willing to sell Aurora at what it considers to be a reasonable price, Kaiser has not been actively pushing to sell, Jones said.

"There are some interested parties and we hope to get back to them some more," he said, commenting that the Aurora Gas staff has not had time recently to focus on selling the company.

AURORA EXPLORATION *continued from page 14*

mate for the oil and gas industry in the Cook Inlet basin, with the basin going through a transition into a new phase of development as several newcomers to the region embark on exploration and development plans.

"The phrase I hear most often is that the stars and the planets are aligned now," Pfoff said.

And, when it comes to gas, Pfoff feels encouraged about the speed with which the Regulatory Commission of Alaska is now processing gas sales agreements between gas producers and local utilities: Gas pricing is now gas market index based, with price floors and ceilings to limit the price risk. With the Cook Inlet region having an isolated gas market, price floors are especially important to gas producers, to protect against the potential market impacts of a glut of shale gas elsewhere in North America, Pfoff said. Price ceilings, on the other hand, protect gas consumers against the "Hurricane Katrina effect," where an unexpected event unrelated to anything happening in Alaska can cause a price spike.

Contact Alan Bailey at abailey@petroleumnews.com

BRPC shifting to development mode

Most active explorer of recent years is eyeing several potential developments across North Slope

By ERIC LIDJI
For Petroleum News

The Alaska Venture Capital Group, or AVCG, one of the most active explorers on the North Slope, is looking to become one of the most active developers on the North Slope.

Through its operating subsidiary Brooks Range Petroleum Corp., or BRPC, the Kansas-based independent operates one unit and, with its joint venture partners, is in the process of forming three more units across the central North Slope. The company also holds acreage prospective for shale source rock exploitation.


BART ARMFIELD

Whether or not the joint venture will ultimately develop all those prospects depends on the usual factors — ranging from geology, to commodity prices, to financing — but AVCG is close to proving what it set out to prove when it arrived in Alaska more than a decade ago: that a small exploration outfit can become a producer on the North Slope.

In the pursuit of fields between 25 million and 50 million barrels, the joint venture has drilled five wells and several sidetracks, and leases more than 330,000 acres in Alaska.

The joint venture includes Brooks Range Development Corp., Calgary-based independent TG World Energy Corp. and Nabors subsidiary Ramshorn Investments Inc.

Followed Charter to Alaska

Formed in 1999 by long-time oilmen John Jay "Bo" Darrah Jr. and Barton Armfield, AVCG emerged as big mergers and acquisitions were changing the Alaska oil industry.

Concerns about anti-trust violations led to the Charter for the Development of the North Slope, an agreement between the State, BP Exploration (Alaska) Inc. and ARCO, guiding how those companies would divvy their assets and treat potential third party operators. Within that environment, AVCG and other independents arrived to seek out oil fields too small to interest the majors, but potentially profitable if developed correctly. The company acquired several prospect, but struggled early on to find partners to help fund exploration and to negotiate access agreements from the North Slope operators.

AVCG formed Brooks Range Petroleum in 2004 to be an operating arm for the company, and over the course of 2006 the subsidiary became the operator of a four-company joint venture with TG World, Ramshorn and Calgary-independent Bow Valley Energy Ltd. (The British independent Dana Petroleum eventually bought Bow Valley and ultimately chose to sell its Alaska assets back to the joint venture.)

NAME OF COMPANY:
AVCG/Brooks Range Petroleum Corp.
COMPANY HEADQUARTERS: 510 L Street, Suite 601, Anchorage, Alaska 99501
TOP ALASKA EXECUTIVE: Bart Armfield, chief operating officer
PHONE: 907-339-9965

Exploration in Gwydyr Bay

Those companies set off on a multiyear exploration program. In early 2007, Brooks Range Petroleum spud North Shore No. 1 and Sak River No. 1, both in the Gwydyr Bay region. While Sak River No. 1 turned out to be a dry hole, North Shore No. 1 found "approximately 70 feet of oil-charged Ivishak sandstone formation."

In early 2008, the companies re-entered North Shore No. 1 to test both the Ivishak and the shallower Sag River formations and drilled the Tofkat No. 1 well east of Nuiqsut.

North Shore No. 1 flowed at 2,092 barrels per day of oil from the Ivishak formation, but a mechanical problem down hole compromised the Sag River test. One partner estimated the formation could have flowed as much as 1,000 barrels per day, if unencumbered.

continued on page 28

AVCG *continued from page 26*

At Tofkat No. 1, the companies took 10 oil samples from four different sandstone reservoirs and found six feet of net pay in the Kuparuk formation, the deepest zone tested. The joint venture also drilled two sidetracks to find the edge of the Tofkat reservoir, and acquired 210 square miles of 3-D seismic over the prospect.

A lawsuit between two partners in the program prevented the joint venture from drilling in the winter of 2009, but the companies resolved the matter in time to drill two wells in Gwydyr Bay in early 2010. The results of the Sak River 1-A sidetrack led partner TG World Energy to relinquish some of its interest in the exploration program. The remaining companies drilled North Shore No. 3, but have not yet released results.

In early 2011, all three remaining partners drilled the North Tarn No. 1 well, farming-in six Eni Petroleum leases along the western edge of the Kuparuk River unit. That well proved to be the only North Slope exploration well drilled in the winter of 2011.

Drilling at Beechey Point

Now, the joint venture is using the information it gathered from the years of drilling to outline development opportunities at its four units, one actual and three in the works.

In 2009, the companies formed the Beechey Point unit in the Gwydyr Bay region. The 52,879-acre unit covers 30 onshore and offshore leases long known to overlie several oil deposits considered small, but only by the outsized standards on the North Slope.

Brooks Range Petroleum said it expected to recover between 5 million and 10 million barrels from the reservoirs. The unit is currently divided into five exploration blocks and Brooks Range is required to drill a well in each block between 2011 and 2019.

The Beechey Point development plan is based on 15 previous wells drilled in the region, starting with Point Storkersen No. 1, drilled in April 1969 by Hamilton Brothers, and the efforts of the AVCG joint venture.

Brooks Range Petroleum said in filings that despite "respectable" results from previous wells in the area, "a cost structure founded on drillsites capable of producing 100,000 bopd was not suitable for 'marginal' areas, particularly with commodity prices in the $20 to $30 price range," and, "as a consequence, these accumulations lay dormant for many years."

BP Exploration, ARCO Alaska and Exxon formed a partnership in 1995 to explore the area and BP drilled the Pete's Wicked No. 1 well to the south of the proposed Beechey Point unit in 1997, but even though BP and ARCO subsequently permitted a development plan around Pete's Wicked, the companies canceled the effort after a drop in oil prices.

Pioneer Natural Resources Alaska picked up Pete's Wicked in 2003 and began permitting a development plan in 2004, but soon suspended the project. Pioneer eventually sold three leases around Pete's Wicked to the joint venture led by BRPC.

The joint venture began its work at Beechey Point on the west side of the Kuparuk delta and soon plans to explore several known oil accumulations on the east side of the delta, Winegarner, vice president of land and external affairs for BRPC, said in January 2010.

Three units in the works

Over the course of 2011, Brooks Range Petroleum applied to form three more units.

The proposed Putu unit would cover 39,994 acres over 28 leases — 11 owned by the State of Alaska and 17 owned jointly by the state and Arctic Slope Regional Corp., the Alaska Native corporation for the North Slope — in the area around the Tofkat prospect (previously known as the Titania prospect when ConocoPhillips held leases in the area).

In filings, Brooks Range Petroleum said the working interest owners of the leases in the area had spent nearly $25 million to date on exploration. The company presented a plan for drilling up to six wells at three exploration blocks over two five-year terms, one running through March 31, 2016, and a possible extension through March 31, 2021.

That plan could yield production as soon as 2015, Brooks Range Petroleum said.

The proposed Southern Miluveach unit would cover 60,684 acres over 29 State of Alaska leases around the North Tarn No. 1 well, including six leases owned jointly by Arctic Slope Regional Corp. Brooks Range Petroleum said the working interest owners spent about $15 million in the region and now plan to explore and develop the region simultaneously. The Mustang development plan calls for beginning production as soon as 2014, while also drilling a well in each of six exploration blocks through 2020.

North Tarn No. 1 counts as the first of those proposed drilling commitments. Brooks Range Petroleum told Petroleum News it plans to complete and test the well this coming winter, as well as drill as many as two delineation wells based on the testing results.

The development plan is based on 18 previous wells drilled in the region between 1966 and 2010 — to depths between about 6,400 feet and 13,000 feet — but aside from five wells drilled at Kuparuk, all have been dry holes. That includes the Ataruq No. 2 and Ataruq No. 2A dry holes that Kerr-McGee drilled in the proposed unit area in 2005.

Both Brookian and Kuparuk

Brooks Range Petroleum believes the region contains reservoirs in both the Brookian and the Kuparuk formations. The shallower Brookian is believed to hold some 35 million barrels of oil, but the complex geology in the region would make getting that oil quite difficult. The deeper Kuparuk is thought to contain only 6 million barrels, but Winegarner said that would be enough to support standalone production facilities.

Although Southern Miluveach is near the proposed Putu unit, Winegarner said it didn't make sense to develop the prospects jointly because of distance and regional geography.

Finally, the proposed Greater Bullen unit would cover 200,058 acres over 68 State of Alaska leases in the area south of the Point Thomson unit on the eastern North Slope.

Among the prospects in the AVCG portfolio, the Greater Bullen area — also known as Slugger or South Thomson — is one of the least explored, but it plays a strategic role for the company because of the promise of regional development on the eastern North Slope.

The Telemark development could yield production from the area west of the Arctic National Wildlife Refuge as soon as 2015, while Brooks Range Petroleum simultaneously works to drill a well in each of six proposed exploration blocks and shoot 300 square miles of 3-D seismic by March 31, 2012, to justify future development.

The working interest owners have spent only $4 million to date exploring the region, but previous exploration work in the area identified the Friezen and Red Dog prospects.

Friezen was the main prospect in the former 79,508-acre Slugger unit that BP formed over 14 leases in the region before it ended its Alaska exploration program in 2001. BP estimated that Slugger contained some 280 million barrels of oil, but never publically estimated the recoverable reserves for the unit. Depending on the source, Red Dog is estimated to contain between 45 million and 85 million (P-50) barrels of recoverable oil.

Considering source rocks

Concurrent with those conventional efforts, AVCG is also looking for partners to help develop the source rocks believed to be present beneath 100,000 acres of its holdings.

The company began scouting for potential partners at the North American Petroleum Expo in Houston this past March and said it met with 75 companies. Of those, six asked for more information and have been continuing discussions in the months since.

Contact Eric Lidji at ericlidji@mac.com

ASRC Exploration to explore Placer

Arctic Slope Regional Corp. signed 'mentoring agreement' with BP in 2003; also partnering with Savant in Badami revival effort

By WESLEY LOY
For Petroleum News

Arctic Slope Regional Corp. long has been a homegrown heavyweight as an oil field services provider in Alaska.

Now the company is building momentum toward a new identity as an actual producer of oil and gas.

It might not be long, in fact, before we see ASRC conducting its own exploratory drilling within its own unit — the Placer unit, which the state's oil and gas director approved Sept. 9 after a nearly eight-month application process.


THERESA IMM

Becoming a producer has been a company goal for quite some time. Jacob Adams, former chief executive, stated his vision for ASRC back in 2003, when the company signed a "mentoring" arrangement with BP, operator of the giant Prudhoe Bay field.

"This agreement provides a critical next step in providing ASRC with access to the tools and knowledge we need to become a competitive, independent producer in Alaska," Adams said.

ASRC will be joining very select company indeed if it does become a producer on the North Slope, where only a handful of companies operate producing fields.

NAME OF COMPANY:
Arctic Slope Regional Corp.
COMPANY HEADQUARTERS: P.O. Box 129, Barrow, AK 99723
3900 C St., Suite 801, Anchorage, AK 99503
PHONE: 907-852-8633
CHIEF EXECUTIVE OFFICER: Rex A. Rock Sr., president and CEO
IN CHARGE OF OIL & GAS LEASES: Theresa Imm, director, resource development

An Alaska Native company

ASRC is among the largest of the corporations established under the Alaska Native Claims Settlement Act of 1971. It reported revenue of more than $2.3 billion in 2010.

The company owns title to nearly 5 million acres across the top of the state, and represents the business interests of some 11,000 Inupiat Eskimo shareholders.

ASRC lands have come into play on some important North Slope drilling projects. For example, about half of the ConocoPhillips-operated Alpine oil field is on ASRC leases. And in the mid-1980s, also on an ASRC lease, a Chevron-led program drilled

the only exploratory well on the coastal plain of the Arctic National Wildlife Refuge. Results of the KIC No. 1 well remain a secret today.

Incorporated in 1972, ASRC has its corporate headquarters in the North Slope village of Barrow, with major administrative and subsidiary offices in Anchorage.

To date, ASRC has been known mostly as an oil field services provider — a very large one. Its major subsidiary, ASRC Energy Services, is involved in such areas as engineering, regulatory and technical services, operations and maintenance, fabrication and installation of oil field modules and mechanical insulation.

ASRC Energy Services ranked No. 5 among Alaska's largest private sector employers in 2010 with average monthly employment of more than 2,500, the state Department of Labor said. It was the top-ranked oil and gas company, ahead of such names as BP, CH2M Hill, ConocoPhillips and Schlumberger.

ASRC also is a downstream player with its Petro Star Inc. subsidiary, which operates refineries along the trans-Alaska oil pipeline at North Pole and at Valdez.

Recently, another ASRC subsidiary has been making some news — ASRC Exploration LLC, headed by Teresa Imm, ASRC vice president of resource development.

The Placer unit

ASRC Exploration is a minority partner in a project to revive production from BP's difficult Badami unit on the eastern North Slope. Denver-based independent Savant Resources LLC is leading the effort.

On Sept. 9, ASRC Exploration achieved a significant victory when Bill Barron, the state's oil and gas director, approved the formation of the Placer unit southwest of the ConocoPhillips-operated Kuparuk River unit.

Gaining the approval wasn't easy. The state pushed ASRC Exploration to minimize the acreage in the unit, and speed up work commitments.

The 1,480-acre Placer unit ties together parts of four state oil and gas leases. The unit is located about six miles southwest of an oil development known as Palm.

The new unit takes in the site of the Placer No. 1 exploratory well ConocoPhillips drilled in 2004. The well, which was suspended, made an oil discovery, encountering hydrocarbon-bearing sands within the Kuparuk formation.

ConocoPhillips and its Placer partners including BP, which had farmed in ASRC, ultimately decided the discovery was not economic and dropped the leases. ASRC Exploration picked up the acreage in a 2006 state lease sale, and later secured ownership of the Placer No. 1 wellbore from ConocoPhillips.

"The Placer #1 well demonstrated that decent quality oil is present in a thin, but high quality reservoir in the Placer area," the state's Sept. 9 unit decision said.

ASRC Exploration made a number of unit work commitments under a two-year plan of exploration.

The company has until Dec. 31 to reprocess and reinterpret newly licensed seismic data shot across the unit acreage.

By June 30, 2013, the company must drill and log a new exploratory well, or re-enter and test the Placer No. 1 well. Either step would mark a significant advancement in ASRC's growth as a North Slope oil player.

Editor's note: In 2003, ASRC formed ASRC Pipeline Co., and paid $15.9 million for a 16.667 percent interest in the Alpine Transportation Co., which owns the pipeline that connects ConocoPhillips' Alpine field in the Colville River unit to the main North Slope pipelines to the east. Teresa Imm is president of this company.

Contact Wesley Loy at wloy@petroleumnews.com

BP: North Slope a 'technology play'

Argues lowering Alaska's taxes necessary to make projects in the state competitive with other opportunities

By KRISTEN NELSON
Petroleum News

BP Exploration (Alaska) hasn't explored for new fields in Alaska in some 10 years, but the company continues to look for ways to produce more oil from existing North Slope fields.

Appropriate technology is a challenge for developing significant viscous and heavy oil resources, but BP officials have been telling the State of Alaska that the state's tax structure is also a challenge, putting Alaska projects in an unfavorable position against other opportunities available to the company worldwide.


JUDY PATRICK
JOHN MINGE

BP, which opened an Alaska office in 1959 and was an early participant in North Slope exploration drilling in the late 1960s, is the unit operator at Prudhoe Bay, North America's largest oil and gas field, and at smaller adjacent fields, including some that are part of greater Prudhoe Bay: Lisburne, Niakuk and Point McIntyre. Among adjacent fields, BP operates Endicott and Northstar, both offshore, the former connected to shore by a causeway, the latter an island. To the northwest of Prudhoe Bay, BP operates Milne Point, an onshore-offshore field. The company is also a partner at the giant Kuparuk River field, operated by ConocoPhillips Alaska.

NAME OF COMPANY:
BP Exploration (Alaska)
COMPANY HEADQUARTERS: BP, London
ALASKA OFFICE: 900 Benson Blvd., Anchorage, AK 99508
PHONE: 907-561-5111
TOP ALASKA EXECUTIVE: John Mingé, president
ALASKA OIL & GAS PRODUCTION, NET: 166,000 barrels per day 2010, 46 million cubic feet per day 2010

Technology play

BP describes its North Slope work on its website as a "technology play."

The company says the foundation of its North Slope operation "is the development of resources already discovered," including "world-class recovery of light oil at Prudhoe Bay," where the recovery rate of oil in place is being raised to some 60 percent (compared to about 35 percent worldwide), using "new technologies such as horizontal drilling, miscible gas injection and gas cap water injection."

In addition to conventional oil recovery,"BP is now producing relatively heavier, viscous oils, and has begun a pilot project to find ways to tap the vast deposits of very heavy oil" lying just under many of the North Slope's oil fields, the company said.

BP also has an undeveloped discovery, Liberty, offshore the North Slope in federal waters, where the company plans to drill some of the world's longest extended-reach wells, some two miles deep and up to eight miles out from a drill site at Endicott. Startup on Liberty has been moved out to at least 2013 as the company works through engineering issues on the rig which was designed and constructed for the project.

Heavy oil test

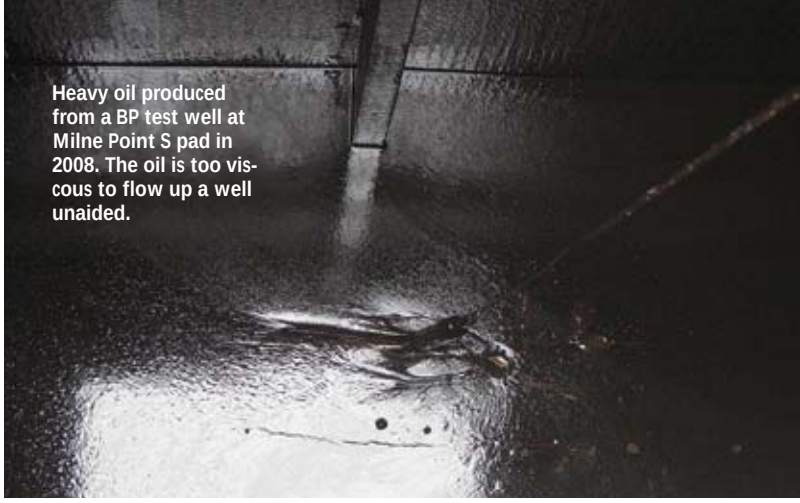
An area where BP has been working technology to produce new resources is in Ugnu formation heavy oil.

Eric West, manager of BP's Alaska renewal team, told Petroleum News in August that the company's heavy oil test had a maximum production rate of 550 net barrels of oil per day. Over 117 days of continuous operation since testing started in April, the well produced a total of 45,000 barrels of heavy oil, he said.

With 12-18 billion barrels of heavy oil in the Ugnu formation, it's a major resource, even if only a small percentage can be recovered.

But BP has yet to determine whether production can be sustained at commercial levels, and has yet to test production from well configurations other than the single well that has been in operation.

The company has drilled four wells for its heavy oil testing, each in a different reservoir zone. Two wells, including the one that has been tested, are horizontal; the other two wells are vertical and designed to test a technique called cold heavy oil production with sand, or CHOPS.



Heavy oil produced from a BP test well at Milne Point S pad in 2008. The oil is too viscous to flow up a well unaided.

ALAN BAILEY

The technique uses an augur-like downhole pump driven by a solid rod passing down the well bore to turn the pump rotor, a spinning rod which over time wears on the steel tubing lining the wells. BP told Petroleum News it had to stop production because the rod had worn a hole in the tubing. The company has been profiling tubing thickness to determine which sections it needs to replace with specially hardened pipe.

Wear on the tubing had been anticipated and one of the test objectives was to determine the rate of wear.

"Actually we got a little more life out of it than we thought," West said.

New facility

BP's heavy oil test facility, at S pad at the Milne Point field, cost $100 million and was completed in March 2010, but commissioning took nearly a year. West told legislators in March that the facility

continued on next page

BP *continued from page 33*

was "essentially ready to go."

BP had successfully tested the CHOPS technique in 2008 at a single well on S pad with standard oilfield equipment. The new facility represents a scaling up of the initial test with installation of custom-built heavy-oil production equipment.

West said in March that BP was focused on "proving technical viability."

On the commercial side, he said that heavy oil needs to be diluted with light oil to move down the pipeline. It could be possible to flow the heavy oil by upgrading it in a North Slope refinery or by heating the pipeline, but West said BP does not view those options as commercially feasible.

"Because of that linkage (with light oil), the time to look at heavy oil is now. And in fact the longer we wait to look at it, the more the light oil declines, and at some point we're going to curtail the amount of heavy oil we can get off the Slope," he said.

Tax structure issues

Whatever BP does on the North Slope, there are issues of getting funding for projects, which the company says means competing with opportunities available worldwide.

BP Exploration (Alaska) President John Minge told the Anchorage Chamber of Commerce in April that he believes that "oil taxes in Alaska will change because the tax structure that we have today is not competitive and it's not driving enough investment to our industry here."

Minge told the chamber BP's focus in Alaska is not on finding new oil, but on "finding ways to develop the huge volumes that we have already found," more than 5 billion barrels of resources.

Under a different tax regime a gas partial processing project could be built, he said, removing a production bottleneck at Prudhoe, where liquids production is being constrained by the volume of gas being produced.

Partial process and I Pad work would present some $2 billion in investment, Minge said, adding that he actually sees more than $5 billion in opportunities.

"I see significantly more."

He said he couldn't be more specific because not enough engineering had been done on other projects.

"When the higher oil taxes passed, we quit working on those projects," Minge said.

Talking to the Resource Development Council's annual conference in November 2010, Minge said that with technology improvements, there are some excellent oil prospects remaining on the North Slope.

He said BP had looked at its track record on viscous oil developments — the resource between conventional light oil and heavy oil.

Referring to the findings of "a fascinating study" within BP, Minge said: "The result of the scoping work is we believe it is possible to develop 2 billion barrels of gross viscous oil with technology advancements that we believe are achievable. A project like this would require on the order of 2,000 more wells on 50 pads with a new gathering center and a hundred miles of new pipelines."

This viscous development would require surface facilities to handle lower-grade, solids-laden crudes, Minge said, adding that the cost of drilling and well completions would have to be lower.

Contact Kristen Nelson at knelson@petroleumnews.com

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Drilling onshore, eyeing offshore

Buccaneer completing Kenai Peninsula wells, acquires jack-up for offshore Cook Inlet program

By ERIC LIDJI
For Petroleum News

Buccaneer Energy Ltd. is using as many mechanisms as it can to fund an offshore drilling program in Cook Inlet: private funding, public funding and revenue from production.

The Australian independent arrived in Alaska in March 2010 by acquiring the assets, and some of the executives, of Stellar Oil & Gas LLC, a sister company to Renaissance Alaska LLC. That and subsequent acquisitions gave the company five potential targets — onshore and offshore, west side and east side — to pursue in the Cook Inlet basin.


JAMES WATT

The three onshore targets are: Kenai Loop, near the city of Kenai; West Eagle, in the southern Kenai Peninsula just north of Homer; and West Nicolai Creek; on the west side of Cook Inlet. The two offshore targets are: Northwest Cook Inlet, a unit located, fittingly, north and northwest of the North Cook Inlet unit; and Southern Cross, a unit just west of the Kitchen Lights unit and north of the North Middle Ground Shoal field.

The company drilled its first two onshore wells in Alaska in 2011, and is now planning a third for this winter in addition to a four-well offshore program beginning next summer.

Getting the jack-up rig

Exploring those offshore units would require a jack-up rig, a mobile offshore drilling unit well suited for the relatively shallow depths of Cook Inlet, but at the time Buccaneer arrived, the Cook Inlet basin had not seen a jack-up in its waters in nearly 20 years.

While most companies looking to bring a jack-up to Alaska over the years tried to rent the rig, Buccaneer decided to buy, arguing that a depressed rig market in late 2010 and the numerous offshore prospects in Alaska that needed a jack-up justified the purchase.

NAME OF COMPANY: Buccaneer Energy
COMPANY HEADQUARTERS: Houston, Texas
ALASKA OFFICE: 215 Fidalgo Ave, Ste. 100, Kenai, AK 99611
PHONE: 713-468-1678
MAIN FAX: 281-768-7700
TOP ALASKA EXECUTIVE: Jim Watt, president & COO, Alaska

It took a year of negotiations, but Buccaneer could soon achieve its goal.

When Buccaneer originally announced plans to buy a jack-up rig, it wanted to use a mixture of state and federal money. The federal money would come through Recovery Zone Facility Bonds, a one-time opportunity available through the stimulus package for economically troubled areas, while the state money would come from the Alaska Industrial Development and Export Authority, the public corporation of the State of Alaska responsible for issuing loans (and also for administering the RZFB program).

While AIDEA approved Buccaneer for that program, Buccaneer couldn't place the bonds and ultimately changed its strategy. In addition to Cook Inlet, it decided to expand its business plan to include exploration companies in the Alaska outer continental shelf that might need a jack-up rig, either to drill exploration wells or to drill relief wells.

That made the project ineligible for RZFBs.

Project Endeavour

AIDEA continued to show a willingness to invest up to $30 million in the rig, negotiated with Buccaneer for several months, mostly behind closed doors, and in April 2011 the two sides came to terms on a multiyear venture called Project Endeavour.

Through the project, AIDEA agreed to fund up to $30 million to-

continued on page 38

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BUCCANEER *continued from page 36*

ward the cost of a jack-up rig in partnership with Kenai Offshore Ventures LLC, a joint venture between Buccaneer and the Singaporean marine company Ezion Holdings Ltd. Kenai Offshore Ventures would contribute $5 million to the project and would find a financial institution willing to contribute the remaining amount to fund the roughly $85 million operation.

The deal involved numerous conditions, some that Kenai Offshore Ventures must meet before AIDEA spent a penny and some it must meet later to keep from defaulting.

Buccaneer announced in September that it planned to buy the Transocean Adriatic XI jack-up rig, modify it for the sub-Arctic conditions of the Cook Inlet and mobilize it to Alaska for $86.5 million. The rig is currently cold stacked in Malaysia. Buccaneer is still waiting to finalize the sale and a loan for more than $50 million from an Asian bank.

Aiming for April/May 2012

While Buccaneer hoped to begin work in the Cook Inlet this summer, the length of the negotiations made that impossible. Now, Buccaneer plans to have the rig upgraded and moved to the Cook Inlet by April or May 2012 in time for a summer drilling campaign.

That timing was important because the first company to drill an offshore well to a certain depth in the Cook Inlet is eligible for a significant one-time tax credit. While the credit is extended to the second and third companies to drill wells, too, it is connected to a single rig, meaning that the second rig in the Cook Inlet couldn't claim the credits. Because Escopeta Oil Co. is currently using the Spartan 151 jack-up rig to explore at its Kitchen Lights unit, it appears likely that Buccaneer would be the second company to drill.

The company drilled its first two onshore wells in Alaska in 2011, and is now planning a third for this winter in addition to a four-well offshore program beginning next summer.

While the credit would obviously provide an economic benefit to the project, AIDEA said its business case for the venture did not depend on the credit (although it does depend on the regular exploration credits offered to all companies). AIDEA said that its business case also does not depend on Buccaneer renting out its rig to other companies.

Buccaneer believes it is sitting on big reserves in upper Cook Inlet.

Based on third party assessments, the company believes Northwest Cook Inlet could hold 46.7 million barrels of oil equivalent and Southern Cross could hold 27.4 million barrels of oil equivalent. Buccaneer plans to drill the Southern Cross No. 1 well and the Northwest Cook Inlet No. 1 well in 2012 and the Southern Cross No. 2 well and Northwest Cook Inlet No. 2 well in 2013. That would fulfill the terms of its deal with AIDEA and the terms of its unit agreements with the Alaska Department of Natural Resources, and help the company decide how to proceed toward possible development.

Production at Kenai Loop

While that process unfolded, Buccaneer also pursued its first onshore target.

The Kenai Loop prospect consists of nearly 8,000 acres of state, Alaska Mental Health Trust Authority and Cook Inlet Region Inc. leases north of the city of Kenai.

Buccaneer spud the Kenai Loop No. 1 well in April and ultimately tested two zones, at 9,600 feet and 10,000 feet respectively. The company indentified numerous other zones it thought might be candidates for testing, but couldn't be tested because of rig availability.

Still, Buccaneer said the well tested at 10 million cubic feet per day, enough to support a supply contract with Enstar Natural Gas Co. Through the agreement, Buccaneer will provide 5 million cubic feet per day starting in 2012, with the option to triple the amount after six month if drilling identifies adequate supplies. The contract is for a total of 12 billion cubic feet with an option to increase to as much as 31.5 bcf pending on drilling results, and requires Buccaneer to drill another well. The supply contract would support the Cook Inlet Natural Gas Storage Alaska storage operation that Enstar is currently working to construct.

Buccaneer began drilling Kenai No. 2 in September. The well is a step-out from Kenai Loop No. 1, starting from the existing well pad but extending to a bottom hole location 1,800 feet away to further test the two previously tested zones, as well as a deeper zone.

Uncertainty about gas line

The coming year for Buccaneer involves Kenai Loop and its offshore prospects, but the company is also looking toward its other onshore opportunities, as well as some threats.

In particular, there is uncertainty about how an in-state natural gas pipeline from the North Slope to Southcentral would impact independents like Buccaneer. While the project is still far from being sanctioned, a recent report suggested it might be economically viable, and state Sen. Tom Wagoner, R-Kenai, asked policymakers to consider the potential impact the pipeline might have on emerging producers in the Cook Inlet area.

The other onshore ventures could benefit from recent activity in the region.

The West Eagle project is near the North Fork field that Armstrong Cook Inlet recently brought into production. North Fork helped extend the existing infrastructure grid in Southcentral to the southern Kenai Peninsula, improving the economics of all exploration targets in the region. The West Nicolai Creek prospect could benefit from nearby work on the west side of the Cook Inlet proposed by Cook Inlet Energy and by Aurora Gas.

Contact Eric Lidji
at ericlidji@mac.com

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Chevron sells Cook Inlet assets to Hilcorp

Long-term player retains North Slope interests; Hilcorp ready to invest in production, exploration

By KRISTEN NELSON
Petroleum News

As this issue of Explorers goes to print, the handoff between Chevron and Hilcorp Energy in Cook Inlet is moving forward. On Oct. 10 Hilcorp said it has named John Barnes senior vice president for Hilcorp in Alaska.

Barnes, formerly with Marathon in Alaska and most recently senior vice president of operations and maintenance services for CH2MHill, brings both producer and contractor experience to his new position, Hilcorp said.


JOHN BARNES

The fate of the Cook Inlet properties has been in question since Chevron acquired Union Oil Company of California in 2005. Both companies have long histories in Cook Inlet, but production was long past its peak.

The Cook Inlet struggle

John Zager, Chevron's general manager in Alaska, told the Alaska Legislature in March 2006 that the company's Alaska team had worked hard to convince Chevron of the value of the Cook Inlet assets. That effort had been successful, he said, and the company planned a multiyear investment in Cook Inlet.

NAME OF COMPANY: Hilcorp Energy Co.
COMPANY HEADQUARTERS: Houston, Texas
TOP ALASKA EXECUTIVE: John Barnes • **PHONE:** 713-209-2400

"With our partners' approval, we could invest $200 million over four years in just the oil part of our Cook Inlet business," he said.

Investments were made and wells drilled, but with mixed results.

Then came the 2008 recession and in March 2009 the eruption of Mount Redoubt volcano and the resulting shutdown of the Drift River Terminal on the west side of Cook Inlet, hampering deliveries of oil from west side platforms.

In November 2009, Chevron said it was laying off an estimated 25 of its Cook Inlet operations and maintenance staff, citing "decreased operational activity and difficult economic conditions associated with its Cook Inlet oil assets."

The company said it had grown its Cook Inlet operations and maintenance workforce over three years, but factors external to the company were forcing cutbacks, specifically an accelerated production decline due to field shut-ins following the Redoubt eruption and the bankruptcy of Pacific Energy Resources, a 50 percent partner in the Drift River Terminal and in the Cook Inlet Pipe Co., owner of the line carrying oil to the terminal.

The final blow

Last October Chevron said it was putting its Cook Inlet assets up for sale, those owned by Union Oil Company of California and those owned by Chevron U.S.A. Inc., including the Granite Point, Middle Ground Shoals, Trading Bay and MacArthur River fields; interests in 10 offshore platforms; interests in onshore fields including the Ninilchik unit and the Beluga River unit; and two gas storage facilities. Chevron said it was also divesting interests in the Cook Inlet Pipe Line Co. and the Kenai Kachemak Pipeline LLC. Approvals for those transfers of interest are before the Regulatory Commission of Alaska and the companies told the commission that approval of those transfers is a condition of the sale.

Cook Inlet discoveries the companies have made illustrate their histories in the basin. Chevron discovered the Falls Creek (1961), Beluga River (1962), North Fork (1965) Ivan River (1966) and Stump Lake (1978) fields. Unocal discovered the Kenai (1959), Sterling (1961), Trading Bay (1965), McArthur River (1965) and Pretty Creek (1979) fields.

North Slope interests retained

Chevron will retain its North Slope interests including a 1.36 percent interest in the trans-Alaska oil pipeline; a 10.52 percent working interest in the Endicott participating area at the Duck Island unit (acquired with the Unocal purchase); a 4.95 percent working interest in the Kuparuk River unit (also from the Unocal purchase); a 25.14 percent working interest in the terminated Point Thomson unit, under litigation between the companies and the State of Alaska; a 1.16 percent interest in the Prudhoe Bay field; and leases in the Arctic National Wildlife Refuge, where Chevron was a partner in the KIC well.

The company has disposed of its North Slope exploration acreage, including White Hills where it drilled in the winters of 2008 and 2009.

Who is Hilcorp?

Hilcorp Energy Co., founded in 1989, is one of the largest privately held independent oil and natural gas exploration and production companies in the United States, with 700 employees.

On its website Hilcorp describes the company's beginnings "as the proverbial 'three guys and a telephone' trying to make a living in the oil and gas business."

In a CEO message on Hilcorp's website, Jeff Hildebrand, the company's founder, president and CEO, cited "world-class employees, legacy assets and a strong balance sheet," as the reasons for the company's success.

"We focus on what we do well," he said, listing the company's core competencies as engineering and geological expertise and operational excellence.

Hilcorp's mission, Hildebrand said, is "To efficiently develop energy that would otherwise be lost while providing an enjoyable and challenging work environment where long-term personal wealth can be created."

The company operates across the United States and said in the joint statement with Chevron that it "continues to grow by actively acquiring and exploiting conventional assets while expanding its footprint into a number of new resource plays."

Hilcorp has been recognized for its progressive culture, values and ethics.

Development, exploration

When the sale was announced in July, Sen. Tom Wagoner, R-Kenai, said in a statement that he received a call from Hilcorp representatives notifying him of the acquisition.

"Hilcorp is enthusiastic about the opportunities it sees in Alaska, and it has an aggressive plan to invest in required well maintenance and in-field drilling to restore and increase production from existing fields, as well as pursue the many exploration targets it has identified around the Cook Inlet basin."

In an application to the Regulatory Commission of Alaska for transfer of Union Oil's Cook Inlet pipeline assets, Hilcorp said it "has identified the Cook Inlet basin as a region holding significant potential for continued oil and gas exploration and development opportunities, and, consistent with its overall corporate mission, upon completion of the acquisition, Hilcorp intends to pursue a maintenance and development program at existing fields, as well as a comprehensive exploration program."

Hilcorp said it "is poised to begin making substantial investments in its newly acquired Cook Inlet assets over the next several years," and said the investment "is anticipated to lead to increased production from the underlying oil and gas assets, which should increase the useful life of these pipeline assets," while benefitting "the broader economy in Southcentral Alaska as well by creating jobs and stimulating economic activity."

Contact Kristen Nelson at knelson@petroleumnews.com

Conoco challenged in Alaska

Largest producer in state says it is challenged by economics, geology, permitting and regulation

By ERIC LIDJI
For Petroleum News

ConocoPhillips is the largest producer and, historically, the most active explorer in Alaska. Several years ago it dropped almost all of its State of Alaska exploration acreage, in favor of larger targets in federal lands and waters. But since 2009 the company has faced roadblocks as it attempts to explore, develop and produce its federal leases.

ConocoPhillips' plan to develop the National Petroleum Reserve-Alaska is stalled by permitting delays while its plan to explore the Alaska outer continental shelf is stalled by legal and regulatory delays. On state lands and waters, meanwhile, ConocoPhillips' legacy fields on the North Slope and in Cook Inlet are continuing to require capital to stem declining production.


TROND-ERIK JOHANSEN

Its midstream operations haven't fared any better. Denali — The Alaska Gas Pipeline LLC, its joint venture with BP Exploration (Alaska) Inc. to market North Slope natural gas resources through a major pipeline, folded because of a lack of shippers, while its liquefied natural gas export terminal in Nikiski is set to close because of a lack of buyers.

On top of that, ConocoPhillips claims that the State of Alaska's fiscal regime is hampering its investment, pointing to two seasons without any traditional exploration wells. And the company continues to find new opportunities for investment outside Alaska.

Despite all that, ConocoPhillips remains the backbone of the Alaska oil industry.

It operates six units and leases more than 1 million acres of state and federal lands and waters. It produced 230,000 barrels of oil per day and 82 million cubic feet of natural gas per day in 2010. The company directly employs more than 1,000 people in Alaska.

NAME OF COMPANY: ConocoPhillips Alaska
COMPANY HEADQUARTERS: Houston, Texas
ALASKA OFFICE: Anchorage
TOP ALASKA EXECUTIVE: Trond-Erik Johansen
PHONE: 907-265-1410
ALASKA OIL & GAS PRODUCTION, NET: Current net production of oil and natural gas liquids: 230,000 bpd. Current net production of gas: 82 MMcfpd

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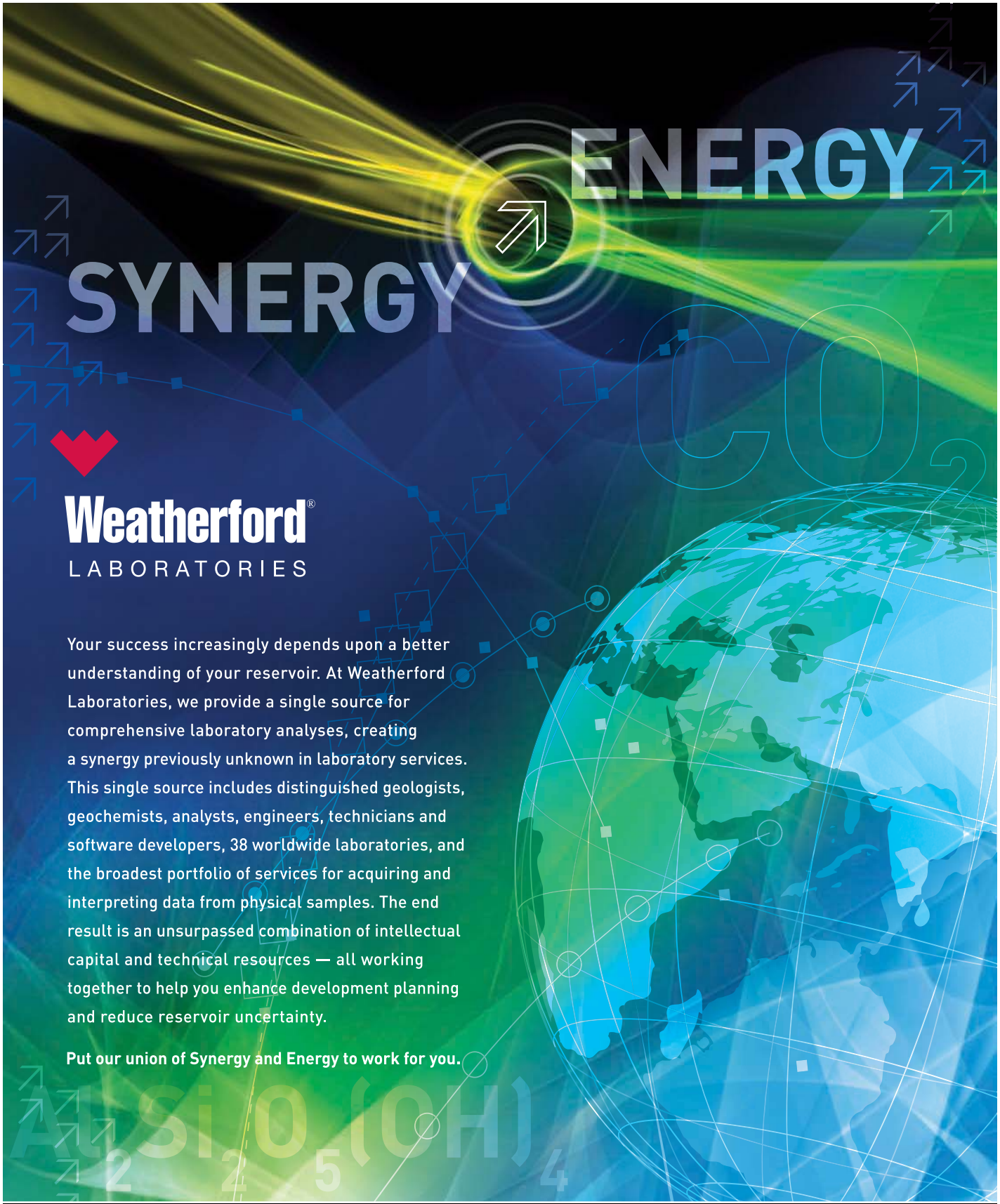
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ConocoPhillips building ice roads in the National Petroleum Reserve-Alaska

COURTESY CONOCOPHILLIPS

CONOCOPHILLIPS *continued from page 42*

Westward expansion on Slope

Although ConocoPhillips is only a decade old, dating back to the merger of Conoco and Phillips Petroleum in 2002, its predecessor companies are responsible for many of the major milestones in the history of the modern Alaska oil industry. In the 1960s its predecessor ARCO joined with Humble Oil to drill the Prudhoe Bay State No. 1. And Phillips, in partnership with Marathon Oil, built the pioneering Kenai LNG export terminal in 1967, the first in the country and largest such facility in the world at that time.

Starting in the 1980s, the companies that became ConocoPhillips began a strategy of westward expansion on the North Slope that continues to this day. In late 1981, ARCO Alaska brought the Kuparuk River unit into production. In 2000, ARCO and partner Anadarko Petroleum brought the Alpine field at the Colville River unit into production.

In the 2000s, ConocoPhillips and Anadarko brought three Alpine satellites online: Fiord in August 2006, Nanuq in December 2006 and Qannik in 2008. ConocoPhillips also took advantage of renewed lease sales in the NPR-A. ConocoPhillips is responsible for 20 of the 29 exploration drilled wells in the 23 million acre reserve between 2000 and 2009.

While that drilling included expensive and remote wildcats, such as the Kokoda and Intrepid wells, the majority took place (somewhat) closer to existing infrastructure, such as Pioneer No. 1 and Grandview No. 1. Based on that exploration work, ConocoPhillips formed the first units in NPR-A, Mooses Tooth in 2008 and Bears Tooth in 2009.

In February 2008, ConocoPhillips expanded its reach by taking part in a record federal lease sale in the Chukchi Sea in northwest Alaska, spending $506.4 million for 98 tracts.

Onshore activities on Slope

In northern Alaska, ConocoPhillips is active on state and federal leases, both onshore and offshore. Those efforts include traditional exploration and development, strategies to increase recovery rates and research on the feasibility of currently untapped resources.

On the North Slope, the company recently sought to expand the Kuparuk and Tarn participating areas at the Kuparuk unit to bring drainage areas within the unit boundaries.

ConocoPhillips also hopes to begin development of the CD-5 Alpine satellite.

Those efforts began in 2005, but faced delays as ConocoPhillips worked with local Native groups to find the ideal route for a utility bridge across the Nigliq Channel of the Colville River. They found consensus, but in early 2010 the U.S. Army Corps of Engineers rejected the bridge idea and told the company to drill directionally underneath the channel instead. ConocoPhillips appealed that ruling. The State of Alaska and the Joint Pipeline Office both favor the bridge over the directional drilling approach.

In the meantime, ConocoPhillips sought to drill 15 additional wells at the CD-1, CD-2 and CD-3 pads, "because of the delays associated with the CD-5 development."

Delays at CD-5, Alpine West

Because CD-5 is in NPR-A, it would open the door to federal production in Alaska.

For that reason, the debate at CD-5 quickly became symbolic of a larger battle between the State of Alaska and the United States government over resource development in Alaska, an issue that Gov. Sean Parnell has made a centerpiece of his first full term in office. The issue stretches from proposals to designate the Arctic National Wildlife Refuge as a "wilderness" area

and the slow pace of permitting in the Arctic Ocean.

That issue eased some in 2011. President Barack Obama called for annual lease sales in NPR-A, including an expedited sale this year, and created a group responsible for coordinating the permitting process of offshore development projects in Alaska. But CD-5 remains unresolved and it is unknown when ConocoPhillips will be able to proceed.

Preparing for OCS exploration

While Shell Oil is leading the charge to explore and develop the Alaska OCS, ConocoPhillips is widely considered to be the second most bullish company in the area.

ConocoPhillips dropped most of its Beaufort leases in 2009, not seeing the potential for hubs that could make development economic, and is now focused on the Chukchi Sea.

ConocoPhillips holds an interest in the two most promising Chukchi Sea prospects: Devil's Paw and Burger. Devil's Paw is the name ConocoPhillips gave to the prospect Shell investigated in 1989 with the Klondike well. ConocoPhillips acquired the acreage in 2008 and in early 2010 brought in the Norwegian company Statoil as a 25 percent partner on 50 leases in the prospect. ConocoPhillips also owns some leases at the edges of the Burger prospect, where Shell hopes to drill once it moves into the Chukchi Sea.

ConocoPhillips recently received a draft air quality permit for its Devil's Paw work, applied for well in advance of actual drilling because of the long expected lead-time for federal permitting. That permit is currently in the middle of a public comment period.

ConocoPhillips, Shell and Statoil are currently working on a continuing Chukchi Sea environmental monitoring program to establish environmental baseline data.

However, there will be no drilling in the Chukchi until several legal matters are first resolved. One is nearing conclusion: The U.S. Bureau of Ocean Management (formerly the Minerals Management Service) is currently taking comments on a court ordered final supplemental environmental impact statement for the February 2008 Chukchi Sea lease sale.

Closing down Denali pipeline

While ConocoPhillips pursues those oil developments on several fronts, it simultaneously worked to develop its natural gas resources on the North Slope through Denali.

ConocoPhillips and partner BP chose not to apply for a license under the Alaska Gasline Inducement Act in 2007 and instead formed a joint venture to pursue a roughly $40 billion pipeline from the North Slope to Alberta. Following several years of environmental and engineering work, Denali held an open season in 2010, but eventually discontinued the plan in May 2011, saying it couldn't find enough customers to justify moving forward.

Although policymakers optimistically noted that the end of Denali freed ConocoPhillips and BP to commit their ample natural gas reserves to another pipeline project, such as the TransCanada and ExxonMobil joint venture proceeding with a blessing (and money) from the state through AGIA, the company has yet to commit itself to any other venture.

That "any other" refers not only to a big pipeline to export Alaska natural gas to domestic or foreign markets, but also a proposal to build a pipeline from the North Slope to the South-

continued on next page

CONOCOPHILLIPS *continued from page 42*

central region. That project is moving along under the guidance of the Alaska Gasline Development Corp. ConocoPhillips met with the group, as did most other natural gas players in Alaska, but as of yet has not made any commitments to the project.

While conventional natural gas supplies on the North Slope remained stranded without transportation infrastructure, ConocoPhillips is also looking at ways of developing the unconventional natural gas resources on the North Slope. With the U.S. Department of Energy, the company drilled a well at the Prudhoe Bay unit in the first half of 2011 to test a method for producing gas hydrates, or molecules of methane trapped in miniscule cages of ice. The Ignik Sikumi testing project is set to continue in 2012.

Investment in Cook Inlet

Although it is not discussed as frequently or as publically, ConocoPhillips is also the leading producer in the Cook Inlet area and continues to promote development there.

The company spent significant capital recently to maintain production and deliverability from its two aging workhorse fields: the Beluga River and North Cook Inlet.

Between 2008 and 2010, ConocoPhillips drilled four wells at Beluga at a cost of more than $80 million to increase production, wells required, in part, by the terms of an agreement with the State of Alaska over support for an LNG export license. In 2011 the company spent $60 million to disperse several compressor stations, to improve the pressure and increase the quality of the giant machines at the 50-year-old gas field that is one of the primary sources of supply for Chugach Electric Association's Beluga power plant.

In 2008 and 2009, ConocoPhillips also spent $75 million drilling three wells at North Cook Inlet, also as part of the agreement, but said those wells were disappointing.

ConocoPhillips likely won't conduct any exploration in Cook Inlet anytime soon because of the need for a jack-up rig, Dan Clark, manager of Cook Inlet assets for the company, said in December 2010. With one jack-up rig currently drilling in the Cook Inlet and another scheduled to arrive next year, perhaps those plans could change in the future.

North Cook Inlet has historically been the primary source of supply for the LNG export operation in Nikiski. Following a successful attempt to get an extension of its export license — through March 31, 2013 — ConocoPhillips and partner Marathon announced in February that they would be mothballing the facility in the spring because they could not secure contracts in the Asian markets where they traditionally sold their supplies.

Amid concerns about employment loss and the loss of a crucial source of back-up supply during periods of peak demand, policymakers wondered if the facility could be configured for alternative uses, particularly as a facility to import LNG. ConocoPhillips said it planned to keep its options open for the facility, but as 2011 progressed those alternative plans went on the back burner as Asian demand increased and the owners twice postponed the closing of the facility to make additional shipments. The plant is currently scheduled to remain open through October to facilitate final shipments east.

Interest in Lower 48 shale

Those struggles in Alaska come at a time when ConocoPhillips is finding new opportunities outside the state — particularly in booming Lower 48 shale plays.

Historically, ConocoPhillips has produced greater volumes from the Lower 48, but earned more money in Alaska because the natural gas it primarily produces in the Lower 48 does not command as high a price as the oil it primarily produces in

continued on page 48

On the Web

Previous Petroleum News coverage:

- "Johansen: Urgency lacking on throughput," in Oct. 16, 2011, issue at http://www.petroleumnews.com/pnads/462514755.shtml
- "Denali project folds," in May 22, 2011, issue at http://www.petroleumnews.com/pnads/121909274.shtml
- "CPAI 2011 capex up," in Feb. 27, 2011, issue at http://www.petroleumnews.com/pnads/51401239.shtml
- "Addressing the changing CI gas situation," in Dec. 19, 2010, issue at http://www.petroleumnews.com/pnads/519628068.shtml
- "Big Risk, Bigger Rewards: The strategy of stepping out at Alpine," in Feb. 14, 2010, issue at http://www.petroleumnews.com/pnads/155700225.shtml

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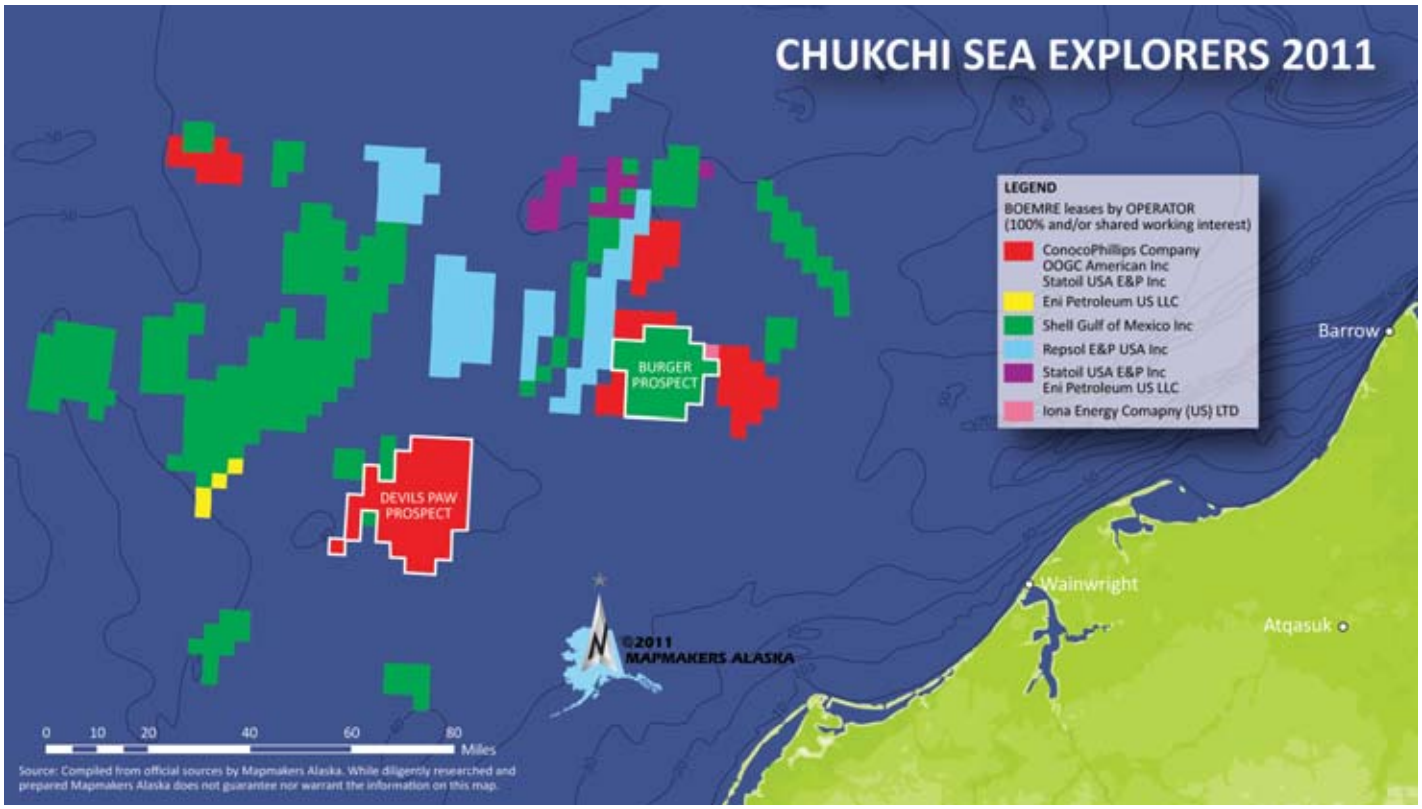


CONOCOPHILLIPS *continued from page 46*

Alaska.

With its increasing investments in the Eagle Ford shale, Permian basin and Barnett shale of Texas and the Bakken shale of North Dakota, though, ConocoPhillips is producing more crude oil from its Lower 48 assets, a shift that could have implications for Alaska.

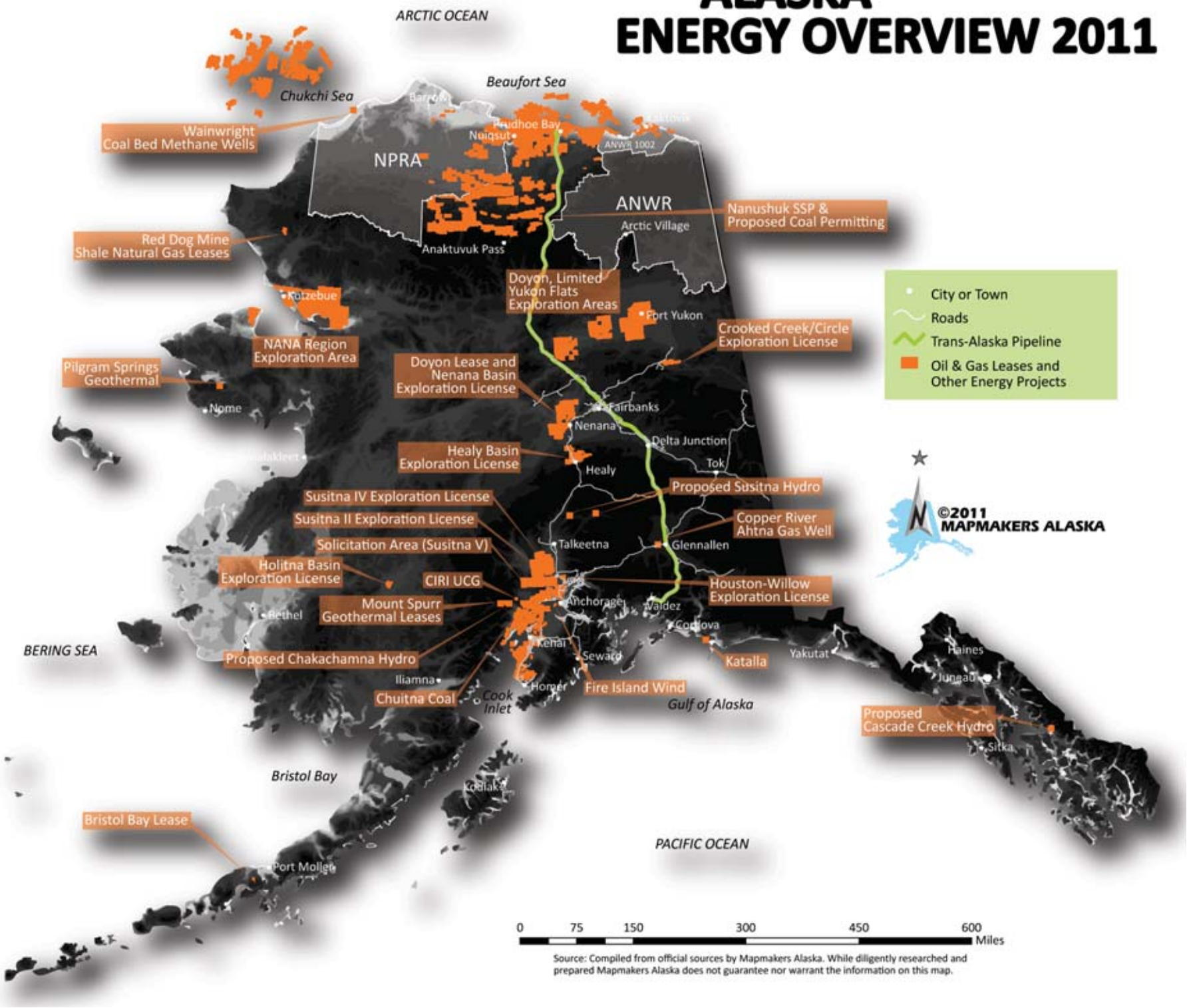
ConocoPhillips certainly believes Alaska is at a disadvantage. It lobbied in favor of a Parnell administration proposal to change the fiscal regime in Alaska primarily by removing a progressivity feature that increases the tax rate as the price of oil increases.

The company said that it is prepared to spend $5 billion to generate 90,000 barrels per day with those changes. Opponents of the changes point to the profits and spending figures ConocoPhillips is posting for Alaska. The company made $1.7 billion in Alaska in 2010 and budgeted $900 million for this year. ConocoPhillips, in turn, pointed to production declines, and the fact that budgeting rarely matches actual spending, and noted that much of the 2011 budget depended on the CD-5 project moving forward.

That bill ultimately did not become law, but will almost certainly be on the table again once lawmakers return for the second half of their regular session this coming January.

Contact Eric Lidji at ericlidji@mac.com

ALASKA ENERGY OVERVIEW 2011



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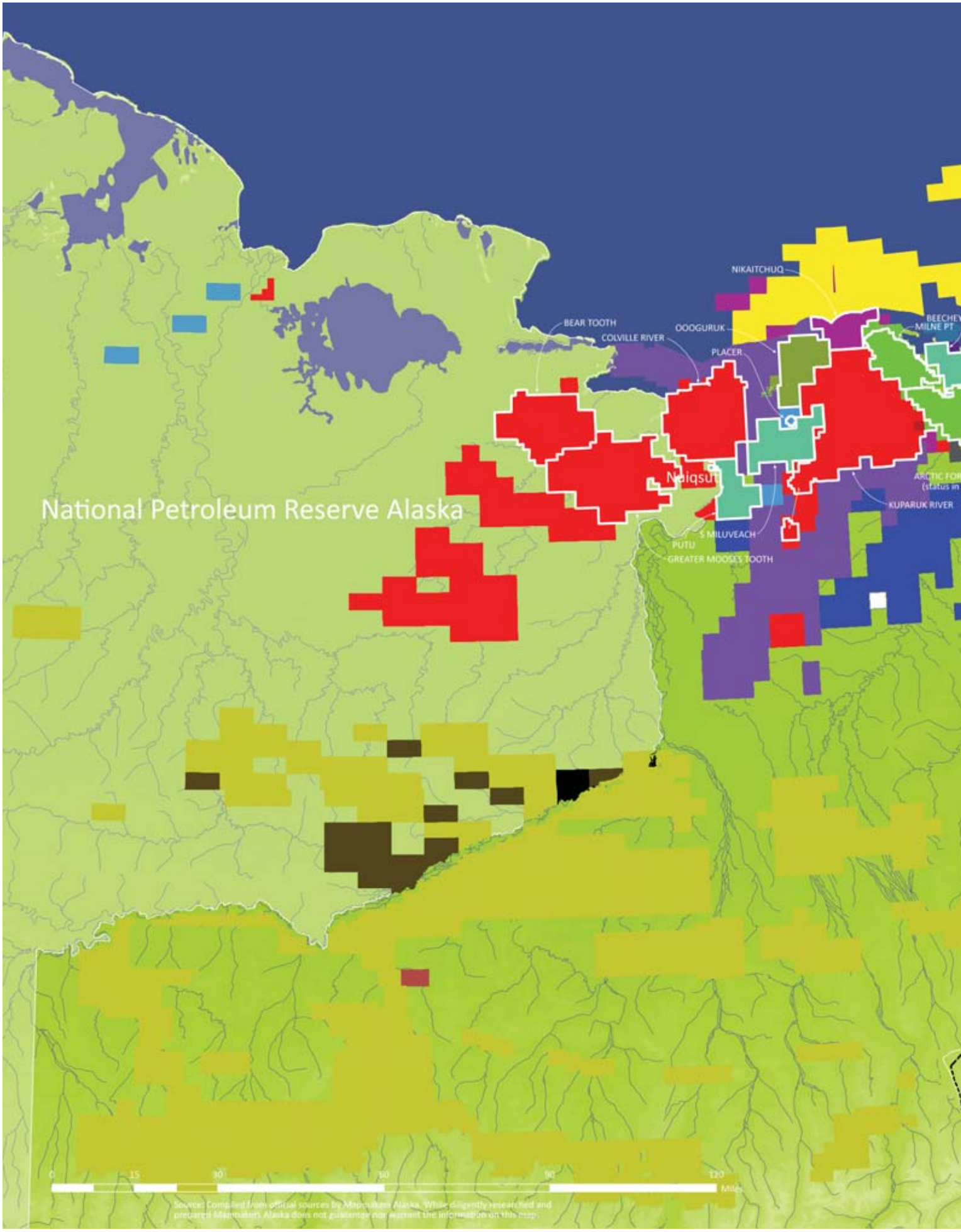
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COLVILLE RIVER
OOOGURUK
PLACER
MILNE PT
Nuiqsut
KUPARUK RIVER
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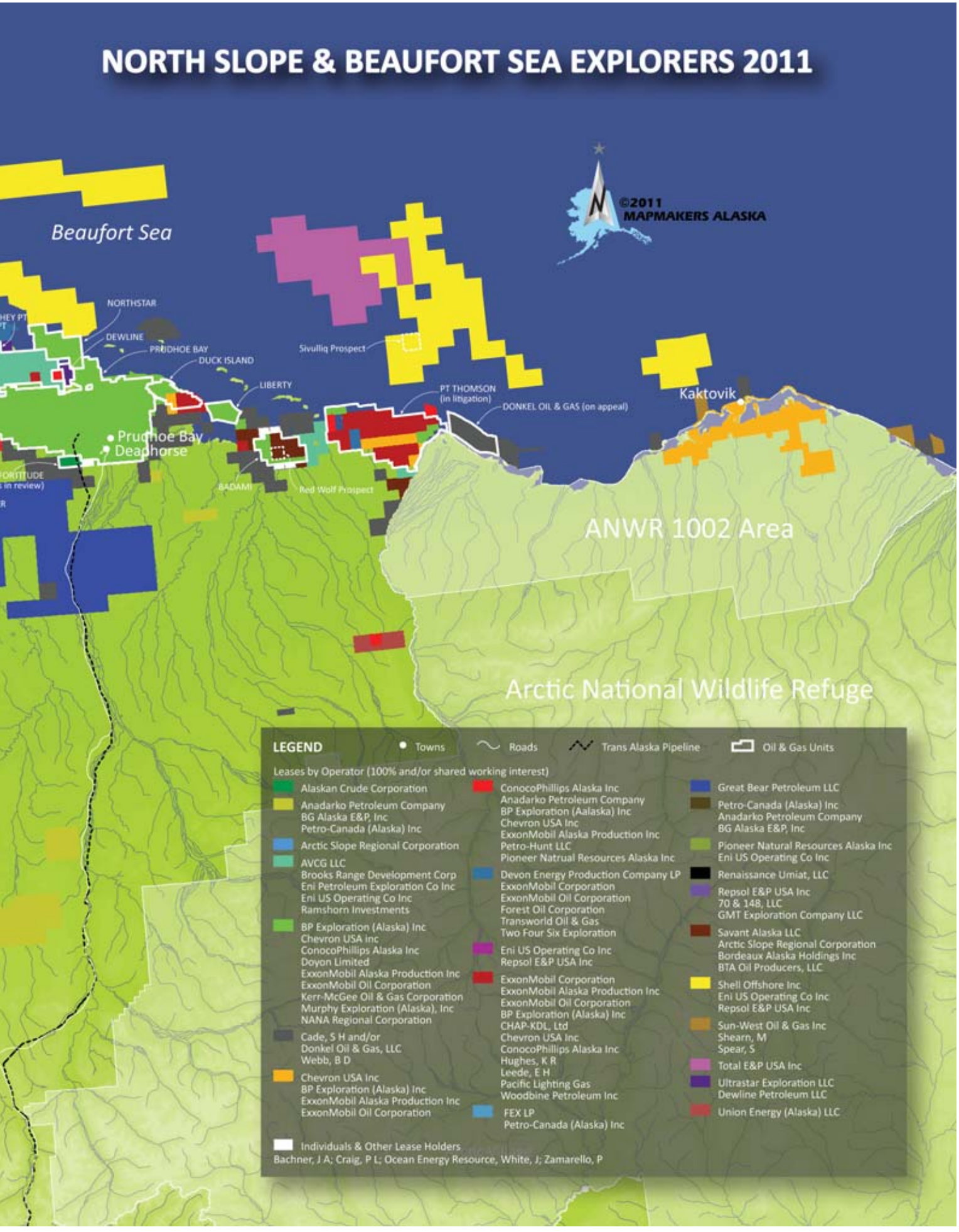
NORTH SLOPE & BEAUFORT SEA EXPLORERS 2011
Beaufort Sea
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MAPMAKERS ALASKA
NORTHSTAR
DEWLINE
PRUDHOE BAY
DUCK ISLAND
LIBERTY
Sivulliq Prospect
PT THOMSON
(in litigation)
DONKEL OIL & GAS (on appeal)
Kaktovik
Prudhoe Bay
Deadhorse
BADAMI
Red Wolf Prospect
ANWR 1002 Area
Arctic National Wildlife Refuge
LEGEND
Towns
Roads
Trans Alaska Pipeline
Oil & Gas Units
Leases by Operator (100% and/or shared working interest)
Alaskan Crude Corporation
Anadarko Petroleum Company
BG Alaska E&P, Inc
Petro-Canada (Alaska) Inc
Arctic Slope Regional Corporation
AVCG LLC
Brooks Range Development Corp
Eni Petroleum Exploration Co Inc
Eni US Operating Co Inc
Ramshorn Investments
BP Exploration (Alaska) Inc
Chevron USA inc
ConocoPhillips Alaska Inc
Doyon Limited
ExxonMobil Alaska Production Inc
ExxonMobil Oil Corporation
Kerr-McGee Oil & Gas Corporation
Murphy Exploration (Alaska), Inc
NANA Regional Corporation
Cade, S H and/or
Donkel Oil & Gas, LLC
Webb, B D
Chevron USA Inc
BP Exploration (Alaska) Inc
ExxonMobil Alaska Production Inc
ExxonMobil Oil Corporation
ConocoPhillips Alaska Inc
Anadarko Petroleum Company
BP Exploration (Aalaska) Inc
Chevron USA Inc
ExxonMobil Alaska Production Inc
Petro-Hunt LLC
Pioneer Natrual Resources Alaska Inc
Devon Energy Production Company LP
ExxonMobil Corporation
ExxonMobil Oil Corporation
Forest Oil Corporation
Transworld Oil & Gas
Two Four Six Exploration
Eni US Operating Co Inc
Repsol E&P USA Inc
ExxonMobil Corporation
ExxonMobil Alaska Production Inc
ExxonMobil Oil Corporation
BP Exploration (Alaska) Inc
CHAP-KDL, Ltd
Chevron USA Inc
ConocoPhillips Alaska Inc
Hughes, K R
Leede, E H
Pacific Lighting Gas
Woodbine Petroleum Inc
FEX LP
Petro-Canada (Alaska) Inc
Great Bear Petroleum LLC
Petro-Canada (Alaska) Inc
Anadarko Petroleum Company
BG Alaska E&P, Inc
Pioneer Natural Resources Alaska Inc
Eni US Operating Co Inc
Renaissance Umiat, LLC
Repsol E&P USA Inc
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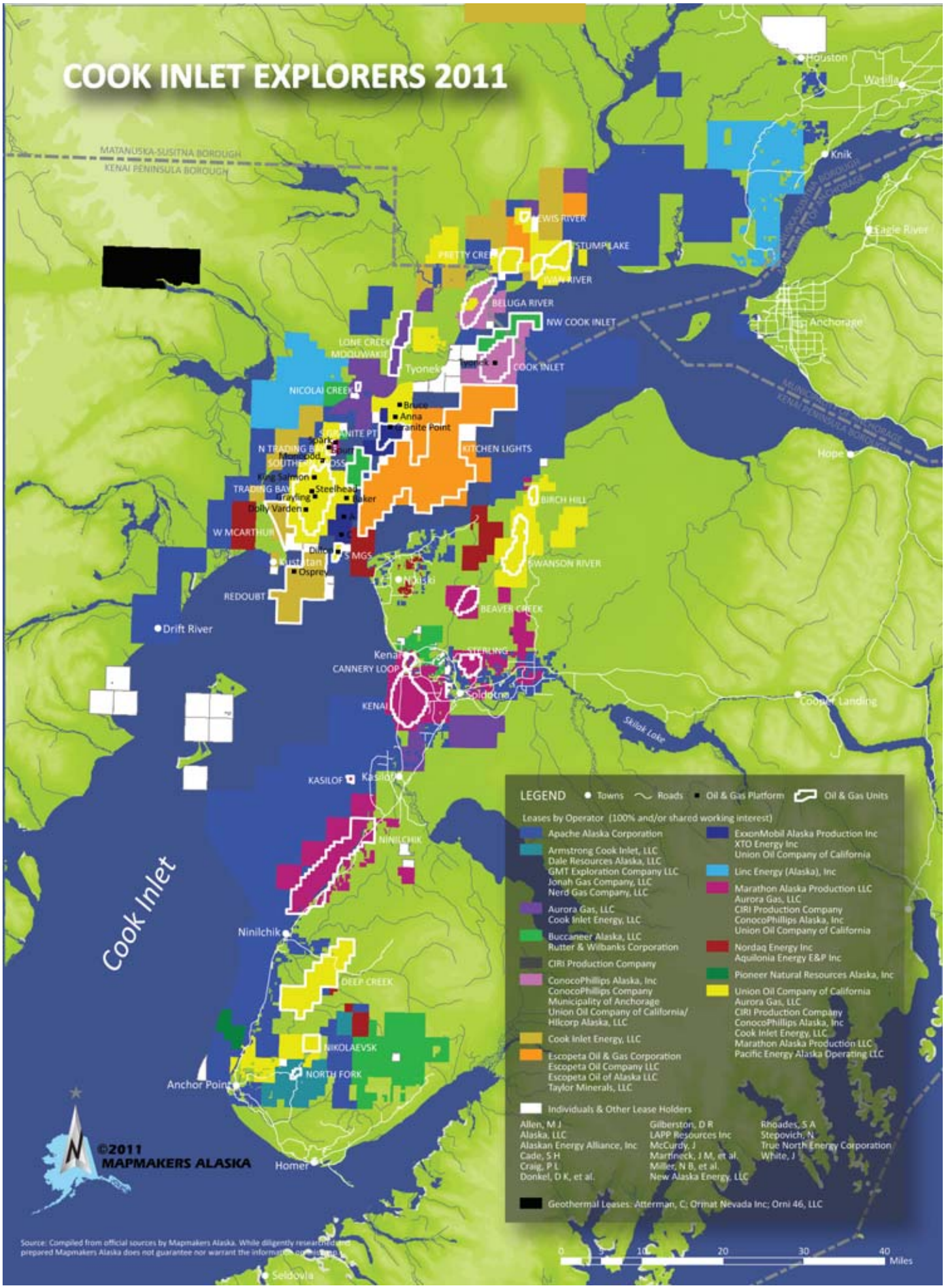
Bordeaux Alaska Holdings Inc
BTA Oil Producers, LLC
Shell Offshore Inc
Eni US Operating Co Inc
Repsol E&P USA Inc
Sun-West Oil & Gas Inc
Shearn, M
Spear, S
Total E&P USA Inc
Ultrastar Exploration LLC
Dewline Petroleum LLC
Union Energy (Alaska) LLC
Individuals & Other Lease Holders
Bachner, J A; Craig, P L; Ocean Energy Resource, White, J; Zamarello, P


COOK INLET EXPLORERS 2011
MATANUSKA-SUSITNA BOROUGH
KENAI PENINSULA BOROUGH
Houston
Wasilla
Knik
Eagle River
Anchorage
Hope
Tyonek
Kenai
Soldotna
Cooper Landing
Skilak Lake
Drift River
Ninilchik
Anchor Point
Homer
Seldovia
Cook Inlet
LEWIS RIVER
PRETTY CREEK
STUMP LAKE
BELUGA RIVER
NW COOK INLET
COOK INLET
LONE CREEK
MOQUAWKIE
NICOLAI CREEK
Bruce
Anna
Granite Point
KITCHEN LIGHTS
TRADING BAY
King Salmon
Steelhead
Grayling
Baker
Dolly Varden
W MCARTHUR
BIRCH HILL
SWANSON RIVER
REDOUBT
BEAVER CREEK
CANNERY LOOP
STERLING
KENAI
KASILOF
NINILCHIK
DEEP CREEK
NIKOLAEVSK
NORTH FORK
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LEGEND
Towns
Roads
Oil & Gas Platform
Oil & Gas Units
Leases by Operator (100% and/or shared working interest)
Apache Alaska Corporation
Armstrong Cook Inlet, LLC
Dale Resources Alaska, LLC
GMT Exploration Company LLC
Jonah Gas Company, LLC
Nerd Gas Company, LLC
Aurora Gas, LLC
Cook Inlet Energy, LLC
Buccaneer Alaska, LLC
Rutter & Wilbanks Corporation
CIRI Production Company
ConocoPhillips Alaska, Inc
ConocoPhillips Company
Municipality of Anchorage
Union Oil Company of California/
Hilcorp Alaska, LLC
Cook Inlet Energy, LLC
Escopeta Oil & Gas Corporation
Escopeta Oil Company LLC
Escopeta Oil of Alaska LLC
Taylor Minerals, LLC
ExxonMobil Alaska Production Inc
XTO Energy Inc
Union Oil Company of California
Linc Energy (Alaska), Inc
Marathon Alaska Production LLC
Aurora Gas, LLC
CIRI Production Company
ConocoPhillips Alaska, Inc
Union Oil Company of California
Nordaq Energy Inc
Aquilonia Energy E&P Inc
Pioneer Natural Resources Alaska, Inc
Union Oil Company of California
Aurora Gas, LLC
CIRI Production Company
ConocoPhillips Alaska, Inc
Cook Inlet Energy, LLC
Marathon Alaska Production LLC
Pacific Energy Alaska Operating LLC
Individuals & Other Lease Holders
Allen, M J
Alaska, LLC
Alaskan Energy Alliance, Inc
Cade, S H
Craig, P L
Donkel, D K, et al.
Gilberston, D R
LAPP Resources Inc
McCurdy, J
Martineck, J M, et al.
Miller, N B, et al.
New Alaska Energy, LLC
Rhoades, S A
Stepovich, N
True North Energy Corporation
White, J
Geothermal Leases: Atterman, C; Ormat Nevada Inc; Orni 46, LLC
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Cook Inlet Energy jumps out quickly

Fledgling producer notches early successes, aims to boost production when Osprey rig working

By WESLEY LOY
For Petroleum News

While its parent company has been battered on Wall Street recently, Anchorage-based Cook Inlet Energy LLC has made steady strides over its short history as an Alaska oil and gas producer.

The fledgling company, organized in January 2009, has restored production from idled wells on the west side of Cook Inlet, and has brought an offshore platform back from the dead.


DAVID HALL

And that's just the start for a company that sees plenty of opportunity in the state's mature No. 2 oil and gas province.

"We're moving full steam ahead," chief executive David Hall told Petroleum News in early August.

The month would prove to be record setting for Cook Inlet Energy, with 46,882 barrels of oil shipped for an average of 1,512 barrels per day. That's significant in a basin that averaged 11,991 bpd overall in August.

The company has its sights set on raising its output significantly come 2012, once its new drilling rig is in place atop the Osprey platform. The National 1320 model rig, put together in Houston, was due for delivery in Alaska in mid-October.

Cook Inlet Energy expects to put the rig to work right away drilling sidetracks off existing but damaged Osprey wells tapping the Redoubt Shoal field.

Funding for the $19.5 million rig came from a two-year, $100 million borrowing arrangement struck with New York-based Guggenheim Corporate Funding LLC and other lenders.

NAME OF COMPANY: Cook Inlet Energy LLC
ALASKA OFFICE: 601 West 5th Avenue, Ste. 310, Anchorage, AK 99501
CHIEF EXECUTIVE OFFICER: David M. Hall
PHONE: 907-344-6745
ALASKA OIL & GAS PRODUCTION, NET: 1,512 barrels per day

Spawned out of bankruptcy

Cook Inlet Energy launched as an oil and gas producer in December 2009, when the company took over assets that formerly belonged to Pacific Energy Resources Ltd., a California company that had filed for bankruptcy.

The two top executives at Cook Inlet Energy, Hall and company president JR Wilcox, previously had worked for Pacific Energy, Hall serving as the firm's vice president in charge of Alaska operations.

Cook Inlet Energy emerged from a stable of bidders for the west Cook Inlet properties. It had backing from a small Tennessee firm, Miller Energy Resources Inc., which put up $4.47 million to buy the assets. Cook Inlet Energy became a Miller subsidiary as part of the transaction.

Miller, in a press release, said it had acquired reserves worth $327 million, including $119 million in proven reserves and $208 million in probable or possible reserves.

The sale assets included the West McArthur River unit, the West Foreland gas field, the Redoubt unit with its Osprey platform, and the Kustatan onshore production facility. Cook Inlet Energy also picked up a 30 percent interest in the Three Mile Creek gas field, plus extensive exploration acreage.

Straight to work

Hall and Cook Inlet Energy immediately set about hiring back employees who had lost their jobs due to the Pacific Energy shutdown.

Hall's initial strategy was to restore production from the West McArthur River field by repairing a couple of its "champion wells."

Within seven months of the purchase, Cook Inlet Energy was able to restore three West McArthur River wells plus a gas well at Kustatan, bringing production to more than 1,000 barrels of oil equivalent per day.

Cook Inlet Energy has had plenty more business to tend to.

Just as the company began operations, Cook Inlet Pipe Line Co. proposed a steep rate increase to transport crude. Cook

continued on page 56

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OFFICE INFORMATION BILL CREDIT OFFER: Purchase of 24 consecutive months of OFFICE INFORMATION and Local Channels packages (if available in your market) required. Upon DIRECTV System activation, beginning in the second month, DIRECTV will begin to credit the new OFFICE INFORMATION customer's account for 24 consecutive months in the amount of $8/mo. for the OFFICE INFORMATION and Local Channels packages**plus an additional $5/mo. when customer activates and maintains the INFORMATION package or higher and enrolls in Auto Bill Pay for 12 months with credit card at the point of sale.** OFFICE ENTERTAINMENT BILL CREDIT OFFER: Purchase of 24 consecutive months of OFFICE ENTERTAINMENT and Local Channels packages (if available in your market) required. Upon DIRECTV System activation, beginning in the second month, DIRECTV will begin to credit the new OFFICE ENTERTAINMENT customer's account for 12 consecutive months in the amount of $20/mo. for the OFFICE ENTERTAINMENT and Local Channels packages **plus an additional $5/mo. when customer activates and maintains the INFORMATION package or higher and enrolls in Auto Bill Pay for 12 months with credit card at the point of sale** OFFICE CHOICE BILL CREDIT OFFER: Purchase of 24 consecutive months of OFFICE CHOICE and Local Channels packages (if available in your market) required. Upon DIRECTV System activation, beginning in the second month, DIRECTV will begin to credit the new OFFICE CHOICE customer's account for 12 consecutive months in the amount of $32/mo. for the OFFICE CHOICE and Local Channels packages**plus an additional $5/mo. when customer activates and maintains the INFORMATION Package or higher and enrolls in Auto Bill Pay for 12 months with credit card at the point of sale.** Account must be in "good standing," as determined by DIRECTV in its sole discretion, to remain eligible.**IF BY THE END OF PROMOTIONAL PRICE PERIOD(S) CUSTOMER DOES NOT CONTACT DIRECTV TO CHANGE SERVICE THEN ALL SERVICES WILL AUTOMATICALLY CONTINUE AT THE THEN-PREVAILING RATES.** In certain markets, programming/pricing may vary.**IN THE EVENT YOU FAIL TO MAINTAIN YOUR PROGRAMMING AGREEMENT, YOU AGREE THAT DIRECTV MAY CHARGE YOU AN EARLY CANCELLATION FEE OF $300.** Cancellation fees are not proratable. **LIMIT ONE BILL CREDIT OFFER PER ACCOUNT.** ^HD ACCESS OFFER: To access DIRECTV HD programming, HD Access fee ($13/mo.) and HD equipment are required. Number and type of HD channels varies by package. 24-month base progamming agreement required. Upon DIRECTV System activation, DIRECTV will credit the new customer's account for 3 consecutive months for HD access provided account is in "good standing," as determined by DIRECTV in its sole discretion, to remain eligible. In the fourth month, HD Access will automatically continue at the then-prevailing rate.**LIMIT ONE HD ACCESS BILL CREDIT OFFER PER ACCOUNT.** ^^SONICTAP MUSIC CHANNELS OFFER: 24-month agreement to a Commercial base programming package required. Upon DIRECTV System activation, DIRECTV will credit the new customer's account for three consecutive months for SonicTap Music Channels. In the fourth month, the SonicTap Music Channels will automatically continue at the then-prevailing rate. HARDWARE OFFER: Programming agreement, as defined by customer's commercial programming rate card, required. DVR Service ($7/mo.) activation required for DVR and HD DVR equipment. HD equipment also requires activation of HD Access. Up to two free HD or SD Receivers per commercial location. Make and model of system at DIRECTV's sole discretion. No single-family residences allowed. Offer void where prohibited or restricted. All DIRECTV Receivers must be continuously connected to the same land-based phone line. DIRECTV programming, pricing, terms and conditions subject to change at any time. Taxes not included. Receipt of DIRECTV programming subject to terms of DIRECTV Commercial Customer Viewing Agreement; copy provided with new customer information packet. INSTALLATION: Free standard professional commercial installation for OFFICE CHOICE customers. $49 standard professional commercial installation only for OFFICE ENTERTAINMENT and OFFICE INFORMATION customers. Complex/custom installation extra. DIRECTV programming, pricing, terms and conditions subject to change at any time. Taxes not included. Receipt of DIRECTV programming subject to terms of DIRECTV Commercial Customer Viewing Agreement; copy provided with new customer information packet.

May 19 shot of Osprey platform in Cook Inlet. Seen on the platform is a hydraulic snubbing unit from Cudd Energy Services. The snubbing unit is being used for well workovers. Platform operator Cook Inlet Energy mobilized the unit from Broussard, La., in April.

COURTESY COOK INLET ENERGY

Inlet Energy challenged the increase and ended up with settlement that reduced the rate hike significantly.

In September 2010, the state Division of Oil and Gas granted Cook Inlet Energy a three-year extension of its Susitna basin exploration license in exchange for $750,000 in work commitments. The license, which the company picked up as part of the Pacific Energy purchase, gives Cook Inlet Energy exclusive exploration rights on 471,474 acres in the Susitna basin north of Cook Inlet, near the Willow community.

To target shallow gas prospects around the west side of Cook Inlet, the company brought up Miller rig 34 from Tennessee. It's a truck-mounted Atlas Copco RD20 model.

Reviving Osprey

Cook Inlet Energy has turned much of its attention to the Redoubt unit and the Osprey platform, which was in "lighthouse mode" and in jeopardy of becoming a ward of the state when Cook Inlet Energy acquired it.

The company has reworked three Osprey wells, and in early June achieved the first production from the platform since mid-2009.

Osprey is the newest and southernmost of the 16 platforms in Cook Inlet. Forcenergy Inc. completed installation in 2000, but production from the platform proved a serious disappointment.

Cook Inlet Energy, however, sees a bright future for Osprey.

One problem was that wells on the platform had design problems, with casings that were too light for the formation pressure, said Hall, the company CEO. As a result, the casings collapsed.

Hall intends to sidetrack four wells, which should restore the 2,000 bpd that the original wells once produced, he said.

The new rig brought up from Houston will drill the sidetracks. Hall also envisions drilling a dozen or more new wells on the platform.

Stock slide, lawsuits

Beginning in July, parent company Miller Energy Resources began to encounter serious turbulence including the crash of its stock price and legal accusations of stock fraud.

After its Alaska acquisition in late 2009, the small Tennessee company's star began to rise rapidly. Miller's shares migrated from the OTC Bulletin Board to the NASDAQ exchange and finally the New York Stock Exchange. The company's stock price went from around 30 cents through much of 2009 to as high as $8.02 on July 15.

By early August the stock had plunged to $2.36 after online reports suggested Miller Energy had overstated the value of the Alaska assets, and after the company advised the U.S. Securities and Exchange Commission that it would need to correct errors in some financial statements.

The stock slide precipitated the filing of several lawsuits in Tennessee against Miller Energy. The suits generally claim that Miller's stock traded at artificially inflated prices due to false statements by the company, and investors were hurt when the price fell.

Miller Energy has stood by the valuation of its Alaska assets, saying their worth was independently verified. Miller said it hired global law firm DLA Piper to defend the lawsuits.

Contact Wesley Loy at wloy@petroleumnews.com

Doyon: Interior basins show promise

New evidence suggests Nenana basin much deeper than previously thought, as deep as 25,000 feet

By ALAN BAILEY
Petroleum News

NAME OF COMPANY: Doyon Ltd.
COMPANY HEADQUARTERS: 1 Doyon Place, Ste 300, Fairbanks, AK 99701
PHONE: 888-478-2060
TOP ALASKA EXECUTIVE: James Mery, Doyon Ltd. senior vice president, lands and natural resources

New geophysical and geochemical investigations in the Nenana and Yukon Flats basins in the Interior of Alaska have pointed to a high resource potential in both of these basins, James Mery, Doyon Ltd. senior vice president, lands and natural resources, told Petroleum News on Sept. 8.

Investigations completed in the past couple of months have indicated that the Nenana basin is much deeper than previously thought, while rock samples recovered from the Nunivak No. 1 well near the town of Nenana show the presence of hydrocarbon source rocks, potential sandstone reservoirs and shales that would form effective hydrocarbon seals. Parallel research in the Yukon Flats basin has provided tantalizing indications of oil and gas in the subsurface, and of subsurface structures that could trap hydrocarbon resources, Mery said.

Seeking opportunities

For several years Doyon, the Alaska Native regional corporation for much of the Interior, has been seeking new resource development opportunities within its region, hoping to make profits for its Native shareholders while also providing local employment. Doyon subsidiaries that provide services to the oil and gas industry also stand to gain from new commercial developments in the Interior.

A partnership consisting of Doyon, Rampart Energy Co., Arctic Slope Regional Corp., Usibelli Energy LLC and Cedar Creek Oil & Gas Co. has been conducting an exploration program in the Nenana basin, about 50 miles southwest of Fairbanks, seeking natural gas and possibly oil. The partnership drilled the 11,000-foot Nunivak gas exploration well in 2009 but that well did not encounter an economic gas accumulation.

New seismic

Doyon has taken over as operator of the Nenana basin exploration program and plans to acquire some 2-D seismic in the northern part of the basin between January and March 2012. The Nenana partnership acquired seismic data for the more southerly part of the basin in 2004 and 2005. Much of the exploration is taking place on state land, under the terms of a state exploration license.

In the Yukon Flats, a 15,000-square-mile lowlands area around the Yukon River, between the trans-Alaska oil pipeline and the Canadian border, Doyon has been investigating the resource potential within Native lands, where the corporation and its shareholders would potentially gain royalties from oil and gas production, in addition to realizing the other potential economic benefits from new resource development.

Both the Nenana basin and the Yukon Flats basin consist of huge depressions in the Earth's crust that have resulted from movements along major geologic faults and that have become filled with river- and lake-borne sediments, primarily of Tertiary age. Prolific vegetation once growing in these landlocked basins has over time given rise to an abundance of coal seams within the rock sequences.

Borrowing successful exploration strategies from analogous basins elsewhere in the world, Doyon has licensed whatever existing geophysical data are

continued on page 60

Schutt new Doyon president, CEO

Aaron Schutt assumed the position of Doyon Ltd.'s new president and chief executive officer on Oct. 1, 2011, replacing Norman L. Phillips Jr., who recently announced his retirement from the Fairbanks-based company.


AARON SCHUTT

Formerly Doyon's senior vice president and chief operating officer, in his new position Schutt oversees the firm's numerous subsidiaries in Alaska and across the United States.

"Aaron is well prepared to step up to this important leadership position in our company. He understands our businesses, he knows the people, and he has what it takes to lead us toward our goals. We are confident he'll hit the ground running," Orie Williams, chairman of the Doyon Ltd. board of directors, said on Sept. 10.

Schutt has been with Doyon since 2006. Prior to joining the company, he worked as an attorney in a private practice and holds a juris doctorate from Stanford Law School, a master's degree in civil engineering from Stanford University and graduated with honors and as an S. Town Stephenson scholar with a bachelor's degree in civil engineering from Washington State University.

DOYON *continued from page 58*

available for the basins, acquired new data and also done some surface geochemical sampling, seeking surface traces of subsurface hydrocarbons, Mery said.

Nenana basin

For the Nenana basin, the corporation has licensed seismic data acquired by Shell in the 1980s, as well as using its own more recent data. The merging of seismic data with proprietary gravity and magnetic data that the corporation has also obtained under license, combined with new data from the Nunivak well, has enabled a new assessment of the basin subsurface. That assessment points to much greater depths with the basin than were indicated by earlier work, and the existence of a previously unknown arch-shaped structure in the base of the northern part of the basin.

"We've concluded that the basin is much deeper than anyone previously thought," Mery said. "Some parts of the basin could be as deep as 25,000 feet."

New well data also indicate that the basin is a bit cooler than data from some old wells on the basin margins had suggested, although the temperature gradient within the basin is fairly typical for a continental interior situation, with the deeper sections of the basin likely to be within the appropriate temperature range for oil generation.

Excellent source rocks

Analysis of coal samples recovered from the Nunivak well shows excellent hydrocarbon source potential, including the presence of material that would support the generation of both

continued on page 62

Eni becomes ANS producer in 2011

Italian major is fourth operator-producer on Alaska's North Slope; keeps hand in exploration

By ERIC LIDJI
For Petroleum News

After relinquishing much of its exploration acreage in Alaska in 2010, Eni Petroleum became a producer in 2011, but is still working behind the scenes on exploration projects in the state.

The Italian major first arrived in Alaska in the late 1960s through its company Agip Petroleum, but traces its more recent push in the state to the mid-2000s. In 2005, Eni bought a minority interest in several North Slope prospects from Armstrong Alaska and in 2007 it bought the outstanding interest in those prospects from Kerr-McGee Corp.

Without the ability to share risk, Eni needed to use "innovative technologies" in order to be successful in developing the "marginally economic" viscous oil at Nikaitchuq.

Those assets included Nikaitchuq, Tuvaaq and a stake in Oooguruk, three offshore prospects in the state waters of the Beaufort Sea, north and northwest of the Kuparuk River unit. It also included several onshore prospects, including the Maggiore and Rock Flour prospects in the central North Slope south of Prudhoe Bay and Kuparuk River.

NAME OF COMPANY: ENI Petroleum
COMPANY HEADQUARTERS: Rome, Italy
CHIEF EXECUTIVE OFFICER: Paolo Scaroni
ALASKA HEADQUARTERS: Anchorage
TOP ALASKA EXECUTIVE: David Moles
PHONE: 907-929-9377
ALASKA OIL & GAS PRODUCTION, NET:
Current net production of oil: ~8,000 bpd

Eni quickly worked to make its offshore prospects viable. The company combined Nikaitchuq and Tuvaaq into the Nikaitchuq unit and got the Alaska Department of Natural Resources to agree to offer royalty modification on leases in the expanded unit.

In 2008, Eni became an Alaska producer through its 30 percent interest in the Pioneer Natural Resources Alaska Inc. operated Oooguruk unit, just to the southwest of Nikaitchuq. But whereas Pioneer chose to partner with Eni and rent space on existing ConocoPhillips Alaska Inc. processing infrastructure, Eni decided to build its own processing facilities for Nikaitchuq.

Eni needed to use "innovative technologies" in order to be successful in developing the "marginally economic" viscous oil at Nikaitchuq, according to David Moles, Eni's Alaska representative

continued on page 63

DOYON *continued from page 60*

natural gas and oil, Mery said. Intriguingly, some well cuttings also contained hydrocarbons with molecular weights higher than that of the methane that is the primary component of natural gas, presumably suggesting the generation of some hydrocarbons from the heating of source rocks, rather than from the bacterial decomposition of organic debris.

Geochemical analysis of some near-surface soil samples above the basin has shown trace quantities of a similar hydrocarbon mix, Mery said.

Yukon Flats

In the Yukon Flats Doyon is interested in both the oil and the gas potential of some sub-basins of the main Yukon Flats basin, with some of those sub-basins lying not too distant from the trans-Alaska oil pipeline. One of the sub-basins is near the village of Stevens Creek where Doyon's recent surface sampling and geochemistry has detected traces of oil and natural gas liquids that would, again, have been formed from a thermal process. These types of surface hydrocarbon trace are particularly prevalent over another sub-basin around the village of Birch Creek, where Doyon has also done sampling and hydrocarbon analysis of deep mud in lakes, Mery said.

And Doyon's most recent interpretation of gravity, magnetic and seismic data for the Birch Creek sub-basin shows subsurface geologic structures that could have trapped oil or gas.

"It sets up a very nice story, we think for (oil and gas) generation both off and on our lands, and migration into these large structural features within our lands," Mery said.

Petrotechnical Resources of Alaska, or PRA, a consultancy firm that has been working for Doyon in its investigations, has in the past suggested that there could be an oil field in the Yukon Flats basin comparable in scale to the Alpine field on the North Slope.

Seeking investors

Mery said that Doyon is now actively seeking investors interested in exploration in the two basins, and wants to make contact with companies experienced in the exploration of basins with similar geologic characteristics.

In addition to Yukon Flats' proximity to the trans-Alaska pipeline, the Nenana basin is adjacent the Alaska Railbelt transportation corridor, the potential site of a pipeline carrying natural gas from the North Slope into Southcentral Alaska. A gas development in the Nenana basin and the development of the gas line could support each other's economic viability, with Nenana gas potentially increasing the pipeline throughput without infringing statutory limitations on the volumes of North Slope gas that the line could carry, Mery said.

Contact Alan Bailey at abailey@petroleumnews.com

On the Web

Previous Petroleum News coverage:

- "Doyon plans new Nenana seismic survey," in March 20, 2011, issue at www.petroleumnews.com/pnads/496870805.shtml
- "Doyon pauses Nenana exploration, gathers data from Yukon Flats," in Sept. 26, 2010, issue at www.petroleumnews.com/pnads/16322579.shtml

ENI *continued from page 61*

and development manager.

The company eventually sanctioned a roughly $2 billion development project in early 2008.The plan involved drilling 52 wells from a combination of onshore and offshore drilling sites and building an independent 40,000-barrel per day processing facility.

Eni originally hoped to bring that project online in late 2009, but delays related to weather and the short Arctic sealift season pushed the program back by one year.

Eni brought Nikaitchuq online in February, three years after it sanctioned the project.

Eni is currently drilling from its onshore facilities at Oliktok Point while it constructs its offshore facilities near Spy Island. The company expects to finish drilling in 2014.

Prepping offshore facilities

The Nikaitchuq Schrader Bluff oil pool includes the OA and N sands.

Eni only plans to develop the OA sand for now.The company believes the accumulation holds between 800 million and 930 million barrels of oil in place and expects to produce as much as 220 million using primary recovery and waterflood injection.The Nikaitchuq unit is expected to produce for 30 years and peak at around 28,000 barrels of oil per day.

Eni is currently drilling from its onshore facilities at Oliktok Point while it constructs its offshore facilities near Spy Island.The company expects to finish drilling in 2014.

Nikaitchuq passed the 1 million barrel mark in July 2011.

On the Web

Previous Petroleum News coverage:

- "Nikaitchuq online," in the Feb. 13, 2011, issue at http://www.petroleumnews.com/pnads/916383803.shtml
- "Nikaitchuq heavy, shallow, cold; multiple challenges at new field," in Nov. 28, 2005, issue at http://www.petroleumnews.com/pnads/170718700.shtml
- "Eni enters Alaska," in the Aug. 28, 2005, issue at http://www.petroleumnews.com/pnads/990362616.shtml

Exploration partnerships

Although Eni dropped its Rock Flour and Maggiore prospects in 2010, after drilling wells at both in early 2007, the company still holds acreage outside of the Nikaitchuq unit.

Through its minority partnership with Pioneer in Oooguruk, Eni is taking part in the Nuna development, an effort to further explore, delineate and develop the Torok formation.

Eni also recently farmed out six leases in the North Tarn prospect southwest of the Kuparuk River unit to Brooks Range Petroleum Corp. and its partners.Those companies drilled the North Tarn No. 1 well this year and plan to return to the region this winter.

Eni also holds leases in the Chukchi Sea in partnerships with Statoil and ConocoPhillips.

Contact Eric Lidji at ericlidji@mac.com

Escopeta brings jack-up to Cook Inlet

Katic prefers outrigger caisson or 3-deck platform at Corsair; depending on gas, oil or both

By KAY CASHMAN
Petroleum News

In August 2011, Danny Davis brought the first jack-up drilling rig in nearly two decades to Southcentral Alaska's Cook Inlet basin. He succeeded, where he and others had tried and failed for nearly 20 years.

Founder of the Escopeta group of companies, Davis was convinced that he had a Kuparuk-size oil field and several trillion cubic feet of natural gas in his offshore Kitchen unit, which today is called Kitchen Lights and contains his initial East Kitchen and Kitchen prospects, as well as the Corsair and Northern Lights prospects.


DANNY DAVIS

A quick inspection of a map of Cook Inlet basin's discovered fields shows that they follow two main trends on either side of the basin axis — one trend passes up the west side of the Kenai Peninsula and the other trend passes up the west side of Cook Inlet.

The trends lie on either side of the central axis of the basin.

"If you look at a map of the well plots there's very few in the core, along the axis (of the basin)," per Tim Ryherd, a commercial analyst with Alaska's Division of Oil and Gas. The Kitchen oil and gas prospects are on the axis of the basin.

NAME OF COMPANY:
Escopeta Oil & Gas
HEADQUARTERS:
Houston, Texas
CHIEF EXECUTIVE OFFICER: Ed Oliver, president
ALASKA OFFICE: Resolution Plaza, Suite 500, Anchorage
PHONE: 907-277-3726

Despite its collection of declining oil and gas fields, much of the Cook Inlet basin remains substantially underexplored, as evidenced by the sparse distribution of on- and offshore exploration wells in the region (see satellite image in this article).

Since the late 1950s the basin has produced about 1.4 billion barrels of oil and 10 trillion cubic feet of natural gas, but U.S. Geological Survey scientists have theorized that only 4 percent of the petroleum that could have been generated by the basin's source rocks has ever been found. And the U.S. Department of Energy's 2004 report on the basin's natural gas hypothesizes that there are missing giants — large oil and gas fields — that remain to be discovered.

End of an era

Escopeta may be on the verge of finding one or more of those giants as it drills its first well, KLU No. 1, in the Corsair prospect. About 10 miles north of Nikiski, the well is one of five wells in Escopeta's multiyear oil and gas exploration program for the unit.

On Oct. 31, as this Explorers magazine went to press, the company had drilled down 8,800 feet of the 16,000 feet it will take to reach total depth in KLU No. 1, and was preparing to do its weekly blowout preventer test.

"I think … (when) we drill down to 12,000-12,500 feet, we'll find all the gas they need (in Southcentral Alaska) for many years to come. There's 2-3 tcf of gas there. It's loaded with gas," Davis said recently.


WESLEY LOY
ED OLIVER

But he is no longer president of Escopeta Oil Company LLC, which holds and operates the 83,394-acre Kitchen Lights unit.

Davis, who established the first Escopeta company in Alaska in 1993, was forced to resign in late June by the German investors he brought in to fund Kitchen Lights exploration and development because of pressure from the federal government over an alleged Jones Act violation in the transport of the Spartan 151 jack-up from Texas to Alaska (see link to story in sidebar). He stepped down as president of Escopeta Oil before the jack-up arrived in August, retaining a 20 percent working interest ownership in the Kitchen Lights leases with his long-time partners A.L. Berry and Taylor Minerals.

Escopeta Oil will soon to be re-named Furie Operating Alaska LLC, a subsidiary of Texas-based Furie Petroleum Co., which is owned by the German investors.

Furie Petroleum President Ed Oliver has replaced Davis in the Alaska company.

STEVE SUTHERLIN

The Spartan 151 jack-up rig in Cook Inlet, September 2011

That said, Davis remains in control of other Escopeta entities, including one that operates the onshore Hanna prospect in the Cook Inlet basin. None of those companies are connected to Furie.

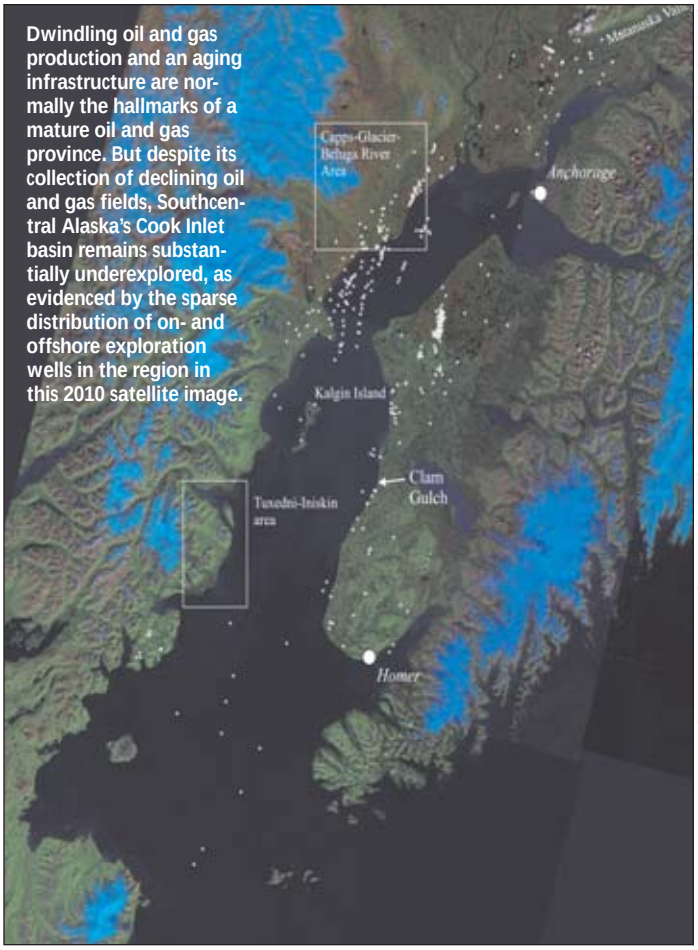
Furie, a privately held company, has production in Texas, an interest in some production on the Alabama-Mississippi state line, and some "things going on" in Louisiana, Oliver said in an Aug. 31 interview with Petroleum News.

Oliver said the company has high hopes for oil prospects in the unit. It must, he said, as the company to date has sunk close to $75 million in its Cook Inlet venture thus far.

Late in the season

Escopeta Oil's Alaska staff and contractors remained the same after Davis stepped down, including Vladimir Katic, the independent's Alaska project manager, who said natural gas would likely be developed first from Corsair — gas zones expected between 4,800

continued on page 94



Dwindling oil and gas production and an aging infrastructure are normally the hallmarks of a mature oil and gas province. But despite its collection of declining oil and gas fields, Southcentral Alaska's Cook Inlet basin remains substantially underexplored, as evidenced by the sparse distribution of on- and offshore exploration wells in the region in this 2010 satellite image.

ALASKA DEPARTMENT OF NATURAL RESOURCES, DIVISION OF GEOLOGICAL AND GEOPHYSICAL SURVEYS

Exxon's Point Thomson in limbo

Court case over disputed field grinds on, months after Alaska official announces a 'resolution in principle'

By WESLEY LOY
For Petroleum News

Editor's note: Technically, ExxonMobil is currently not an explorer in Alaska, but the development of its Point Thomson unit is the first step in getting the state's eastern North Slope's oil and gas reserves explored, developed and produced, so the legal status of Point Thomson leases are critical.

In mid-August, Alaska's natural resources commissioner signaled the fight over the Point Thomson field was coming to an end — that the state and unit operator ExxonMobil had reached a "resolution in principle."

But two months later, the conflict remained unsettled as lawyers for the state and the company continued to battle.

The Department of Natural Resources on Oct. 10 filed a new set of papers with the Alaska Supreme Court as part of its continuing effort to break up the Point Thomson unit and reclaim the state acreage there.

The state appeared to be pressing on in court as a fallback in the event the settlement effort failed.

Point Thomson is a rich but undeveloped oil and gas field along the Beaufort Sea coastline, next to the Arctic National Wildlife Refuge.

Point Thomson 'mockery'

DNR Commissioner Dan Sullivan announced the resolution in principle during an Aug. 15 legislative hearing.

Sullivan said resolving the dispute involved more players than just DNR and the oil giant.

"ExxonMobil now is discussing the provisions of the settlement with other working interest owners of the unit," he said, noting they had commercial terms to work out among themselves.

NAME OF COMPANY: Exxon Mobil Corp.
COMPANY HEADQUARTERS: Irving, Texas
ALASKA OFFICE: 3301 C St., Suite 400, Anchorage, AK 99503
PHONE: 907-561-5331
TOP ALASKA EXECUTIVE: Dale Pittman, Alaska production manager
ALASKA OIL & GAS PRODUCTION, NET: 120,000 barrels per day

Those other owners include BP, Chevron and ConocoPhillips. The three companies, along with ExxonMobil, are fighting to preserve the Point Thomson unit and the underlying leases.

The state began its quest to take back Point Thomson six years ago, when the state's oil and gas director at the time, Mark Myers, held that decades of nondevelopment at Point Thomson had made a "mockery" of the state's rights as a landowner.

Thus far, the oil companies have thwarted the state's attempts to terminate the unit. But the state was continuing its efforts before the Alaska Supreme Court.

Hugely valuable asset

DNR appealed to the high court in early 2010, after state Superior Court Judge Sharon Gleason reversed the agency's unit termination.

Gleason held, in part, that the oil companies had been denied a special hearing provided for in the Point Thomson unit agreement. DNR's lawyers argue that no such hearing is warranted.

For a long while, the case remained idle as the Supreme Court allowed the two sides to concentrate on settlement talks.

In recent months, however, the court proceedings have begun to pick up.

A history lesson

In doing the research for "Exxon in Alaska, a 90 year history," a magazine Petroleum News published in April 2011, we discovered several interesting things about the company and its predecessors:

• ExxonMobil, like most oil and gas companies, has been in Alaska off and on since it opened its first field office in 1921.

• During that time, the company operated or been a partner in numerous exploration wells all over the state, including Cook Inlet basin; Navarin, St.George and St. Matthew-Hall basins of the Bering Sea; Alaska Peninsula and Bristol Bay of the North Aleutian basin; the Gulf of Alaska basin; the Norton Sound basin; the Yukon Flats basin; the Copper River basin; and the Beaufort Sea, Brooks Range Foothills and North Slope.

• ExxonMobil has always been well-funded and that made a huge difference in its partnership with Richfield Oil, ARCO's predecessor. When all the other key players were leaving northern Alaska, ExxonMobil's financial strength allowed the ARCO/Humble team to drill one last well — the Prudhoe Bay discovery well, a location that was selected by Humble, part of ExxonMobil, geologists.

• ExxonMobil has been a leader in technological research and application in the oil and gas industry, especially in the Arctic.

• It takes a long-term view regarding its oil and gas projects, which results in consistency in investment decisions, first-rate project execution and applying best practices around the world.

• The company's organizational structure encourages the effective sharing of ideas, technology and best practices with its partners, which has made a huge difference in Alaska. For example, in the design of the trans-Alaska oil pipeline challenges associated with the operation of a warm pipeline in an unstable permafrost environment were solved by using ExxonMobil technology, elevating the pipe above ground and using pipes to transfer heat from below ground to the air in winter. Also, ExxonMobil's enhanced oil recovery technologies, including tailored well-stimulation programs, full-field reservoir simulation and special core analysis capabilities have been critical to increasing Prudhoe Bay conventional oil reserves by approximately 30 percent over initial estimates.

• As a partner, ExxonMobil often pushed exploration and development, such as example at the Point McIntyre field. Without two ExxonMobil geologists using new technology to look at the characteristics of the field, and a very aggressive company agent forcing operator ARCO to drill a third exploration well after two busts, the field might not have been developed for years.

For more information, check out "Exxon in Alaska" at www.starzhost.com/petroleumnews/pdfarch/emak11.pdf.

—Kay Cashman

The case has seen three major filings thus far: DNR's opening brief, a responding brief from ExxonMobil and its partners, and DNR's reply brief filed Oct. 10.

It's clear from this lumbering legal process that reaching a decision from the Supreme Court could take many months. Even then, the high court's decision might be to remand the case to the Superior Court for further proceedings.

Both sides have said they prefer settling the matter out of court.

Point Thomson is a hugely valuable asset. It holds an estimated 8 trillion cubic feet of natural gas plus hundreds of millions of barrels of petroleum liquids.

ExxonMobil discovered the field with wells drilled in the 1970s. The Point Thomson unit was formed in 1977. (Read a history of Point Thomson at www.petroleumnews.com/pnads/12414258.shtml.)

While some have accused ExxonMobil of "warehousing"

continued on next page

EXXONMOBIL *continued from page 67*

Point Thomson's riches, the company has cited the lack of a North Slope natural gas pipeline as a primary reason why the field has never been developed.

A more active ExxonMobil?

ExxonMobil is a huge player in Alaska's oil industry, but its role for many years primarily has been that of investor rather than explorer or field operator. Most notably, the company owns a 36.4 percent working interest in the BP-operated Prudhoe Bay oil field.

The settlement also could be important for advancing a natural gas pipeline, long an elusive economic development priority for the state. Point Thomson holds about a quarter of the known gas reserves on the North Slope, and many have seen the field as an important bargaining chip in the gas line game.

ExxonMobil's profile in Alaska could look very different depending on how the Point Thomson issue shakes out.

Responding to the state's move to reclaim the acreage, ExxonMobil between May 8, 2009, and Oct. 27, 2010, drilled a pair of wells at Point Thomson, the first wells drilled there since the early 1980s. The company has not disclosed any test results from the drilling.

The "development wells," as ExxonMobil termed them, were part of a promised $1.3 billion project to start producing 10,000 barrels a day of natural gas condensate by year-end 2014.

The U.S. Army Corps of Engineers is drafting an environmental impact statement for the Point Thomson project. The Corps was scheduled to release a draft EIS in November 2011, with a record of decision to be signed in August 2012.

The state would like to see much larger volumes produced from Point Thomson than what ExxonMobil has proposed. In court papers, state lawyers have said DNR officials were wary of ExxonMobil using a "minimal trickle" of production as a way to hang onto the Point Thomson leases. In years past, company executives themselves have talked of a project to produce up to 75,000 barrels a day.

Political, gas line impacts

Because of the years of frustration over Point Thomson, the terms of any state settlement with ExxonMobil are sure to be closely scrutinized. Politically, the unveiling of a settlement promises to be a defining moment for Gov. Sean Parnell, who will be judged on whether his administration made a good deal or got beat.

The settlement also could be important for advancing a natural gas pipeline, long an elusive economic development priority for the state. Point Thomson holds about a quarter of the known gas reserves on the North Slope, and many have seen the field as an important bargaining chip in the gas line game.

ExxonMobil currently is a partner with TransCanada Corp. on a proposed gas line from the North Slope to Alberta. TransCanada, a Calgary-based pipeline company, is attempting to recruit adequate gas shippers to support the project.

Sullivan, during his Aug. 15 legislative testimony, hinted the tentative Point Thomson settlement could have a bearing on "commercializing North Slope gas."

Contact Wesley Loy at wloy@petroleumnews.com

Great Bear going for the source

Approaching a year in Alaska, shale player is preparing exploration and evaluation campaign

By ERIC LIDJI
For Petroleum News

If a true revolution requires a change in structure, not just a change in style, then Great Bear Petroleum LLC plans to truly revolutionize oil exploration on Alaska's North Slope.

Although exploration companies have been refining drilling and seismic techniques for decades in the search for oil, they are mostly targeting conventional reservoirs, "pools" of oil trapped inside geologic structures. Great Bear plans to target source rock, the deep formations where the oil in those conventional reservoirs was created long, long ago.

As the local independent approaches its first anniversary in Alaska, it holds out a promise to turn around the decades-long slide in production for decades to come, but fulfilling that promise will require a lot of research, a lot of time, a lot of wells and a lot of money.

Expecting to drill from four, Great Bear is permitting six drilling sites along a 15-mile stretch of the Dalton Highway and trans-Alaska oil pipeline, a location that reduces environmental impacts by being a previously disturbed, active industrial area with existing access roads and gravel sites.

Because of that location along the haul road, Great Bear is in the enviable position of being able to drill year round, so long as it can secure the necessary permits and authorizations. The company hopes to start drilling its first wells in November; at the latest ion the spring.

NAME OF COMPANY: Great Bear Petroleum LLC
ALASKA HEADQUARTERS: Key Bank Plaza, 601 W. 5th Ave., Ste. 505, Anchorage, AK 99501
PHONE: 907-868-8070
TOP ALASKA EXECUTIVE: Edward A. Duncan, president and chief operating officer

Core samples first

Great Bear plans to drill 9,000 to 12,000-foot vertical wells to take core samples for lab analysis, followed by a sidetrack or lateral from each wellbore to conduct hydraulic fracturing and short-term production flow tests. The company plans to rotate through the six drill sites, likely drilling no more than four vertical wells, each with one lateral well.

The six sites are the Alcor No. 1, Merak No. 1, Mizar No. 1, Megrez No. 1, Dubhe No. 1 and Alioth No. 1, named after stars in the Ursa Major constellation, or: the Great Bear.

continued on next page

GREAT BEAR *continued from page 69*

Although it didn't have a drilling rig contracted as of mid-October, Great Bear plans to use a 1,500 to 2,000 horsepower unit that can be broken down into pieces and moved by truck.

'Proof of concept'

Great Bear's goal for its upcoming program is to achieve "proof of concept," or to demonstrate it can commercial producing the oil and natural gas liquids in its leases, a process that is fundamentally different from traditional North Slope oil exploration.

If successful, Great Bear hopes to define its drilling and completion strategy in time to begin production by 2013 and believes it can sustain production through at least 2074.

That is one of many eye-popping figures to come from Great Bear this year.

When Great Bear arrived in Alaska in October 2010, picking up some 500,000 acres in a North Slope areawide lease sale, few knew anything about the company or its motivations. Both soon became clear. COO and President Ed Duncan spent the 1980s in Alaska as a project supervisor and geologist focusing on exploration with Sohio (now BP) a position that shed insight into the convergence of technology and geology in the region, including the potential of three stacked source rocks in the central North Slope.

Great Bear believes those three plays produced the oil in Prudhoe Bay, Kuparuk and other massive fields across the North Slope, but the company also estimates 80 percent of the oil produced by those source rock is still trapped in those source rocks, and believes it can recover 5-6 percent of that using current technology, or around 2 billion barrels of oil and 12 trillion cubic feet of natural gas. As technology improves, that estimate could rise.

Not a 'blind land grab'

While shale oil, as oil-bearing source rocks are also known, is new to Alaska, it is emerging as one of the fastest growing trends in Lower 48 oil exploration and production.

The Bakken Shale is driving production increases in North Dakota and companies are flocking to the Eagle Ford Shale in South Texas. Those young plays already have competition. Chesapeake Energy Corp. CEO Aubrey McClendon recently called the Utica shale of eastern Ohio analogous but "economically superior" to the Eagle Ford.

The three stacked source rocks on the North Slope, from deepest to shallowest, are the Shublik shale, the Kingak shale and the Hue shale (also known as the GRZ or HRZ).

While these three formations stretch across much of northern Alaska, Duncan said Great Bear did not make "a blind land grab" in the October 2010 lease sale. Alaska Division of Oil and Gas Geologist Paul Decker confirmed that assessment by telling Petroleum News that he thought Great Bear had "very carefully selected" its acreage position.

"They are pretty well positioned, I would say, to pick up the appropriate thermal mature zone for the Triassic and lower Jurassic Kingak," Decker said in March 2011.

Conventional exploration aims to find a reservoir and simultaneously measure rock characteristics such as permeability and porosity, but source rock exploration measures factors like thermal maturity, organic chemistry, tectonic history and geomechanics.

Thermal maturity

Thermal maturity is the degree to which hydrocarbons have been "cooked" by underground temperatures and pressures. Shale plays can have an oil window, a wet gas window and a dry gas window, and explorers must delineate the bounds of each to find where to drill. While the North Slope source rocks are present under the prolific Barrow Arch, for instance, the source rocks in that region are too thermally immature to develop.

Organic chemistry measures, among other things, the amount of carbon and hydrogen and the nature of the hydrocarbon resources embedded in the rock formation. Tectonic history measures the natural fractures in the rock formation that an operator will attempt to artificially expand and prop open using hydraulic fracturing. Geomechanics measures the brittleness of the rock to determine if those rocks can be fractured effectively.

So for instance, while the North Slope source rocks do not appear to be as organically rich as the Bakken or Eagle Ford, they are thicker, Decker told the Senate Resources Committee in February. The Shublik is suitably brittle, like the Bakken and Eagle Ford, but contains heavier oil, while the Kingak and Hue are less brittle, but lighter, he said.

While Decker believes the Shublik is similar to the Eagle Ford, he added that existing information about the North Slope source rocks is still limited and will be boosted greatly by a pilot program (such as the one planned by Great Bear) and by an unconventional resource assessment of Alaska that the U.S. Geological Survey is currently undertaking.

Unique aspects of source rock

The unique attributes of source rocks influence exploration and development.

Unlike conventional reservoirs, there are no dry holes in source rock exploration because the formation is completely saturated with oil. Instead of a geologic risk, source rock poses an

engineering risk as companies attempt to design a cost-effective drilling method.

Whereas engineers at fields like Prudhoe Bay used natural underground pressure during the early years of production, source rock operators must expand existing rock fractures, sometimes repeatedly, to unlock oil trapped in small pores.

How small? Whereas the permeability of conventional reservoirs is measured in millidarcys, the permeability of shale formations is measured in microdarcys, a full order of magnitude smaller.

The most widely known component of this development technique is hydraulic fracturing — where operators inject large volumes or water and sand underground to expand and prop open fractures, often using chemical additives to manage rock characteristics — but the process involves many other decisions, such as the length of horizontal laterals running through the formation, the amount of fracturing stages and the volume of water.

(While the process is criticized across the Lower 48 based on concerns about water contamination, geologists such as Decker believe good engineering can keep the fractures in the shale formations separate from the fresh water aquifers thousands of feet above.)

While a shale operator might be technically capable of producing large amounts of oil, a poorly designed program could prove to be uneconomic. Therefore source rock operators must fine-tune a development strategy that maximizes production while keeping costs down. Complicating matters is the fact the decline curve on source rocks is sometimes steeper than conventional wells (although the relatively young life of shale development means operators only have a decade of information available from actual wells).

Three phases over 45 years

Great Bear acknowledges this learning curve.

The company said early work will be oriented toward research and development while it looks for technique that can bring down costs through "factory drilling," Duncan said.

That "factory" could be huge.

Great Bear is proposing to develop its leases over three 15-year phases, using 20 rigs to drill 200 wells per year, or as many as 9,000 wells over the entire life of the project.

The first two phases would develop the Shublik formation, but it doing so would drill through the Kingak and Hue Shales and collect information on those formations.

The third phase, beginning 30 years after development begins, would focus on the other formations, although Duncan said early results could justify expedited development.

As currently imagined, Great Bear would begin by drilling from eight-well pads spaced 160 acres apart and eventually cut the distance between those pads roughly in half. The company expects to drill wells that have a 9,000 to 11,000 foot vertical section and laterals extending between 4,000 and 6,000 feet horizontally. Those specifications are roughly analogous to the development tactics currently employed in the Lower 48.

Under that plan, Great Bear believes it can produce 200,000 bpd by 2020, 350,000 bpd by 2035, 450,000 bpd by 2041 and peak at 600,000 bpd by 2056 with production continuing around 450,000 bpd through 2074. Duncan said that profile could be increased by expediting the development process, and said he believes that source rock exploration might one day justify the construction of a "sister" oil pipeline from the North Slope.

That program would cost $2 billion per year plus infrastructure, or $10 million per well.

"We're a big company in a little company body," Duncan said.

While he has often said he is not looking for a partner (a fact soon to be disputed by the expected announcement of a partnership of sorts with oilfield service giant Halliburton), Duncan said Great Bear would be willing to share the cost of a major seismic shoot it plans to conduct from the border of the Arctic National Wildlife Refuge to the National Petroleum Reserve-Alaska.

Uncertainties remain

The newness of the program, though, means that uncertainties abound.

In addition to the technical puzzle Great Bear is currently seeking to solve, the company must consider supplies: tremendous amounts of water, drilling rigs and workers.

And the North Slope Borough is looking to adjust Great Bear's plan of operations, as well.

The nature of source rocks, a continuous formation running uninterrupted for hundreds of miles, will prompt changes to the existing rules for unitization and correlative rights, and the increase in drilling could require the state to hire more inspectors for the field.

Contact Eric Lidji at ericlidji@mac.com

On the Web

Previous Petroleum News coverage:

- "Taking a look at NS shale oil potential," in Oct. 2, 2011, issue at http://www.petroleumnews.com/pnads/904542196.shtml
- "Great Bear advances drilling plans," in Sept. 25, 2011, issue at http://www.petroleumnews.com/pnads/445986791.shtml
- "Great Bear raises eyebrows," in the March 6, 2011, issue at http://www.petroleumnews.com/pnads/312301231.shtml
- "A source concept," in the Nov. 7, 2010, issue at http://www.petroleumnews.com/pnads/900969131.shtml

Oil, gas and UCG for Linc Energy

Using conventional resources for unconventional exploration to produce gas from deep coal deposits

By ERIC LIDJI
For Petroleum News

Linc Energy Alaska Inc. is taking an untraditional approach to Alaska.

The Australian independent is primarily interested in developing the prodigious coal resources in the state in an unconventional way, and is using conventional gas prospects to fund that effort.

The company drilled its first well in Alaska in 2010, but is planning to significantly increase in operations in the state in 2011 and especially in 2012.


CORRI FEIGE

Linc is primarily interested in underground coal gasification, or UCG.

UCG involves creating a synthesis gas underground in coal seams too deep to mine traditionally. By injecting air and water into an ignited coal seam, an operator can prompt a chemical reaction that rearranges the carbon and oxygen into methane, or natural gas.

Internationally, Linc is following a strategy that combines UCG with gas-to-liquids technology to produce valuable liquid hydrocarbons from these deep coal deposits.

NAME OF COMPANY: Linc Energy
ALASKA HEADQUARTERS: 3000 C St., Ste. 103, Anchorage, AK 99503
PHONE: 907-868-8660
TOP ALASKA EXECUTIVE: Corri Feige, general manager Alaska

Limited optimism at LEA No. 1

Linc arrived in Alaska in March 2010, acquiring 123,000 acres from San Francisco independent GeoPetro Resources Inc. Throughout the year, Linc acquired additional leases and continued permitting work for a well in the Point Mackenzie area.

That acreage included state, Cook Inlet Region Inc. and Alaska Mental Health Trust leases near Point Mackenzie and in the Trading Bay region on the west side of the inlet.

Using infrastructure inherited from GeoPetro and its own momentum, Linc spud the LEA No. 1 well in October 2010, less than nine months after arrived in the state.

Linc drilled to 6,323 feet and encountered "a number of gas bearing horizons" and "a number of significant coal seams," but decided the structure was "too tight" to produce without "swabbing" the well with large amounts of formation water.

However, Linc said the region "appears to be highly suitable for UCG."

"I'm disappointed about the final result of LEA No. 1, but in the scheme of opportunity and activity that is currently ongoing within Linc Energy globally, LEA No. 1 represents only about 1 percent of the opportunities we are currently pursuing around the globe," Linc Energy CEO Peter Bond said in May. "At the end of the day exploration is a numbers game, the more smart wells you drill the more likely you are going to be successful. Linc Energy has an extraordinary record of getting our exploration targets right the majority of the time and I still think the coal measures we've discovered via the LEA No. 1 program will add a lot of value to the Company in the longer term."

Undiscouraged, Linc announced that it would move ahead on plans to drill another exploration well, this time in the Trading Bay region on the west side of Cook Inlet.

That well would use existing roads to follow up on drilling in the region by Shell Oil in the 1960s that encountered natural gas while in pursuit of a deeper oil target in the region.

UCG exploration drilling

While it pursues natural gas in Cook Inlet, Linc is also pursuing coal across Cook Inlet and the Interior, and crude oil in the foothills of the Brooks Range Mountains.

In February 2011, Linc received a UCG exploration license from the Alaska Mental Health Trust Land Office covering 181,414 acres across three areas of the state.

The Mental Health Trust proposed a seven-year license at $1 per acre. If the licensing leads to leasing, the Trust proposed to offer the land for an initial five-year term at $4 per acre per year that could be extended for another five more years by production.

"At the end of the day exploration is a numbers game, the more smart wells you drill the more likely you are going to be successful."
—Linc Energy CEO Peter Bond

Before the license, Linc estimated that its Alaska leases overlaid some 20 billion tons of "known" coal deposits. It has called the potential of the license area "extraordinary."

Linc recently announced plans for a three well exploration campaign in the license area.

The company planned to drill the TYEX01 well in September on its 25,375 acres in the Tyonek area, some four miles west of Beluga on the west side of Cook Inlet. The company said the coals of interest are based on Phillips Petroleum Co.'s 1973 North Tyonek State 58848 No. 1, just northwest of TYEX01, as well as some information gathered from Superior Oil Co.'s 1967 Three Mile Creek No. 1, southwest of TYEX01.

Then, Linc plans to drill the HEEX01 well in late January on its 60,270 acres in the Interior some seven miles north of Healy. The well would target the Suntrana formation coal seams in the Usibelli group, but without previous deep exploration drilling in the region, Linc said its estimates for drilling depth are based on structural geologic analysis.

For both wells, Linc plans to use the Tester Simco 4000 drilling rig to drive conductor casing some 300 feet and the Boart Longyear coring rig to core approximately 3,500 feet.

Linc plans to acquire new 2-D seismic data in the license area near HEEX01, but said the proposed well site does not appear favorable for a structural or stratigraphic trap for natural gas. The results of the survey, though, will help define the depth and thickness of gravel in the region and the depth of the thicker coals of interest to UCG, Linc said.

Linc also holds 82,123 acres of the exploration license on the Kenai Peninsula.

Umiat exploration, at last?

While Linc pursues overlooked conventional natural gas prospects and unconsidered deep coal prospects, it is also going after one of the oldest oil discoveries in Alaska.

In June, Linc paid $50 million for controlling interest in the Umiat oil field by purchasing 100 percent of Renaissance Alaska LLC, which held an 84.5 percent interest in Renaissance Umiat LLC, which in turn holds a 100 percent working interest in the Umiat oil field and an 80 percent net revenue interest in the project.

The 19,358-acre prospect covers four leases — two state and two federal — along the boundary separating state-owned land in the central North Slope from the National Petroleum Reserve-Alaska, some 80 miles west of the trans-Alaska oil pipeline.

The U.S. Navy discovered Umiat in 1946 and the field is believed to hold about 1 billion barrels of oil in place, but remoteness, low reservoir pressure and permafrost have kept it from being developed. With improved technology, the permafrost and pressure can be managed, and now with the state studying an all-season road from the Dalton Highway to the Umiat area, the prospect is suddenly looking more realistic.

Renaissance staked 10 wells in the Umiat area in late 2007, but couldn't secure funding for a drilling program. Renaissance shot seismic in the area, allowing it extend the terms of the federal leases. The company also asked the U.S. Bureau of Land Management to include an Umiat development scenario, along with accompanying transportation and infrastructure projects, in its upcoming integrated activity plan for the NPR-A.

As of Oct. 30, Linc was still looking for a drilling rig, with plans to drill up to five wells at Umiat this winter.

"We will be using a packed snow road for access. We do not have an agreement with Anadarko for cost sharing, though we are working on a road sharing agreement with them for a portion of our snow road that will be co-located with theirs. … Rigs are tight but we are making headway," a company official told Petroleum News.

The company leases nearly 117,000 acres of state land in Alaska, and has an office in Anchorage. Project manager Corri Feige is the top person for Linc in Alaska.

Contact Eric Lidji at ericlidji@mac.com

On the Web

Previous Petroleum News coverage:

- "Explorers up from 5 to 7," in Oct. 2, 2011, issue at http://www.petroleumnews.com/pnads/644204709.shtml
- "Linc applies for coal exploration wells," in Sept. 4, 2011, issue at http://www.petroleumnews.com/pnads/727978473.shtml
- "Linc acquires Renaissance Umiat field; seismic, drilling planned," in June 19, 2011, issue at http://www.petroleumnews.com/pnads/963193784.shtml
- "Linc says LEA reservoir too tight; next well planned at Trading Bay," in May 8, 2011, issue at http://www.petroleumnews.com/pnads/48019598.shtml
- "Aussie indie picks up Cook Inlet leases," in March 7, 2010, issue at http://www.petroleumnews.com/pnads/827279356.shtml

Marathon activity in CI diminishing

Drills fewer and few exploration wells in Cook Inlet basin, but continues gas production

By ALAN BAILEY
Petroleum News

In the decades since Marathon Oil Co. first arrived in Alaska in 1954, operating then as the Ohio Oil Co., Alaska has become a world-class oil province, Anchorage has expanded into a vibrant mid-sized city and the production of oil and gas from Cook Inlet has peaked and declined. Marathon, a major gas producer in the Cook Inlet basin has been supplying Anchorage with utility gas continuously since 1961. And in 1969 the company partnered with what is now ConocoPhillips to build on the Kenai Peninsula the first U.S. liquefied natural gas facility, to export LNG from Cook Inlet to Japan.


WADE HUTCHINGS

In 1996 the company sold its Alaska oil properties to focus on Cook Inlet natural gas production. The company now operates gas fields in the Beaver Creek, Cannery Loop, Kasilof, Kenai, Ninilchik, North Trading Bay and Sterling units, while also having interests in several non-operated fields. The company owns and operates several pipelines that form part of the Cook Inlet basin natural gas infrastructure. The company also operates its own gas storage facility in part of the Kenai gas field, using the facility to warehouse summer-produced gas to ensure the availability of gas to meet gas supply contractual obligations during periods of high winter gas demand.

But times are changing.

Tightening supplies

As production from aging Cook Inlet gas fields declines, the availability of Cook Inlet gas for delivery to Southcentral Alaska power and gas utilities has tightened. Concerns about the delivery of gas at adequate rates during peak winter cold have increased and utility gas prices have risen, as what used to be an excess of gas dwindles to a potential future shortage.

Faced with reduced gas supplies for the Kenai Peninsula LNG plant and with an inability to secure new contracts for the sale of the modest quantities of LNG now being delivered from the plant, in February 2011 ConocoPhillips and Marathon announced that they were going to close the plant. The companies originally planned the closure for the spring, but some additional unexpected shipments of LNG to Japan and China kept the facility open through October, perhaps longer. When the facility does close, the owner companies plan to mothball it for possible future use.

Meantime Marathon has continued using its Glacier Rig No.1 to drill new development wells in its gas fields, albeit at a slower rate than in earlier years. In investor presentations made in the fall of 2010, the company said that it planned to drill between

NAME OF COMPANY: Marathon Alaska Production LLC
COMPANY HEADQUARTERS: 35350 Kalifornsky Beach Rd. PO 1949, Kenai, AK 999611
PHONE: 907-283-1305
TOP ALASKA EXECUTIVE: Wade Hutchings, Alaska asset team manager
ALASKA OIL & GAS PRODUCTION, NET: Average 104 million cubic feet per day 2010

two and six wells per year in Alaska, a sharp drop from the 10 or more wells per year that it drilled in the mid-2000s. In later U.S. Securities and Exchange Commission filings the company said that it anticipated drilling one to three wells per year in Alaska in 2011 and 2012.The company drilled nine wells in 2008, six wells in 2009 and three wells in 2010.

The only exploration drilling that Marathon has done in recent years was for one of its 2010 wells, the Sunrise LK2 well in Cook Inlet Region Inc. land, inside the Kenai National Wildlife Refuge on the Kenai Peninsula. Beyond saying that the well "encountered a zone of interest," Marathon has not commented on the results of its Sunrise drilling.

Summer gas

One practical problem with the closure of the LNG plant is the loss of the plant's role in providing a market for summer-produced gas, when local utility gas demand is quite low. Without the plant's ability to process summer gas not required for utility use, some gas wells might have to be shut in, thus putting future production from those wells at risk as water encroaches into well bores.

However, in March 2011 Carri Lockhart, the then production manager for Marathon's Alaska operations, told the Alaska Legislature that the company's storage facility in the Kenai gas field has the capability to warehouse all of the company's summer gas production, thus enabling the company's wells to continue to operate year-round. In addition, in its Nikiski field Marathon has been testing some new technology for stabilizing gas production after restarting a shut-in well or after throttling up a well that has been choked back, Lockhart said.

The tightening utility gas supply situation in Southcentral Alaska has caused Marathon to take some actions to improve the flexibility with which gas can flow through its gas pipeline infrastructure — as different gas wells come into play, responding to fluctuations in gas demand as winter temperatures drop, it is necessary to be able to switch the routings by which the gas moves from wellheads to market delivery points.

Bidirectional flow

Lockhart told the Legislature that Marathon was implementing a bidirectional meter in its Kenai Nikiski pipeline on the Kenai Peninsula to allow more flexible use of the company's Kenai gas storage facility. And in September the company applied to the Regulatory Commission of Alaska to allow bidirectional flow on the Cook Inlet Gas Gathering System under the Cook Inlet. CIGGS, operated by Marathon on behalf of itself and Chevron subsidiary, Union Oil, was designed to only flow gas west to east. But power utility Chugach Electric Association wants to be able to flow Kenai Peninsula gas east to west, if necessary, to bolster gas supplies for the power station at Beluga on the west side of the Inlet. Bidirectional gas flow through CIGGS could also help with gas deliveries

As Marathon moves towards its 59th year in Alaska, a new manager has taken over the helm of its Alaska operations. In September Wade Hutchings replaced Carri Lockhart as Alaska asset team manager.

to and from a new gas storage facility that Cook Inlet Natural Gas Storage Alaska is building near the City of Kenai.

In October RCA granted temporary approval for some necessary changes to CIGGS and the Kenai Nikiski pipeline, to allow bidirectional flow in CIGGS during the 2011-12 winter.

The Beluga pipeline, operated by a Marathon subsidiary, connects CIGGS with the Beluga power station and to the Enstar Natural Gas Co. gas transmission line connecting the west side of the Cook Inlet with the Matanuska Susitna Valley and Anchorage. Bidirectional flow has been possible in the Beluga pipeline for some time, but in early 2011 Beluga Pipe Line asked RCA to approve a radical new tariff for that line, saying that the existing tariff was not workable. Pipeline tariffs are critical factors in determining how companies in the Cook Inlet gas industry choose to move gas around the pipeline infrastructure. RCA has yet to issue a final ruling in the Beluga pipeline tariff case, although the various parties involved have submitted a settlement agreement.

As Marathon moves towards its 59th year in Alaska, a new manager has taken over the helm of its Alaska operations. In September Wade Hutchings replaced Carri Lockhart as Alaska asset team manager. Hutchings will doubtless have plenty to deal with as Marathon continues to adjust to the ever changing Cook Inlet gas industry.

Contact Alan Bailey at abailey@petroleumnews.com

NordAq drills for gas on CIRI land

Small independent drills prospect in Kenai National Wildlife Refuge west of Swanson River field

By KRISTEN NELSON
Petroleum News

A new entrant began exploring for natural gas in 2011 on Cook Inlet Region Inc. lands on the Kenai Peninsula.

NordAq Energy of Anchorage drilled the Shadura No. 1 in February on CIRI subsurface in the Kenai National Wildlife Refuge northeast of Nikiski.

NordAq president and major shareholder, Bob Warthen, said in a Feb. 5 news release that "NordAq is an early stage company."

He said the company would "not have been able to establish itself without the encouragement" of CIRI and local companies "and we are particularly grateful for their support."

FORREST CRANE

BOB WARTHEN

Warthen has worked the inlet since 1967, first for Union Oil where he was a regional geologist for 26 years, and then as a consultant.

The Shadura No. 1 targeted historic Cook Inlet gas producing zones in the Upper and Middle Tyonek formation, with the shallower Beluga formation a secondary objective. Total depth was projected at 14,556 feet. Completion data is not currently available from the Alaska Oil and Gas Conservation Commission, which reports completion date and depth.

NordAq used Glacier Drilling Rig No. 1 to drill the well from a temporary drill pad.

NAME OF COMPANY: NordAq
ALASKA OFFICE: 9350 Nordic St., Anchorage, Alaska 99507
PHONE: 907-346-1840
TOP ALASKA EXECUTIVE: Bob Warthen

ANILCA

The prospect is west of the Swanson River field; the pad and most of the ice road were on lands managed by the U.S. Fish and Wildlife Service and on subsurface inholdings owned by CIRI.

NordAq Energy of Anchorage drilled the Shadura No. 1 in February on CIRI subsurface in the Kenai National Wildlife Refuge northeast of Nikiski.

NordAq has an agreement with CIRI on leases CO61647, CO61648 and CO61649, a combined 10,800 acres of CIRI subsurface estate holdings. Section 1110(b) of the Alaska National Interest Lands Conservation Act allows for access to CIRI subsurface inholdings within the Kenai National Wildlife Refuge for exploration, testing and development of hydrocarbons.

The environmental assessment done for the project said CIRI has entitlements to some 200,000 acres of subsurface estate adjacent to the leases being explored by NordAq under provisions of the Alaska Native Claims Settlement Act, and has development rights to oil, gas and coal resources on these lands.

Kenai National Wildlife Refuge lands are within the Cook Inlet hydrocarbon basin, identified in ANILCA as a favorable petroleum geologic province. Refuge lands were classified in the 1950s to identify areas that would not be subject to oil and gas leasing, and since that time leases for the Swanson River, Beaver Creek and Birch Hill oil and gas fields have been issued under the authority of the Minerals Leasing Act of 1920, with 13,252 acres leased and developed.

NordAq also holds some 22,354 acres of State of Alaska oil and gas leases.

Pioneer expanding Oooguruk efforts

Dropped Cosmopolitan, but expanding Oooguruk, gearing up for Torok exploration program

By ERIC LIDJI
For Petroleum News

Pioneer Natural Resources Alaska Inc. is expanding and contracting at the same time.

While the local subsidiary of the Texas independent continued to relinquish assets across Alaska this year, it also redoubled its efforts at its signature development in the state.

As one of the large independents brought to Alaska by Armstrong Oil and Gas over the past decade, Pioneer arrived in the early 2000s looking to shorten the amount of time it took for companies to bring new fields into production in the state. Pioneer bought a majority stake in the offshore Northwest Kuparuk prospect — now known as Oooguruk — and quickly racked up other leases across the state, but after unpromising drilling efforts, the company shifted its focus away from exploration in favor of developing two areas: the Oooguruk unit off the North Slope and the Cosmopolitan unit in Cook Inlet.


JUDY PATRICK
KEN SHEFFIELD

After dropping Cosmopolitan earlier this year, Pioneer is now focused entirely on Oooguruk, where it plans to continue developing three horizons in the coming year.

After building a gravel island in the state waters of the Beaufort Sea north of the Kuparuk River unit, Pioneer brought the Oooguruk unit online in June 2008, becoming the first independent and the fourth overall operator to produce on the North Slope. The company owns 70 percent of the unit and Eni Petroleum owns the remaining 30 percent.

Moraine/Torok/Nuna

Although Pioneer initially seemed bullish about exploring and developing overlooked prospects across Alaska, it quickly settled into a more narrow approach in the state.

The company drilled five exploration wells in northern Alaska — both operated and non-operated — but stopped its exploration program in late 2007 because of discouraging results and relinquished some 300,000 acres of federal leases in the National Petroleum Reserve-Alaska held in partnership with ConocoPhillips and Anadarko Petroleum.

Over the following years, though, Pioneer expanded its operations at Oooguruk.

In early 2009 Pioneer increased its resource estimate for the unit by 40 percent based on initial drilling results that exceeded expectations, and in 2010 it announced plans to target an additional horizon at the unit that it said would increase production even further.

Torok now targeted

When Pioneer sanctioned Oooguruk it began developing two distinct pools, the Kuparuk pool and the deeper and larger Nuiqsut pool, but early exploration drilling at the unit, including the Cronus No. 1 well in 2006, also targeted a shallower Torok formation.

After years of drilling wells through Torok to get to deeper pools, Pioneer accumulated enough information to justify developing the formation, calling it the Moraine prospect.

According to Pioneer, the Torok formation at Oooguruk consists of 200 to 250 feet of thinly laminated sands and shales located some 1,000 feet above the Kuparuk formation.

Existing data on Torok dates back to the Sinclair Colville River No. 1 well from 1965, the Texaco Colville Delta No. 2 and No. 3 wells from the 1980s, the ARCO Kalubik No. 1 and No. 2 wells from the 1990s and 18 wells Pioneer drilled through the formation over the years, including the 3,000-foot ODST-45A drilled from the offshore island directly into the formation in 2010 and produced at an initial rate of 1,100 barrels per day.

Because the Torok reservoir extended past the southern boundary of Oooguruk, and a considerable distance from the existing gravel island, Pioneer proposed the Nuna Development Project in late 2010. The project would include two new onshore drill sites on the east side of the Colville River to allow Pioneer to approach the reservoir from the opposite direction. A system of gravel roads would connect the new drill sites to the existing North Slope infrastructure grid in the region around the Kuparuk River unit.

The plans currently call for processing that oil through existing facilities, but Pioneer also held out of the possibility of building standalone processing facilities at the location.

Pioneer currently rents space on facilities operated by ConocoPhillips in the Kuparuk River unit, but is facing problems in that arrangement. In addition to being at the whim of the maintenance schedule of the larger and older field, Pioneer recently said it lost some 2,500 and 3,000 barrels of oil per day of production in 2011 because of water shortages and is looking for an independent supply source to avoid that problem in the future.

The Alaska Department of Natural Resources formed the Torok participating area in July and added four leases to the unit in September to bring the entire reservoir into the unit boundaries. Pioneer believes Torok holds 690 million barrels of oil in place and estimated that it can produce up to 25 percent through primary and secondary recovery methods.

continued on page 79

NAME OF COMPANY:
Pioneer Natural Resources
ALASKA OFFICE: 700 G St Ste. 600, Anchorage, AK 99501
TOP ALASKA EXECUTIVE: Ken Sheffield, vice president, Alaska
PHONE: 907-277-2700
ALASKA OIL & GAS PRODUCTION, NET: Current net production of oil: 6,336 bpd in 2010

Pioneer changes leadership

UPDATE

Ken Sheffield, president of Pioneer Natural Resources' Alaska division, is returning to Dallas to assume leadership of Pioneer's newly established corporate engineering group. Sheffield has headed the company's Alaska operation since 2003. Todd Abbott will take his place, effective Nov. 15.

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Fish printing workshop at Salmon Camp, a conservation program of the Bristol Bay Economic Development Corp. with support from The Nature Conservancy

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XTO Energy, Inc.

The Nature Conservancy
715 L Street · Suite 100 · Anchorage, AK 99501 · alaska@tnc.org · 907-276-3133 · nature.org/alaska

PIONEER *continued from page 77*

Torok pilot wells

Under the most recent plan of exploration running through 2014, Pioneer must drill three Torok pilot wells from the existing gravel island. The first, T-45A, is currently in production. The second, T-46i, is an injection well scheduled to be completed by the end of September. The third, T-39, is a producer that must be completed by March 31, 2012.

The state also gave Pioneer until June 30, 2014, to sanction the Nuna development.

Should Pioneer move ahead, it said it plans to build the gravel roads and the first Nuna drill site pad, DS-1, by June 30, 2015, in order to begin drilling in the expansion area by 2016. Pioneer is also proposing to build a second onshore Nuna drill site in the future.

This winter it plans to drill two wells as part of that program.

The offshore Sikumi No. 1 well would be a vertical well starting on ADL 355037, some two miles southwest of the existing Oooguruk Island, but still within the Oooguruk unit boundaries. The onshore Nuna No. 1 well would be a directional well starting on ADL 25528, some 2.5 miles northwest of KRU drill site 3S within the Kuparuk River unit.

Pioneer hopes to begin drilling Nuna No. 1 in early January, and Sikumi No. 1 in mid-February, and continue hydraulic fracturing and flow testing operations through the end of April. Produced fluids would be taken to existing production facilities in the region.

While Sikumi No. 1 would be plugged and abandoned after completion, Pioneer said it plans to preserve Nuna No. 1 as a development well for future work in the region.

Leaving Cosmopolitan

For years, Pioneer supplemented its efforts at Oooguruk through its work at the Cosmopolitan unit located off the southern Kenai Peninsula in the Cook Inlet basin.

The prospect dates back to the Pennzoil Starichkof State No. 1 discovery well in 1967 and the Hansen No. 1 and Hansen No. 1-A well and sidetrack ConocoPhillips drilled in 2002 and 2003. Pioneer acquired a 50 percent stake in the 25,000-acre state and federal unit in 2005 and picked up the remaining half and the title of operator the following year.

In 2007, Pioneer drilled the Hansen 1A 1L sidetrack from the same onshore pad used by ConocoPhillips and later announced that the three wells together produced at about 1,000 barrels per day,

JUDY PATRICK

Oooguruk Ice Island with Nabors rig 27E, winter 2003

enough to encourage the company to keep evaluating the prospect.

The sudden drop in oil prices in late 2008 delayed further drilling at Cosmopolitan but the company eventually completed a workover of Hansen 1A-L1 in early 2010 and even laid out a development plan that involved trucking oil to the Tesoro refinery in Nikiski.

In January 2011, though, Pioneer gave up on Cosmopolitan, saying that the results of a recent flow test led the company to reduce its estimate of the size of the offshore field.

DNR subsequently leased the prospect under special terms to Apache Corp.

Alaska is increasingly competing with Texas in the Pioneer portfolio.

While Pioneer expands its operations at Oooguruk, it is also expanding its operations in the Lower 48, particularly in the Eagle Ford shale and Permian basin of Texas. Of its $2.1 billion budget for 2011, about $100 million is dedicated for Alaska while nearly $1.3 billion is slated for the Spraberry field in the Midland-Odessa area of West Texas.

Asked in August whether Pioneer is still interested in international and frontier plays like South Africa and Alaska, Sheffield said "it's always an option in regard to whether or not to look at divesting those two assets," but added that the company sees South Africa as "running out" and sees Alaska as "growing significantly over the next several years."

Contact Eric Lidji at ericlidji@mac.com

Repsol takes a big bite out of Alaska

Spanish major planning 15-well North Slope, Beaufort program via partnership with Armstrong, GMT

By ERIC LIDJI
For Petroleum News

Almost overnight, Repsol YPF, S.A. went from being a leaseholder without any definite exploration plans for Alaska to one of the most active exploration companies in the state.

The Spanish major held federal leases in both the Beaufort and Chukchi seas for years, but didn't capture the attention of state policymakers until March 2011, when it launched a $768 million exploration program across 494,211 acres of state land and water.

Repsol is partnering on the program with 70 & 148 LLC, a subsidiary of Denver-based Armstrong Oil & Gas, the independent responsible for bringing Pioneer Natural Resources and Eni Petroleum to Alaska. GMT Exploration Co. LLC is also a partner on the program. Through the deal, Repsol picked up a 70 percent interest in 157 leases.

Repsol said it planned to conduct "a broad-reaching exploration and development program" that involved "collaborating on all aspects of the program" with 70 & 148 LLC. The vast majority of the $768 million transaction cost — perhaps as much as $750 million — will go toward actual exploration, according to Petroleum News sources.

> *"The North Slope of Alaska is an especially promising area for Repsol as it has already shown to be oil-rich and carries low exploratory risk."*
> *—Repsol Chairman Antonio Brufau*

This winter, Repsol plans to run five rigs and drill 15 wells, one of the most ambitious single season exploration programs undertaken anywhere in Alaska in recent history.

"This deal is a perfect fit in our efforts to balance our exploration portfolio with lower risk, onshore oil opportunities in a stable environment," Repsol Chairman Antonio Brufau said in March. "We are confident that our worldwide experience combined with a partner with an extensive local knowledge is going to deliver value in the near future."

Starting offshore, now onshore

Repsol traces its lineage to a state-owned petroleum industry monopoly created before the Spanish Civil War and reorganized often in the following decades. Repsol became a private company in the late 1980s and gradually expanded internationally, buying the Argentinean company YPF in 1999 and establishing a vast Latin American portfolio.

In the past decade, Repsol made liquefied natural gas a major segment of its portfolio, while expanding in North and South America, the Caribbean, Europe, Russia and Africa.

With some 40,000 employees working in more than 30 countries, Repsol is currently one of the 10 largest private oil companies in the world. The company earned 4.7 billion euros of income in 2010 (around $6.5 billion) up from 1.5 billion euros in 2009 (around $2 billion).

Repsol first arrived in Alaska through two partnerships in the outer continental shelf Beaufort Sea. Although it did not bid in sale 195 or 202, Repsol later acquired a 20 percent interest in acreage held by Shell (40 percent) and Eni (40 percent), and a 20 percent interest in acreage held by Eni (80 percent) leased during those federal sales.

NAME OF COMPANY: Repsol E&P USA Inc.
COMPANY HEADQUARTERS: 2001 Timberloch Place, Ste. 3000
The Woodlands, Texas 77380
PHONE: 281-297-1000
TOP ALASKA EXECUTIVE: Greg Smith, director US business unit

In February 2008, Repsol made $14.4 million in high bids on 93 blocks in sale 193 in the Chukchi Sea. Although the company hasn't made any official plans for that acreage, Petroleum News sources have suggested Repsol might be interested in partnering with Shell, Eni and/or Statoil. None of those companies, though, have confirmed those rumors.

"The North Slope of Alaska is an especially promising area for Repsol as it has already shown to be oil-rich and carries low exploratory risk. This acreage also helps increase the company's presence in OECD countries," the company wrote in a press release in March, adding, "Repsol has significantly boosted its onshore and offshore exploration activities in the last five years, resulting in some of the world's largest oil and gas discoveries."

Using five rigs for program

The acreage Repsol acquired in March is clustered in three general areas: south of the Kuparuk River unit, in the White Hills region and near the offshore Oooguruk unit.

Repsol plans to build five ice pads this winter and drill a vertical well and two sidetracks from each pad. The wells would range in measured depth from 12,000 to 16,000 feet.

The five proposed drilling locations would run down the fairway between the Colville River unit to the west and the Oooguruk and Kuparuk River units to the east.

Repsol is planning a vertical well and as many as two sidetracks at each location:

*Qugruk No. 1 would be in the Colville River Delta near ARCO Kuukpik No. 3 and Gulf Colville Delta State No. 1. Repsol plans to drill the well using the Nabors rig 2ES.

*Qugruk No. 2 would be about five miles east of Qugruk No. 1. Repsol plans to drill the well using the Doyon Arctic Fox, a lightweight truckable rig that Pioneer Natural Resources Alaska Inc. first used at the NE Storm and Cronus units in 2006 and Anadarko Petroleum Corp. later used to drill two wells at its Gubik Complex in early 2009.

*Qugruk No. 3 would be about five miles south of Qugruk No. 1 and five miles west of the ConocoPhillips' Placer wells. Repsol plans to drill the well using Nabors rig 105AC.

*Qugruk No. 4 would be an offshore well several miles off the northern coast of the Colville River unit. Repsol plans to drill the well using Nabors 106AC.

*Kachemach No. 1 would be farther south, just east of the Meltwater participating area of the Kuparuk River unit. The proposed site is about five miles southwest of the Chevron Ruby St. No. 1

well and five miles northwest of the BP Exploration (Alaska) Narvaq No. 1 well, and near several of the Union Oil Co. of California White Hills wells.

Repsol plans to drill Kachemach No. 1 using Nabors rig 9ES, the rig that Brooks Range Petroleum Corp. used earlier this year to drill North Tarn No. 1 several miles to the west.

The region is what is known as the "billion-dollar fairway," a rich, not fully explored, north-south trending long rectangle with a western edge a few miles inside NPR-A and an eastern boundary reaching the Kuparuk and Tarn oil fields. The fairway extends north to south from the near-shore Beaufort Sea to an area several miles south of Tarn. The Alpine oil field and its satellites lie inside the fairway.

Repsol is already preparing for that drilling program, although it continues to work with the North Slope Borough on permitting and with residents of the Colville Delta region to be sure it is doing what is necessary to conduct a safe exploration campaign.

The company conducted fieldwork this summer to define the route and location of the ice roads and pads it plans to build this winter and to indentify water sources for that construction. The company planned to begin monitoring soil temperatures along the route this September using thermistor strings and will pre-pack the roads in November and December.

Once temperatures permit in December and January, Repsol plans to build 30 miles of onshore ice roads and 30 miles of offshore ice roads. The company will also build seven ice pads, two near Drill Sites 3S and 2P in the Kuparuk River unit for staging, and five — four onshore and one offshore — for a 15-well drilling campaign. Repsol plans to drill "at least" one vertical well and, "time permitting," up to two sidetracks from each pad.

The staging pad near Drill Site 2P will be about 600 feet by 600 feet and used to support the southernmost drilling site. With Drill Site 2P located along existing all season roads that connect to the Dalton Highway. The pad will house a 40 to 60-man camp.

The staging pad near Drill Site 3S will be about 600 feet by 1,200 feet and used to support the four northern drilling locations. The site is also connected to existing all-season roads. The pad will house a 120-man camp. Repsol said it "may share some of the staging capabilities with another operator in the area," but offered no further details.

The four onshore drilling pads will be about 500 feet by 500 feet, but could be expanded to 600 feet by 600 feet "if needed." The offshore drilling pad will be larger with additional design elements to accommodate the harsh conditions of Arctic coastal waters.

The company expects to begin demobilization and clean up in April or May.

Another stab at White Hills

Although the company is focused on the Colville River Delta this winter, the Kachemach No. 1 well shows that Repsol is interested in the beguiling White Hills prospect.

The White Hills region is onshore, close to the trans-Alaska oil pipeline and recently explored. Chevron drilled five shallow wells across the large play in 2008 and 2009.

Although Chevron never released results, the State of Alaska believes the region is both oil and gas prone, and recently released Alaska Oil and Gas Conservation Commission well logs suggest Chevron was targeting oil and gas prospects in the Brookian formation.

Although some of the acreage Repsol acquired in the March is prospective for shale source rock, Repsol appears to be only interested in conventional oil plays for now.

On the Web

Previous Petroleum News coverage:

- "Permitting under way," in Sept. 18, 2011 issue at http://www.petroleumnews.com/pnads/759134526.shtml
- "Repsol takes 70%," in March 13, 2011, issue at http://www.petroleumnews.com/pnads/566892168.shtml
- "Repsol sees nice alternative in Alaska," in March 13, 2011, issue at http://www.petroleumnews.com/pnads/106276292.shtml
- "GMT excited about Alaska opportunities," in Nov. 7, 2010, issue at http://www.petroleumnews.com/pnads/269836170.shtml
- "Chukchi high five," in Feb. 10, 2008, issue at http://www.petroleumnews.com/pnads/347813743.shtml

GMT starting out on Slope

While 70 & 148 parent company Armstrong is well known in Alaska, the other partner in the program, GMT Exploration, is a relative newcomer without much history in the state.

Although the company arrived in Alaska as a minority partner of Armstrong on the North Fork unit in the southern Kenai Peninsula, Denver-based GMT first acquired its own acreage in 2010. The company picked up 10 leases in three spots in the Beaufort Sea area wide sale in February: on the northern edge of the Oooguruk unit, north of the National Petroleum Reserve-Alaska and north of a block of ConocoPhillips/Anadarko acreage west of the Colville River unit. GMT grabbed more acreage in the North Slope areawide sale that October, picking up eight leases that extended its existing block to the west.

GMT Exploration began as an offshoot of GMT Capital Corp., a Georgia investment firm founded in the 1990s. GMT Exploration is currently based out of Denver, and while it has common shareholders with GMT Capital, it is run independently.

GMT maintains a small natural gas production base in Alaska through its 20-30 percent stake in the leases at North Fork and holds 37,825 net acres in State of Alaska leases.

Contact Eric Lidji at ericlidji@mac.com

Savant plans another year at Badami

Looks to drill up to three sidetracks and possibly exploration well in Red Wolf prospect

By ERIC LIDJI
For Petroleum News

Savant Alaska LLC plans to continue its attack on production problems at the Badami unit this coming year by drilling as many as three coil tubing sidetracks on existing wells into the Badami sands, and could also drill another Red Wolf exploration well, depending on rig availability.

The goal is to increase production at the eastern North Slope field by bringing new technology to bear on the complex geology of the reservoir. After three years of renewed operations, Badami is producing 1,300 barrels of oil per day for the year, according to Savant Alaska President Greg Vigil. "We just want to increase production, period," Vigil told Petroleum News on Sept. 21. "We don't have a production target, if you will."

Unit operator BP Exploration (Alaska) Inc. brought the local subsidiary of Denver-based independent Savant Resources LLC on as a partner at Badami in mid-2008 in the hopes of re-starting and ultimately sustaining production at the troubled field using horizontal drilling and hydraulic fracturing. ASRC Exploration is a minority partner on the project.


GREG VIGIL

Under a ninth plan of development submitted to the Alaska Department of Natural Resources in late August, BP proposed work on four existing development wells, as detailed plans for an future exploratory well. That plan is still awaiting approval.

Stimulation, fracturing

The plan calls for Savant to stimulate the B1-18A well to "determine the economic viability of additional application of stimulated horizontal well construction in the Badami Sands interval." Savant would use coiled tubing frac technology, propellant frac technology or hydraulic fracture treatment technology to stimulate the well.

Savant drilled the B1-18 sidetrack in 2010 into younger and shallower Brookian rocks.

The plan also calls for Savant to use hydraulic fracturing to stimulate the B1-38 well in order to evaluate the impact on productivity and reserves, and to gather information about a reservoir in the Killian sands targeted in a previous seismic survey. That work could lead to future horizontal wells and a participating area for the Killian sands pool.

Savant drilled B1-38 into the Red Wolf prospect in early 2010 and found oil in two horizons. The first was the deeper Kekiktuk formation that also contains the oil reservoir for the Endicott field to the west. The second was the shallower late Cretaceous Killian sands that Savant used when it brought Badami back online in September 2010.

Savant attempted to hydraulically frac-

NAME OF COMPANY: Savant Alaska
COMPANY HEADQUARTERS: Denver, CO
TOP EXECUTIVE OFFICER: Pat Shaw, president and CEO
TOP ALASKA OFFICER: Greg Vigil, executive vice president
PHONE: 303-592-1905
ALASKA OIL & GAS PRODUCTION, NET: Current net production of oil: 1,300 bpd through Badami farm-in

ture that well this year, but Vigil said the operation wasn't successful because of issues related to pressure limitations at the wellhead. The company did not perform a planned hydraulic fracturing operation on the B1-18 well because it needed "some different technology on the Slope" before it could continue.

Red Wolf requires rig

The plan also calls for Savant to drill an exploratory well from a "remote ice pad to the crest of the Red Wolf (Kekiktuk) prospect," subject to rig availability. "We would like to drill the well this winter but as you know rigs are tight. We are working multiple fronts with respect to securing a rig," Vigil told Petroleum News in an email Sept. 26.

The plan calls for Savant to sidetrack the B1-16 and B1-28 wells using a coiled tubing drilling rig to further evaluate the impact of horizontal drilling on the Badami Sands.

B1-16 and B1-28 are older wells at the Badami unit.

Finally, the plan calls for Savant to continue producing at all wells currently online, and to continue using a chemical paraffin inhibitor program implemented over the past year to improve productivity and reduce operating expenditures by keeping wells online.

The ninth plan of development would run from Nov. 15, 2011, to Nov. 15, 2013.

Over the period covered by the eighth plan of development — Nov. 15, 2010, to Nov. 15, 2011 — Savant produced from the B1-18A, B1-38 and B1-36 wells, but abandoned plans to convert the B1-21 production well into a gas injection well and later shut-in the well.

From Kupcake to Badami

Savant picked up leases in Foggy Island Bay some 20 miles west of Badami in 2006 and drilled an exploration well from an ice island into the Kupcake oil prospect in early 2008.

The Kupcake No. 1 well failed to uncover hydrocarbon resources worth pursuing. A partner on the program said the target interval in the Kemik formation "was thinner than anticipated" and the porous Cretaceous sandstone proved to be

BP EXPLORATION (ALASKA) INC.

The Badami unit was brought back on line Nov. 5, 2010.

"water wet," meaning that the porous sandstone rocks in the reservoir tended to absorb water more easily than oil.

Savant re-emerged at Badami in 2008, taking on an even more formidable challenge.

The turbidite formation at Badami is a series of channels, like fingers on a hand. The trouble has been getting them to "communicate" so that oil moves from one to the next.

When BP began developing Badami in the late 1990s, it expected the field to produce 30,000 to 35,000 barrels of oil per day, but the first wells proved to be disappointing.

Facing a low total production rate of 2,500 bpd, BP suspended production at Badami from February to May 1999. BP suspended production again in 2003 after daily production dropped to 1,350 bpd and kept the field offline until 2005, when it planned to use horizontal drilling techniques to tap oil from the many reservoir compartments.

In September 2007 the field was taken off line once again due to low production rates.

Contact Eric Lidji at ericlidji@mac.com

On the Web

Previous Petroleum News coverage:

- "Savant announces restart at Badami," in Nov. 14, 2010 issue, at http://www.petroleumnews.com/pnads/13338896.shtml
- "Savant and ASRC taking on Badami," in Oct. 6, 2008, issue at http://www.petroleumnews.com/pnads/941869368.shtml
- "Savant to plug and abandon Kupcake," in May 4, 2008, issue at http://www.petroleumnews.com/pnads/52071589.shtml

The Environmental Protection Agency has isued air quality permits for Shell to use the drillship Frontier Discoverer for exploration drilling in the Chukchi or Beaufort Seas. Shell plans to use the vessel for Chukchi Sea drilling.

SHELL EXPLORATION & PRODUCTION

Shell exec optimistic about 2012

OCS drilling permits coming through; thinks can withstand litigation; wants early '12 decision

By ALAN BAILEY
Petroleum News

NAME OF COMPANY: Shell
COMPANY HEADQUARTERS: Hague, Holland
ALASKA OFFICE: 3601 C St., Ste. 1334, Anchorage, AK 99503
PHONE: 907-770-3700
TOP ALASKA EXECUTIVE: Pete Slaiby, vice president

Another year has passed and Shell is still waiting for permission to drill some exploration wells in its leases in Alaska's Beaufort and Chukchi seas.The company now wants to commence drilling during the open water season of 2012 and has said that it will make a go/no-go decision on that drilling in late October 2011, with the decision dependent on the status of the company's permits at the time.

In September Pete Slaiby, Shell's vice president in Alaska, told the Alaska Support Industry Alliance that an early drilling decision is necessary, given the time required to organize and deploy the large number of assets needed for its operations.

PETE SLAIBY

Robust permits

Although it is likely that any permits issued to Shell will be litigated, with some litigation certain to extend beyond Shell's late October deadline, the company feels confident that after several cycles of court action, its permits are now sufficiently robust to withstand further appeals.

"We feel we have some very strong permits and we feel there is reason to be optimistic that our permits will survive a court challenge," Slaiby told Petroleum News on Sept. 30."Litigation will always be a risk we have.When we make the decision (to deploy), it will be (dependent) on how strong we think our permits are … and we think our permits are strong."

Shell clearly envisions the Alaska Arctic outer continental shelf as a strategic area of future business growth and is willing to commit a multiyear effort and massive cost into furthering its Arctic plans — Slaiby told the Alliance that Shell's Alaska expenditure since the company returned to the state in 2005 was approaching $4 billion.

Having purchased a substantial number of Beaufort Sea leases in 2005, the company first planned to drill in the Beaufort in 2007, targeting its Sivulliq prospect on the western side of Camden Bay.

continued on page 86

Arctic Engineering Pioneers

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137
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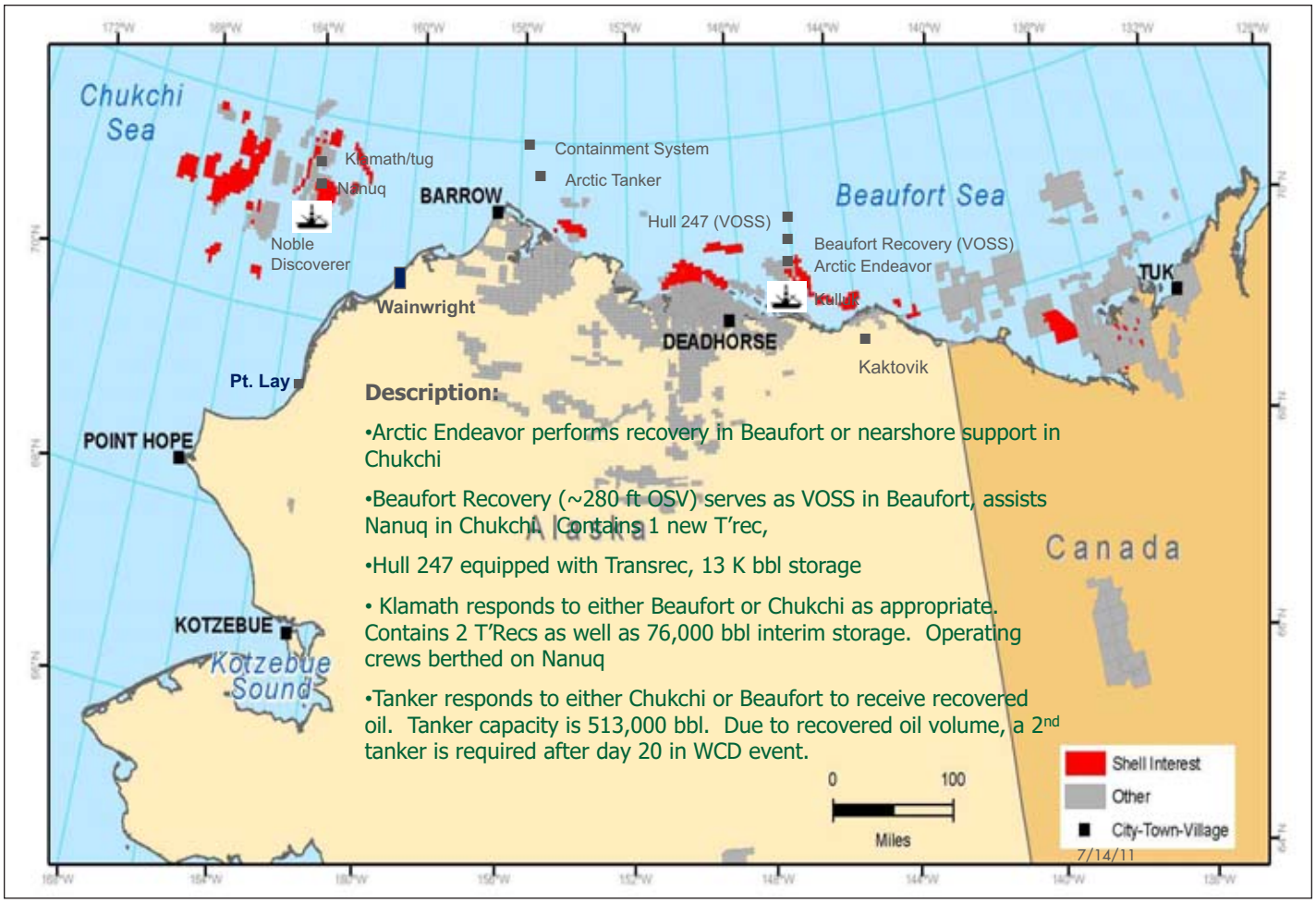

SHELL EXPLORATION & PRODUCTION

Shell's self-contained oil spill response plans for exploration drilling in Alaska's Beaufort and Chukchi seas involve the placement of oil spill response vessels close to drill sites, with an oil containment dome device and oil storage tanker positioned halfway between the two drilling arenas.

SHELL *continued from page 84*

But in the face of appeals against the approval of various permits that the company needed before starting drilling, the company's Beaufort Sea drilling plans have repeatedly been postponed and modified.

Chukchi a priority

Shell has said that its top priority in Alaska is exploration in the Chukchi Sea, a remote region with world class hydrocarbon potential. In a 2008 Chukchi Sea lease sale the company put $2.1 billion on the table for a series of leases across various swathes of territory in the region. Of that massive sum, $1.5 billion went on leases on just one prospect, the Burger prospect, a structure 25 miles in diameter, known to contain a major pool of natural gas and lying about 80 miles offshore the western end of the North Slope. A well drilled by Shell into the Burger structure in an earlier phase of Chukchi Sea exploration, around 1990, discovered the gas pool.

"We truly believe this (prospect) is a game changer," Slaiby told the Alliance.

Slaiby told Petroleum News that, based on evidence such as oil staining found in rock samples from the old Burger well and pressures in the lower part of the Burger structure, Shell thinks that there is likely to be oil in the Burger prospect. He also pointed out that seismic data gathered from Burger by both Shell and ConocoPhillips prior to the 2008 lease sale had clearly generated enthusiasm for the prospect, given the high bonus bids that both companies had offered for Burger leases.

"We do believe that there exists a large probability that there is oil there," Slaiby said.

Lease sale litigation

But Shell's plans for Chukchi Sea drilling, with Burger as the key drilling target, have been stymied by an appeal against the

On the Web

Previous Petroleum News coverage:

- "BOEM affirms 2008 Chukchi Sea lease sale; Shell plan already in," in Oct. 9, 2011, issue at http://bitly.com/oAa6Mi
- "Back to the court," in Oct. 9, 2011, issue at http://bitly.com/p9OeEE
- "New Shell permits," in Sept. 25, 2011, issue at http://bitly.com/qqUPWz
- "Deadline ahead," in Sept. 18, 2011, issue at http://bitly.com/qEbMEA
- "One step at a time for Shell's OCS plans," in Aug. 14, 2011, issue at http://bitly.com/qKVs1x
- "Laying out the plan," in July 17, 2011, issue at http://bitly.com/oVNr1X
- "Going for Chukchi again," in May 22, 2011, issue at http://bitly.com/phQfVl

environmental impact statement that the then U.S. Minerals Management Service prepared for the 2008 lease sale. The appeal, launched by the Native Village of Point Hope, the Inupiat Community of the Arctic Slope and 12 environmental organizations, went to the federal District Court for Alaska. In July 2010 the court ruled that the Bureau of Ocean Energy Management, Regulation and Enforcement, the government agency that replaced MMS after the Deepwater Horizon disaster, must add some material to the original EIS — the court banned all lease-related oil and gas exploration activities in the Chukchi Sea until the EIS changes are made and the lease sale is re-affirmed.

Meantime Shell, in conjunction with ConocoPhillips and Statoil, has been continuing to work on baseline environmental science for the Chukchi, including an annual program of environmental monitoring, using arrays of offshore acoustic recorders. Shell has also been conducting surveys of potential drilling sites. Slaiby told Petroleum News that Shell has also been evaluating potential pipeline routes across the National Petroleum Reserve-Alaska for the transportation of future Chukchi Sea oil east to the trans-Alaska oil pipeline. Slaiby told the Alliance that a pipeline across NPR-A could act as a catalyst for the opening of many small and mid-sized oil fields in the reserve.

But although in May 2011 Shell submitted a Chukchi Sea plan of exploration to BOEMRE for approval, the agency placed its review of the plan on hold until the lease sale court case is resolved.

BOEMRE has since published a new supplemental EIS for the 2008 lease sale, voluntarily including a new section analyzing the potential impacts of a very large oil spill in the Chukchi, in addition to adding material that the agency said complied with the 2010 court ruling. And on Oct. 3 the Bureau of Ocean Energy Management, the successor agency to the resource management parts of BOEMRE, published a record of decision based on the final SEIS, upholding the lease sale and presumably paving the way for Chukchi Sea exploration to move ahead.

Beaufort: major potential

Shell also sees the Beaufort Sea as having major potential for oil and gas development, given the region's excellent resource potential and relative proximity to the existing North Slope oil infrastructure. The company owns leases in the Camden Bay area and in Harrison Bay, on the northwest side of the central North Slope.

SHELL EXPLORATION & PRODUCTION

Shell plans to use its floating drilling vessel, the Kulluk, for exploration drilling in the Beaufort Sea.

"There's the potential for years of production (in the Beaufort Sea) at Gulf of Mexico deepwater kinds of flow rates," Slaiby told the Alliance.

And oil from the Beaufort could band-aid the trans-Alaska oil pipeline, where low and declining oil flow rates are causing concerns about future pipeline operations, he said.

The company's Beaufort Sea drilling plans have focused both on the Sivulliq prospect and on the neighboring Torpedo

continued on next page

SHELL *continued from page 87*

prospect. However, the company has also conducted a 3-D seismic survey in the Harrison Bay area in partnership with Eni Petroleum, the co-owner of Shell's Harrison Bay leases.

Following its multiyear attempts to start drilling in the Beaufort Sea since buying its first Beaufort Sea leases in 2005, Shell's latest exploration plan involves drilling up to four wells in the Beaufort Sea, targeting the Sivulliq and Torpedo prospects and starting in the summer open water season of 2012. The company wants to conduct this drilling in conjunction with a parallel drilling program in the Chukchi Sea, involving the drilling of up to six Chukchi Sea wells, with Burger as the prime target. Shell's floating drilling platform, the Kulluk, would drill the Beaufort Sea wells, while the drillship Noble Discoverer would drill in the Chukchi.

Plan approval

Although government agency review of Shell's Chukchi Sea exploration plan has remained on hold, pending resolution of the Chukchi Sea lease sale litigation, in August BOEMRE granted conditional approval of Shell's Beaufort Sea plan. On Sept. 29 Earthjustice, acting on behalf of the Native Village of Point Hope and a who's-who list of environmental organizations, duly filed suit in the U.S. Court of Appeals for the 9th Circuit, appealing the Beaufort Sea plan approval. Briefs in the case are due in January 2012.

However, especially given the fact that in April 2010 the 9th Circuit Court dismissed appeals against approval of Shell's 2011 Beaufort Sea and Chukchi Sea exploration plans, Shell feels confident that its latest Beaufort Sea plan will withstand legal challenge, Slaiby told Petroleum News.

Air quality permits

Obtaining federal air quality permits for the emissions from Shell's planned drilling operations has also proved to be a major challenge for the company, with various cycles of permit issuance and appeal becoming a significant factor in the delays to the start of the company's hoped for drilling. The U.S. Environmental Protection Agency has jurisdiction over air quality permitting on the Alaska outer continental shelf but, with a lack of previous experience of permitting for OCS drilling, EPA has been struggling to issue permits that can withstand appeal. Questions such as defining the circumstances under which a drilling vessel and its attendant fleet become regulated industrial emissions sources have dogged various attempts to issue legally resilient permits.

Following a successful appeal to the Environmental Appeals Board against EPA approval of Shell's air quality permits for the company's planned drilling in 2011, the EPA has prepared new permits for Shell's planned operations in 2012, with those permits taking account of the issues that the EAB had raised with the 2011 permits. On Sept. 25 EPA issued the final version of the permit for operations by the Noble Discoverer in either the Chukchi Sea or Beaufort Sea, starting in 2012 — Shell expects the issue in mid-October of a similar permit for the Kulluk for operations in the Beaufort Sea.

Three major issues

In terms of overall permitting and approval for its Alaska Arctic OCS exploration activities, Shell has had to deal with three major issues: local Native concerns about the potential impacts of offshore industrial activities on subsistence hunting, in particular the hunting of bowhead whales; concerns about the adequacy of

scientific knowledge of the fragile Arctic environment; and questions about the feasibility of responding to an accidental oil spill in the often ice laden Arctic waters.

Shell has responded to the concerns of North Slope residents through numerous meetings and discussions with local communities. As a result, in the interests of limiting industrial disturbance to migrating whales and other wildlife, the company scaled back its annual drilling plans from an original concept of concurrent drilling with two rigs in the Beaufort Sea, to a single rig operation involving a limited number of wells per drilling season; a similar strategy applies to the Chukchi Sea. The company's exploration plans now include provisions for a cessation to drilling during whale hunts, with the removal of the drilling fleet from the hunt area.

Shell has also implemented a system of communications centers in North Slope coastal villages, with the objective of achieving effective communications between offshore oil operations and community subsistence hunting activities.

Environmental science

From the perspective of Arctic environmental knowledge, Shell and the other oil companies exploring in the Arctic OCS have mounted a multiyear environmental monitoring program, primarily involving the collection of information about marine mammal activity through the use of offshore acoustic recorders. And in November 2010 Shell and the North Slope Borough initiated a joint program of scientific research into the offshore environment.

The program is focusing on an improved understanding of the potential impacts of oil and gas development and on meeting North Slope community science needs relating to subsistence issues, while encouraging the use of traditional knowledge of the environment.

The North Slope Borough has long expressed major concerns about the potential risks involved in Arctic offshore oil and gas exploration and development: The borough has set out some policies such as a zero discharge standard that it sees as essential to environmental protection. Meantime, some sectors of the North Slope communities remain adamantly opposed to offshore development, with the Native Village of Point Hope, for example, accusing the oil companies and the federal government of threatening the future of the Arctic subsistence culture.

Self-sufficient spill response

From the perspective of oil spill risks in remote regions with minimal support infrastructure, Shell has adopted a policy of maintaining a self-sufficient oil spill response capability, while placing high priority on spill prevention through factors such as effective well planning. The company has organized a substantial oil spill response fleet which the company says is more than capable of responding to a worst case discharge scenario from any of the wells that the company plans to drill. The fleet includes a purpose-built, ice-capable oil spill response vessel, oil spill response barges and a 513,000-barrel capacity, ice-class, double hulled oil tanker. Another Arctic oil spill response vessel is under construction. The fleet comes with an arsenal of boom, skimmers and other response equipment.

While some people have questioned the effective operation of oil spill response equipment in ice-infested water, Shell has pointed to successful testing done in Norway of some offshore oil recovery tactics in ice conditions.

Shell has said that its spill response fleet would be deployed in parallel with any drilling operation, ready to step in immediately were an oil spill emergency to arise. And different elements of the oil spill response arrangements would be available for the drill site, for nearshore response and for shoreline response, Shell has said.

Shell has said that its top priority in Alaska is exploration in the Chukchi Sea, a remote region with world class hydrocarbon potential.

Lessons learned

Following the Deepwater Horizon disaster in the Gulf of Mexico and the blowout of BP's Macondo well, Shell has been supplementing its oil spill contingency arrangements, using lessons learned from the disaster. In particular, the company is fitting its blowout preventers with double shear rams and implementing two new pieces of technology: a "capping stack" that can be bolted onto the top of a well's blowout preventer and an Arctic containment dome for gathering oil floating upwards from an out-of-control wellhead.

Slaiby told Petroleum News that the capping stack, a device that could block the flow of oil from a well should the well's blowout preventer fail, looks to be a particularly effective means of dealing with an Arctic well blowout, although Shell sees a blowout as extremely unlikely, given the relatively straightforward wells that the company plans to drill. The containment dome would be a backup device, enabling any oil escaping from the well to be gathered and pumped into storage vessels at the sea surface.

Shell has said that, in the context of concurrent drilling operations in the Chukchi and Beaufort Sea, the company would position the capping and containment systems on a vessel at a midpoint between the two operations, ready to move into action if needed. And the drilling vessel in use in one drilling operation could, if necessary, transit to the other drilling operation, to provide relief well drilling support were there to be a blowout.

"We've only got one chance to do this right," Slaiby told the Alliance. "If it looks like we err on the side of caution, I make no apologies for it."

And, given these comprehensive oil spill contingency arrangements and the intense scrutiny already given to its proposals, Shell feels confident that its exploration plans can withstand legal scrutiny.

"We've never felt more confident about being able to proceed," Slaiby said. "And frankly we've never been more confident about the (Alaska) portfolio that we're sitting on."

The oil in an area like the Chukchi Sea is enough to change national politics by eliminating the need to import oil from a country like Saudi Arabia, he said.

Contact Alan Bailey at abailey@petroleumnews.com

Statoil assessing Chukchi seismic

Anticipates drilling decision by mid-2012; assessing possible drilling sites, starting permitting

By ALAN BAILEY
Petroleum News

Norwegian oil major Statoil is still figuring out its continuing plans for Chukchi Sea exploration, determining the resources it needs and deciding on the timing of any exploration drilling, Lars Sunde, the head of Statoil Exploration Alaska's Anchorage office, told Petroleum News Sept. 7. The company now has the final results from the 3-D seismic survey that it carried out in its Chukchi Sea leases in the fall of 2010 and is assessing these results, anticipating a drilling decision by the middle of 2012, Sunde said.


LARS SUNDE

The company has identified two to three prospects from the seismic and is assessing those in detail, having already named two of the prospects Augustine and Amundsen. The prospects lie about 100 miles offshore, with the village of Wainwright being the closest point on the Chukchi Sea coast.

The company is a relative newcomer to Alaska, having purchased 16 leases in the 2008 Chukchi Sea lease sale, most of the leases being jointly purchased with Eni Petroleum. The company made its first tangible signal of interest in the state in 2007 when it joined the Alaska Oil and Gas Association and the Resource Development Council, while also hiring a local representative in Anchorage. The company's operations in the state have expanded, with the company moving into a new midtown Anchorage office in June 2011. In 2010 the company obtained a 25 percent interest in 50 ConocoPhillips Chukchi Sea leases.

NAME OF COMPANY: Statoil
COMPANY HEADQUARTERS: Stavanger, Norway
ALASKA OFFICE: 3800 Centerpoint Drive, Ste. 920, Anchorage, AK 99503
PHONE: 907-339-5452
TOP ALASKA : Lars Sunde, head Statoil Anchorage office

Drill site evaluation

During the 2011 Arctic open water season Statoil has been evaluating some potential drill sites on its prospects, with Gardline Marine Sciences conducting some shallow seismic surveys using the M/V Duke, looking for shallow drilling hazards, and with Fugro Synergy doing shallow coring to test the characteristics of the seabed.

There have been no ice-related delays to this year's work program in the Chukchi Sea, and Statoil's permits for the work came through in time, Sunde said.

"The (shallow) seismic is going well and we expect to complete this work in about two to three weeks," he said. "And the geotechnical coring just started this week and it's expected to be completed by the end of the month if the weather cooperates."

A preliminary evaluation of the shallow seismic indicates that there are no hazards in the prospective drilling sites.

A decision on the timing of any drilling by Statoil in its own leases will come as part of the company's overall drilling decision expected in 2012. Meantime, the company is starting work on permitting for eventual drilling, Sunde said.

Anticipates clarity

Litigation and appeals over the 2008 Chukchi Sea lease sale and the permitting of Shell's planned Chukchi Sea drilling have led to uncertainty over the regulatory situation for Chukchi Sea exploration. However, as Shell and ConocoPhillips move toward drilling in the Chukchi, Sunde expects the regulatory fog to dissipate, with greater regulatory clarity and maturity emerging before Statoil is ready to start its drilling operations. And so far the litigation over Chukchi Sea exploration has not delayed Statoil's plans: The company has not been planning to drill in 2012 or 2013 and has sufficient time remaining on its leases to do the work that it intends to carry out, Sunde said.

"We will work with the agencies to help provide clarity if we can. … We believe that adds value to everyone involved," he said.

Communication & cooperation

Success in a region such as the Chukchi Sea requires communication and cooperation with all stakeholders in the region, Sunde said. For example, Statoil has met with people from North Slope communities to discuss the company's plans.

:"We have drilled 64 wells in the Barents Sea … and have not had any accidents which would be in conflict with the zero harmful discharge criteria. I think that experience is something we can bring to the table when we're planning our work in the Chukchi Sea."
—Lars Sunde, head of Statoil Exploration Alaska's Anchorage office

"We have engaged in public meetings with the villages of the North Slope and we will continue to do so going forward," Sunde said, adding that villagers have challenged Statoil on various issues associated with oil exploration, with possible conflicting interests between industry and subsistence activities being of particular concern.

"This has been discussed with the villages and we appreciate their concerns," Sunde said. "It's important and we will have to continue to talk to the villages over these issues and we will do so in the future."

Statoil is planning a series of meetings on the North Slope, probably around October and November, to review the results of its 2011 field season and to report to the villages on findings such as marine mammal observations, he said.

Zero harmful discharge

Looking further ahead, with oil spill risks perhaps being many people's biggest single concern when it comes to drilling on the Arctic outer continental shelf, Statoil feels confident that it can evaluate and manage the risks associated with each of its prospects.

continued on page 94

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UltraStar plans return to Dewline

Alaska independent wants to follow up 2009 well this winter, but drilling rigs hard to find

By ERIC LIDJI
For Petroleum News

As the smallest active explorer on the North Slope, UltraStar Exploration LLC proves that Alaska isn't too big for anyone, but also proves that small companies must operate at their own pace if they hope to find success among major players and giant fields.

The Alaska-based independent consists essentially of one man — Jim Weeks — and a group of investors. Subject to rig availability, UltraStar plans to drill one well this winter at its Dewline unit, four leases wedged into the coastline north of the Prudhoe Bay unit.


JUDY PATRICK
JIM WEEKS

North Dewline No. 1 is the third North Slope exploration well for Weeks in the past decade. Weeks helped found Winstar Petroleum LLC in the late 1990s, UltraStar in 2002 and Dewline Petroleum LLC in 2008 with an overlapping group of investors. Today, UltraStar holds some 4,533 acres over the four-leases that make up the Dewline unit.

Dewline No. 1 'typical'

Following the Winstar dry hole at Oliktok Point State No. 1, UltraStar obtained 3-D seismic over its leases west of Point McIntyre showing several prospects. The company decided to pursue the oil-prone Dewline Deep prospect, believed to hold between 5 million and 20 million barrels of oil in the Ivishak and Sag River formations.

Following years of negotiations that included talk of possibly expanding the Prudhoe Bay unit to include Dewline Deep, UltraStar and BP came to terms on a framework for access to the drill site and for the future use of Lisburne facilities. UltraStar drilled the Dewline No. 1 well near Point Storkersen in early 2009 using the Akita-Doyon Arctic Wolf rig.

The 9,990-foot vertical well encountered its target in the Ivishak formation. Weeks declined to offer detailed results but called Dewline "a typical exploration well. Not a train wreck. We came pretty close to the operational amount we expected to spend."

The Alaska Department of Natural Resources formed the Dewline unit in June 2009 and expanded the unit in March 2011 to include an offshore section. Under the existing five-year plan of exploration, UltraStar must drill a second well at Dewline by May 31, 2013.

UltraStar expects North Dewline No. 1 to be a 14,000- to 15,000-foot directional well with a 6,000-foot displacement to reach an offshore target from an onshore pad. Like its predecessor, the North Dewline No. 1 well will target the Ivishak formation, but could also explore potential targets in the Sag River and Kuparuk formations, Weeks said.

The only other well drilled to date in the area now included in the Dewline unit is the Point Storkersen No. 1 well drilled by the Hamilton Brothers in 1969 to a measured depth of 11,473 feet. That well tested an oil target in Sag River formation, flowing at 315 barrels per day and 735 bpd from two different depths in the Ivishak Sandstone.

NAME OF COMPANY: UltraStar Exploration LLC
ALASKA HEADQUARTERS: 1629 W. 11th Ave., Anchorage, AK 99501
PHONE: 907-258-2969
TOP ALASKA EXECUTIVE: Jim weeks, managing member

Tiny company, big voice

Through UltraStar, Weeks also continues to advocate for independents in Alaska.

Over the past year, weeks called for the Alaska Legislature to indefinitely extend the Small Producer Credit. The credit pays up to $12 million per year to companies that produce less than 50,000 barrels of oil equivalent per day (and smaller credits for companies that produce between 50,000 and 100,000 barrels of oil equivalent per day).

The credit is set to expire in 2016, although if a company brings a field online between 2006 and 2016, then the credit lasts for nine years from the start of production.

"Rather than have a specific year when the Small Producer Credit expires, I recommend that it stay in place for each reservoir

continued on page 97

ESCOPETA *continued from page 65*

and 12,000-12,500 feet.

From the time of discovery Katic predicted Escopeta could have gas online in 18 months.

"This is just full steam ahead," Katic told the Senate Resources Committee on Oct. 20. "We're quite confident that we will find oil and gas."

Not a difficult prediction to make since Shell, Phillips and ARCO drilled five exploration wells at Corsair between 1962 and 1993. The wells all had gas shows and some also tested small quantities of oil, but at the time developing gas without oil wasn't economically feasible, so the gas was never tested.

Later, energy absorption analysis would show the wells were not drilled to the proper depths for an oil discovery in the deeper Tyonek-Hemlock formations.

In 2003, Forest Oil, a former owner of the Corsair leases, said that its analysis of the prospect, gleaned in part from well data and 2-D seismic shot in 1997, indicated Corsair alone might hold as much as 137 million barrels of oil.

One possible hitch in Katic's plans was a stop-drilling date of Oct. 31, part of Escopeta's oil spill plan agreement with the Alaska Department of Environmental Conservation. DEC recently gave Escopeta clearance to drill beyond that date.

"The original approval done in June had a drilling end date of October. … With more precise weather and up to date ice outlook information we were able to extend that to Nov. 15 — at the latest. Monitoring will continue and if conditions warrant they drilling will be suspended earlier," Betty Schorr, DEC's Division of Spill Prevention and Response program manager for the Industry Preparedness Program manager, told Petroleum News Oct. 31. (This issue of The Explorers magazine goes to press Nov. 1, so watch for updates in Petroleum News and PN's News Bulletin Service.)

Escopeta needs to find about 150 billion cubic feet of natural gas and/or 50 million to 100 million barrels of oil to justify development, Katic said. The company is considering four development options and already favors two potential schemes.

Prefers outrigger caisson

Should the company produce only natural gas at Corsair, it favors a six-well campaign using an outrigger caisson platform, or a 14-foot diameter post, similar to one leg of Osprey platform, Katic said, filled with conductors going down to the sea floor.

Simultaneously, Escopeta would build a pipeline either to ConocoPhillips' Tyonek platform to the north or to the onshore East Foreland production facilities to the south.

The module could be built in Anchorage, or even in Kenai, Katic said, but he also noted that this precise development option has never been tried in Cook Inlet before. That said, by going "full steam ahead" the caisson option could deliver natural gas to the grid within 18 months from discovery and is "by far" the cheapest option, according to Katic.

"I certainly hope that does happen," House Speaker Mike Chenault said about the fast development plan free of interference,

continued on page 96

STATOIL *continued from page 91*

Statoil employs a zero harmful discharge philosophy in all of its worldwide operations, achieving its zero harm goals through actions such as minimizing its operational footprint, conducting effective planning and using materials that are environmentally friendly, Sunde said.

In addition to complying with its own internal standard of no harmful discharges into the sea, Statoil will ensure that it is working within U.S. regulations for environmental protection, Sunde said.

And Statoil is used to the challenges of working in remote regions, he said.

"We have drilled 64 wells in the Barents Sea … and have not had any accidents which would be in conflict with the zero harmful discharge criteria," Sunde said. "I think that experience is something we can bring to the table when we're planning our work in the Chukchi Sea."

Cooperative approach

Much of the cost of drilling in the Chukchi Sea will likely be associated with logistical support for the drilling operation and the provision of oil spill response capabilities, rather than with the drilling itself, Sunde said.

So Statoil sees benefit in cooperation between companies when it comes to operating in such a challenging and remote region. There is much scope, for example, for coordination between all companies engaged in Chukchi Sea exploration when it comes to oil spill contingency planning, sharing oil spill response resources and providing industry-wide oil spill response capabilities, he said.

Currently, Statoil is participating with Shell and ConocoPhillips in a continuing Chukchi Sea environmental monitoring program, establishing environmental baseline data through, for example, the deployment of offshore acoustic recorders to monitor sounds from marine mammals. Some of the recording devices are situated in the area of Statoil's leases, and in a region to the north of the leases. The recorders have been in operation this year, and some will continue in operation over the coming winter.

"That's an important part of our Arctic research program," Sunde said.

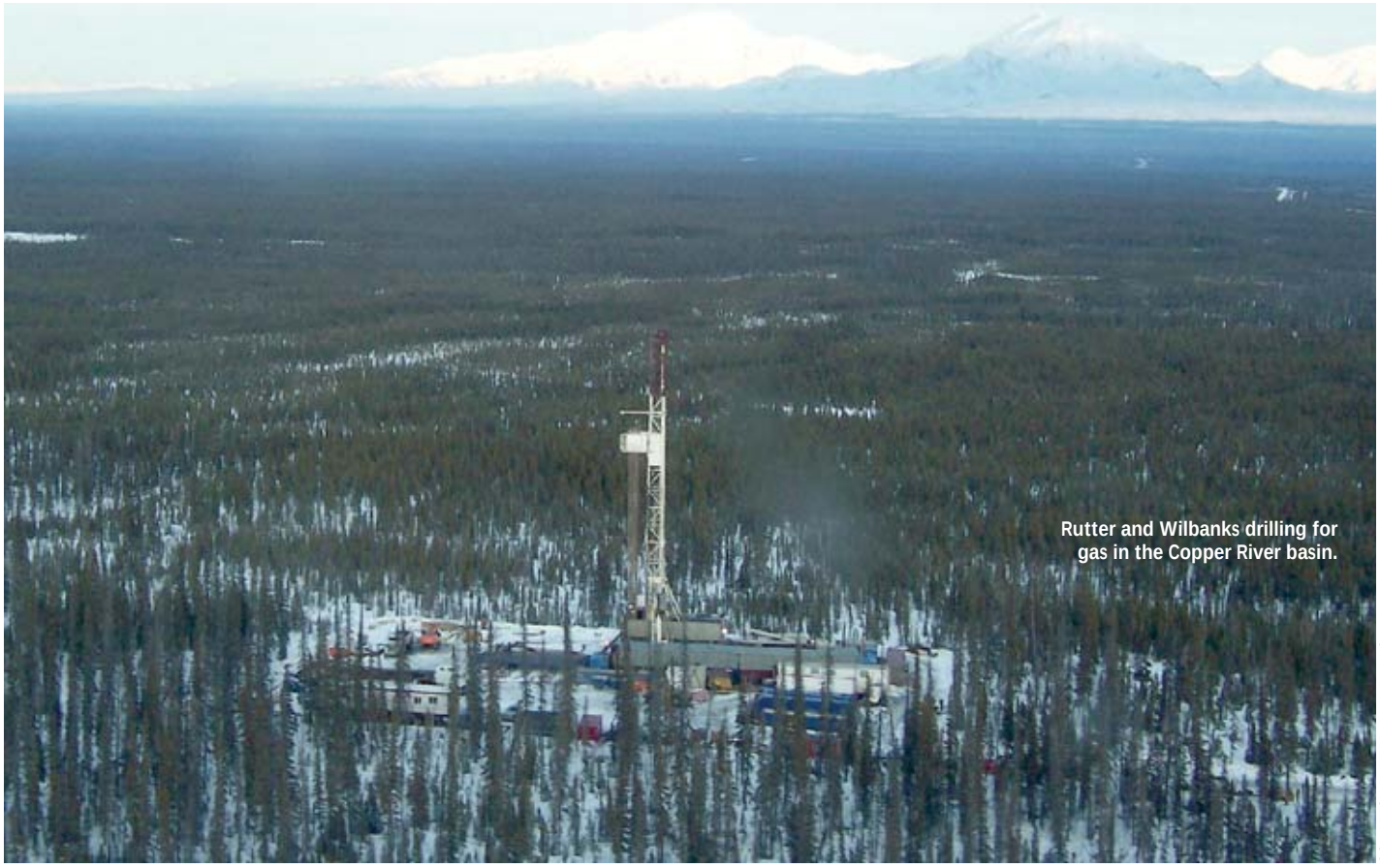
Statoil's research and development group in Norway is also progressing a "moving north" research program, focusing on a variety of topics associated with Arctic oil and gas exploration and development. Those topics include issues associated with oil spills in ice and the gathering of data about the ocean. Although the moving north program is geared toward Arctic exploration and development in general, including Statoil's operations in the Barents Sea, the findings from the program will be applicable in the Alaska Arctic. Statoil is itself funding some of the research, while some research involves partnerships between Statoil and other businesses in the oil industry, Sunde said.

Contact Alan Bailey at abailey@petroleumnews.com

On the Web

Previous Petroleum News coverage:

- "Heading for a decision," in Aug. 28, 2011, issue at http://bitly.com/nYkqrI
- "Statoil moves toward Chukchi drilling," in March 13, 2011, issue at http://bitly.com/opPwTi
- "Statoil spells out Chukchi strategy," in Dec. 5, 2010, issue at http://bitly.com/q4Foax



Rutter and Wilbanks drilling for gas in the Copper River basin.

COURTESY RUTTER & WILBANKS

Licensing continues to draw explorers

More companies applying for exploration licenses but the program is sometimes delayed by permitting or legal challenges

By ERIC LIDJI
For Petroleum News

While the North Slope and Cook Inlet account for the majority of the exploration work going on in Alaska, companies continually sniff around the rest of the state.

The State of Alaska began offering exploration licenses in 1998 as a way to encourage drilling in prospective areas of the state not included in annual lease sales, and the Alaska Mental Health Trust Land Office also uses the mechanism to encourage drilling.

Of the 13 applications submitted since the program began, the Alaska Department of Natural Resource has issued five exploration licenses, issued another to a company that chose not to accept it, declined one application and is currently considering three more.

Nenana and Glennallen basins

Only two exploration licenses to date have led to actual drilling.

Perhaps the most successful exploration license so far is the one DNR issued to Doyon Ltd., Usibelli Energy LLC and Arctic Slope Regional Corp. in 2002. It covers 482,942 acres in the Nenana basin southwest of Fairbanks and required a $2.525 million work commitment. Operator Rampart Energy Co. drilled Nunivak No. 1 well on behalf of that joint venture in 2009, but didn't encounter an economic accumulation of natural gas.

Doyon is now operating that program, and believes new geophysical and geochemical investigations point to a high resource potential in the region. The company said rock samples taken from the 2009 well show the presence of hydrocarbon source rocks, potential sandstone reservoirs and shales that would form effective hydrocarbon seals.

The Alaska Native corporation for the Interior is now actively seeking investors interested in exploring Nenana (as well as the Yukon Flats basin), as well as companies with previous experience exploring basins that have similar geologic characteristics.

After getting a three-year extension, the license is now set to expire in 2012.

Farther south, Rutter and Wilbanks Corp. spent years drilling for gas in the Copper River basin near Glennallen on a 44,576-acre license issued in 2007 and held by Pacific Energy Alaska Operating LLC and Anschutz Exploration Corp., but couldn't find a commercial reservoir. The license expires in 2012, but some of the area has been converted to leases.

Continued interest in Susitna

While the exploration license program led to drilling in the Nenana and Copper River basins, the Susitna basin north of Anchorage continues to attract more interest than any other frontier basin.

continued on next page

ESCOPETA *continued from page 94*

"but we're kidding ourselves if we think it will."

Escopeta could also use a subsea completion strategy at Kitchen Lights, constructing a wellhead on the sea floor surrounded by a cage to protect against drifting objects.

That option is more expensive and more complicated than a caisson, untried in Cook Inlet and problematic for repairs or emergency response during the ice season, Katic said.

Different plans for oil

Should Escopeta discover both oil and natural gas, Katic said the company favors either a two-deck platform similar to the one in place at Osprey, or a three-deck platform similar to the one at Steelhead, depending on production volumes.

Escopeta is favoring the three-deck platform, Katic said, because the two-deck platform requires special installation considerations for the water depths at the Kitchen Lights unit and is limited to a 28-well capacity, which might not work for a larger discovery.

The three-deck platform can handle 32 wells and deeper waters, but requires a heavy lift barge for installation and is more expensive than the two-deck platform, Katic said.

Those platform options would take more than 30 months to bring online, Katic said.

Escopeta is currently estimating production of 50 million cubic feet of natural gas and 12,000 barrels per day of oil from Corsair, requiring a 10-inch natural gas pipeline and an 8-inch oil pipeline to either the East Foreland production facilities or new onshore facilities.

Once drilling is done for the season, Escopeta plans to move the rig to either Port Graham or Seward, according to Escopeta official Bruce Webb, but the company would prefer to bring the rig to Port Graham because it keeps the giant machine out of the harsher waters of the Gulf of Alaska.

The company is also working to lower the $15 million fine from the U.S. Department of Homeland Security for allegedly vio-

continued on next page

On the Web

Previous Petroleum News coverage:

- "Barron gives Escopeta thumbs-up to drill down," in Oct. 23, 2011, issue at www.petroleumnews.com/pnads/532863599.shtml
- "$15 million fine: Escopeta fined by US Customs for Jones Act violation," in Oct. 23, 2011, issue at www.petroleumnews.com/pnads/95101214.shtml
- "Escopeta reaches stopping point for KLU, planning future work," in Oct. 16, 2011, issue at www.petroleumnews.com/pnads/21122298.shtml
- "Fortune Hunt Alaska: Hunting for elephants in Cook Inlet," in May 8, 2011, issue at www.petroleumnews.com/pnads/187577641.shtml
- "Looking for Cook Inlet hydrocarbon kitchen," in April 1, 2007, issue at www.petroleumnews.com/pnads/66130542.shtml

EXPLORERS *continued from page 95*

DNR has issued four exploration licenses in the region.

Susitna Basin I went to Forest Oil Inc. in 2003, a seven-year license to spend at least $2.52 million exploring 386,207 acres in the area in 2003.That license was terminated in 2007.

Susitna Basin II currently belongs to Cook Inlet Energy LLC, the local subsidiary of Tennessee-based Miller Petroleum.The independent inherited the license over 471,474-acre area when it acquired the assets of Pacific Energy in 2009. DNR issued that license on a seven-year term in 2003, but later extended the deadline by three years, giving Cook Inlet Energy until 2013 to meet a $3 million work commitment in the area.

(See full article on Linc Energy on page 72.)

DNR offered the Susitna Basin III exploration license to Clearflame Resources in 2003.The seven-year license included a $2.5 million work commitment to explore 478,584 acres in the region, but Clearflame ultimately chose not to accept the license.

This past April, DNR issued Susitna Basin IV to Cook Inlet Energy. The 10-year license covers 62,909 acres and comes with a $2.25 million work commitment.

And DNR is currently considering a fifth license proposal in the Susitna basin from an as-yet-unnamed company interested in exploring approximately 356,842 gross acres in the region directly south of the existing Cook Inlet Energy exploration license areas.

Delays in Holitna and Healy

While the licensing process gives companies the chance to explore in regions not covered by traditional areawide lease sales, it also moves much slower than those annual sales.

And occasionally gets slowed down even more by public opposition.

In 2005, the state denied Holitna Energy Co. LLC's application for a license over 26,779 acres in the natural gas prone Holitna basin, but overturned the ruling in December 2009.

The Native Village of Sleetmute subsequently filed papers in Superior Court in Anchorage opposing the license, and the license remains a legal matter for the time being.

That license would include a work commitment of $80,337.

That application is still pending, as is Usibelli Coal Mine Inc.'s 2004 application to explore for natural gas and coalbed methane on 208,630 acres in the Healy basin, near the company's long-time coal mining operations.The state approved that license in June 2010, but after receiving opposition to the plan decided to review the proposal again.

That 10-year license would include a work commitment of $500,000.

In 2008, two independent explorers proposed new exploration licenses.

Berkeley GeoImaging LLC, of Oakland, Calif., requested an oil exploration license covering 72,443 acres in the Crooked Creek-Circle basin of Interior Alaska, located east of the community of Central and south of the community of Circle. LAPP Resources Inc. requested a natural gas exploration license covering 21,080 acres in the Houston-Willow basin, an area along the southern Parks Highway that has attracted interest for decades.

Both of the proposed licenses would run for 10-year terms and require a $500,000 work commitment from the application. DNR continues to review both proposals.

In 2011, the Alaska Mental Health Land Trust issued a license to Linc Energy Alaska Inc. to explore in three areas: near Tyonek, near Healy and on the Kenai Peninsula.The company is currently preparing an underground coal gasification exploration program.

(See full article on Linc Energy)

Contact Eric Lidji at ericlidji@mac.com

It's almost free

To encourage exploration and development, the State of Alaska offers Cook Inlet oil and gas producers one of the most favorable tax and royalty environments in the United States, with total rates at or below every other major producing state: Cook Inlet oil is assessed no production tax, and a 12.5 percent royalty rate; natural gas' royalty rate is the same but its gross production tax rate varies, depending on gas prices — at $5 per mcf it's 3.6 percent, which assumes no capital credit-write-off.

Plus, the state pays up to 40 percent of exploration costs. And production tax increases and decreases with oil prices and the level of investment; in other words, the more you invest, the less tax you pay.

And there is a credit for capital investments, plus a 25 percent credit for net losses

On top of that, in 2010 Alaska lawmakers passed a bill with a $25 million tax incentive for the first offshore Cook Inlet well drilled by a jack-up into the Mesozoic. Subsequent wells, which have to be drilled by different oil and gas companies, get $22.5 million and $20 million if they are drilled with the same jack-up.

But drilling into the deeper Mesozoic offshore is very costly; hence the state's decision to help cover some of the cost of a jack-up.

The possibility of finding oil and gas in the Mesozoic, beneath the Tertiary basin, intrigues geologists, especially since Cook Inlet oil originated from the Jurassic Tuxedni group within the Mesozoic sequence, having presumably percolated upwards.

Cretaceous rocks in the Mesozoic exposed at either end of the Cook Inlet basin show evidence of oil formation.

However, geologists have also been concerned about the potential for minerals called zeolites to clog the pores of potential reservoir rocks — the chemistry of the Mesozoic rocks tends to be conducive to zeolite formation.

But State of Alaska geologist Paul Decker thinks that the nature of the Mesozoic under the basin is not well understood. In fact the Mesozoic oil and gas potential has become one of several focuses of a multiyear Cook Inlet research program begun in 2006 by Alaska's Division of Geological and Geophysical Survey, or DGGS.

—Kay Cashman

ESCOPETA *continued from page 96*

lating the federal Jones Act. Webb said the company plans to argue the need for natural gas in Southcentral, including at military installations, and noted that the fine is an automatic amount based on the value of the rig.

The company has 60 days to appeal the fine.

In May Escopeta opened an Alaska office, leasing a suite in the Resolution Plaza building in downtown Anchorage. Offices and the board room feature a panoramic view down Cook Inlet, which in winter clogs with drifting ice.

The company will not comment on rumors that it is in negotiations with Apache Corp. to farm in or purchase its interest in the Kitchen Lights unit.

Contact Kay Cashman at publisher@petroleumnews.com

ULTRASTAR *continued from page 93*

or unit until payout of the exploration, delineation and development costs necessary to get the oil flowing," Weeks wrote to lawmakers.

Weeks also continued to speak out about facility sharing on the North Slope after Rep. David Guttenberg, D-Fairbanks, proposed legislation to make oil and gas processing facilities into public utilities, like power producers and telecommunications companies.

Weeks said additional regulation would make the North Slope prohibitively complicated, but said the state could help by backing out its royalty production to make space for new producers. "It's in the state's interest to get new barrels in the system," Weeks said.

Contact Eric Lidji at ericlidji@mac.com

BRPC UNITS *continued from page 12*

working interest owners must sanction the Tofkat Project by Oct. 1, 2013.

Under the agreement for the new Putu unit, BRPC must post a $10 million performance bond to guarantee that it will fulfill its original four-well drilling commitment.

The company must now drill four wells into the Upper Jurassic-age strata of the Kingak formation by May 31, 2013, two targeting the Musketeer trend (Brookian Sequence Boundary C) and two targeting the Big Foot trend (Brookian Sequence Boundary BC).

BRPC applied to form the Southern Miluveach unit in December (a revised application was submitted in March) over 40 leases, including 11 owned jointly by the state and ASRC, covering some 60,864 acres northeast of Putu.

The original unit included six exploration blocks - Northeast, Southeast, Northwest, Southwest, West and South. The state ultimately created the Southern Miluveach unit out of the Southeast block and the Kachemach unit out of the West and Northwest blocks.

The Southern Miluveach unit includes five state leases covering around 8,960 acres, while the Kachemach unit includes 11 state/ASRC leases covering around 16,487 acres.

The remaining area will not be unitized and those leases will expire at the end of their terms.

Under the agreement for the new Southern Miluveach unit, BRPC must drill, test and complete three wells — the North Tarn No. 1-A well, the Mustang No. 1 well and the Mustang No. 2 well or sidetrack — into the Kuparuk formation by May 31, 2012, and the working interest owners must sanction the Mustang project by Oct. 1, 2012.

The Kachemach unit is divided into two exploration blocks, Block A and Block B.

Under the unit agreement, BRPC must drill, test and complete one well in Block A targeting the Caribou trend (Brookian Sequence Boundary F) and one well in Block A targeting the Moonlight trend (TP4-2 Nanushak prospect) by May 31, 2013. If BRPC meets those commitments it must them commit to drill, test and complete one well in Block B targeting the Moonlight trend (TP4-1 Nanushak prospect) by May 31, 2014.

—Eric Lidji

Contact Eric Lidji at ericlidji@mac.com

Advertiser Index

A

B-F

G-M

N-P

Q-Z

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