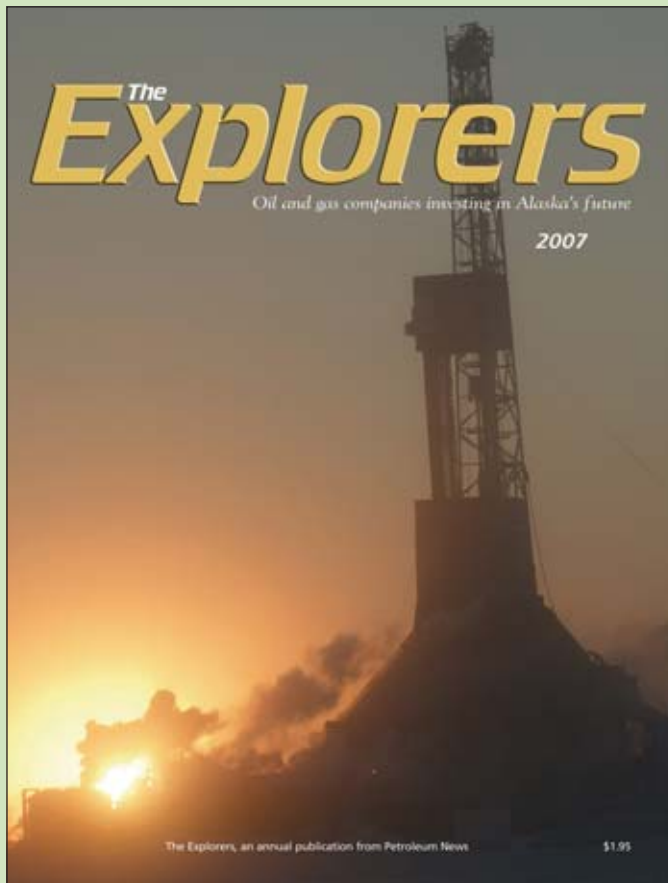




page 11 TransCanada rethinks nuclear future, unsure if can compete with coal

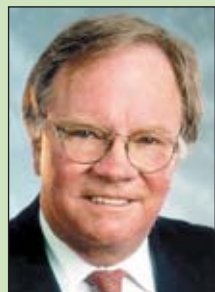
The Explorers 2007 released at RDC



The Explorers magazine was released Nov. 14 at the Resource Development Council for Alaska's annual conference. The Explorers is published by Petroleum Newspapers of Alaska LLC, owner of Petroleum News, every year in November and released at RDC's conference in Anchorage, Alaska. For more information call 907 522-9469, or visit www.PetroleumNews.com.

Close, but no cigar: Oil price falls on OPEC, CPI and jobs reports

Perhaps the biggest reason oil recently came within a couple of dollars of \$100 a barrel can be found in places like China, where roads that were full of bicycles 15 years ago are now choking with cars and trucks. Or in India, where sales of diesel-powered generators have soared as people try to avoid frequent power outages. The rapid growth in China, India and other emerging economies has been fed by crude oil, but this rising demand for fossil fuels may finally be pushing the limits of supply. If basic economics is any guide that could also mean \$100 is just the beginning of far higher prices.



MATTHEW SIMMONS

The International Energy Agency warned earlier in November that growing global demand, particularly from China and India, could create a supply crunch as early as 2015. Currently, oil producers are turning out about 85 million barrels a day, while the U.S. Department of Energy says consumption is between 85 million and 86 million barrels a day.

The department predicts output will reach 118 million barrels

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BREAKING NEWS

5 Alberta oil sands, water in conflict: Study reports high levels of carcinogens, toxic substances in fish, water

8 Seven drilling North Slope exploration wells: Two of Anadarko's wells target gas; Chevron back

12 Solving Cook Inlet's gas conundrum: Exploration, storage, North Slope gas, LNG factor into supply options

EXPLORATION & PRODUCTION

Investment at risk

Oil company execs says consequences dire if Alaska hikes taxes again

By KAY CASHMAN

Petroleum News

Investment in Alaska is in jeopardy if the state's oil production tax is overhauled in such a way that it significantly increases the State of Alaska's take, oil company executives told attendees of the Resource Development Council for Alaska's annual conference in Anchorage on Nov. 14.

The first casualty of a higher oil tax, ConocoPhillips Alaska President Jim Bowles said, would be the company's \$300 million ultra low sulfur diesel production facility, scheduled for construction in 2008 in the North Slope Kuparuk River unit. The

see **INVESTMENT** page 19

Get production back up

Oil company executives aren't the only people who have been weighing in on Alaska's oil tax debate. The oilfield service firms that provide Alaskans with a chunk of the state's highest paying jobs have also been communicating with state leg-



see **PRODUCTION** page 19 **JAMES GILBERT**

FINANCE & ECONOMY

Alaska gets poor marks

Two consulting firms tell Alaska legislators state's oil take already high with PPT

By KRISTEN NELSON

Petroleum News

How attractive is Alaska for oil company investment? And how will the proposed changes in the state's production tax — Gov. Sarah Palin's Alaska's Clear and Equitable Share bill, or ACES, now before the Legislature — change that attractiveness?

The Alaska Legislature has been told by administration consultants from Gaffney Cline that increasing oil taxes will make investments in the state more attractive to oil and gas companies.

Two other consulting firms, Wood Mackenzie and Cambridge Energy Research Associates, have released results from confidential studies of worldwide fiscal attractiveness which indicate the opposite. Under the petroleum profits tax enacted in 2006 Alaska was fairly far down in fiscal attractiveness for

With fiscal terms increased — or under threat of increasing — “companies are seeking to make their investments in places where they can be most sure they will earn a return both in terms of having some assurance of fiscal stability but also in terms of having some assurance that their costs will also be controllable.” —David Hobbs, CERA managing director and vice president of research

investment — at the bottom of Wood Mackenzie's list. CERA also found Alaska fiscal attractiveness to be low and said the governor's original ACES proposal, with a 25 percent tax rate, decreased the state's fiscal attractiveness ranking.

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EXPLORATION & PRODUCTION

Alaska oil forecast shaky

Production interruptions, infrastructure renewal, slowed heavy oil pace the cause

By KRISTEN NELSON

Petroleum News

The fall production forecast for Alaska's North Slope is down from the spring forecast — down for the next eight years. Projected volumes have dropped as much as 130,000 barrels per day for fiscal year 2012, petroleum engineer Dudley Platt told the Alaska Senate Finance Committee Nov. 7. The estimated drop for the current fiscal year, 2008, is 38,000 bpd. The reduction in projected barrels increases through FY 2012, and then decreases, with a drop of just 30,000 bpd for FY 2015.

Platt noted that if you look only at projected changes in volumes from state lands (current vs.



DUDLEY PLATT

spring forecast), the range is from a drop of 38,000 bpd in FY 2008, peaking at a drop of 55,000 bpd in FY 2010, with volumes from state lands going positive at plus-5,000 bpd in FY 2014 and plus-10,000 bpd in FY 2015.

Platt said the timing of new projects appears to have changed, but that's not the most important thing: The major factors are increases in unplanned interruptions in production and planned down-

times for infrastructure renewal. He said back maybe five or six years he used to be able to get within 2 percent with his forecast for the current fiscal year, but recently the difference between projected and actual production has been

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A weekly oil & gas newspaper based in Anchorage, Alaska

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Companies tell Senate Finance that more taxes will lower, not raise, investment levels; bill includes more than two increases

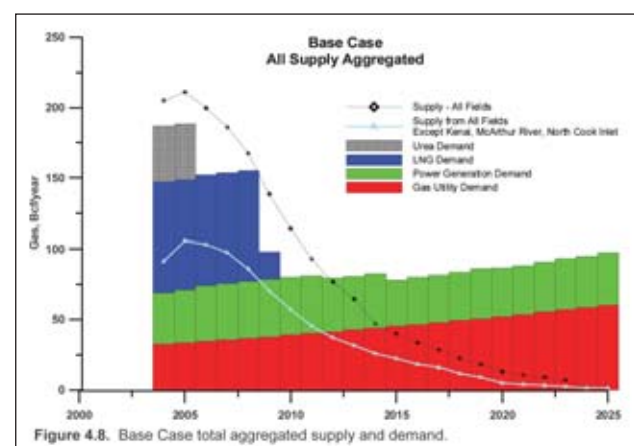
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Region needs gas for foreseeable future; gas exploration, gas storage, North Slope gas, LNG all factor into energy supply options

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Alaska - Mackenzie Rig Report

Rig Owner/Rig Type Rig No. Rig Location/Activity Operator or Status

Alaska Rig Status

North Slope - Onshore

Akita Drilling Ltd.			
Dreco 1250 UE	63 (SCR/TD)	Racked in Deadhorse	Anadarko
Doyon Drilling			
Dreco 1250 UE	14 (SCR/TD)	Prudhoe Bay H-14B	BP
Sky Top Brewster NE-12	15 (SCR/TD)	Kuparuk 1J-178	ConocoPhillips
Dreco 1000 UE	16 (SCR/TD)	Rig maintenance	BP
Dreco D2000 UEBD	19 (SCR/TD)	Alpine CD4-304	ConocoPhillips
OIME 2000	141 (SCR/TD)	Kuparuk River Unit 3A-03B	ConocoPhillips
TSM 7000	Arctic Fox #1	Stacked in Yard	Pioneer Natural Resources
	Arctic Wolf #2	Stacked in yard	FEX

Kuukpik	5	Stacked in Deadhorse Available till 1/15/08	Available
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Nabors Alaska Drilling			
Trans-ocean rig	CDR-1 (CT)	Stacked, Prudhoe Bay	Available
Dreco 1000 UE	2-ES	Prudhoe Bay DS 14-18B	BP
Mid-Continental U36A	3-S	Kuparuk 3N-11	ConocoPhillips
Oilwell 700 E	4-ES (SCR)	Milne Point MPU F-25	BP
Dreco 1000 UE	7-ES (SCR/TD)	Prudhoe Bay GNI-04	BP
Dreco 1000 UE	9-ES (SCR/TD)	Polaris W-214i	BP
Oilwell 2000 Hercules	14-E (SCR)	Stacked	Available
Oilwell 2000 Hercules	16-E (SCR/TD)	Stacked	Available
Oilwell 2000	17-E (SCR/TD)	Stacked, Point McIntyre	Available
Emsco Electro-hoist -2	18-E (SCR)	Stacked, Deadhorse	Available
OIME 1000	19-AC (SCR)	On-site at Oooguruk	Pioneer Natural Resources
Emsco Electro-hoist Varco TDS3	22-E (SCR/TD)	Stacked, Milne Point	Available
Emsco Electro-hoist	28-E (SCR)	Stacked, Deadhorse	Available
OIME 2000	245-E	Oliktok Point OPI2	Anadarko
Emsco Electro-hoist Canrig 1050E	27-E (SCR-TD)	Stacked	

Nordic Calista Services			
Superior 700 UE	1 (SCR/CTD)	Prudhoe Bay well K-14a	BP
Superior 700 UE	2 (SCR/CTD)	Prudhoe Bay well DS18-13b	BP
Ideco 900	3 (SCR/TD)	Kuparuk well 2L-330	ConocoPhillips

North Slope - Offshore

Nabors Alaska Drilling			
Oilwell 2000	33-E	Maintenance/mobilization Northstar	BP

Cook Inlet Basin – Onshore

Aurora Well Service			
Franks 300 Srs. Explorer III	AWS 1	Stacked at Nikiski	Available

Marathon Oil Co. (Inlet Drilling Alaska labor contractor)			
Taylor	Glacier 1	Rig maintenance	Marathon

Nabors Alaska Drilling			
National 110 UE	160 (SCR)	Stacked, Kenai	Available
Continental Emsco E3000	273	Stacked, Kenai	Available
Franks	26	Stacked	Available
IDECO 2100 E	429E (SCR)	Stacked, removed from Osprey platform	Available
Rigmaster 850	129	NNA-1	Chevron
Academy AC electric Heli-Rig	106E (SCR/TD)	DS Happy Valley #12	Chevron

Rowan Companies			
AC Electric	68 (SCR/TD)	Drilling Hansen 1A-L1 well at Cosmopolitan	Pioneer Natural Resources

Cook Inlet Basin – Offshore

Unocal (Nabors Alaska Drilling labor contractor)			
Not Available			

XTO Energy			
National 1320	A	Platform A no drilling or workovers at present	XTO
National 110	C (TD)	Idle	XTO

Mackenzie Rig Status

Canadian Beaufort Sea

Seatankers (AKITA Equatak labor contract)			
SSDC CANMAR Island Rig #2	SDC	Set down at Roland Bay	Devon ARL Corp.

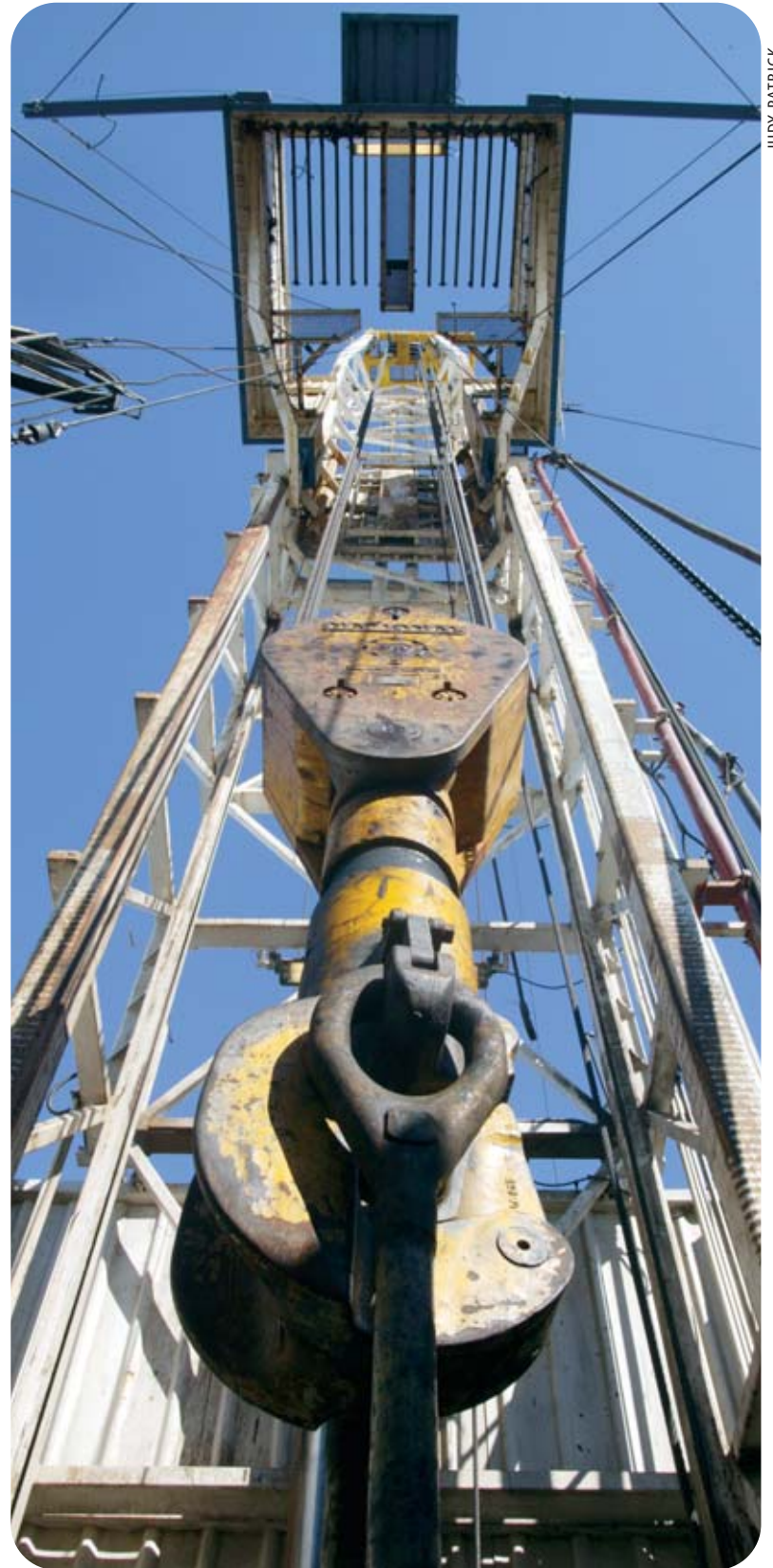
Mackenzie Delta-Onshore

AKITA Equatak			
Dreco 1250 UE	62 (SCR/TD)	Rig Racked in Inuvik, NT	Available
Modified National 370	64 (TD)	Staged on barges in Mackenzie Delta	MGM Energy Group

The Alaska - Mackenzie Rig Report as of November 15, 2007.
Active drilling companies only listed.

TD = rigs equipped with top drive units WO = workover operations
CT = coiled tubing operation SCR = electric rig

This rig report was prepared by Alan Bailey



JUDY PATRICK

Baker Hughes North America rotary rig counts*

	November 9	November 2	Year Ago
US	1,801	1,795	1,693
Canada	361	368	446
Gulf	56	56	82

Highest/Lowest		
US/Highest	4530	December 1981
US/Lowest	488	April 1999
Canada/Highest	558	January 2000
Canada/Lowest	29	April 1992

*Issued by Baker Hughes since 1944

The Alaska - Mackenzie Rig Report
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GOVERNMENT

Alaska's PSIO completes staff hiring

The Petroleum System Integrity Office has completed its recruitment efforts, PSIO Coordinator Jonne Slemmons told Petroleum News Nov. 14.

Slemmons said Dan Rice, PE, was hired in July as PSIO's lead technical engineer, bringing to PSIO more than 10 years of experience with the State Pipeline Coordinator's Office where he had technical oversight of common carrier, gathering and flowlines on the North Slope and in Southcentral, and on the trans-Alaska oil pipeline and its fuel gas pipeline.

Steve Schmitz was hired in September. Schmitz has been the lead North Slope permitter within the Division of Oil and Gas — the agency where PSIO is housed — for 17 years. Slemmons said Schmitz brings "invaluable first-hand knowledge and experience" to PSIO's North Slope activities.

Mike Engblom-Bradley will be joining the PSIO team in mid-February as the lead quality assurance authority. Slemmons said Engblom-Bradley has owned a quality control business and developed quality assurance programs; he currently manages the quality assurance program for Alyeska Pipeline Service Co.

PSIO is working on Phase I of the statutory and regulatory gap analysis, Slemmons said. A list of current statutory and regulatory authorities is being compiled. State and federal agencies will review the list for completeness and will also be asked for "feedback on how those authorities are exercised," Slemmons said.

"Subsequent phases of the gap analysis will build upon the information compiled and provided in the Phase I process, to identify and clarify gaps in oversight, propose alternatives to address them and proceed to resolution," she said.

The process will also identify any duplication in efforts.

—KRISTEN NELSON

GOVERNMENT

House coalition passes 25% bill

Senate Finance amends its CS from 22.5% to 25%, refuses to let Revenue write leasehold expenses regs, sunsets audit masters

By KRISTEN NELSON

Petroleum News

The 30-day special session of the Alaska Legislature ends at midnight, Friday Nov. 16, more than a day after this issue of Petroleum News goes to print, with a nail biter of a finish expected.

The issue is whether House and Senate can agree on amendments to the state's production profits tax, or PPT.

The House passed their version of amendments to the state's 2006 oil production tax Nov. 11. Senate Finance passed a committee substitute late in the evening Nov. 14. The Finance CS was expected on the Senate floor Nov. 15.

The Senate Finance CS was amended to the same 25 percent base tax rate as the House bill after starting out at 22.5 percent. Progressivity was also dropped to parallel the 0.4 percent rate in the House bill, although the Senate version retains a different rate at high prices.

The special session was called by Gov. Sarah Palin, who cited the cloud created by indictments and convictions for bribery of legislators who participated in the 2006 session that passed PPT. The administration was also concerned that revenue estimates from the previous administration fell short after taxpayers claimed higher costs as deductions than projected when PPT was passed.

When she proposed her tax bill — Alaska's Clear and Equitable Share, or ACES — the governor called for a fair share for Alaska and for a tax that would encourage investment in the state.

House at 25 percent

The House bill includes a 25 percent tax base, aggressive progressivity (a tax rate surcharge as the net value of a barrel increases), stiff penalties for underestimations of taxes and a standard deduction for operating costs at legacy fields based on 2006 costs.

The increase in base rate (the current petroleum profits tax has a 22.5 percent base) and more aggressive progressivity starting at \$30 net with a 0.4 percent slope capped at 25 percent of the net (PPT started at \$40 net and had a 0.25 percent slope) were too much for Republicans worried about stifling industry investment in the state. It took a coalition of Republicans and Democrats to pass the bill. Democrats had come into the session favoring a gross tax and their price for approving a net tax was a standard deduction for operating costs at legacy fields. This will be based on 2006 costs and will allow a 3 percent increase each year. Democrats described this as one fixed

The special session was called by Gov. Sarah Palin, who cited the cloud created by indictments and convictions for bribery of legislators who participated in the 2006 session that passed PPT. The administration was also concerned that revenue estimates from the previous administration fell short after taxpayers claimed higher costs as deductions than projected when PPT was passed.

point in a tax which is otherwise composed of moving parts.

The standard deduction is also viewed as a way for the state to get a handle on auditing difficulties associated with a net tax. The issue of allowing the Department of Revenue to pay enough to attract experienced oil and gas auditors was solved — with a floor amendment — by allowing Revenue four "audit masters" who would be in the exempt category, outside the state's classification system; the Department of Natural Resources, which also has oil and gas audit issues, would have two audit masters.

Senate Finance works CS

The House bill was assigned to Senate Finance, which was already working on a committee substitute which didn't appear until the evening of Nov. 13. Committee discussions Nov. 12 and Nov. 13 on progressivity in the CS showed a base rate of 22.5 percent and a progressivity varying from 0.6 percent to 0.1 percent as the net trigger price rises from \$30 to \$90.

The Senate Finance CS did not include either the standard deduction or additional penalties for under estimation of taxes.

When the dust settled after a day of discussion by consultants and the administration about impacts of the Finance CS — and several hours of testimony from oil and gas companies objecting to every aspect of the CS — Senate Finance came back late in the evening of Nov. 14 and quickly passed 12 amendments.

In addition to increasing the base rate to 25 percent and lowering the progressivity rate, the committee removed an ACES requirement that the Department of Revenue write regulations defining allowable leasehold deductions and inserted a sunset for audit masters, a change which Revenue Commissioner Pat Galvin told the committee would make it impossible for him to attract highly qualified oil and gas company auditors because the sunset in effect means he could only offer a three-year job. ●



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● EXPLORATION & PRODUCTION

Alberta oil sands, water in conflict

New study reports high levels of carcinogens, toxic substances in fish, water and sediment downstream from projects

By GARY PARK

For Petroleum News

In the words of Mark Twain: Whisky is for drinking. Water is for fighting over.

Some might consider posting that quip in large letters over 90,000 acres of what was once forest and wetlands and is now a moonscape that keeps spreading across the oil sands of northeastern Alberta.

In recent years, the consumption and alleged contamination of the region's water supply by oil sands operations have become as big a concern for environmentalists and residents as the sector's greenhouse gas emissions, hunger for natural gas and degradation of the landscape.

The water issue was raised to a new level Nov. 6 when a 75-page report was released by the Nunee Health Authority of the Fort Chipewyan area of northeastern Alberta.

It identified high levels of carcinogens and toxic substances in fish, water and sediment downstream from oil sands projects and suggested oil sands development might be responsible for rare types of cancer in the heavily aboriginal community of 1,200, poor water quality and other health afflictions.

The authority's health director Donna Cyprian said residents who have long believed their community experiences higher rates of cancer than normal "now know there is something wrong."

Oil-related PAHs found

Although the report, authored by ecologist Kevin Timoney, with Treeline Environmental Research, did not specifically link the oil sands to the elevated levels of carcinogens and toxic substances, the study said oil-related compounds called polycyclic aromatic hydrocarbons or PAHs were found in the Athabasca River, which flows downstream from the oil sands to Lake Athabasca. (From the lake, the Slave and Mackenzie rivers flow another 1,200 miles to the Arctic Ocean.)

Timoney said that although PAHs occur naturally in the area and are found in oil sands deposits along the Athabasca River bank, they were above historical levels in the sediment, indicating human activity was contributing to the increase.

The Mikisew Cree First Nation, representing aboriginals in and around Fort Chipewyan, called for an immediate moratorium on oil sands expansion.

A Mikisew spokesman said the Canadian and Alberta governments "are

The Mikisew nation has urged the Alberta Energy and Utilities Board over the past year to block oil sands projects, but has been overruled by the regulator which has approved three new mining operations as being in the "public interest."

continuing to issue approvals for projects despite all the uncertainty about the true environmental effects" of the developments.

Alberta Health Minister Dave Hancock said the province had only seen a draft of the study, but its initial view is that the research was based on old data.

He said the government had already found that study claims of high arsenic levels and cancers in the area were overstated.

But Hancock said the final report will be examined to determine if Timoney has raised any new issues.

Arsenic study last year

A study commissioned last year by oil sands giant Suncor Energy estimated arsenic found at the company's Voyageur site could result in 450 additional cases of cancer for every 100,000 residents over people's lifetimes.

The Alberta government conducted its own follow-up study and concluded that oil sands development was not contributing to arsenic levels or elevating cancer risks.

The Mikisew nation has urged the Alberta Energy and Utilities Board over the past year to block oil sands projects, but has been overruled by the regulator which has approved three new mining operations as being in the "public interest."

Now it is armed with new information that is in sharp contrast to the Alberta government's findings.

Timoney, using data gathered from 1970 to the present from the Athabasca River, Peace River and Peace-Athabasca Delta near Fort Chipewyan, found PAH levels rose between 2001 and 2005 in the Delta sediment, with current levels rated as unsafe to aquatic life.

He said the government and industry seem reluctant to "admit there is any cause for concern.

"I can't (answer for them) as to why they would always downplay the risk: Certainly the numbers indicate to any objective scientist that there is a cause for concern," he said.

Timoney urged the residents to press for another independent study of the water and wildlife.

Health Canada attacks physician

However, the challenge for those trying to sway governments was evident earlier this year when John O'Connor, a family physician at Fort Chipewyan from 1993 to 2007, came under attack from Health Canada when he reported a disproportionately high incidence of liver, blood and bile-duct cancers in patients from the community that he linked to arsenic and PAHs.

Health Canada filed a complaint against O'Connor with the regulatory body for Alberta doctors, accusing him of causing undue alarm.

Physicians and other health care professionals who worked with O'Connor said he was being targeted because his comments potentially threatened billions of dollars of oil sands investment.

Cyprian said she was "really upset because ... he's standing up for us," while Michel Sauve, the medical head of an inten-

sive care unit in Fort McMurray, said doctors who identified potential public health problems should be protected rather than punished.

"Obviously we need some whistleblower protection, some laws that will banish these kinds of repressive censorship," Sauve said.

However, there are signs that aboriginal communities are not prepared to let one aspect of the water issue fade.

A year ago 200 First Nations representatives in Alberta, British Columbia and the Northwest Territories formed a united front to protect the region's water supply and combat falling water levels in the Athabasca, which is estimated to have dropped 30 percent in the past two decades.

Deh Cho Grand Chief Herb Norwegian said he hoped the meeting would serve as a catalyst "so people can actually start focusing on this really serious issue."

The leaders hope to hold further conferences and invite industry and governments to participate in regular round-table sessions. ●

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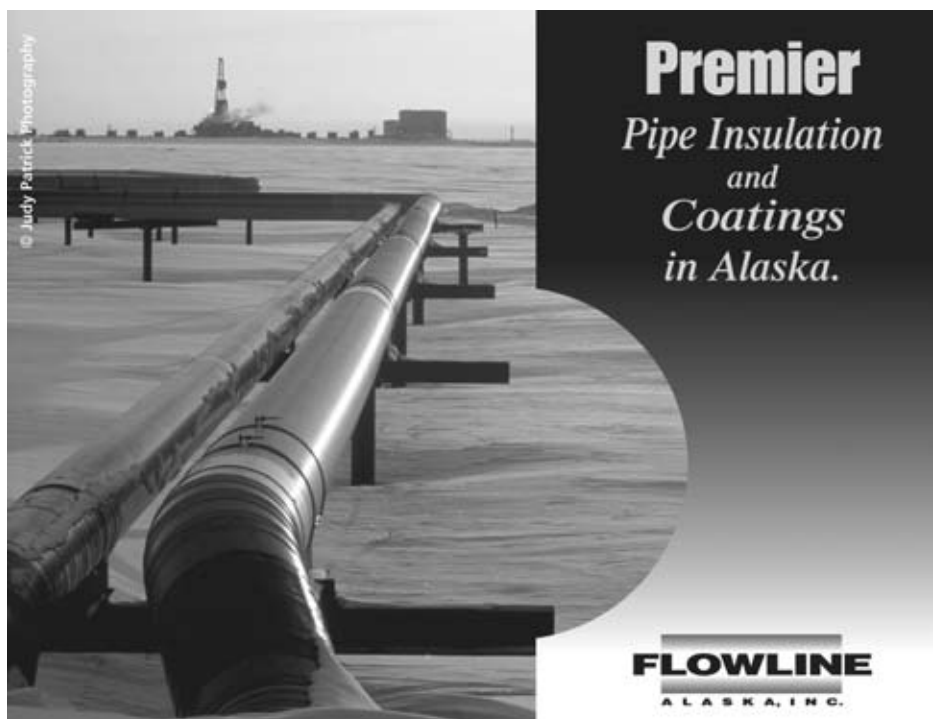


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EXPLORATION & PRODUCTION

Fresh lift for revolutionary technology

Two Canadian juniors, Petrobank Energy and Resources and Duvernay Oil, have hitched up to develop 100 million barrels of oil resources in northwestern Alberta.

To gain a 50 percent operating interest in the Dawson property and 10 percent of production, Petrobank will contribute its patented and pioneering crude oil recovery technology and Duvernay, primarily a natural gas producer, will have a chance to commercialize its heavy oil holdings.

If the technology succeeds, the recovery factors could soar to 70-80 percent of original oil from 8-10 percent.

"If it works, there's lots of upside for both companies," said Duvernay President Mike Rose. He said the company is eager to roll out its technology, currently being tested at the Whitesands demonstration oil sands facility in north-eastern Alberta, into other reservoir applications, domestically and international-ly.

The process, known as THAI (toe-to-heel-air-injection), employs combustion to ignite oil underground, transforming it into a higher value product that is forced toward the production wells. It was first developed at the University of Bath in England.

Whitesands is testing a variation of the THAI process to further increase the quality of the produced oil and hopes eventually to produce 100,000 barrels per day.

Preliminary work on 25,000 acres

Petrobank is also conducting preliminary work to use the technologies on 25,000 acres of oil sands leases in Saskatchewan.

If it can establish a viable alternative to natural gas-generated steam that is the currently favored method of melting bitumen deposits, it is likely to be swamped with interest from larger state-owned oil companies who are candidates to license the process.

But Bloomer said striking a deal with a major would not be consistent "without business plan and strategy, as it would slow us down. We want to move with people that are like us and we'll pick our partners strategically."

However, he said discussions are taking place with international parties as Petrobank positions itself in a "wide fairway" of opportunity.

Bloomer indicated a new partner could be secured within six months.

UBS Securities Canada analyst Andrew Potter said that if the Duvernay venture works it "could open the doors to another large global resource base."

—GARY PARK

GOVERNMENT

Golf tournaments eyed in corruption case

By MATT APUZZO

The Associated Press

The Justice Department is investigating whether an Alaska oil contractor used golf tournaments to funnel cash to U.S. Rep. Don Young, R-Alaska, people close to the corruption investigation said.

The contractor, former VECO Corp. Vice President Rick Smith, told investigators that Young personally received cash at the events. Once an important ally who helped raise tens of thousands of dollars for Young's election committee, Smith has become a key government informant.

As part of his cooperation, Smith allowed FBI agents to record his telephone calls with the Republican congressman in a corruption sting. The former VECO executive has pleaded guilty to bribing state lawmakers to support oil-friendly legislation.



RICK SMITH

people getting together to play golf," said Young's campaign spokesman, Mike Anderson, who declined to discuss the tournaments or how often Young won. "The congressman finds it inappropriate to discuss anything connected to an ongoing investigation."

Moose Run manager Gary Sanford said he recalls the tournament being held about three times over the past several years. About 16 to 24 people played, mostly Anchorage businessmen, at maybe \$100 each, Sanford said. Smith made the arrangements, handled the money and doled out the cash prizes, Sanford recalled.

Sanford said he was sometimes around when prize money was handed out and said he doesn't remember ever seeing Young receive cash he didn't win.

Sanford said he doesn't know whether records were kept. VECO attorney Amy Menard said she hasn't seen any documents related to the tournaments and Smith's attorney, John Murtagh, did not return messages seeking comment.

Tournaments followed pig roast

The events were normally held in August, shortly after Young's annual pig roast fundraiser, which has also attracted FBI attention. Smith organized that event, which drew up to 400 people and cost up to \$15,000. The events, which Smith organized for years, were lucrative. The day after the 2006 event, Young's campaign reported nearly \$45,000 in donations.

After the investigation surfaced, Young amended his campaign finance reports to show he reimbursed VECO founder Bill Allen about \$38,000 for event expenses.

At a recent corruption trial, defense attorneys suggested Smith laundered money by cashing golf tournament checks at a bar under what he called a "phony account."

Some golf managers around Anchorage received letters from the Justice Department alerting them they'd been recorded on wire-taps of Smith's phone. Jeff Barnhart, manager of the Settlers Bay Golf Course in Wasilla, Alaska, received such a letter. He said he's not surprised authorities are eyeing Smith's golf tournaments, but he said the businessman would be remembered in golf circles for his good deeds.

"He's done a lot for the community and raised money for more charities than you can imagine," he said. ●

Details of Smith's cooperation against Alaska's 18-term congressman were confirmed by people close to the case who spoke on condition of anonymity because they were not authorized to discuss it publicly.

The case, which surfaced last year as a state bribery investigation, has spread from Alaska to Capitol Hill, where Young and Alaska Sen. Ted Stevens are under scrutiny. Two of the most powerful Republicans in Congress, Young and Stevens are influential figures in setting U.S. energy policy and had close ties to oilfield service firm VECO.

Golf outings have often been used by lobbyists and interest groups to curry favor with lawmakers. Politicians, including Young, also use them as fundraisers.

Moose Run events not reported

The events under FBI scrutiny, however, were different. Unlike the dollar-for-dollar accounting of golf fundraisers in Alaska, Washington state and Virginia, the events at the Moose Run Golf Course just outside Anchorage were informal and the prizes were cash. There is no record of them on the campaign or personal financial reports that federal lawmakers are required to file.

"That tournament had nothing to do with the campaign or anything official. It was just

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LAND & LEASING

No bids for Mental Health Trust sale

The Alaska Mental Health Trust Land Office received no bids for its Nov. 14 oil and gas lease sale.

The Trust Land Office offered 24 tracts, some 125,000 acres, in the northern Cook Inlet basin.

The agency owns the right to lease or develop coal as well as oil and gas on approximately 300,000 acres of land surrounding Cook Inlet and on the Kenai Peninsula and has more than 100,000 acres under oil and gas lease in the Cook Inlet and Nenana basin regions.

—PETROLEUM NEWS

The Trust Land Office offered 24 tracts, some 125,000 acres, in the northern Cook Inlet basin.

● NATURAL GAS

Gas supplies enter winter in good shape

By GARY PARK

For Petroleum News

The nosedive in Canadian natural gas drilling that is expected to stretch well into 2008 should not endanger supplies even if North America experiences a cold winter, Canada's National Energy Board said in its winter outlook.

The regulator also said heating oil inventories are adequate for the winter, but the price of crude will likely remain high through the winter in the range of \$75-\$80 per barrel.

It said there is a continued risk of rising prices due to tightening inventories, although the price of heating oil should track similarly to the price of crude.

NEB analysts presenting the report said that any shortfall in Canadian gas production would be more than offset by stronger U.S. production and steadily rising imports of liquefied natural gas, which the Energy Information Administration predicts will reach 850 billion cubic feet in 2007, accounting for 4 percent of supplies.

The NEB also said rising output from the U.S. Rockies and gas shales in the Midcontinent will also help cushion any volume declines.

"Energy price volatility is the only certainty," said NEB Chairman Gaetan Caron.

The board expects natural gas futures prices in North America will hold steady at \$6-\$8 per million British thermal units on the Nymex market, but an exceptionally cold winter could push prices above that range.

Fewer gas wells drilled

NEB analyst Jennifer Murray told reporters that because fewer gas wells are being drilled in Canada supplies could drop by an average 840 million cubic feet per day in the 2007-08 winter from the recent average of about 16 billion cubic feet per day.

She said that North America is again entering the heating season with above-average storage levels, which "should help keep the market at ease."

Murray said slipping gas prices saw U.S. drilling slip to 1,760 active rigs in October, but that still easily surpassed the five-year average of 1,288 rigs.

In contrast, she said drilling in the Western Canada Sedimentary basin was down 30 percent year-over-year in the third quarter and 27 percent below 2005, reflecting an estimated C\$5 billion shift in capital spending from conventional

Downward pressure on gas price is expected to continue this winter because of ample storage inventories that should take the edge off price spikes, while prices could be further softened by a slowdown in the U.S. economy and the stalled U.S. housing market.

projects to the oil sands.

"Canadian gas drilling budgets are unlikely to increase in 2008, but a few additional wells could end up being drilled, as under-utilized drillers cut their rates," Murray said.

Downward pressure on gas price is expected to continue this winter because of ample storage inventories that should take the edge off price spikes, while prices could be further softened by a slowdown in the U.S. economy and the stalled U.S. housing market.

Disconnect between prices

Paul Mortenson, another NEB analyst, said there is a "disconnect" between oil and gas prices, which traditionally moved in lockstep.

He said there is now a "very sloppy gas market," with additional supplies coming from the U.S. and LNG, creating an oversupply "whereas oil is very much supply-constrained," as a result of which oil and gas are moving in different directions.

Mortenson said it may be some time yet before the full impact of reduced Canadian gas drilling is felt, although the drop in output of 800 million to 1 billion cubic feet per day "is a big departure from what's been a fairly flat profile for the last decade."

However, he said lower Canadian volumes in the larger North American market will be countered by U.S. supply growth in the Rockies, East Texas, Barnett Shale area and the Gulf of Mexico, with a further lift from LNG imports.

Christian Rankin, the NEB's oil market analyst, said the rising crude prices stem from inventories that are below the five-year average and unstable supplies, with OPEC's average output down 900,000 barrels per day from 2006, mainly because of a steady draw-down of inventories.

If OPEC raises production at its December meeting that would moderate prices, but that reduction would not show up until spring, he said. ●



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● EXPLORATION & PRODUCTION

Seven drilling ANS exploration wells

Gas target of two Anadarko's wells; four small independents to drill; Chevron starts multi-year exploratory program in Foothills

By KAY CASHMAN

Petroleum News

Seven oil and gas companies plan to drill exploration wells on Alaska's North Slope this winter; an eighth company is moving forward with plans to re-enter an old exploration well on an undeveloped prospect. Five of the eight companies are small independents; one is a big independent; and two are majors — one returning to the Slope after a 15-year absence.

The big independent, Anadarko Petroleum, is targeting natural gas, the first explorer in northern Alaska to do so. Gas wells have been drilled on the North Slope in the past, but for local use or by mistake when companies were looking for oil, which is more valuable and can be marketed via the 800-mile trans-Alaska oil pipeline.

The two majors are returnee Chevron and ConocoPhillips, the slope's biggest explorer historically, although this year the company is backing off wildcat exploration to drill close-in delineation wells after disappointing results and an unusually expensive exploration season last year.

Three of the small independents plan to drill their own exploration wells — Brooks Range Petroleum Corp. Group, or BRPC Group, Savant Alaska and Renaissance Umiat.

Small independent UltraStar Exploration will have BP drill its well from an existing Point McIntyre gravel pad near the end of the winter exploration season. And Alaskan Crude, a fifth small independent doing exploration work on the Slope this winter, plans to re-enter a well that was suspended in 1985.

Anadarko: two rigs under contract

Anadarko has two drilling rigs under contract, Nabors 105E, new to Alaska, and Akita 63, which has just been winterized. In the west it plans two gas wells with Nabors 105E at its Gubik and Chandler prospects, which are on Arctic Slope Regional Corp. land near Umiat in the Foothills. BG Alaska and Petro-



BPRC Group drilling at North Shore prospect in winter 2006-07

Canada are partners in those prospects.

On the other side of the slope, 10 miles southeast of Prudhoe Bay, Anadarko will go in to finish a well it began drilling last winter on its Jacob's Ladder oil prospect. State Division of Oil and Gas geologists believe the Lisburne (Wahoo formation) structure in Jacobs Ladder could yield a range of 20-660 million barrels of oil equivalent and the Sadlerochit (Ivishak formation) structure could yield a range of 50-800 million barrels of oil equivalent. Anadarko's partners at the prospect are ASRC and BG.

Depending on what it finds at Jacob's Ladder this winter, Anadarko might do more drilling there or drill another nearby prospect, local spokesman Mark Hanley said in late October.

Chevron returns to northern Alaska

Chevron, an oil and gas explorer and Cook Inlet producer in Alaska for decades, will begin exploration drilling this winter at its White Hills prospect in



MARK HANLEY

the Brooks Range Foothills. It will be the first time the company — or Union Oil Company of California, which Chevron acquired in 2005 — has explored on the North Slope since the early 1990s.

Chevron has told regulators that it hopes to drill six wells this winter, and in a recent application to the Alaska Department of Environmental Conservation said it "plans to conduct a regional, multi-year onshore oil and gas exploration drilling program during the winter months" at White Hills.

The company will be using another new rig from Nabors, Rig 106E.

Chevron officials have not been willing to talk about the target of the White Hills' wells, but Alaska Division of Oil and Gas geologist Paul Decker told Petroleum News in 2006 that two wells on the acreage, Unocal's 1994 Amethyst well and BP's 1991 Malguk 1 well, penetrated thick Upper Cretaceous deepwater turbidite sands with good oil and gas shows. Decker also said Phillips

Petroleum's 2002 Heavenly 1 well just west of White Hills had the same Cretaceous interval and that the same sands may extend within the Chevron acreage.

Bowles bumps well number to 3

ConocoPhillips exploration program, with partners Anadarko and Pioneer Natural Resources, reached into far western NPR-A last winter. This winter ConocoPhillips plans to drill closer in, focusing on appraising discoveries previously announced on the eastern border of NPR-A near the Alpine oil field infrastructure in the Colville unit, where it is a partner with Anadarko.

Erec Isaacson, ConocoPhillips Alaska's vice president of exploration and land, told Petroleum News in October that budgets for this winter's exploration season wouldn't be approved until December, but the company was looking at drilling a couple of wells in the "Alpine-Greater



EREC ISAACSON

Moose's Tooth area — really exploration-appraisal wells." A flow test for one of the Rendezvous wells was also possible, he said.

Staging would be done using the ice road to Alpine, which is built every year to move supplies to the Colville River unit, Isaacson said.

see EXPLORATION page 9



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continued from page 8
EXPLORATION

In a Nov. 14 speech, ConocoPhillips Alaska President Jim Bowles increased the number of this winter's exploration wells to three, one each in the Spark, Rendezvous, and Fiord West prospects.

His statement is in line with the five-year NPR-A drilling plan ConocoPhillips submitted to the U.S. Bureau of Land Management.

The Spark DD wells (Nos. 9-12) in that plan are all in the Northeast NPR-A planning area, directly adjacent to the proposed site for CD-7, which has been evaluated as a development node with permanent road access and a pipeline to Alpine. Spark is some 15 miles southwest of Alpine.

If the Spark and nearby Lookout (CD-6) discoveries are developed, as little as two miles of pipeline would be needed to connect the Spark DD sites, BLM said.

The Spark No. 1A 2001 discovery well tested 1,550 barrels per day of liquid hydrocarbons and 26.5 million cubic feet per day of gas. Other successful wells included the Spark 1, Moose's Tooth C, Looking 1 and Rendezvous A and 2. All encountered oil or gas and condensate in the Alpine producing horizon.

Isaacson said Doyon Rig 141, currently under contract with ConocoPhillips at Kuparuk, would likely be the rig the company uses for this winter's exploration-delineation program.

BRPC Group most active

The most active of the four small independents that plan to drill exploration wells this winter is Brooks Range Petroleum Corp. Group, or BRPC Group, which drilled two wells on two North Slope prospects last winter, and is planning a multi-year, multi-well exploration program on the North Slope.

BRPC Group consists of AVCG, its operating subsidiary Brooks Range Petroleum and three well-funded partners — TG World Energy Inc., Nabors subsidiary Ramshorn Investments Inc. and Bow Valley Alaska Corp.

Company executive Ken Thompson said in October that BRPC Group is hoping to drill as many as four wells this winter on three different North Slope prospects with Nabors Rig 27E. But first the company will go



KEN THOMPSON

JUDY PATRICK

back in to complete and test its North Shore 2006-07 exploration well, one of two drilled in the Gwydyr Bay area northwest of Prudhoe Bay. Sak River No. 1 was a dry hole, but BRPC Group said the other well, North Shore No. 1, looked like an oil strike.

The partners will likely drill one or two more wells near North Shore No. 1, Thompson said, in hopes they "can discover a sufficient volume of oil to warrant a commercial development at Gwydyr Bay."

The 2007, 3-D seismic shot over the Gwydyr Bay prospect area "has identified two small satellite prospects to North Shore No. 1 that can be reached from the North Shore No. 1 drilling pad," TG World said in an October press release.

In a Nov. 13 press release Bow Valley said North Shore No. 1 "appears to be comparable to, the 1974 Mobil Gwydyr Bay South No. 1 well," which is about 1,100 feet to the east and "flowed at an average rate of 2,263 barrels of oil per day on production test from the same formation."

At the Oct. 24 Beaufort and North Slope state lease sales, the co-venturers were high bidders on several tracts adjacent to, or near, North Shore No. 1.

BRPC Group is also planning to drill the Tofkat No. 1 well this winter, which is in what the company used to refer to as the Titania prospect area, south of the Alpine field.

TG World said that if Tofkat No. 1 is a discovery, the partners "may choose to drill a sidetrack well this winter season to help delineate the reservoir extent."

The company also said that the first North Shore satellite "prospect is expected to be drilled after Tofkat No. 1 well operations are completed."

"We will ... also drill a fourth exploration well on a prospect to be named," spending more than \$40 million on seismic and drilling in the winter of 2007-08, Thompson said.

TG World said the fourth well would be selected "from prospects in the Gwydyr Bay area covered by proprietary 3-D seismic data. Final prospect selection is awaiting delivery and interpretation of the pre-stack depth-migrated seismic volume."



COURTESY BROOKS RANGE PETROLEUM/SCOTT NISH

see **EXPLORATION** page 10 **BRPC Group drilling Sak River No. 1 in winter 2006-07**

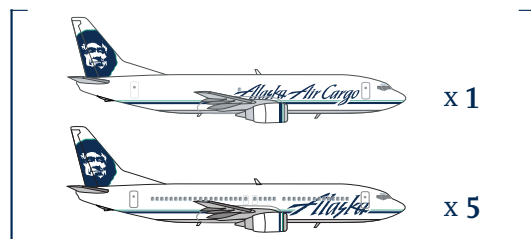
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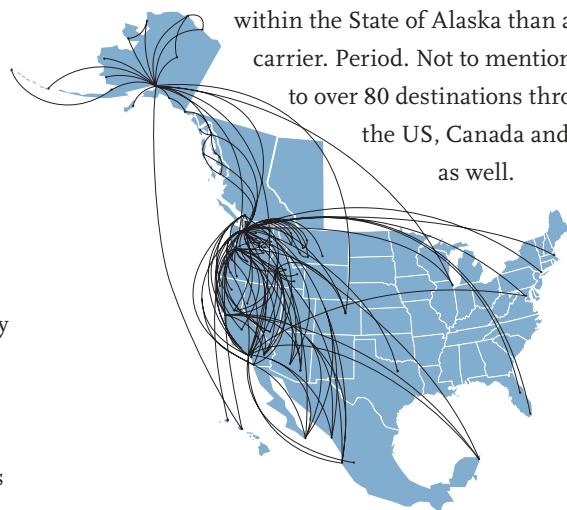
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C O M M I T T E D T O C A R G O



• ALTERNATIVE ENERGY

TransCanada rethinks nuclear future

By GARY PARK
For Petroleum News

Against a background of bullish talk by France's state-owned nuclear energy conglomerate about the potential for nuclear reactors in Alberta, utility powerhouse TransCanada is having second thoughts about entering the field.

Just a year after downplaying speculation that nuclear power could fuel Alberta's oil sands development, Chief Executive Officer Hal Kvisle has conceded his company is engaged in a "detailed" assessment of a nuclear role in the province's future.

He said there is no question about the long-term electricity supply and demand fundamentals in Alberta.

Kvisle said TransCanada might be able to apply the expertise it has gained as majority owner of Ontario's Bruce nuclear plant that is undergoing a multibillion-dollar refurbishment.

"We've got an exceptionally competent nuclear development team at Bruce that has done a very good job of guiding the refurbishment ... which in many ways is similar to a complete new build," he said.

"We have confidence that team would do a very good job of pursuing nuclear projects in Alberta if they make sense."

But Kvisle is unsure whether nuclear power would be competitive against "exotic forms of coal generation," such as coal gasification, he said.

"We don't think simple coal-fired generation makes sense in Alberta going forward for (carbon dioxide) reasons, but there are coal-gasification and other projects that might make sense and that is what nuclear has to compete with," Kvisle said.

Alberta currently consumes 9,000 megawatts of electricity and expects to add another 5,000 megawatts by 2016 to handle the surging demand for power in the oil sands sector.

Energy Alberta, a privately held firm, is pursuing a possible C\$6.2 billion nuclear plant in the Peace River area of northwestern Alberta, having filed plans with nuclear safety regulators.

It is hoping a 2,200-megawatt plant can start operations in 2017.



"We don't think simple coal-fired generation makes sense in Alberta going forward for (carbon dioxide) reasons, but there are coal-gasification and other projects that might make sense and that is what nuclear has to compete with."
—TransCanada CEO Hal Kvisle

Simultaneously, Avera Canada, the Canadian arm of the France state-owned nuclear corporation, has been exploring prospects of building a plant 90 miles northwest of Edmonton.

Avera Canada President Armand Laferrere said that should the Alberta government decide nuclear power could meet 50 percent of its energy needs, there is a case for twin reactors with capacity of 4,500 megawatts in the post-2020 period.

He said that could be the first step toward building six nuclear reactors in Alberta, which he said faces the highest growth in North American electricity demand, needing an extra 10,000 megawatts by 2020.

Research and Markets, a British-based firm, said nuclear power is "back on the menu for 20 countries as a potential baseload generator."

It said many industrialized nations face a shortfall in baseload power as existing fossil fuel and nuclear fleets come to the end of their operating lives.

Environmental awareness is giving fresh impetus to the nuclear option, although there are "many uncertainties about the economics and future of nuclear energy."

The study said "coal has already rebounded and nuclear may well do the same," regardless of the negative public perception. ●

continued from page 10

EXPLORATION

Slope Burglin No. 33-1 well, San Antonio-based Alaskan Crude says it will proceed with plans to re-enter the well in the winter of 2008. But first, the small independent will re-enter a well on Southcentral Alaska's Kenai Peninsula.

"We'll drill Amarex well first, then send our rig to the North Slope to re-enter the Burglin 33-1 well in the Arctic Fortitude unit," Jim White, president of Alaskan Crude, told Petroleum News Oct. 30. "... Our first plan (for Burglin) is to test the Ugnu, and then evaluate what we have and make a decision as to the next step. ... The area is oil and gas prone."

One and a half miles southeast of the Deadhorse airport, the 6,363-acre Arctic Fortitude unit sits on the south side of the Prudhoe Bay unit, immediately east of the NE Storms unit, on three state leases.

Alaskan Crude's drilling rig has a top drive and is similar in size to Aurora Gas's AWS 1 rig, White said. "Nice little pony — actually, it's a race horse," he said.

Alaskan Crude will use a snow road to truck its lightweight drilling equipment three miles from the Haul Road to the Burglin well, White said.

The original Alaskan Crude Corp. drilled the Burglin well down to Ivishak formation in 1984-85, and suspended it. The original company went bankrupt. Jim White bought the company and acquired the Burglin leases in a state lease sale.

A key issue in the delayed drilling at Burglin has been the need for an oil spill contingency plan. Under state statutes and regulations, a company drilling an oil well needs a contingency plan for responding to an oil spill up to a maximum potential rate of unassisted flow for the well.

Going back and forth with AOGCC over a period of months, Alaskan Crude eventually amended its drilling plan to re-enter only the Ugnu formation. As a result, AOGCC reduced the unassisted oil flow potential for the well to 115 barrels per day, for an Ugnu test.

White, a long-time Alaska oil and gas investor and explorer, said he drilled his first well in Alaska in 1977. ●

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RESOURCE DEVELOPMENT COUNCIL

• NATURAL GAS

Solving Cook Inlet's gas conundrum

Region needs gas for foreseeable future; gas exploration, gas storage, North Slope gas, LNG all factor into energy supply options

By ALAN BAILEY

Petroleum News

The days of an overabundance of cheap natural gas from Cook Inlet basin may be over, but Southcentral Alaska needs reliable gas supplies for years to come was a recurring theme during the first day of the Law Seminars International Energy in Alaska conference in Anchorage on Nov. 12.

Gas reserves from existing Cook Inlet gas fields are gradually dwindling. But, although there are definite opportunities to develop alternative energy supplies such as wind, hydro and geothermal power, the impracticality of a total switchover to alternative fuels will drive a need for natural gas for a long time.

"All of our assumptions are that you and I will continue to heat with gas at whatever it costs because the options are just so horrifically expensive to convert ... from gas

that it's something we can't visualize," Harold Heinze, chief executive officer of the Alaska Natural Gas Development Authority, said in a discussion of the energy supply issues.

Heinze also said that a mix of different energy sources, including gas and alternative energies, would be desirable, because that diversity would increase the overall reliability of energy supplies.

"We believe that the energy in this area is going to be a mixture of things — there's no one magic solution," Heinze said.

So where will future Southcentral gas supplies come from?

ANGDA has been working on plans to build a spur gas line that would divert some North Slope gas into Southcentral Alaska from a future North Slope gas export line.

But, although a spur line could likely meet Southcentral Alaska's gas needs, gas line construction would be several years in the future and there is no certainty that the line

will be built.

So, local gas supplies from the Cook Inlet basin remain critically important.

Guarded optimism

Scott Jepsen, Cook Inlet manager for ConocoPhillips, and Mitch Little, production manager, Alaska, for Marathon, both sounded guardedly optimistic about the future of gas production from that basin. ConocoPhillips and Marathon are major gas producers in the Cook Inlet region.

That optimism comes despite the "gas cliff," a familiar graph showing a precipitous decline in future Cook Inlet gas production in coming years. That graph only uses the forecast production from current estimated reserves and depicts a conservative picture of the gas situation, Jepsen said.

"It represents no further investment in existing fields and no exploration," he said.

Whenever the plot is updated the cliff

moves further ahead in time, Jepsen said.

In fact the Cook Inlet basin has been underexplored for natural gas and likely still contains substantial undiscovered gas resources.

"There have been a number of studies that have been done. ... All of them have found significant amounts resource potential," Jepsen said.

In addition there is considerable resource potential from the continued development of existing fields, he said.

Lower 48 comparison

Jepsen likened the situation in the Cook Inlet basin to the "perceived natural gas crisis" in the Lower 48 in the mid 1970s. When the reserves to production ratio, a measure of how many years of gas supply remain, had dropped from around 20 to about 10 people thought that gas supplies were about to run out, he said.

"We thought the gas bubble was about to burst. ... We had utilities curtailing their expansions because they didn't think they were going to have enough gas for existing consumers," Jepsen said.

But then gas prices rose and, with new investments in gas development, the reserves to production ratio stabilized at around 10 over the years to come.

In Cook Inlet the reserves to production ratio dropped to about that magic 10 level at around 2000, Jepsen said. Then as gas prices rose the number of wells drilled in the Cook Inlet basin also increased. Between 2001 and 2005 five times more

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AOGCC sets Oooguruk pool rules hearing

The Alaska Oil and Gas Conservation Commission has set a hearing Dec. 18 for pool rules for Oooguruk.

The agency said Pioneer Natural Resources Alaska Inc., the Oooguruk operator, has requested an order defining two oil pools within the Oooguruk unit, Oooguruk-Nuiqsut and Oooguruk-Kuparuk, and prescribing rules for development and operation of the pools.

Oooguruk lies in the Beaufort Sea north of Kuparuk off Alaska's North Slope and is scheduled to go into production in the first quarter of next year. Pioneer will be the first independent oil company to operate an oil field in the Alaska Arctic. The company has estimated peak production at 18,000 to 20,000 barrels per day from the Kuparuk and Nuiqsut formations.

The commission said the proposed pools and the proposed development area are within portions of township 13 north-range 7 east, T13N-R8E, T14N-R7E and T14N-R83, Umiat Meridian.

The public hearing is tentatively scheduled for 9 a.m. Dec. 18 at the commission's offices at 333 W. 7th Ave. in Anchorage. To learn if the hearing will be held, call (907) 793-1212 after Dec. 13.

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wells were drilled than during the previous 15 years, Jepsen said.

Little also compared the situation in Alaska with that in the Lower 48.

He showed a graph depicting a strong correlation between natural gas prices and the number of Lower 48 wells drilled as evidence of the connection between prices and gas development. The graph also showed growth in gas reserves in line with increased drilling activity.

Low Cook Inlet prices

But gas prices in the Cook Inlet have remained consistently lower than those in the Lower 48, Little said.

“The average price for Southcentral Alaska’s producers is approximately \$3 an mcf lower than what you see for competing opportunities in the Lower 48,” Little said. “... If a producer or an investor had equal opportunities ... in those environments, they’re going to choose the market that gives them the most incentive for doing that. ... Clearly Alaska’s gas opportunities are not today competitive on average with those opportunities in the Lower 48.”

Local market factors also come into play in Alaska because of the extreme seasonal swings in utility gas demand between summer and winter. The average daily supply volume is 75 million cubic feet, while the peak is 185 million to 200 million cubic feet, Little said. But the traditional utility gas supply contracts for the Cook Inlet basin are “full service” contracts that include both base load and peak winter demand.

“To date the producers bear the sole burden of providing that peak availability,” Little said. “... It’s a real cost of doing business.”

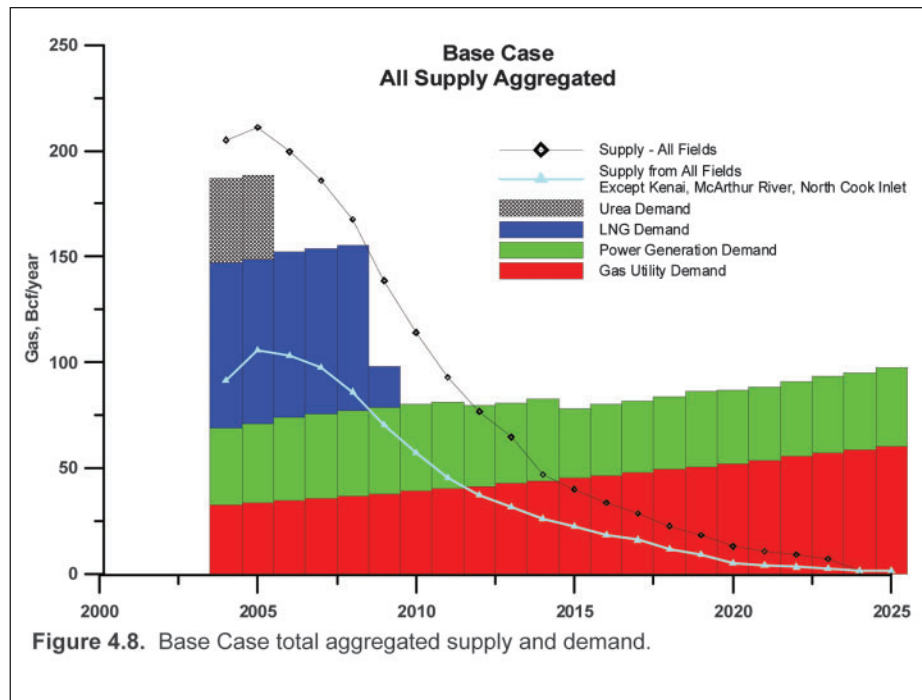


Figure 4.8. Base Case total aggregated supply and demand.

The projected total Cook Inlet gas supply and demand in 2004. The projections only include estimated future production from existing fields, without further development. More recent data has moved the production cliff forward, so that production is now forecast to drop to power generation and heating demand in 2015.

CREDIT: From U.S. Department of Energy Southcentral Alaska Natural Gas Study, June 2004

And there’s a double whammy in that it is becoming increasingly difficult to stop and start wells to adjust production to match the swings in demand. Whereas years ago it was possible to shut in a Cook Inlet gas well and then simply restart it, the mature nature of the gas fields nowadays means that well production recovery after a shut in may take anything from several days to several months, and may never fully return to pre-shut-in levels, Little explained.

Storage facilities

So, with average production coming into balance with average demand, Cook Inlet producers have been establishing gas storage facilities. These facilities can store excess gas during the summer when demand is low, and then release gas during

higher winter demand. To date, Chevron has developed storage facilities in the Swanson River and Pretty Creek fields, while Marathon has established a facility in the Kenai field.

Little sees a need for a portfolio of different types of gas storage arrangements to support demand fluctuations. Subsurface storage of the type that has currently been implemented should support major overall swings in demand between summer and winter, he said. And were a spur line to bring North Slope gas into Southcentral, gas storage in depleted gas reservoirs could help smooth out gas line throughput to maximize pipeline usage efficiency.

But other approaches, such as small-scale liquefied natural gas storage facilities, are needed to support short-term

peaks in demand.

“On-the-surface LNG peak shaving is another common practice used by utilities and/or third party providers,” Little said. “... It can provide instantaneous needle peak supplies.”

Peak shaving facilities of this type are also commonly placed close to where the gas is used, as insurance against interruptions in gas production or transmission line operation, he said.

Gas storage could also provide a convenient buffer against fluctuations in supply rates from future alternative energy sources such as wind power, Heinze said.

Cook Inlet gas market

But, with gas storage costing money, the issue of how to pay for the storage comes back to the operation of the Cook Inlet gas market — a market that is still adjusting to the changing gas supply situation in the region.

Kurt Gibson, acting deputy director of Alaska’s Division of Oil and Gas, characterized the Cook Inlet gas market as an “emerging market that requires some guidance on the part of regulatory agencies.”

“There is no market for natural gas in Cook Inlet. A functional market does not exist,” Gibson said. “It exists as periodic episodes of negotiation followed by silence.”

Although market forces should bring supply and demand into balance, it becomes problematic if, when prices go up, there is no outlet for additional supplies — the market needs to react on a more regular basis, Gibson said.

Full requirements and long-term contracts keep the parties apart and don’t result in smoothly transitioning commercial agreements, Gibson said. In the Lower 48 continuous negotiations and portfolios of

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DNR	Alaska Peninsula Areawide	Feb. 27, 2008
DNR	North Slope Foothills Areawide	Feb. 27, 2008
DNR	Cook Inlet Areawide	May 21, 2008
DNR	Beaufort Sea Areawide	October 2008
DNR	North Slope Areawide	October 2008
BLM	NE NPR-A	To be determined
BLM	NW NPR-A	To be determined
DNR	Alaska Peninsula Areawide	February 2009
DNR	North Slope Foothills Areawide	February 2009
DNR	Cook Inlet Areawide	May 2009
DNR	Beaufort Sea Areawide	October 2009
DNR	North Slope Areawide	October 2009
MMS	Sale 209 Beaufort Sea	2009
MMS	Sale 211 Cook Inlet	2009
DNR	Alaska Peninsula Areawide	February 2010
DNR	North Slope Foothills Areawide	February 2010
DNR	Cook Inlet Areawide	May 2010
DNR	Beaufort Sea Areawide	October 2010
DNR	North Slope Areawide	October 2010
MMS	Sale 212 Chukchi Sea	2010
MMS	Sale 217 Beaufort Sea	2011
MMS	Sale 214 North Aleutian basin	2011
MMS	Sale 219 Cook Inlet	2011
MMS	Sale 221 Chukchi Sea	2012

Agency key: BLM, U.S. Department of the Interior's Bureau of Land Management, manages leasing in the National Petroleum Reserve-Alaska; DNR, Alaska Department of Natural Resources, Division of Oil and Gas, manages state oil and gas lease sales onshore and in state waters; MHT, Alaska Mental Health Trust Land Office, manages sales on trust lands; MMS, U.S. Department of the Interior's Minerals Management Service, Alaska region outer continental shelf office, manages sales in federal waters offshore Alaska.

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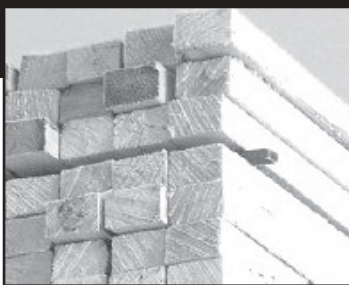
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Tri-borough panel developing energy policy

The Municipality of Anchorage, the Matanuska-Susitna Borough and the Kenai Peninsula Borough are embarking on a joint project to develop an energy policy for Southcentral Alaska, Anchorage Mayor Mark Begich told the Law Seminars International Energy in Alaska conference on Nov. 12.

"The cornerstone (of the policy) should be delivering affordable and dependable energy to Alaska homes and businesses," Begich said.

A dozen energy experts from the three boroughs were scheduled to meet Nov. 13 to kick off the development of the policy, which Begich anticipates being completed in time for the state legislative session in January.

The focus will be on three elements: how to increase oil and gas development in Alaska, including more drilling in the Cook Inlet region; the construction of a North Slope gas pipeline; and the need for renewable energy and energy conservation.

"We must recognize that Alaska is truly ground zero when it comes to global climate change," Begich said in reference to the importance of renewable energy and conservation.

—ALAN BAILEY

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commercial transactions form an overall supply portfolio for a utility. Regulatory agencies review agreements in retrospect, to determine whether the transactions are in the best interests of the ratepayers.

A similar approach in Alaska might cut out the long lead times and high costs associated with the regulatory approval of supply contracts, Gibson said.

And, as in the Lower 48, the regulators may need to create a situation where the supply transactions are "unbundled." Companies could then shop around for different service components, and service providers could be compensated appropriately for different types of service.

That type of arrangement would enable peak shaving services pricing, for example, to reflect the cost and complexity of that specific service.

But that also raises questions about who should operate the gas storage.

In the Lower 48 gas utilities or mid-stream businesses, rather than the gas producers, often take care of peak demand, said natural gas consultant Tony Izzo.

"Typically, what you find is that the utility is responsible," Izzo said. "Either they buy the service from someone at the mid-stream level or they own the peaking assets."

Kenai LNG facility

However, with deliverability of utility gas during the extreme peak demand of cold winter days in Southcentral Alaska being so important, several speakers at the conference spoke about the peak shaving role of the LNG export facility on the Kenai Peninsula. In recent winters the plant has cut production to boost the short-term availability of gas for utility use during peak demand.

But the plant's export license expires in 2009 and the U.S. Department of Energy is

currently reviewing an application by Marathon and ConocoPhillips, the plant owners, for a two-year license extension.

The prevailing view of the conference speakers was that closing the plant would be a mistake. At present, the plant provides the only means of quickly adjusting utility gas deliverability during peak winter demand, Heinze said, for example.

Not only that. Without the LNG plant, there would be insufficient base gas load in the region to support the regional gas market. And, if wells are shut-in as a result of closing the plant, it is unlikely to be possible to restart the wells.

"You'll lose wells if you can't produce them," Heinze said.

Heinze also thinks that it is important to be able to convert the LNG plant to import LNG, in the event of gas supplies running short during the interim period before a pipeline infrastructure connects the North Slope gas supplies to Southcentral Alaska.

"If there isn't some significant discovery made that makes you comfortable about our supply, it seems to us that you've got to look at modifying that plant," Heinze said.

Energy conservation can also play a significant role in addressing future gas supply issues. Anchorage Mayor Mark Begich described to the conference several Municipality of Anchorage initiatives to reduce energy consumption by, for example, retrofitting lights with modern technology and putting computers into sleep mode when not in use.

And gas utility rate structures need to be redesigned to encourage gas conservation, Izzo said.

But, even with conservation, investment will be needed to address issues such as the need for gas storage and a dependable gas transmission infrastructure, Izzo said. And, since that ultimately comes back to cost to the customer, there will also need to be "regulatory response" to assure that appropriate cost increases will be approved, he said. ●

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GOVERNMENT

Industry less and less happy with ACES

Companies tell Senate Finance that more taxes will lower, not raise, investment levels; bill includes more than two increases

By KRISTEN NELSON
Petroleum News

Industry representatives were glum when they testified at Senate Finance Nov. 14. They'd had less than 24 hours to look through the committee substitute for Senate Bill 2001, the evolving bill that began life in mid-October, at the beginning of the 30-day special session of the Alaska Legislature, as Gov. Sarah Palin's Alaska's Clear and Equitable Share, or ACES.

The governor said ACES had two goals: a fair share of oil revenues for Alaska — and incentives for industry to invest.

The incentives for investment weren't apparent to industry.

ConocoPhillips: higher taxes will impact investment

Kevin Mitchell, ConocoPhillips Alaska vice president of finance and administration, said the committee substitute "gives us major cause for concern" and will require the company to go back and look at its business plans. The most recent version of the bill would be a \$2 billion tax increase at current prices, he said.

ConocoPhillips has previously said higher taxes would have an impact on investment and absolutely stands by those comments, Mitchell said. It is unrealistic, he told the committee, to expect that an increase in taxes of this magnitude won't have an impact.

He said the committee has heard testimony from consultants who say you can increase taxes and it won't have an impact on investment. "In my view this is wrong," Mitchell said.

On the provision in the House bill — not included in the Senate Finance CS — for a standard deduction for operating expenses for Kuparuk and Prudhoe based on 2006 levels, that's a "disincentive to invest in new activity," Mitchell said, and "encourages more of a harvest type operation," not growth.

Various components of the bill have the effect of reducing allowable deductions, he said, and noted that in modeling ConocoPhillips has done, a 5 percent reduction in allowable deductions is the equivalent of a 1 percent increase in the tax rate.

Asked by Finance Committee Co-Chair Bert Stedman, R-Sitka, if ConocoPhillips prefers a higher base tax rate and lower progressivity or a lower base rate and higher progressivity Mitchell quipped that it was the equivalent of being asked if he preferred

being hit by a truck or a bus. "I can't pick one or the other," he said.

BP: visible and invisible increases

Claire Fitzpatrick, BP Exploration (Alaska)'s senior vice president commercial, told the committee that while there are two visible tax increases — rates and progressivity — there are "many, many hidden tax increases" in the bill.

Responding to consultants statements that progressivity will make investments look better, Fitzpatrick said: "Not the way I make investment decisions." She said she looks at investments over a range of prices and at prices over \$50 "I'll have to assume additional taxes," which won't make an investment look better.

Bernard Hajny, BP's tax and royalty manager, said all of the changes in the bill could aggregate to more than \$100 million in additional taxes, on top of the changes in the base rate and progressivity.

On the standard deduction for operating costs at Prudhoe Bay and Kuparuk Fitzpatrick said that the 3 percent per year inflation over 2006 costs doesn't equate with what third parties told the Department of Revenue — that there had been a 53 percent increase in costs since 2005. Net taxes allow self adjustment, he said, and if high prices stay, costs will move up. "2006 costs means 2006 activity," she said. There wouldn't be adjustments allowed in the standard operating deduction for satellites and heavy oil development.

As far as a House proposal to exclude costs from outside the state, Fitzpatrick said not everything needed is made in Alaska. She told the committee that if exclusion of out-of-state costs and a standard operating deduction were in the bill it would make her business planning a lot easier — she said she couldn't do anything under those conditions.

Chevron: from half a million to \$1.5-\$2.5 billion

John Zager, general manager for Chevron in Alaska, told the committee that while the governor called ACES fair and equitable, and Econ One said it would raise an additional \$500-\$600 million above PPT, the numbers now quoted are \$1.5-\$2.5 billion above PPT.

While the proposed changes may bring the state more money in the near term, charts from the consultants don't reflect what production will look like in the state in

five or 10 years, if the current 6 percent decline in production increases due to reduced investment following on higher taxes, he said.

Zager also said he was concerned about unintended consequences, including the fact that the trigger for progressivity was based on nominal, not real dollars. A \$30 kickoff point today is not the same as \$30 in the future, he said, and would result in progressivity kicking in at lower real prices in the future.

Pioneer: industry disagrees with consultants on effect

Pat Foley, manager land and external affairs for Pioneer Natural Resources Alaska, noted that all members of industry disagree with consultants who say you can increase taxes and investment will not be affected.

Pioneer has some different investment concerns than the majors, he said, because its competing projects are in the Lower 48 where there is lower government take than in Alaska. Texas and Colorado, Pioneer's primary investment areas, do not have progressive taxes, he said, and if Pioneer had equal investment opportunities in Texas and Alaska, at higher prices investment dollars would be motivated to flow to Texas because government take in Texas allows the company to keep the upside, the additional dollars that come in when prices are high.

Compared to Lower 48 opportunities, Foley said Alaska is advantaged in size of

projects but disadvantaged in costs and cycle time.

At Oooguruk, the North Slope project the company is bringing online, Pioneer faces a unique problem because a high percentage of the resource is on net profit share leases. He said he believes Pioneer has come to an agreement with the administration that net profit share can be deducted under a net tax, and asked the committee to keep that benefit in the bill.


Anadarko: a lot of things in bill are tax increases

Mark Hanley, public affairs manager for Alaska for Anadarko Petroleum, said a lot of people had already delivered the messages Anadarko wanted to deliver. "A lot of things in the bill are tax increases," he said: they're costs to the company, so effectively are the same as tax increases.

He agreed with ConocoPhillips that if the state prevents industry from taking 5 percent of costs as deductions, it's the same as a 1 percent tax increase.

Anadarko does not support retroactivity provisions in the bill, he said: We don't even have regulations yet for everything the Legislature adopted in 2006.

Higher tax rates make projects less economic, he said, and also noted that progressivity was steep in the range where companies make investment decisions. He said Anadarko is concerned about the bill being too much of a tax increase — and also about all of the other things that are in the bill. ●




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Tom Tompkins began his career as an equipment operator and certified industrial maintenance mechanic/electrician in underground mining and facility maintenance. He earned a bachelor of science degree in geology with a minor in engineering from Fort Lewis College in Colorado. Tom was a consultant for more than 10 years working on remote projects located in rural Alaska. He also worked at Prudhoe Bay as a scaffold builder for VECO/BP. He and his wife Debbie started TTT Environmental in 2002.

—PAULA EASLEY



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FORECAST

higher.

Unplanned interruptions can't be predicted, Platt said, "so I attempt to make a rational judgment as to how many of those events are going to happen. I've dialed that number up for the next eight years."

Field-by-field forecast

Platt has done production forecasts for Revenue since 1989, first as an employee but for the last 15 years as a contractor. He said he does the forecasts on a field-by-field basis, part of a "bottoms-up approach" which involves taking "a clean, fresh look" at every field twice a year and continually reviewing the assumptions he builds into his forecast.

Then he runs the numbers and when he sees the kind of difference between forecasts that he saw between this year's spring and fall projections, he looks at the differences on a field-by-field basis, looking for mistakes.

Unfortunately the drop in forecast production wasn't based on a mistake.

Comparing plots of daily production from the greater Prudhoe Bay area for 2005 and 2007, production in 2007 shows "significantly more than the volatility of the same line just two years ago," Platt said.

Problem not with reservoirs

Platt said the problem doesn't lie with the reservoirs.

North Slope reservoirs "want to produce — they're healthy reservoirs," he said.

"Just because a reservoir is capable of producing, there's a lot of other things that can prevent it from performing up to the expectations that I have of it and frankly the expectations that the operators have of it." Platt said those things include the wells, flowlines, facilities and the trans-Alaska oil pipeline.

"It's getting the oil from the reservoirs, up to the surface, to the facilities, to Pump Station 1, down to Valdez, where we have a lot of room" for unexpected events that it's hard to include in a forecast, he said.

In addition to unplanned interruptions, planned infrastructure renewal is likely to slow production rates. Calendar year 2006 "was defined as the year of integrity management," Platt said, and "was highlighted by pipelines that had some issues." Platt said that following the pipeline problems in 2006, operators probably decided to "look at everything. And as a result of that they put together an integrity management plan that led to an infrastructure renewal plan that will take years to complete."

Infrastructural renewal

In calendar year 2007, he said, integrity management seems to have given way to "infrastructure renewal, lifecycle replacement costs." Healthy reservoirs need "facilities that have integrity" and "a trans-Alaska pipeline that has integrity," he said.

Platt said he took "a fairly detailed site-inspection tour of all the major fields on the North Slope" about a month ago "and I had a chance to talk to field managers and operators. ..."

One issue that came up, he said, is the 1,100 miles of pipelines at Prudhoe Bay alone. "They're not going to last forever."

At Milne Point he learned "that over the next three to five years they will be replacing certain flowlines on a regularly scheduled pace" that will reduce production while that replacement is being done "and it will also, hopefully ... extend the life of the oil production."

Platt said he's heard "there's plenty of capital and expense money" to go around but that money isn't always going to "rate-enhancing projects."

While production may be slowed because you have to shut in facilities to work on them, "you still get the production — you just get it later. That's my interpretation of the geological producing characteristics of the fields," Platt said, "and I just don't believe that not getting it now won't allow you to get it later."

700,000 through 2014

Including federal production, "my latest forecast says we're at 700,000-plus" barrels per day through 2014, Platt said. The fall production forecast for FY 2008 is 732,000 bpd, although Platt warned that for every degree over normal during the winter, you take off 2,000 bpd.

In addition to planned and unplanned interruptions, Platt said he "slowed the pace of heavy oil development," based on discussions with industry. There are challenges to West Sak-Schrader Bluff development, he said. There were reservoir issues at West Sak, what Platt called "major bypass events," but he said "ConocoPhillips has done a really good job of figuring out how to fix the problem."

BP Exploration (Alaska), which is developing the comparable oil at Orion in the western Prudhoe satellite area, "has learned from that and Orion does not suffer from those particular reservoir issues."

West Sak development in the Kuparuk River unit has commercial issues, as well as technical challenges. "Just because one company, perhaps the operator at an oil field, wants to do something doesn't necessarily mean that they're going to convince their co-owners to sign off on that. And that's happening also at West Sak," Platt said.

In trying to anticipate that, "I've stretched out the development plan as projected to the Department of Natural Resources for West Sak." ConocoPhillips knows where they want to go, "where they'd like to go — but they can't because of co-owner approval issues." Platt said that every time an extra drill site at West Sak is delayed, you delay 10,000 to 15,000 bpd.

New project timing

Platt said Liberty is an example of how he's revised his projections for new project development.

Initially BP thought it would develop Liberty as a standalone project, he said, but then with further evaluation it realized surplus capacity at the Endicott facility could handle Liberty. It will take, he noted, "world-record" extended reach drilling and construction of "the world's biggest rig" to reach Liberty from Endicott.

"When you do it that way," he said, rather than with the more expensive standalone project, "you drill one, maybe two wells a year to see if it works. And you wait a year and you do two more wells and then you wait again and you do two more wells."

And that approach changes the pace of production, Platt said.

Instead of "a rapid rise to a peak plateau production, you have a stair step," he said. When you delay some of the production it's a timing event.

He said he also delayed Liberty production six months because that was what BP told the Minerals Management Service.

There has also been a delay at Oooguruk. A year ago, Platt said, Pioneer Natural Resources expected production to start in the fourth quarter of 2007; now it looks like second-quarter 2008.

And at Nikaitchuq, where Kerr McGee expected to have first production in the fourth quarter of 2008, Eni has taken over as operator and merged in the Tuvaq unit. Platt said he's delayed startup there for another year in his forecasts.

While new oil is an issue in maintaining production levels, there are also issues at existing fields, where Platt said facilities expansion may be needed. He said the large facilities are "maxed out on how much gas they can handle and they're getting close to being maxed out on how much water they can handle. ... If they don't expand their facilities to handle that, the oil production will continue to go down."

Production basis for forecast

What's in the forecasts is producing fields, fields under development and fields under evaluation.

There aren't any undiscovered resources; no Ugnu — the heaviest and shallowest North Slope oil; only a very small portion of West Sak and Schrader Bluff, heavy oil lighter than Ugnu; no discoveries on the federal outer continental shelf such as Sivulliq, Kuvlum and Sandpiper; no National Petroleum Reserve-Alaska discoveries, except a few known oil pools near Alpine; and no barrels from new technologies such as slope-wide implementation of low salinity waterflood, a technology BP is just beginning to test at Endicott.

The largest field under evaluation is Point Thomson, which Platt said he's currently showing as coming online in 2017.

There was a plan of development for Point Thomson when Platt started doing forecasts in 1989, he said, and plans kept calling for bringing the field online six or seven years down the road. "So it seemed like every year for the last 10 years I've been continually pushing that out." A few years ago the development proposal was changed from gas-cycling to gas sales.

Platt said he's been using a 10-year planning horizon for Point Thomson, and pushing it out. And "I miss my forecast when I do that — actual vs. what I've said — I always miss it."

Point Thomson is a gas condensate field, but "it's got an oil rim on it" and like Prudhoe Bay, Kuparuk and Alpine, "Point Thomson has some satellite fields that are known to exist — one kind of straddles ANWR." When Point Thomson production is deferred, it's not just 70,000 barrels a day from Point Thomson, but 20,000 to 30,000 bpd from satellite opportunities in the Point Thomson area, Platt said. ●



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FINANCE & ECONOMY

Canadian trust goes global

Vermilion Energy Trust has delivered another blow to Alberta by unveiling a 2008 capital budget, 75 percent of which will be spent outside its home base.

Driven by weak natural gas prices and a strong Canadian dollar, but making no direct reference to the impact of Alberta's royalty increases, the trust set a spending target of C\$182 million, up C\$17 million from this year.

The bulk will go to France, the Netherlands and Australia, which account for 65 percent of its production (75 percent of that being oil).

Overall output is expected to take a slight dip in 2008 to 31,000 barrels of oil equivalent per day, due to maintenance downtime in facilities in Canada and the Netherlands.

On the upside, the geographic and production mix help shield the trust from currency and natural gas weaknesses and limit its exposure to Alberta's planned royalty hikes.

Vermilion estimates the new royalty regime will trim less than 2 percent from its 2009 cash flow, when the new regime takes effect.

—GARY PARK

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CLOSE

by 2030. Some experts see a potential disaster looming — in as soon as five years or even less. Chris Skrebowski, the editor of the London-based Petroleum Review, thinks slower-than-expected supply growth combined with rising demand from burgeoning Asian economies could result in a worldwide shortfall of as much as 7 million barrels a day by 2013.

Demand is so strong that Matthew Simmons, a Houston oil and gas investment banker, says \$100-a-barrel oil may even be a bargain, with \$300 crude likely in the future.

"I think oil prices are unbelievably inexpensive," said Simmons, the author of "Twilight in the Desert: The Coming Saudi Oil Shock and the World Economy," a widely debated book suggesting that the world's largest oil exporter will be hard pressed to maintain its crude output, let alone increase it.

From the oil industry, too, there are voices of concern. For example, Christophe de Margerie, chief executive of Total SA, France's largest oil company, believes the Department of Energy's global production forecast is far too high.

"One hundred million barrels ... is now in my view an optimistic case," de Margerie said at an industry conference in London in late October. Over time, soaring energy costs could have disastrous consequences for the world economy, with affordable transportation being the most obvious casualty. Manufacturing, petrochemicals and power generation would all be affected.

But some analysts argue that consumption growth will slow if limited supply keeps prices high.

Recent evidence suggests that prices of \$80 a barrel have already begun to put a crimp in consumption in industrialized countries, said Leo Drollas, chief economist at the London-based Center for Global Energy Studies.

He projects annual consumption growth of 1.2 percent to about 93 million barrels a day in 2015. That growth figure is lower than in many existing forecasts.

Oil prices surged to a record \$98.62 a barrel the week of Nov. 4.

"Demand will not grow at those prices," Drollas said of oil at current, let alone higher levels.

Drollas' view appeared to get a boost Nov. 12 when the IEA lowered its oil demand forecast for the fourth quarter by 500,000 barrels per day and for 2008 by

300,000 bpd. Demand growth will now average 1.2 percent in 2007, the group said.

However, it said demand would likely grow 2.3 percent in 2008, keeping consumption close to global supply.

So far, subsidies in China and India have blunted the impact of high prices on their consumers. But state-run oil refineries are feeling the pinch, and China recently raised retail gasoline prices about 10 percent.

And if anecdotal evidence is right, that could indeed affect demand.

"If the gasoline price jumps another 50 percent, I'll quit driving and take public transportation," said Zhou Zhiqiang, a Beijing driver. "I think it is the trend for oil price is to go up. The international oil price will ultimately surpass \$100, because the resource will become scarcer and scarcer."

But the World Bank said Nov. 14 that East Asian economies are likely to remain healthy next year despite the impact of the widening subprime lending crisis in the U.S. and the renewed increase in crude oil prices. The region's rapid growth is also reducing poverty, although income inequality is expanding. Led by domestic demand, growth in emerging East Asia, which excludes Japan, is expected to exceed 8 percent this year for a second year in a row, and to moderate slightly next year, the bank said in its half-yearly update on the region's outlook. Japan is likely to grow about 2 percent this year and 1.8 percent in 2008, it said.

Looking at planned oil field developments, Skrebowski, the London-based oil expert, calculates that 23.6 million bpd of new production will come onto the market by 2013 — and that only if projects are completed on schedule, despite growing shortages of equipment and qualified personnel.

But the former long-term planner for energy giant BP PLC and oil analyst for Saudi Arabia believes that new production will be largely offset by the natural depletion of existing fields totaling 20 million bpd. The net gain, then, would be only about 3.5 million barrels over the five-year period, raising daily production to 88.5 million barrels. Against that, Skrebowski says IEA demand projections would raise consumption to 96 million barrels by 2013, more than 7 million barrels short of his production estimate.

"After 2011 we could be in for serious trouble," he said.

But oil prices dropped down to the low \$90s in mid-November after OPEC downgraded its fourth-quarter demand forecast and the government reported jumps in inflation and unemployment filings.

The Organization of Petroleum Exporting Countries predicted that demand for oil in the fourth quarter would rise 1.97 percent, down from expectations of a 2.1 percent increase a month ago. The revision was due in part to the effect high prices are having on demand.

OPEC's secretary general blamed feverish speculation in international oil markets for the rise in crude prices, the official Saudi Press Agency quoted him as saying Nov. 15.

"The main reason behind the current rise in oil prices is the hot speculation in the international markets," Abdalla Salem el-Badri told SPA. "The increase of the prices has nothing to do with the insufficient quantity of oil as some claim."

El-Badri said OPEC was ready to increase oil production "if that will contribute to lower the (crude) price."

But, he warned, "even if the output is increased, there are not enough refineries to refine the extra production."

Leaders from many of the world's top oil producers will meet in the Saudi capital Riyadh Nov. 17 and 18 to discuss the challenges a potential global recession and the weakening value of the U.S. dollar present to the international oil market.

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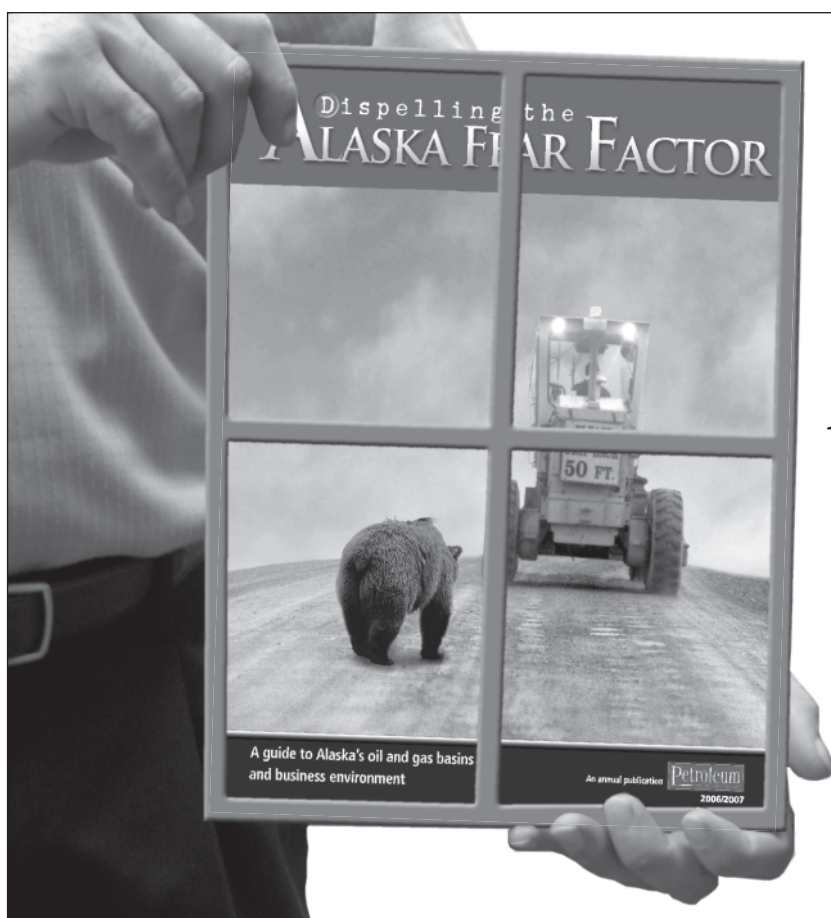


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INVESTMENT

new facility would produce diesel fuel for all of the industrial operations on the North Slope.

Taxes higher than profits already

Taxes under the current production profits tax, or PPT, were “considerably more than our profits” in 2006, BP Exploration (Alaska) President Doug Suttles told conference attendees. BP’s taxes to the state and federal governments on its Alaska assets totaled more than \$2.7 billion for 2006. If Alaska Gov. Sarah Palin’s production tax bill is passed, he said, it would be a 400 percent tax increase in a two-year period for oil and gas companies doing business in the state. The governor’s proposed new tax is called Alaska’s Clear and Equitable Share, or ACES.

“Before all the tax stuff came up, we had a plan to increase our capital spending fairly significantly,” Suttles told Reuters at the conference. And it will take continued oil field investment to keep Alaska oil production steady; gas development isn’t enough to fill state coffers, he said.

BP has put its 2008 Alaska investment plans on hold “until the dust settles” over the oil-tax issue, he said, noting there are a lot of opportunities left on the North Slope, such as the 20 billion barrels of discovered heavy oil, that in today’s “higher priced environment” could be “realized,” especially with a tax structure that encourages investment.

But those opportunities will require “tremendous” amounts of investment and people, and “massive amounts of know-how.”

In 2007, Suttles said, BP is making investments in all three areas. The company will spend almost \$1.9 billion in 2007 in Alaska, \$685 million of which is capital investment and the balance is for operations.

In fact, since 2006, BP has increased its workforce in Alaska by more than 40 percent to almost 2,000 employees and its contractor workforce has increased from 2,500 employees to nearly 6,000, which has resulted in the highest number of people working on the North Slope since 1983, six years after the trans-Alaska oil pipeline went online.

Investment to date, Suttles said, has kept oil production declines to 6 percent a year at the maturing North Slope fields, which include significant chunks of the Prudhoe Bay and Kuparuk River units. Without that investment, production from the aging fields would fall by 16 percent a year, he said.

“We would be at half our current rate in just four years’ time.”

Alaska produces 650,000 barrels of crude per day; almost half of that comes from Prudhoe Bay.

Investment in Prudhoe Bay and Kuparuk generates almost 70,000 new barrels of oil each year, which is larger than any field that has been developed in over a decade on the North Slope, Suttles said.

Prudhoe Bay, still the largest field in North America, “is the biggest driver of new production in Alaska, the biggest generator of jobs, and generates more state revenue than any other field,” he said. But the infrastructure in the field, which just celebrated its 30-year anniversary in production, was built expecting a 25-year life, so it, too, needs investment.

Suttles also expressed concern about oil prices staying high, noting that oil companies make investments based on reasonable price forecasts.

“I hope the high prices of the last few years continue, but clearly this is not certain,” he said. “A 10-year average of Alaska

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PRODUCTION

isulators, cautioning them against another oil production tax hike.

James Gilbert, president of Alaska-based Udelhoven Oilfield Systems Service, summed up the concerns of many of the contractors in a Nov. 14 Anchorage Daily News guest editorial.

“We should not be considering raising taxes. We should be considering what it will take to get (oil) production back up to 2 million barrels per day,” Gilbert wrote, noting his company provides 538 jobs in Alaska.

If the Legislature passes Gov. Sarah Palin’s production tax plan in the special legislative session that ends the day after Petroleum News goes to press Nov. 15, “it proves that Alaska is an unstable place to operate and invest,” Gilbert said, noting that it has only been “14 months since the last tax increase was imposed.”

Before oil prices shot to new highs in recent years, Alaska had been a tough place for oil companies to make a profit, he said.

“Maybe that’s why, after 30 years of North Slope production, only one independent — Pioneer Natural Resources Co. — has developed a new field. Now we want to punish Pioneer by raising its taxes too.”

Now that Alaska oil producers “are finally getting some payback for all those years of investments, we seem to hear nothing but complaints, accusations and whining,” Gilbert said.

“No other industry — not fishing, not tourism, not mining, and certainly not the public sector — contributes what our employees, our clients or our clients’ employees do,” he said. “My clients (the oil companies) pay their ‘fair share,’ and they’ve been paying it for 30-plus years. Consider the Permanent Fund: a \$40 billion nest egg built on the foundation of oil revenues. Consider more than \$70 billion paid to the state in taxes and royalties.”

“We need to be looking at how we can get the pipeline back to its operating capacity, not trying to tax the final 600,000 barrels per day into ultimate submission,” Gilbert said.

—KAY CASHMAN

crude, adjusted for inflation, for the last 10 years ... (was) \$33 a barrel.”

The average price per barrel for the last 30 years, since the startup of Prudhoe Bay, was \$22 per barrel, he said.

Suttles also pointed out that unlike other governments around the world, the State of Alaska has no transition period for the taxpayer should the Alaska Legislature vote to increase production taxes. “This is like the government deciding to disallow a mortgage deduction on your home, but after you bought the home and ... signed the mortgage.”

Bowles: Alaska has enough challenges

“Our business in Alaska already has enough challenges,” Bowles said, reminding attendees of the \$60 million ConocoPhillips spent drilling two wildcat wells in the National Petroleum Reserve-Alaska last winter, one of which was a dry hole and the other deemed non-commercial because it was some 200 miles from the nearest oilfield infrastructure at Alpine.

“It’s no easy lunch for us on the North Slope. ... it’s a very, very difficult place to work,” Bowles said, noting the company and its partners Anadarko Petroleum and Pioneer Natural Resources recently relin-

quished 300,000 exploration acres in NPR-A, and are preparing a second acreage drop in the near future.

Instead of drilling wildcat wells far from infrastructure where there is the potential of large oil discoveries, this year ConocoPhillips is drilling wells close to its

Alpine field in the Colville River unit where the potential is more like 30-50 million barrels per prospect.

And even though the Alpine satellites are close to infrastructure and so less risky for ConocoPhillips, they are difficult to make economic, Bowles said.

He said Pioneer and Eni Petroleum are facing the same expensive technical challenges at Pioneer’s sanctioned Ooguruk development and Eni’s not-yet-sanctioned Nikaitchuq discovery.

Alpine satellites, Ooguruk and Nikaitchuq are all “very difficult to develop economically without having the added challenge of a very high oil tax rate,” Bowles said.

Another challenge on the North Slope that Bowles pointed out was the long lead time from discovery to production because of permitting hold-ups, using as an example ConocoPhillips’ Alpine West satellite. He said the company has been seeking a permit from the U.S. Corps of Engineers for a bridge to cross a channel for two years, and “we’re still no closer” to getting it.

“Even if the resource is there,” the “long cycle time” that can be the result of permitting delays damages the economics of Alaska projects.

Bowles also mentioned the challenge of developing the North Slope’s immense heavy oil resource, specifically the cost of the multilateral wells needed to effectively tap the crude, which cost \$12 million to \$15 million each as compared to about \$5 million for a normal well. ●



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POOR MARKS

Both firms provide confidential reports. The state bought the current Wood Mackenzie study for use by the departments of Revenue and Natural Resources and Wood Mackenzie has released a 38-page Alaska summary to all legislators.

ExxonMobil, a subscription client of CERA, paid for an Alaska report from its worldwide study and for David Hobbs, CERA managing director and vice president of research, to come to Juneau and present the Alaska report to Senate Finance.

Responding to comments

Wood Mackenzie responded to comments made about its low ranking of Alaska's fiscal competitiveness at the beginning of the special session by consultant Pedro van Meurs, brought to Juneau by the Legislative Budget and Audit Committee to provide an overview of how PPT was developed in 2006.

Graham Kellas, vice president of upstream consulting for Wood Mackenzie, told LB&A Chair Ralph Samuels, a Republican representative from Anchorage, in a Nov. 12 letter that its fiscal ratings are not based on whether taxes have changed recently, which was how he said van Meurs

characterized the rating to legislators.

"The fiscal stability rating in the study combines assessments of both 'recent history' of fiscal changes and the 'built-in flexibility' of the current fiscal terms." Kellas said those factors are weighted equally in Wood Mackenzie's stability rating score.

"According to our analysis, Alaska was one of only nine regimes to adversely change the terms on existing assets in the study period," Kellas said, noting the state added satellite fields to the severance tax ring fence under the previous production tax with its economic limit factor and then introduced PPT.

He said Wood Mackenzie's study estimates that the state's take from the remaining value of existing assets increased by \$10 billion under PPT, compared to 2001 terms — the previous, ELF-based production severance tax. This represented "a transfer of 15 percent" of investors' remaining net present value to the government, Kellas said. Under higher price assumptions — \$75 per barrel — investors' remaining value (NPV at 10 percent discount rate) is reduced by \$21 billion, a 22 percent reduction, "compared to the NPV under 2001 terms."

"We regarded the overall impact of these changes as a 'significant increase in take from existing assets' which is why Alaska received the lowest score on this

measure," he said.

Stability history issue

Kellas also addressed the issue of Alaska's much-vaunted 16 years of tax stability.

Wood Mackenzie bases its "recent history" analysis on the end of 2001 through mid-2007, he said. While this may seem a short period, new investors are far more likely to be interested in recent government behavior than in what governments did in the 1980s and 1990s. "Investors are far more interested in how governments respond to significant shifts in the perceived attractiveness of investment rather than how they behave when the industry is in a steady state," and oil prices were "relatively low but stable" between 1987 and 2001 "and industry and governments worked closely together to ensure economic development of discoveries," Kellas said. Fiscal policies tended to be lenient, and some previously closed countries were open to investment.

He said Wood Mackenzie believes fiscal policies have become "notably less 'investor-friendly' around the world" since prices started to increase in 2001-02.

From the bottom up

CERA's Hobbs discussed with legislators how his firm does comparisons. In establish-

ing a peer group the firm looks at sample field sizes, models how the fields would run under different fiscal regimes and then compares "the economic returns that can be earned in that situation." In selecting a peer group, it looks at different environments and selects the peer group from those with "similar cost structures" — in the case of Alaska, high cost structures.

CERA assesses costs of developing fields under fiscal terms in place, the lead times — based on regulatory requirements and complexity of operations — and then compares "on an apples-to-apples basis, how does a dollar invested in those environments compare in terms of a dollar invested in any of the others."

CERA found that "Alaska ranks near the bottom of that peer group in terms of the economical attractiveness of investment."

Alaska's production is declining and that decline is unlikely to be reversed "absent a fiscal stimulus that would make Alaska more attractive than competing regimes for investment."

Attractiveness is also based on "the perception of stability, the growth potential and the ease of operations," he said.

"In today's environment, where cost of activity has nearly doubled since the start of the decade, the biggest shortage seems to be on engineering and project management talent and so for example return on effort might be as important a measure of the investment appetite as return on investment itself."

ACES drops ranking

Hobbs said CERA found "that under the existing PPT regime Alaska is in the bottom half (of its peer group) and that depending on exactly how the ACES proposals are enacted, that that would reduce the attractiveness" based on measures in the study.

He said resource-holding countries are certainly looking at the possibility of increasing their take with current high prices.

But, he said, it's easier to see the revenues "because that's very transparent — and much harder to look at what is the underlying cost number, which is actually often far from transparent." Because costs are not transparent, governments that have chosen to increase their take have "maybe a more optimistic view on the profitability of activities than is actually being experienced."

One of the difficulties, Hobbs said, is "that activity levels are challenged by a shortage both of personnel to conduct activities competently and secondly by the relative attractiveness at a time of great cost inflation; companies are finding it hard to move forward, particularly with large investments, while they seek to tie down what exactly those costs will be and to limit their exposure to financial cost inflation during the course of the project."

With fiscal terms increased — or under threat of increasing — "companies are seeking to make their investments in places where they can be most sure they will earn a return both in terms of having some assurance of fiscal stability but also in terms of having some assurance that their costs will also be controllable."

Fundamentals don't support price

On the subject of current high oil prices, Hobbs said, "there is no doubt at all in our minds that the underlying fundamentals do not support a price as high as it is today." The price may go higher, he said, "as the price is not set just by fundamentals but also by people's perceptions of those fundamentals." Remarking on the price spike in the early 1980s, he said "through the application of technology and through discipline in project execution," industry cut costs of activities by more than half, "which in a sense was the reason the prices were able to retreat down into the 20s and even as low as \$10 a barrel during that decade." ●

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The background of the cover is a photograph of an oil rig at sunset. The sun is low on the horizon, creating a bright orange and yellow glow. The rig's structure is silhouetted against the sky. The title 'The Explorers' is written in a large, bold, yellow, italicized font. The word 'The' is smaller and positioned above the 'E' of 'Explorers'.

The Explorers

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Banks sees partnership of equals

By **KEVIN BANKS**

Acting Director of the Alaska Division of Oil and Gas

Much has been made this last year about the relationship between state government and Alaska's oil and gas industry. Many of you in the business community have no doubt heard and maybe repeated rumors about the state's apparent dislike of the industry and the lack of access to government decision makers. Nothing could be more wrong. Obviously things changed in some very important ways when Governor Palin's election in November 2006 signaled a move towards a more populist government. To interpret this change as anti-industry fails to accommodate the nuances of the relationship between the state and industry. I challenge you to find a more pro-development spirit than that held by most Alaskans and their representatives.



Kevin Banks, acting director, Alaska Division of Oil and Gas

People may not realize that we elect politicians who will not only serve as lawmakers and the head of state, but we also elect our leaders to serve as board members and the CEO of one of the largest oil and gas landowners in the country. When our leaders act as government policy makers and execute government policy, they use the tools available to the sovereign to raise revenues through taxes and regulate industry to ensure that operations are conducted safely and with the least environmental impact. When they manage the state's land holding they are not much different than the managers of any company with a large oil and gas land position.

Our elected representatives receive guidance from the only clause in the state's constitution that speaks to policy: that they are to "... provide for the utilization, development, and conservation of all natural resources belonging to the state, including land and waters, for the maximum benefit of its people." In my view, we are fortunate in Alaska that these men and women recognize this responsibility in all that they do. Their debates about taxes and laws that regulate the oil industry usually turn on the impact of their decisions on resource

development. When they lead the state in its role as the landlord, they usually find themselves aligned with and responding to the same incentives that private sector managers respond to. As Alaskans, we want our leaders to use the tools appropriate for a partner and full participant in the "commercial space" usually reserved for players from the private sector.

Those of us who work in the Department of Natural Resources — especially the Division of Oil and Gas — recognize that we often work in this commercial space. We must be entrepreneurial and recognize as best we can that we measure our performance in part by how much revenue our lands earn. We start with a successful leasing program to provide as much access to state land for responsible oil and gas development as we can. We offer lease terms that strike an appropriate balance between how the resource is shared with the lessee and the state. The lease contract is our deal with industry: We trade the largest share of our resource to attract investment and we expect that our

resource will be developed.

As we unitize leases to facilitate development, we try to strike a balance between prescriptive and detailed work commitments and a more "laissez-faire" management philosophy. We want our lessees to find the most efficient and profitable development solutions. Should we disagree with our lessees about the progress of development, we will first try to find a truly workable compromise — and we can be very patient. If we fail to reach that compromise, we know that we can and must exercise the rights granted to the state in its leases and unit agreements.

Between the time that I write this essay and you read it, we may see some progress on events that will have far reaching affects on the oil and gas industry. The Legislature may have concluded its deliberations of Gov. Palin's ACES tax initiative, perhaps the superior court will have ruled on the dispute between ExxonMobil and the state over the state's termination of the Point

see **BANKS** page 10

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Cover photo: Sunrise at minus 35 degrees at Nabors rig 14E, drilling for FEX last winter in NPRA.

Photo by Judy Patrick

Printed in Alaska



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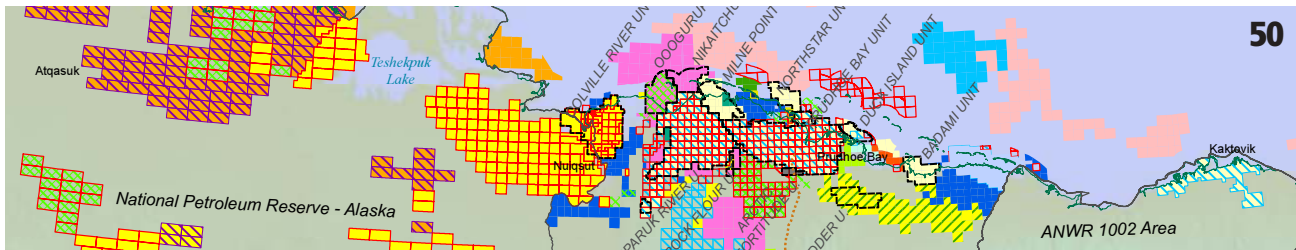
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Laird: Alliance members 'make the investments work'

By **PAUL LAIRD**

Alliance General Manager

When it comes to Alaska's oil and gas industry, there's one thing on which we all seem to agree —

Democrats and Republicans, the governor and the Legislature, industry friends and foes, business people and bureaucrats alike: Alaska should get its "fair share."

But fair share of what — and what does that mean?

Maximizing short-term state government revenues by imposing the highest possible taxes on the industry and hoping it doesn't have too negative of an impact on investment?

Maximizing jobs and business opportunities for Alaskans, stimulating new production and generating sustainable long-term state revenues by encouraging investment?

As companies whose ability to survive and thrive depends on oil and gas investment, members of the Alaska Support Industry Alliance are deeply concerned about constant changes in fiscal policy that put investments at risk.



Paul Laird, general manager, Alaska Support Industry Alliance

The Alliance is a trade organization representing companies and individuals that provide goods and services to Alaska's oil, gas and mining industries. Our membership ranges from small local contractors and vendors to the largest Alaska Native and Alaska-based corporations to the Alaska subsidiaries of multinational service companies.

Our 400 member companies and their 35,000-plus Alaska employees don't make the multibillion-dollar investments in oil and gas development that fuel Alaska's economy. They make the investments work.

As contractors and suppliers, we don't

know the perfect tax rate and terms that will generate the greatest state revenues while doing the most to stimulate investments and production. But then no one does — not the Alliance, not the Legislature, not the administration — not even the producers.

So far, proponents of imposing the third major oil tax increase in three years have premised their arguments on a plethora of improbable projections and a paucity of proof.

However, we do know that oil and gas investments and the production they fund are the lifeblood of Alaska's economy, and it's incredibly naïve to think Alaska can increase taxes by hundreds of millions of dollars year after year without shedding some blood.

We do know that every dollar in additional taxes is a dollar that won't be invested in sustaining production, in creating business opportunities for Alaska compa-

see **ALLIANCE** page 10

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Welcome to The Explorers 2007

By **KAY CASHMAN**
Petroleum News

Welcome to The Explorers annual magazine, which got its start as The Independents in 2002.

We changed the name to The Explorers in 2004 because it was evident, as oil prices began to rise, that there were two sets of companies coming to Alaska: the small independents focused on the mature areas of the North Slope and Cook Inlet basin, and the large independents and majors in the less explored parts of both — and in areas not yet developed, such as the National Petroleum Reserve-Alaska, and the North Aleutian, Nenana and Copper River basins.

But it wasn't a clear division between independents and majors. Some small independents are paving the way in undeveloped areas.

What's particularly exciting this year is Anadarko Petroleum will be drilling for natural gas on the North Slope, betting that a gas pipeline will be built to Outside markets.

The other big news is several small independents will be drilling exploration wells on the North Slope, and between them and big independent Anadarko Petroleum, will likely drill the majority of the exploration wells in northern Alaska in the 2007-08 exploration season.

And Chevron, a Cook Inlet producer, will be drilling several North Slope wells this year.

Last year I said that 2007

would see the beginning of serious exploration in federal waters off the North Slope, with Shell drilling in the open water season at its Beaufort Sea Sivulliq (Hammerhead) prospect.

But legal action by the North Slope Borough, whalers, and several anti-development groups has held up drilling for at least a year.

What was particularly interesting about Shell picking up OCS leases was that it had purchased tracts well to the north of traditional North Slope exploration oil plays, which tend to be on a structural high called the Barrow Arch.

The Arch runs, more or less, along the Beaufort coast. Fields like Prudhoe Bay and Endicott lie on the Arch in a rock sequence known as the Ellesmerian. Other fields like Kuparuk and Alpine lie in a sequence known as the Beaufortian. The Ellesmerian sequence consists of strata ranging in age from Devonian to Jurassic, while the Beaufortian sequence ranges from Jurassic to early Cretaceous.

Former state Division of Oil and Gas Director Ken Boyd thinks federal waters north of the Arch in the Beaufort and Chukchi seas present the best potential for major new oil finds in Alaska.

With promising geology but very sparse well data, exploring north of the Arch involves significant risk but major potential. It's all a voyage into the unknown.

As Boyd says, "the offshore is as unknown as the onshore 20 years ago." ♦



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BANKS

Thomson unit, and you may have heard some news about AGIA and the “request for applications” for the Alaska gas line.

These events will help to redefine the relationship between the state and industry, a relationship that I think should be a partnership of equals. These events admittedly stirred up a lot of controversy and

may have fueled concerns that the State of Alaska is unfriendly to industry, but I hope you will realize that those of us who work for you in government serve in the best interests of the state — just as we expect that our counterparts in industry serve in the best interests of their shareholders.

I believe that we are standing at the start of a new rush for oil and gas development of the Arctic. Policies implemented by Alaska over the next few years will

reflect this expectation. We want to encourage new explorers in Alaska’s Arctic with land management practices that will treat them fairly while promoting continued development within the “legacy” fields.

One thing that has never changed: Alaska welcomes responsible and aggressive businesses that will explore, find and expeditiously develop our oil and gas resources. ♦

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ALLIANCE

nies like Alliance members, in generating good-paying private sector jobs for Alaskans.

We do know that the more state government takes, the more state government spends. Over the past five years, state spending has nearly doubled. Despite record prices and soaring revenues in fiscal year 2007, the state saved a paltry \$5 million.

We do know that throughput in the trans-Alaska oil pipeline has already declined by two-thirds, and despite multibillion-dollar investments by the industry, it continues to decline 6 percent a year. And we know that without increased investment, the pipeline will reach its economic

threshold in the next 15 or 20 years instead of in the next 50 or 60.

We do know that while the extent to which yet another tax increase will discourage investment is debatable, the fact that it will do absolutely nothing to encourage new oil production and construction of a gas project is not.

Shouldn’t that be at the core of every public policy discussion on oil and gas taxes and incentives: how we can work together to promote investments; How we can ensure our “fair share” of long-term jobs and business opportunities for Alaskans, rather than how much more money we can extract from the private sector without further risking our long-term future — just so state government can have more money to spend in the

short term?

As Alaskans debate how to get our “fair share” of the revenues from oil and gas production — which effectively means taking more money from the industry to fund further growth of state government — let’s also consider the effects of any new taxes on Alaska’s competitiveness and the long-term health of our economy.

Let’s reject the notion that Alaskans derive maximum value from their resources by increasing costs and jeopardizing the economics of critical long-term investments just so we can have a bigger state government.

Many of us are more concerned about getting our “fair share” of the long-term jobs and business opportunities that depend on new oil and gas investments. ♦

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Alaska gets \$2 million from lease sales

By **KRISTEN NELSON**
Petroleum News

An Alaska investor group and a new company dominated the State of Alaska's annual North Slope and Beaufort Sea areawide lease sales. When bids were read Oct. 24 in Anchorage by Acting Director of the Division of Oil and Gas Kevin Banks, the state had received 21 bids on 21 tracts in the Beaufort Sea sale and 18 bids on 18 tracts in the North Slope sale.

In the Beaufort Sea sale, local investors J. Andrew Bachner (90 percent) and Keith C. Forsgren (10 percent), bidding jointly, accounted for \$573,996.80 of \$704,482.40 bid in that sale, while a new company, Union Energy (Alaska) LLC, with an address in Switzerland, spent \$449,971.20 in the North Slope sale (33.2 percent of the sale total of \$1,354,828.80).

The sales didn't draw as many bidders or as much money as earlier areawide sales.

North Slope areawide sales from 1998 through 2006 averaged \$11.2 million. The first sale, in 1998, was the best of the areawide sales: it brought in \$51.8 million. Beaufort Sea sales have averaged \$2.6 million, with the best areawide sale

drawing \$7.7 million in 2006. Prior to areawide sales, however, a 1997 Beaufort sale — the first the state had held since 1992 — brought in \$28 million.

The North Slope tracts sold at this sale totaled 68,480 acres, compared to an average of 325,444 acres for previous North Slope areawide sales. There were 53,120 acres sold in the Beaufort sale, compared to an average of 66,477 acres for the actual areawide sales, but an average of 103,800 acres in previous sales if the big 1997 Beaufort sale is included.



Kevin Banks, acting director of the Division of Oil and Gas, predicted a larger North Slope and Beaufort Sea lease sales next year because number of 1998 and 2000 leases set to expire, plus Point Thomson leases might be available next year.

Leases due to expire

Banks said after the sale that the reason the Oct. 24 sales weren't large is partly related to the length of time for which leases are issued, which affects the amount of land available for a sale. The state has been holding North Slope areawide sales for almost 10 years; Beaufort Sea areawide sales began in 2000.

"It's sort of a cycle that is harmonic to the term of the leases," he said. Lease terms range from five to 10 years, depending on the area.

"Maybe next year we'll have a bigger sale because there will be more land that will have been relinquished over the course of the next 12 months from those leases that we offered in '98 and also in 2000," he said.

In the central portion of the Beaufort sale it was all Bachner-Forsgren: they picked up all the unleased state offshore acreage between Northstar and Nikaitchuq, 17 of their 18 tracts, and one tract off the mouth of the Colville River ... containing the old Gulf 1 Colville Delta State well.

And, he noted, leases from Point Thomson may be available for sale next year, subject to pending legal settlement of the dispute between the state and the former Point Thomson owners.

Former Kavik unit

In the North Slope sale, Union Energy (Alaska) bid on three leases formerly in the Kavik unit east of the Haul Road. With two bids of \$187,488, the company had the highest tract bids in either sale.

Chevron — bidding as Union Oil Company of California — bid a total of \$327,603.20 (24.2 percent of North Slope sale bids) on five tracts which had been part of the Whiskey Gulch unit south of the Kuparuk River unit. At \$34.15 per acre, three of the five leases had the highest per-acre bids in either sale.

Chevron/Unocal already hold a block of tracts to the south of Whiskey Gulch. The tracts the company bid on in this

see **SALES** page 12

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From left, Tim Wood, Steve Stuart, & Owen Boyle

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SALES

sale include two old wells, ARCO's 2 Winter Trail and ARCO's 1 Ravik St. The leases were formerly held by Brooks Range Petroleum Corp., operating arm of Alaska Venture Capital Group LLC.

Chevron is a major leaseholder on the North Slope and in Cook Inlet. Prior to this sale Chevron/Unocal held some 767,120 acres of state oil and gas leases. The company has some production from the North Slope and is a major producer in Cook Inlet.

FEX SW of White Hills

FEX LP bid \$298,828.80 (22 percent of the sale total) on four tracts southwest of Chevron's White Hills prospect on the southern edge of the North Slope lease sale area. These tracts are adjacent to a block of Anadarko Petroleum, Petro-Canada and BG leases, which are in the Foothills lease

AVCG holds a large block of leases south-southeast of Badami extending across the bottom of Point Thomson to the border of the Arctic National Wildlife Refuge.

sale area to the south. Tract 17 contains BP's 1 Itkillik U. well. FEX held some 203,000 acres of state oil and gas leases prior to this sale and also holds federal oil and gas lease acreage in the National Petroleum Reserve-Alaska.

UltraStar Exploration bid \$173,465.60 (12.8 percent of the sale total) on two tracts between the southeastern edge of the Kuparuk River unit and the Rock Flour unit. At \$33.88 per acre, these were the second highest per-acre bids in either lease sale. Prior to this sale UltraStar held some 4,500 acres of state oil and gas leases.

AVCG bid \$104,960 on four tracts (7.75 percent of the sale total). One tract is south of

Badami, northwest of a large block of AVCG tracts running east to south of Point Thomson. Three tracts are east of the Colville River unit in an area where AVCG has considerable acreage, and all three are adjacent to existing AVCG acreage. Tract 1051 contains the ARCO 1 Colville River well. Prior to this sale the company held some 245,000 acres of state leases.

Bachner-Forsgren dominate

Bachner (90 percent) and Forsgren (10 percent) were the dominant bidders in the Beaufort Sea sale, with 18 of 21 bids, a total of \$573,996.80 for 81.5 percent of the \$704,582.40 bid at the Beaufort Sea sale.

There were 21 bids on 21 tracts in the sale.

AVCG took two tracts at Bullen Point on the eastern flank of the Badami unit — the farthest east tracts sold in the Beaufort sale. AVCG bid \$52,480 (7.5 percent of the sale bids). AVCG holds a large block of leases south-southeast of Badami extending across the bottom of Point Thomson to the border of the Arctic National Wildlife Refuge.

ConocoPhillips took one tract at the northwest corner of the Colville River unit on the west side of the sale area,

the farthest west tract sold, for \$78,105.60. The company is the operator and majority owner at the Colville River unit. Prior to this sale ConocoPhillips held some 585,000 acres of state leases; it also holds extensive federal acreage in NPR-A.

In the central portion of the Beaufort sale it was all Bachner-Forsgren: they picked up all the unleased state offshore acreage between Northstar and Nikaitchuq, 17 of their 18 tracts, and one tract off the mouth of the Colville River — farther west than other leases on which they bid — containing the old Gulf 1 Colville Delta State well. The other tracts they took run from north of Gwydyr Bay in the east — across the top of a block of leases held by AVCG and adjacent to a block of Devon leases, and all available acreage seaward of the Milne Point unit, including a lease which contains the old ARCO 1 Jones Island well. Prior to this sale Bachner held some 24,310 acres in state oil and gas leases, Forsgren 2,860 acres. ♦

Editor's note: This article is an abbreviated version of one that appeared in the Oct. 28, 2007 edition of Petroleum News.



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Paspalof to head Alaska operations

Pacific Energy buys bulk of Forest Oil's Alaska assets; word is California independent buying jack-up for Cook Inlet exploration

By **KAY CASHMAN**
Petroleum News

Pacific Energy Resources Ltd. is looking to make Alaska's Cook Inlet basin a core area of its operations. The Long Beach, Calif., independent closed Aug. 27, 2007, on its purchase of Forest Oil Corp.'s assets in Southcentral Alaska.

The purchase price was \$400 million, plus the issuance of 10 million shares of Pacific Energy common stock and a seller note to Forest with a net present value of approximately \$30 million, Pacific Energy said.

When the companies first announced the sale in May 2007, Pacific Energy said it was producing about 3,000 barrels of oil per day in California, two-thirds of which came from three offshore platforms in the federal waters of San Pedro Bay, and that Forest was producing about 5,900 barrels of oil equivalent per day in Alaska.



Paspalof appointed

Pacific Energy has played its cards close to the vest since it took over Forest's assets in Alaska. The first real news from the company came on Oct. 31 when Pacific Energy President Darren Katic told Petroleum News that George Paspalof had been appointed to head its Alaska operations.

According to www.zoominfo.com, from May 1988 through January of 1994, Paspalof was the L.A. basin field engineer for Texaco E&P, where he was in charge of ongoing operations in the Long Beach, Richfield, Aliso Canyon, Inglewood, and Seal Beach oil fields that, combined, produced about 6,000 bpd of oil and 3 million cubic feet of gas per day from 200 wells. Paspalof's duties included management of field operations personnel, strategic budget planning and management, coordination with local and state entities,



Pacific Energy
President
Darren Katic

and long-term reservoir management.

Paspalof reportedly has extensive experience in implementing waterflood optimization programs.

Before going to work for Pacific Energy, from 1994 to April 2001, he was the president of Global Solutions Inc.

Alaska core area

In a May 29, 2007, interview Katic said the Forest acquisition fit his company's business model which is "looking at older fields that we perceive have lots of upside ... but are undercapitalized for various reasons, perhaps because they've been passed around in mergers, so they are non-core areas for larger companies. ... We see these Cook Inlet assets as fantastic assets that need to be somebody's core properties. Our intention is to pour a lot of money in the proven, undeveloped reserves."

see **PACIFIC ENERGY** page 15



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Kevin R. Banks
Kevin R. Banks
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continued from page 13

PACIFIC ENERGY

Pacific Energy Chief Financial Officer Jerett Creed told Petroleum News Aug. 30 that the company planned to move ahead with exploration of the Cook Inlet acreage it acquired from Forest.

Buying a jack-up?

Creed said the company wanted to use a jack-up rig to explore its Cook Inlet offshore prospects, which include Corsair — on the same geologic trend as the North Cook Inlet, Kenai and Cannery Loop gas fields. He said Pacific Energy was engaged in discussions with other companies interested in bringing a jack-up to the Inlet, and with drilling companies.

In May, Katic said Corsair “alone has 200 million-barrel potential, provides large exploration upside ... (and) was a high-priority” drilling prospect for his company. (In 2003 Forest said the prospect could also contain as much as 480 billion cubic feet of natural gas.) Petroleum News sources say Pacific Energy is looking at buying a jack-up rig from Rowan, which has three jack-ups for sale that would work in Cook Inlet.

That information coincided with an Oct. 19 announcement by Pacific Energy that it

had closed an equity private placement in the amount of US \$65.5 million.

“The initial US\$40 million of the private placement proceeds will be used to repay a portion of the debt associated with the acquisition of the offshore producing Alaskan assets of Forest Oil ... with the balance of funds to be used for development of offshore Alaska and California properties and for general working capital and business purposes,” the company said in a press release.

CIPL in the deal

The assets that Pacific Energy bought from Forest include interests in nine producing fields in the Cook Inlet area; nearly 1 million net acres in oil and gas leases; and a 50 percent equity interest in Cook Inlet Pipe Line Co., which owns the 44-mile onshore pipeline that carries crude oil down the west side of Cook Inlet to the Drift River Terminal.

Forest owned 40 percent of CIPL; 40 percent was owned by Chevron (formerly Unocal); the remaining 20 percent was owned by Mobil Pipe Line Co. (part of ExxonMobil).

In late September 2007, the Regulatory Commission of Alaska was considering an application by Forest and Mobil for

approval of a sale of half of Mobil's 20 percent share in CIPL to Forest.

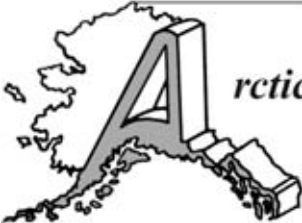
In a separate application, Forest and Pacific Energy have applied to the RCA to transfer Forest's interest in CIPL to Pacific Energy. Chevron is, and will remain, the CIPL operator. Chevron will purchase Mobil's remaining shares in CIPL and those companies will then file an application for approval of that transfer.

Pacific Energy has production from a 100 percent working interest in the Redoubt unit (Osprey platform); from a partial interest in the Trading Bay unit (King Salmon, Grayling, Steelhead and Dolly Varden platforms) operated by Chevron; and from its 100-percent owned West McArthur River unit and Kustatan field.

Forest is still operating the Osprey platform under an agreement with Pacific Energy.

Pacific Energy reported total revenues of \$8.9 million for 2006 and approximately \$157 million in total assets. ♦

Editor's note: On Oct. 25, 2007, Reuters released a 12-page investment profile on Pacific Energy Resources Ltd., which trades on the Toronto Stock Exchange under the symbol PFE. The profile can be purchased at this Web site:
<https://commerce.us.reuters.com/>



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Armstrong, Total back in the game

By **KAY CASHMAN**
Petroleum News

An affiliate of Denver-based Armstrong Oil and Gas and a subsidiary of Paris-based Total S.A. returned to Alaska in 2007.

When independent Armstrong Alaska LLC and Houston-based major Total E&P USA Inc. left the state in 2005 and 2004 respectively, they both said they might be back. But this time the two companies returned to different areas.

Armstrong, which had leases onshore and offshore the North Slope and been an active minority partner in drilling several exploration wells, returned to buy leases in Southcentral Alaska's Cook Inlet basin, initially onshore. Total, which had owned leases and drilled an exploration well in the National Petroleum Reserve-Alaska, returned to buy leases in the federal



BILL ARMSTRONG



Total plugged and abandoned its first Alaska exploratory well, the Caribou 26-11 No. 1, in 2004. The well was drilled in partnership with Talisman Energy's U.S. subsidiary Fortuna Energy (now called FEX).

waters of the Beaufort Sea, offshore the North Slope.

More deals to come

The first indicators that Armstrong was back were in July 2007, but it wasn't until September that the new affiliate, Armstrong Cook Inlet LLC, confirmed it had taken over as operator of the North Fork gas unit from Gas-Pro LLC.

The top executive of all the Armstrong companies, Bill Armstrong, said the North Fork deal, which included the 640-acre

unit and nearly 18,000 acres of surrounding and nearby leases, was just the first deal of possibly several more to come.

"We are looking to get active in the Cook Inlet," Armstrong said. "We think it's a good time to explore for gas in the Cook Inlet. ... We're looking forward to doing more deals. ... Assuming we're successful, we'll be doing what was typical for us on the North Slope — a combination of wildcat and development drilling."

The Armstrong CI team is "essentially"

see **BACK** page 18

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BACK

the same as the North Slope team, he said, which included Ed Kerr, Stu Gustafson and Matt Furin.

Pursuing aggressive development

Armstrong CI amended North Fork's 42nd plan of development to pursue what it describes as "aggressive" development of the nonproducing unit's natural gas. The amended plan includes drilling a 9,000-foot Tyonek delineation well by March 31, 2008.

Armstrong Vice President Ed Kerr told the state Division of Oil and Gas that Armstrong CI would drill a delineation well in the spring, which Kerr said was needed to evaluate the Tyonek reservoir and ensure "continuous uninterrupted commercial gas production."

Armstrong is also working on an "agreement in principle"

with Enstar to build "a 15-mile pipeline from North Fork's existing gas well to the KKPL," provided Armstrong is able to "drill and test a reasonable amount of gas out of the delineation well," Kerr told the state. The Kenai Kachemak pipeline is the most southerly gas pipeline on the Kenai Peninsula.

Kerr pointed out that no one has been able to persuade Enstar or any other party to construct a pipeline to the North Fork unit, largely because there is only one well in the unit.

Curtis Thayer, director of corporate and external affairs for Enstar, told Petroleum News Sept. 24 that his company sees Armstrong as the most likely candidate to be the first producer to offer gas for sale from the southern Kenai Peninsula. This would motivate Enstar to build 4- to 6-inch transmission lines connecting the existing Cook Inlet basin gas grid to the southern penin-

sula, he said.

The Anchorage-based utility would like to first connect into the KKPL and then build a line south to the City of Homer.

Kerr said North Fork was the first step for Armstrong CI "playing a larger part in providing natural gas to Southcentral Alaska."

The three companies Armstrong Alaska brought to the North Slope in 2002-05 were Pioneer Natural Resources, Kerr-McGee and Eni.

Total never lost Alaska focus

Even though the French major left Alaska in 2004, it continued to study the state's potential, vice president of Total E&P USA's Corporate Division Tom Ryan, told Petroleum News in April 2007.

"It's never been an area that Total abandoned. When we closed our office we were, at that time, finished with our last project there and did not have anything to go after, but we didn't change our focus. Our geologists completed their analysis ... and continued to work on their model," Ryan said, which is an "evolving" effort.

"Alaska has never been off our agenda."

Total entered Alaska in 2002 when it picked up leases in NPR-A and later opened an Anchorage office.

The company drilled on its NPR-A Caribou prospect in the winter of 2003-04. Unhappy with the results, Total closed its office and for all intents and purposes left the state.

Francoise in charge of Alaska

Since Total left Alaska in 2004, the company has sold or traded all its onshore acreage in the United States, concentrating instead on Gulf of Mexico deepwater plays.

But that's "not suggesting Total wouldn't look at onshore" in Alaska, Ryan said.

When asked if the compa-

ny was interested in the Bristol Bay or Cook Inlet areas, Ryan said, "I'm not at liberty to say, but we've done a large regional model so it would cover other areas as well."

Total does not have any immediate plans to open an office in Alaska. Rather the company's exploration office in Houston, which is headed by Denis Francoise, will be in charge of its new Alaska assets.

"Denis Francoise will be in charge of refinement and further evaluation of those blocks. They have long-term implications. But we're not going to be opening an office in the near future or finding a replacement for someone like Jack Bergeron until we firm up our plans," Ryan said. Bergeron headed up Total's operations in the state from 2002 to 2004.

When asked if a seismic program was a possibility in the near future, Ryan said, "That's a good question."

"We're glad to be back and look forward to working with the people of Alaska on the North Slope and elsewhere. We look forward to establishing new relationships, and building on those we left behind," he said.

North of Point Thomson

The leases Total picked up when it returned to Alaska were offered in the April 18, 2007, U.S. Minerals Management Service Beaufort Sea lease sale. Total won 32 tracts for \$2.2 million in the eastern sale area, north of the former Point Thomson unit, which had the only contested tracts in the sale.

Shell and Total picked up contiguous and somewhat intermingled acreage north of the Kuvlum and Hammerhead discoveries, where Shell took a large number of tracts in the 2005 sale. (Shell has since changed Hammerhead's name to Sivulliq and is looking to drill and develop it.) ♦

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Escopeta, Renaissance hunt for jack-up

By **KAY CASHMAN**
Petroleum News

Escopeta Oil has led the effort to bring a mobile offshore drilling unit into Cook Inlet, the body of water in Southcentral Alaska that lies over part of the Cook Inlet oil and gas basin.

That hunt has mainly been for a jack-up rig, but the company has also looked at mobile platforms and drillships. It even considered a permanent platform because it's so sure that once its offshore Kitchen prospects are drilled, the next step would be development.

Escopeta entered Alaska in 1993. Currently, the Houston-based independent is in the final stage of permitting to drill its North Alexander gas prospect onshore Cook Inlet in 2008. But its crown jewel is its two, adjacent Kitchen prospects offshore the Kenai Peninsula community of Nikiski. Escopeta President Danny Davis thinks the Kitchen unit could contain one of the inlet's missing giants, per a



DANNY DAVIS



MARK LANDT

2004 U.S. Department of Energy report on the inlet.

"We think we have a possible total resource of 1.2 billion barrels of oil and 7 trillion cubic feet of gas," Davis said.

He said his company's East Kitchen prospect is in the same anticlinal structure as Forest Oil's (now Pacific Energy Resources') Corsair prospect and Renaissance Alaska's Northern Lights prospect. Davis said all three prospects, which are separated by faults, hold great promise. That same anticlinal structure also hosts the producing North Cook Inlet gas field.

Renaissance signed deal

Renaissance — and previous owners of Northern Lights — is the other company that has been working to get a mobile offshore drilling unit of some kind into Cook Inlet. Leading that effort has been company executive Mark Landt.

And it's no wonder: The Northern Lights prospect contains an oil accumulation proven from earlier drilling and thought to contain in the neighborhood of 240 million barrels of oil.

Both Landt and Davis have said they would like to work with each other and other companies to form a consortium to bring a jack-up to Cook Inlet, but each effort to form a consortium has been thwarted — largely because they were a couple of wells short of justifying the

Renaissance has "entered into a Letter of Intent with GlobalSantaFe for the High Island VIII Jack-up rig," Mark Landt said.

expense of a jack-up. One significant player that would not commit to a jack-up was Forest Oil, which at the time had Corsair and other offshore prospects.

But since Pacific Energy took over Forest's Alaska assets in August 2007, it has been actively trying to get a jack-up to Alaska (see story on page 13).

Both Escopeta and Renaissance are moving forward with permitting their prospects.

Landt told Petroleum News in October 2007 that Renaissance has contracted with Entrix "for permitting and environmental services to submit plans of operations" for the following wells: Northern Lights No. 1, Northern Lights No. 2, Northwest Cook Inlet No. 1 and North Middle Ground Shoal No. 1.

The company has a little insurance, though, if Pacific Energy doesn't buy a jack-up. Renaissance has "entered into a Letter of Intent with GlobalSantaFe for the High Island VIII Jack-up rig," Landt said.

All three companies stand to lose leases if they are unable to get their Kitchen Northern Lights and Corsair prospects drilled soon. ♦



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COURTESY TALISMAN

Arctic Wolf drilling rig ordered by FEX from Akita-Doyon joint venture for drilling in NPR-A. In the above photo the rig is drilling the Amaguk 2 well in the winter of 2006-07, the first season it was used.

FEX puts NPR-A drilling on pause

Independent remains committed, but concerned about land access, high costs, fiscal regime, postpones drilling for two years

By **KAY CASHMAN**
Petroleum News

FEX L.P.'s decision to put its Alaska drilling program on pause for two years came as a surprise to everyone except those paying attention to the federal government's cancellation of National Petroleum Reserve-Alaska lease sales. Land access is the number one issue for the Alaska subsidiary of Calgary-based Talisman Energy, but the independent is also concerned about what it refers to as the "increasing high cost of doing business" on Alaska's North Slope.

In an Oct. 10, 2007, interview with Petroleum News, Talisman's senior manager of global new ventures, Tim England, said "Alaska is increasingly less competitive in

attracting exploration capital due to the very high costs of remote exploration operations, long timelines for development, many levels of regulatory oversight and less attractive and unstable fiscal terms."

But FEX would have been back to drill the next winter if the U.S. Bureau of Land Management had not deferred a Northeast NPR-A lease sale from 2007 to sometime in the last half of 2008.

"FEX contemplated a multi-well, multi-year drilling program in NPR-A. ... Because the Northeast lease sale was cancelled, we could not move our drilling rig to locations

F E X

Talisman/FEX production

Worldwide: 460,000 boe

Alaska: none (yet)

Time period: Average daily for first half 2007

into the Northeast NPR-A for this year. Because we needed to stop and shoot seismic in the Northwest, there was nowhere for the rig to go so we sent it back to Deadhorse," England said.

To reduce capital exposure per well, he said, a company has to do multi-well drilling programs

rather than single drilling programs. For FEX to develop a multi-well program in the Northeast, it needed land released through lease sales.

"BLM has not held a sale in the Northeast planning area of the NPR-A since

see **FEX** page 24

continued from page 23

FEX

2002, contrary to the original plan of conducting sales every other year," England said.

He said FEX's activity in the Northeast NPR-A planning area, which was supposed to include wells in the upcoming 2007-08 season, "will be driven by access to land."

This coming winter FEX will be conducting a \$25 million seismic program on and offshore Smith Bay.

"One, we're looking to complete our subsurface coverage over existing discoveries and, two, if we get a good ice year, we'll continue to shoot into Smith Bay," where FEX has State of Alaska leases, he said.

In both cases FEX is looking to identify drilling targets.

"Realistically, the earliest we could get back to operations in the Northwest NPR-A will be 2009-10," England said, because by the time the seismic acquired in 2007-08 has been evaluated it will be late 2008, too late to plan and prepare for 2008-09 drilling.

Five wildcats, one sidetrack in less than five years

But despite its concerns and its decision

to put its Alaska drilling program on a two-year hold, FEX has made a lot of progress since it first entered the state in late 2003.

Initially operating as Fortuna Exploration — later changed to FEX — Talisman's subsidiary in Alaska's first step was to farm in to Total E&P USA's Caribou prospect in Northeast NPR-A, where Total drilled a wildcat in the winter of 2003-04.

In mid-2004 Total E&P USA dropped all but three of its 20 NPR-A leases, assigning eight leases covering the Caribou prospect to Talisman's Alaska subsidiary.

When asked if FEX would drill a side-track or second well on the Caribou prospect the following winter, David Mann, manager of investor relations and corporate communications for Talisman, said the company would drill a NPR-A well in the winter of 2005-06, but he didn't know if it would be at Caribou.

"Obviously we already have seismic on the Total acreage. And obviously we have our own views on geology and prospectivity," he said in regard to the 9,362 foot, Caribou 26-11 No. 1 well Total drilled, then plugged and abandoned.

That same year FEX dominated a BLM sale for the Northwest NPR-A planning area where it was the highest bidder with almost \$26.5 million in high bids. It also

offered the highest amount for a single tract with its winning bid of more than \$13.7 million for a lease near the Ikpikpuk River at the junction of the Northwest and Northeast planning areas.

The independent next dominated an October 2004 state Beaufort Sea lease sale, where FEX bid \$3.5 million for a block of 19 leases in Harrison Bay offshore NPR-A.

Eight wells in three years

In a July 2005 conference call, Talisman executives said FEX would be drilling two wells in the Northwest planning area during the following winter's exploration drilling season.

In the same time period a newsletter was distributed to residents of the North Slope Borough saying the two wells would be part of a three-year program for the winters of 2005-06, 2006-07 and 2007-08 in which "a total of two to three drill site ice pads will be constructed per year" east and north of the village of Atqasuk and southeast of Barrow on the company's acreage in Northwest NPR-A.

In September 2005 paperwork filed with the State of Alaska said FEX was looking at drilling a total of eight exploration wells in the three-year program.

see FEX page 25

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FEX

Nabors Rig 14E and supplies were barged to Cape Simpson from West Dock in the summer of 2005. Mobilization via low-pressure vehicles into the area would happen later that year after the tundra was frozen and covered with snow.

Looking for big numbers

By mid-2005 FEX's acreage in and offshore NPR-A had grown to 443,000 acres.

Talisman Executive Vice President John 't Hart, to whom England reported to at that time, said FEX was "looking at very big numbers" from its Alaska acreage — on the order of 250 million barrels of oil equivalent per prospect — with the potential to exceed 1 billion boe from something he referred to as "the structure" within the Northwest area that was to be drilled in the winter of 2005-06. Because of the remoteness of Alaska, he said "we are going for a big prize, bigger than we have ever drilled."

In early 2006, Talisman CEO Jim Buckee said his company spent C\$49 million in Alaska in 2005 on seismic and preparations for exploration drilling.

FEX did drill two wells that winter, although one was a sidetrack — not a separate prospect as originally planned. The exploration drilling season on the North Slope, which is always in the winter when the delicate tundra is frozen and has a protective snow cover, was exceptionally short in 2005-06 due to a lack of snow cover early in the season, preventing tundra access, and an earlier-than-usual spring.

Advice for Alaska, U.S. governments

When asked if he had any advice for Alaska Gov. Sarah Palin and the federal government that owns much of the acreage in the National Petroleum Reserve-Alaska, Talisman Energy executive Tim England said if the governor wants to see continued investment in Alaska, the state should maintain fiscal stability and provide "regular, unencumbered access to lands." Both are very important to Talisman Energy's Alaska subsidiary, FEX L.P., he said Oct. 10.

"For the federal government, royalty relief for marginal projects and lease extension provisions need to be ratified for BLM lands, which are challenged by their remote and harsh operating environment," England said.

England is senior manager of global new ventures for FEX's parent, Calgary-based Talisman.



TIM ENGLAND

JUDY PATRICK

In between, drillers had to shut down more than once for some of the coldest weather on record.

The Aklaq 2 and sidetrack were drilled west of the Ikpikpuk River near the eastern border of the Northwest planning area, 154 miles west of Prudhoe Bay.

Acreage number keeps growing

In the March 1, 2006, State of Alaska areawide Beaufort Sea lease sale FEX took 25 tracts covering 120,000 acres in Smith Bay offshore NPR-A for a total of \$1.46 million, bidding from \$10.29 to \$20.48 an acre. Some of those leases were adjacent to federal leases the company held onshore in NPR-A. (Smith Bay is west of Harrison Bay.)

In addition to complementing the company's land position south of Cape Simpson, FEX's leases in Smith Bay could line up with a possible exploration fairway across the northern part of NPR-A to the company's existing leases on the west side

of Harrison Bay, Paul Decker from Alaska's Division of Oil and Gas told Petroleum News following the lease sale.

Decker saw some particularly interesting exploration possibilities in Smith Bay.

"It's a nice crestal position on the Barrow Arch, with shallow water and logistically connected to their onshore exploration program in NPR-A," he said.

People have long known about four oil seeps on the coast at Cape Simpson, just west of Smith Bay. It's a natural oil trap where Brookian topset sands come up against shale in an ancient incised canyon, Decker said. The oil from the Cape Simpson seeps likely originates from an "oil kitchen" to the north, in a lower Cretaceous source rock system known as the HRZ, Decker said.

"That would put this (Smith Bay) area squarely in between the kitchen and the seeps," he said. "So you probably have a

see **FEX** page 26

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FEX

pretty good plumbing story to be able to charge this with nice light oil.”

In addition to a possible Brookian play, there are potential Ellesmerian plays below the lower Cretaceous unconformity (ancient erosion has probably scoured out the Beaufortian middle and upper Jurassic sands that are found in nearby onshore wells). The East Simpson No. 1 and No. 2 wells on the coast near Smith Bay found some interesting Sadlerochit and Endicott sands below the lower Cretaceous unconformity, Decker said.

Alaska an exercise in logistics

In addition to discovering oil at his company's first wildcat in NPR-A, the Aklaq 2 and sidetrack, Buckee said his company learned just how cold it could be on Alaska's North Slope.

“It's damn cold up there,” he said in a May 10, 2006 confer-



COURTESY TALISMAN

Nabors Rig 14E drilling Aklaqyaaq No. 1 exploration well in NPR-A for FEX in the winter of 2006-07.

ence call.

It's also surprisingly warm at times, said 't Hart.

A combination of those two extremes forced FEX to sus-

pend drilling Aklaq 2 and its sidetrack in February in anticipation of future testing.

Buckee and 't Hart said the challenges ran the gamut from a deep freeze as FEX was barging equipment to the Aklaq site, followed by a warm spell that affected the tundra, then another cold snap.

“Alaska is an exercise in logistics,” said 't Hart.

Weather aside, FEX was soon gearing up for its next round of drilling in the winter of 2006-07, this time with two drilling rigs.

Akita to build new Arctic rig

The big Nabors Rig 14E that FEX used in 2005-06 was stacked at a staging area on the shores of Smith Bay. But FEX was also interested in bringing a second, lighter-weight exploration rig to NPR-A — one designed to withstand the rigors of the Far North.

Calgary-based Akita Drilling would build it, FEX said, and Anchorage-based Doyon Drilling would operate it. Each company would own 50 percent of the rig, which would be under contract to FEX and Talisman for an unnamed num-

ber of years.

The rig, which would be brought in from the other side of the Colville River via low-pressure vehicles as soon as conditions allowed, was named the Arctic Wolf.

Akita said the new rig would cost \$13.2 million to build.

Shooting for five wells

Initially FEX hoped for a favorable 2006-07 season in which five wells south of Cape Simpson and west of the Ikpikpuk River in Northwest NPR-A could be drilled with the two rigs.

The program would involve building up to five ice pads and 81 miles of ice road, as well as one 5,000-foot ice runway and several smaller airstrips, FEX said in paperwork filed with BLM.

Although FEX had nine well locations staked, it said in its plan of operations for the 2006-07 exploration season that “probable well sites would be at Aklaqyaaq No. 1 and Aklaq Nos. 3, 6, and 7” and that “two to three reservoir penetrations may be drilled at each of the locations during the 2006-07

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FEX

drilling season.”

Picks up more acreage

While making preparations for the 2006-07 drilling season, FEX was picking up more acreage on Alaska's North Slope.

In the September 2006 BLM lease sale for Northwest NPR-A more than 75 percent (\$10 million) of the high bids came from FEX and its 60/40 bidding partner, Petro-Canada.

The partners took some 562,000 acres, paying an average of almost \$18.50 an acre, and winning all 48 tracts on which they bid.

FEX/Petro-Canada also had the highest bid per acre for a tract when they took lease 272 at \$201.03 per acre for a total price of almost \$2.3 million. It was adjacent to a tract FEX paid \$5.09 an acre in the 2004 Northwest NPR-A sale.

The companies' 2006 bids were on tracts south and west of a large block on the northeastern edge of the sale area in which both companies took acreage in the 2004 sale. The new acreage extended as far west as Atqasuk. In the north the companies filled in north and east of 2004 tracts.

Richard Garrard, geoscience manager for FEX and the company's top man on the ground in Alaska, told Petroleum News after the sale that the sale area is where the company shot proprietary 3-D seismic the previous winter. This was followed by a 2-D program, England said Oct. 10, 2007.

First onshore state acreage

In the October 2006 North Slope areawide lease sale held by the State of Alaska, FEX took its first onshore state acreage — a block of seven leases west of the trans-Alaska oil pipeline including the old Atlantic Richfield Susie 1 well. The company bid \$413,805 for the tracts.

The Susie 1 was drilled in 1966 by Richfield, which would soon merge with Atlantic, at a surface geological structure north of Sagwon on the Sagavanirktok River. Richfield drilled down through the crest of the surface anticline at Susie.

“That well went down to 13,500 feet and had some oil shows in the ... upper part of the hole,” Gil Mull, an on-site geologist, told Petroleum News in 2002. Unfortunately, the shows did not prove economic for a remote well by 1968 standards and Richfield abandoned the well in December 1966. A year later Atlantic Richfield, predecessor to ARCO, and

Humble Oil, predecessor to Exxon, drilled the discovery well at Prudhoe Bay, about 60 miles north of Susie 1.

Mull, who gained a reputation as one of the top geologists working northern Alaska, also said “some of us were pushing hard to continue the Susie well on down to test the Sadlerochit before that well was abandoned.” (The top of the Sadlerochit group is the Ivishak formation that forms the main reservoir in the Prudhoe Bay field.)

FEX, Petro-Canada formally team up

In December 2006 a 30-day public notice was posted by the State of Alaska saying that Calgary-based Petro-Canada's Alaska subsidiary had submitted an oil discharge prevention and contingency plan for a “multi-year exploration drilling program” in NPR-A. Drilling was to begin in the winter of 2007-08.

But while the company's spill plan was being processed by the Alaska Department of Environmental Conservation an exploration partnership between FEX and Petro-Canada was being hashed out for all of their tracts in NPR-A, except for Petro-Canada's acreage in the Brooks Range Foothills which it shared with Anadarko

see **FEX** page 28

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FEX

Petroleum and BG Group.

Three wells instead of five

On Jan. 19, 2007, at the Alaska Support Industry Alliance's annual Meet Alaska conference, England was less enthusiastic about Alaska than he and his superiors had been in the past.

On the one hand FEX was forging ahead with an aggressive exploration program in NPR-A, he said. On the other hand, issues such as land access, rising costs, permitting inefficiency and Alaska's tax regime threatened the viability of the state's petroleum exploration and development, England said.

He said that FEX, with almost 1.5 million gross acres under lease, was continuing deep drilling done by industry in the early 1980s. But modern drilling equipment enabled the drilling to be done much more quickly than in the past, he said.

FEX, he said, was planning to spud another deep well, the Aklaqyaaq No. 1, on Jan. 27.

"We should have completed our second ice pad today and we're expecting to spud our Amaguq No. 2 well on Feb. 7," England said.

FEX also hoped to spud a third NPR-A well, the Aklaq No. 6, later in the winter, which totaled three wells in NPR-A for 2006-07. This was down the previous goal of as many as five wells because of later than expected tundra access.

Continuing challenges

In his January 2007 speech England said NPR-A exploration continued to face many of the challenges that existed during exploration of the region 20 years earlier. In particular, operational costs were very high and becoming higher.

While industry could manage its costs through partnerships, cost sharing, by becoming more efficient and through the use of new technologies, England said the State of Alaska could also help with cost issues. He especially praised the state's exploration incentive tax credit program.

"Without those substantial exploration incentive credits we wouldn't be here," England said. "That substantially affects our ability to compete for cash to explore in Alaska."

The state might also be able to help in other ways, he suggested, perhaps through tax credits for operational efficiencies such as the use of modern drilling rigs. Tax incentives for drilling multiple wells in a single drilling season might be another possibility.

England also slammed the state's switch from a petroleum severance tax to PPT, the new oil and gas production tax passed in 2007, saying it "effected a 25 percent loss in Net Present Value." (The Alaska Legislature convenes in a special session Oct. 18, 2007, to look at changing the new tax in a manner that might increase the state's take.)

Land access

Access to North Slope land was also proving problematic, England said in his January 2007 speech, noting there had been a time lag of two years between successive NPR-A lease sales, and third-party pressure had caused lease sale cancellations and postponements.

"The federal administration should really think about holding more frequent lease sales, providing greater access to its lands," England said.

He also said that industry and government needed to take the appropriate steps to curtail "nuisance litigation," saying that he had estimated that industry had expended about \$40 million in preparing for the September 2006 NPR-A lease, a substantial

part of which was pulled from the sale because of a court ruling.

"Those (costs) are large numbers and we are less receptive to keep doing that in the future. ... We've got to get it fixed," England said.

Extend North Slope drilling season

He also urged people to seek ways of extending the North Slope exploration drilling season with a review of the criteria for the tundra travel opening date. He said that FEX supported ideas for state or federal staging areas in remote areas, to enable equipment to be stored close to exploration areas during the summer.

"That could be a joint federal and state initiative, and we've had some discussion in that regard," England said.

Regulatory process too cumbersome

England also criticized the regulatory process for North Slope operations as lengthy, repetitious and expensive. People must find ways of reducing the redundancy involved in doing multiple environmental assessments in the same area year after year. Multi-year permitting might provide one solution, he suggested.

From the state's perspective, the crucial question was how to stem the decline in oil production, England said. "We need to drill a lot more exploration wells on the North Slope to even have a chance to offset that decline."

Still bullish on NPR-A

England emphasized that FEX and Petro-Canada remained bullish on the prospects for oil and gas development in NPR-A.

"We're taking a long-term view to developing our subsurface knowledge and our experience in building in our second operating season," England said. "... We are developing good partnerships with the North Slope Borough stakeholders and we hope that will help us bring future development. ... We have 157 people out in the field right now."

England ended his January 2007 presentation with a photograph of the Cape Simpson oil seep on the Beaufort Sea coast of NPR-A.

"It's still there and it's massive," he said. "... There is the potential for massive deposits untapped ... out in NPR-A, but we need to drill a whole bunch more wells to find them."

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FEX

Hints 2006-07 drilling success

In early March 2007 there were rumors of FEX hauling truckloads of crude from the Aklaqyaaq No. 1 well.

Unfortunately for all companies drilling exploration wells on Alaska's North Slope, the weather once again interfered with scheduling. Most exploration programs got under way in February, not December or January.

The first official word from FEX on its drilling results came March 1, 2007, from top executives in Calgary to analysts.

This is part of what they had to say:

Q: Progress in Alaska?

A: Talisman CEO Jim Buckee: "I think there are six or seven wells drilling up there (referring to work of all operators) and we all spud approximately the same time in mid-February ... the weather conditions affect everybody. Now that we've started drilling, though, the operation's been going very well. ... We have seen some uphole gas. Hydrocarbons are not a problem."

Q: P-50 reserve potential for the three Alaska prospects?

A: Executive Vice President of Exploration John 't Hart: "Yeah, actually Aklaqyaaq could be the biggest ... but Jim is quite correct in the hundreds of millions of barrels for a P-50 (median reserve potential) number, is the ... right number, but a significant upside to these numbers."

Q: On Alaska what is the lead time for these fields going onstream?

A: Ronald J. Eckhardt, executive vice president, North American operations: "In Alaska the timeline's pretty long ... very, very best — you know miraculous — would be 2012; I think 2014 — 13, 14 is probably better."

Hits in several formations

In May 2007, Talisman had more to say, this time in a press release and an interview with Petroleum News.

All three of the wells FEX drilled in NPR-A in 2007 encountered hydrocarbon-bearing sandstones in several formations, Talisman said.

One well — Amaguq No. 2 — was plugged and abandoned and the other two wells — Aklaqyaaq No. 1 and Aklaq No. 6 — were suspended, Talisman said.

Although weather conditions did not allow enough time to test the three wells — or the well and sidetrack that FEX had drilled the previous winter — the "initial estimate of contingent resources present" in the formations of the two 2007 suspended wells was "300-400 million barrels" net to FEX, which has a 60 to 80 percent working interest in the leases.

In addition to the 300-400 million barrels, Talisman said "there is significant follow-up potential on many similar structures on Talisman's acreage if commercial productivity is proven."

The announcement was based on log analysis and "strong gas and oil shows, including oil staining and free oil in the drilling mud in one of the wells," the company said. The two wells encountered more than 225 feet of net hydrocarbon-bearing sandstones.

"I am very encouraged by the results of our winter drilling program in Alaska, although disappointed that we did not have time to test the wells," Buckee said in the May press release. "The presence of black oil on the shakers is very positive as it confirms the presence of mobile oil as opposed to gas."

Although the well that was plugged and

see **FEX** page 30





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FEX

abandoned encountered hydrocarbon-bearing sandstones, Talisman said Amaguq No. 2 would be “subcommercial given current infrastructure” — a challenge all three prospects face west of the Ikpikpuk River. The company said “recently acquired high-fold seismic” will be used to analyze Amaguq No. 2.

Talisman said FEX would test the rest of the wells during the winter drilling season of 2007-08, but soon after canceled those plans when it appeared there would be no NPR-A lease sales until the last half of 2008.

Taking two years off

After three years of wildcat drilling in NPR-A, FEX said it would take two years off to evaluate its five project areas in northern Alaska with the goal of identifying drillable prospects for the 2009-10 winter season, England told Petroleum News July 20, 2007.

During that time FEX would be acquiring new 3-D seismic in the Smith Bay area, onshore and offshore.

Drilling results looked promising, he said, but the cost of the NPR-A exploration program had been high. FEX wanted as much data as possible before choosing where it would drill next amongst its five northern Alaska projects.

“Drilling so far from infrastructure is very expensive in Alaska. Before we spend additional money on drilling and testing we need to complete our seismic data, because we want to be sure we are drilling in optimum locations,” England said. (The closest

FEX well in Northwest NPR-A is about 150 miles from a common carrier pipeline.)

“Once you’re out of the field in the spring you only have about four weeks to decide if you’re going to keep the equipment out there and go back in the following winter,” he said, noting that “even if you just go out to test wells the costs are still very high ... because so much of what you’re paying for is fixed costs ... for maintaining a presence in the area. You have to have similar equipment out there no matter what you’re doing, drilling or just testing.”

Five project areas

As of mid-October 2007, FEX’s five project areas in Alaska include Smith Bay onshore in Northwest NPR-A; Smith Bay offshore in state waters; Caribou in Northeast NPR-A; Harrison Bay offshore NPR-A, where the company has already shot 3-D seismic, and; onshore state acreage near the trans-Alaska oil pipeline on the central North Slope, where the company plans “subsurface evaluation and geophysical surveys” during the next two years, England said.

To date, FEX has invested \$185 million in drilling and seismic and acquired 950,725 net acres since entering the state, he said.

The company’s 2007-08 Smith Bay seismic program would “provide 60 to 70 jobs, mostly to contractors,” England said. “Kuukpik-CGGVeritas will carry out the survey.” FEX will be “consulting with the community of Barrow about our plans on Oct. 23,” England said.

“During drilling this past winter we had about 220 people, mostly in the field work-

ing for contractors.”

During the coming year’s evaluation phase, he said FEX would continue to employ five full-time employees in its Anchorage office. (As of mid-October, there were still eight people working in its Alaska office.)

Is FEX looking to sell its North Slope acreage or bring in another partner (in addition to Petro-Canada)?

“FEX is not looking to sell its Alaska acreage. This winter we are acquiring substantial new seismic data, which will be reviewed in 2008, and from those reviews we will be able to set our plans for future exploration activity. Additional partners could be considered at that point,” England said.

On May 30, 2007, Jim Buckee, 62, resigned as Talisman’s chief executive officer, a position he had held for 14 years, to spend more time with his grandchildren. He passed the controls to John Manzoni, 47, most recently the head of BP’s refining and marketing operations and once seen as a leading candidate to replace chief executive officer John Browne.

Buckee, backed by a doctorate in astrophysics from Oxford University, was president and chief operating officer of BP Canada in 1991 when it spun off its Canadian assets at that time to create Talisman. ♦

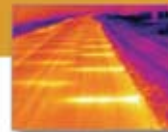
Editor’s note: In addition to Richard Garrard in Anchorage and Tim England in Calgary, another lead individual working on FEX’s Alaska operations and assets is Calgary-based Kim Safton, Talisman’s North America frontiers exploration manager, who reports to England.

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Chevron: working across the state

White Hills exploration to begin this winter, company continues to look at Cook Inlet opportunities

By **KRISTEN NELSON**
Petroleum News

Chevron, an oil and gas explorer and producer in Alaska for decades, will begin exploration drilling this winter at its White Hills prospect in the Brooks Range foothills on the southern edge of the North Slope. This marks the first time the company — or Union Oil Company of California, which Chevron acquired in 2005 — has explored on the North Slope since the early 1990s.

Chevron's Alaska general manager, John Zager, told Petroleum News in mid-September 2007 that Chevron's "overall exploration plan ... is commensurate with our commitment to Alaska." After the Chevron purchase, there was speculation that the company might sell off its Alaska properties, but in 2006 Chevron announced that it would keep Unocal's employees and assets in Alaska.

Zager said "exploration is a key part of our plans" because Chevron intends "to grow the business" and has "made a commitment to be in Alaska."

While that commitment "involves a significant amount of development work" there is "also an exploration component," he said.

"Over the next couple of years we'll have more exploration going on than we have had in a number of years here in the state."

"We haven't operated along the North Slope since the early '90s, so this is a significant move for us and obviously we're hopeful it will be successful and lead to many more opportunities up there."

Chevron holds 906,136 net acres of oil and gas leases in Alaska.

White Hills prospect

Chevron has been talking about exploration drilling at White Hills — Zager told the Resource Development Council in November 2006 that the company was "working hard on getting that ready and plan to have a rig out there probably

about 12-14 months" from now.

Petroleum News reported in July 2007 that Chevron had permitted a number of White Hills locations and told regulators it planned to drill up to six wells in its first exploration drilling season at the White Hills prospect, with the potential for additional wells in subsequent years.

Chevron described the plan to the Alaska Department of Environmental Conservation as "a regional, multi-year onshore oil and gas exploration drilling program during the winter months on the North Slope" at its Brooks Range Foothills White Hills prospect. White Hills is west of the Sagavanirktok River and east of the Colville River. Mobilization will begin with a staging area and camp at the Franklin Bluffs pad, Milepost 39.6 along the Dalton Highway.

The new North Slope rig that will drill at White Hills, Nabors 106E, will drill first at Happy Valley on the Kenai Peninsula. Zager said the 106E was being set up at Happy Valley in mid-September and will "drill two new wells off what we're calling the B pad (at Happy Valley), which is a western extension from the original A pad."

And when will work begin on the North Slope? As soon as conditions permit and Chevron has permits in place, Zager said. The rig is expected to be taken to the slope in early December and spud at White Hills as soon as snow and freezeup allow.

2-D seismic last winter

Unocal began White Hills tract acquisition in 2001 and Chevron added 48 tracts in the March 2006 state areawide lease sale. The White Hills acreage includes Unocal's 1994 Amethyst well as well as BP's 1991 Malguk 1 well.

Zager said he couldn't discuss Chevron's target at White Hills, but former Alaska Division of Oil and Gas Director Mark Myers told Petroleum News in 2006 that White Hills is close to

the 1966 Susie well that Richfield drilled just before Prudhoe Bay was discovered. That well had oil shows and Myers said while the well was unsuccessful "there is still significant interest in that area for oil."

"The oil-stained outcrops ... around Sagwon Bluffs illustrate the area contains oil," Myers said. Targets at White Hills would include Cretaceous sands, including the Kuparuk River formation, he said.

Division of Oil and Gas geologist Paul Decker told Petroleum News in 2006 that both the Amethyst and Malguk wells penetrated thick Upper Cretaceous deep-water turbidite sands with good oil and gas

shows and said Phillips Petroleum's 2002 Heavenly 1 well just west of White Hills had the same Cretaceous interval and that the same sands may extend within the Chevron acreage.

Chevron acquired 2-D seismic on the North Slope last winter.

Stump Lake well in '08

While Chevron has production from working interest ownership in North Slope fields, its operated production is from Cook Inlet.

Zager said that the company has been "active onshore for the last few years with gas exploration" in the Cook Inlet basin — resulting in "at least two discoveries, one with Marathon at Ninilchik and the other one at Happy Valley."

"Our effort in the next year or two onshore will primarily be — I'd call it more in the exploitation realm," he said.

Drilling will be at Happy Valley before Rig 106E goes to White Hills.

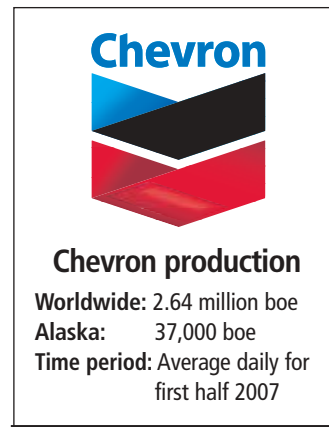
"And then on the west side, we have plans for next summer to drill a well at Stump Lake." That will be the first well the company has drilled on the west side in a number of years, he said.

"That is probably more of an exploitation well than a true exploration. It's not a new field wildcat," Zager said.



JOHN ZAGER

JUDY PATRICK



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CHEVRON

He said Chevron's intention is to "use the same rig that we hope to be using with our partners at Beluga River" next summer.

Stump Lake is gas, he said, and is one of four west side Chevron fields — all gas — including Stump Lake, Pretty Creek, Ivan River and Lewis River. Chevron holds 100 percent working interest in all four, Zager said. Of the four, Alaska Oil and Gas Conservation Commission records show current production from Ivan River and Pretty Creek. Chevron also has gas storage at Pretty Creek.

The Stump Lake well is based on a "new geological interpretation," Zager said, "... reworking the data and coming up with a new interpretation."

Chevron has just completed another storage well at Swanson River, "so we've got a

little more capacity for this winter."

An undeveloped Chevron find is the Red well, which has been discussed as a possible gas source for the southern Kenai Peninsula.

Kevin Tabler, Chevron's Alaska manager of land and government affairs, said the Red 1 well flowed "at a substantial rate," but the offset well, the Red 2, was a dry hole. "The Red 2 results coupled with our analysis of the well data on Red 1 indicate that the reservoir volume is rather small," Tabler told Petroleum News in an October 2007 e-mail. "We will look for opportunities to work with others to hook the well up as soon as a commercial project comes together," he said.

Offshore work oil-related

Most of Chevron's offshore Cook Inlet work is oil related, Zager said, although "we will soon be drilling" a gas devel-

opment well on the Steelhead platform.

As far as offshore exploration work goes, "probably mostly work at the Monopod will be considered exploitation-type work, but we're doing significant development at Granite Point and at Trading Bay unit and Trading Bay field."

"As far as exploration, the only real what I call true exploration well we have planned right now is off Anna in Granite Point field. That would be a gas prospect."

Zager talked about this gas prospect at the Resource Development Council in November 2006. He said Granite Point is a big structure, a four-way closure, and is in a good neighborhood for gas with the McArthur River, Beluga River and North Cook Inlet fields in the area. He said Granite Point "has never really been drilled on top as a gas prospect," and is risky for gas because it's shallower than some of the other fields.

That well could be drilled around the second quarter of 2008, Zager told Petroleum News in September 2007. He said Rig 428, a Chevron-owned rig, is being moved out to Anna now. "It'll be set up and start drilling off Anna probably by the first of December and we'll have a couple of oil wells that we'll drill first," development oil wells, he said.

Most of Chevron's Cook Inlet activity will be develop-

ment drilling, he said, because the object is an "increase in near-term production."

With gas "a more and more precious commodity" in Cook Inlet, "we're focused on working to meet our ongoing obligations to our gas markets," Zager said.

No Jurassic in 2008

Zager said in 2006 that Chevron is considering drilling deep in Cook Inlet to test the pre-Tertiary Jurassic.

Tabler told Petroleum News that test will not occur in 2008, but "we continue to plan for a Jurassic test in the McArthur River field in the next couple of years." He said that test "will need to compete to secure exploration funding in Chevron's global exploration portfolio."

The deepest vertical depth of a Cook Inlet basin well is some 12,000 feet. Commissioner Dan Seamont of the Alaska Oil and Gas Conservation Commission said companies will have to drill another 5,000 feet below known reservoirs to test the deeper sands.

Seamont told Alaska legislators in early 2005 that there has been relatively little exploration drilling in Cook Inlet compared with oil regions elsewhere in the United States, and said with potential deeper undiscovered oil existing platforms could play a role in exploration.


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CHEVRON

The U.S. Geological Survey has estimated that only 4 percent of the oil theoretically generated from Cook Inlet source rock has been identified.

Referring to existing platforms, Seamount told legislators "There's still a good chance that a lot of that 96 percent is still under the drill bit."

He said there are many known, untested Tertiary prospects accessible from the platforms and said fault blocks, some of which lie right under the platforms, form fault traps that could contain oil.

"We could explore untested fault blocks and now, with new technologies and extended reach drilling, there are a lot of other identified prospects within reach," Seamount said.

He thinks there is oil in the Jurassic strata under the platforms, below Tertiary rocks that form the reservoirs for all of the Cook Inlet oil and gas fields. Rocks of the middle Jurassic Tuxedni group sourced Cook Inlet oil and that oil must have migrated through or alongside potential reservoir sandstones that are late Jurassic in age and

How to attract investment to Alaska

Here is Chevron's response to what the State of Alaska and/or federal governments can do to attract more oil and gas company investment to Alaska.

The government needs to provide three things to attract more investment in Alaska:

- 1) Provide access to land — the State does a very good job through the areawide leasing program;
- 2) Provide a reasonable permitting environment. Steps have been taken, but there is more to do to cut down the costs and possible delays;
- 3) Provide a stable and reasonable tax environment. It is very difficult for any company to plan its business if taxes are changing annually.

Recognize that Alaska is an expensive and high-risk place to do business. In order to attract more capital, Alaska must offer terms that recognize, and in some manner accommodate, some of those risks. The State will not be successful in attracting more capital and getting more production if the industry is continually forced to take more risks and accept increased costs through higher taxes.

Chevron holds 906,136 net oil and gas acres in Alaska.

known to exist under Cook Inlet.

"There are very thick sands in the Jurassic," Seamount told legislators. "The oil would have had to have touched the sandstone within the Jurassic before it got up into the Tertiary reservoirs that have been exploited to date."

Chevron spokeswoman Roxanne Sinz told Petroleum News in November 2006 that there had been a small amount of Jurassic production at the Trading Bay

unit in the past. Testing the Jurassic from one or more of the unit's platforms is an option "being considered along with a wide spectrum of oil development opportunities in Cook Inlet, including Jurassic. However, significant additional technical work must be completed before we can rank, prioritize and schedule any specific drilling activity to further evaluate these types of targets," Sinz said in 2006. ♦

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Gas giant BG strong partner

By **KAY CASHMAN**
Petroleum News

London-based BG Group, one of the world's largest natural gas companies, entered Alaska in January 2006, with a Brooks Range Foothills joint venture agreement with Anadarko Petroleum and Petro-Canada.

The Foothills deal gave BG Group's new Alaska subsidiary BG Alaska E&P Inc. a one-third share in the oil and gas rights on some 2.2 million acres between the Canning and Colville rivers along the southern border of the North Slope.

In September 2007, JV operator Anadarko said the partners would drill two wells on two gas-prone Foothills prospects in the winter exploration season of 2007-08 — the first commercial wells targeting gas to be drilled in northern Alaska (see story on page 88).

Other investments followed, including a 40 percent share of 208,000 acres on the eastern North Slope, including a piece of an oil prospect called Jacob's Ladder.

"BG Group is focused on growing its presence in Alaska as part of our long-term plan to meet the increasing U.S. energy demand through the production of new natural gas supplies from Alaska and Canada," BG Group's Executive Vice President Martin Houston said in May 2006.

BG also began bidding in Alaska lease sales with Anadarko and Petro-Canada in 2006.

By July 2007 the company had interest in over 3.1 million gross acres in the eastern North

**Other
players
& partners**

2007 headlines

OCT. 28

LNG good option

BG says increasing globalization of market bodes well for North Slope gas
<http://www.petroleumnews.com/pnads/597284068.shtml>

MARCH 25

Gas shippers on AGIA: It's a start

North Slope explorers Chevron, BG give Alaska legislators preliminary take on governor's gas line bill; call for alignment
<http://www.petroleumnews.com/pnads/138514660.shtml>

MARCH 11

BG Group goes after 'big gas' in Canada

<http://www.petroleumnews.com/pnads/509079798.shtml>

Slope and Foothills partnerships.

BG, which supplied half the liquefied natural gas imported to the United States in 2006, supported Alaska Gov. Sarah Palin's 2007 Alaska Gas line Inducement Act.

A company executive told an Anchorage audience in October 2007 that exporting LNG from Alaska would be an effective way to monetize the state's North Slope resource.

"LNG, I believe, is an industry that holds the key to the future evolution of gas markets worldwide and I believe that Alaska can be a critical part of that world market," said David Keane, vice president policy and corporate affairs, BG North America, Caribbean and Global LNG.

Glenn McNamara, president of Calgary-based BG Canada Exploration and Production, manages BG's Alaska subsidiary. ♦



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Aurora Gas in holding pattern

Drilling rig remains idle while company deals with litigation, looks to sell or recapitalize company

By **ALAN BAILEY**
Petroleum News

Following a difficult year in 2006, Aurora Gas remains in something of a holding pattern while it tries to resolve its future. Aurora Gas has spent the majority of 2007 focused on its ongoing litigation with Enstar Natural Gas Co. and on its efforts to sell or recapitalize the company, Aurora Gas President Scott G. Pfoff told Petroleum News Oct. 29, 2007. Efforts to sell the company have progressed but not to a point where Aurora Gas is prepared to release any information, Pfoff said.

Formed 2000

After its formation in 2000 the company established itself as a small, independent explorer and producer, bringing natural gas to market in Alaska's Cook Inlet. A relatively low-risk strategy of drilling close to known gas accumulations transitioned in 2004 to the drilling of more risky exploration prospects.

In late 2004 Aurora Gas drilled its first pure exploration well, the Three Mile Creek No. 1. It was a discovery.

And by the end of 2005 the company was operating five fields on the west side of the Cook Inlet: the Koala, Lone Creek, Moquawkie, Three Mile Creek and Nicolai Creek fields.

This initial exploration success was followed by the drilling of dry exploration wells at Aspen in 2005 and Long Lake in 2006 — both of these wells were on the west side of the Cook Inlet.

Swift joint venture

In March 2006 Aurora Gas and Swift Energy Co. announced a joint venture to explore some of Aurora Gas's Cook Inlet acreage. And in April 2006 the joint venture drilled a wildcat well at the Endeavour oil prospect in the southwestern Kenai Peninsula. The 9,225-foot well proved to be a dry hole, despite its proximity to a known oil accumulation in very similar geology at the Hammerhead prospect near Anchor Point.



SCOTT G. PFOFF

JUDY PATRICK

The agreement with Swift contemplated the possibility of drilling at least two wells, Ed Jones, Aurora Gas's executive vice president engineering-operations, told Petroleum News in March 2007 — potential oil prospects include a target below the Aspen gas prospect that Aurora Gas drilled in 2005. But Pfoff said in March that Swift was preoccupied with some recent acquisitions in Louisiana. In October Swift told Petroleum News that it had diverted manpower working on Alaska to deal with "two sizable acquisitions" that the company had made during the past year.

In November 2005 Aurora Gas signed an agreement with Trading Bay Oil and Gas to take a majority interest in the Hanna prospect on the west side of the Cook Inlet, but an initial plan to drill a well at Hanna in 2006 was postponed. In addition to a fairly shallow gas prospect, Hanna has a deeper oil prospect that Aurora Gas advertised in the 2007 NAPE expo.

Recompletions and workovers

In 2006, in addition to its exploration drilling, Aurora Gas also focused on recompletions and workovers, with what it described as moderate success in the Nicolai Creek 1B, Lone Creek 1, Mobil Moquawkie 1 and Nicolai Creek 9 wells, using the company's own AWS No. 1 drilling rig that the company had also used for much of its exploration drilling.

But in 2006, the company ran into difficulties with the commercial arrangements for the sale of its Cook Inlet gas — in October of that year the company suspended its supplies of gas to Enstar Natural Gas Co., the major Southcentral Alaska gas utility, because of gas prices that Pfoff described as "far below what is economic." That suspension of delivery resulted in Enstar suing Aurora Gas for breach of contract, although Aurora Gas said that it had the contractual right to the suspension.

Pfoff also told Petroleum News that the State of Alaska's use of "prevailing value" to calculate royalties on gas pro-

Meantime the contractual dispute with Enstar is scheduled for trial in the first quarter of 2008 in a Superior Court for the State of Alaska district court, Pfoff said.

duction compounded the commercial problems by penalizing producers who supply gas at below average prices for the Cook Inlet region.

Perfect storm

And, in what Pfoff described as "a perfect storm" compounded by "geologic complexity, the high-cost environment in which Aurora Gas operates and recent commercial uncertainty," the company suspended its drilling operations in October 2006. The AWS No. 1 rig returned to Nikiski on the Kenai Peninsula, where it has remained mothballed ever since.

"We see no incentive to continue the search

for gas until this issue (with Enstar) can be resolved; and if the issue is not resolved in Aurora Gas's favor, the result will be no further exploration and development by Aurora Gas in our core area of operations," Pfoff said.

In March 2007 Pfoff told Petroleum News that Kaiser Francis Oil Co. of Tulsa, Okla., which owns more than 90 percent of Aurora Gas, was taking a hard look at whether it wanted to spend more money on Cook Inlet exploration wells. Kaiser subsequently decided not to invest further in Cook Inlet exploration and Aurora Gas has been trying to find a new owner or investors, Pfoff said in October.

Meantime the contractual dispute with Enstar is scheduled for trial in the first quarter of 2008 in a Superior Court for the State of Alaska district court, Pfoff said.

"It has been in an extremely frustrating year for Aurora Gas," Pfoff said. "We would much rather be utilizing our resources to find and develop badly needed Cook Inlet gas reserves; instead we have had to devote our energy on fighting senseless litigation." ♦

 **Aurora Gas, LLC**

Aurora Gas production

Outside Alaska: none

Alaska: 5,912 mcf

Time period: Average daily
January-September 2007

Repsol partners with Eni, Shell in Beaufort Sea

By **KAY CASHMAN**
Petroleum News

In September 2007, Repsol YPF joined a Shell/Eni partnership in a block of 64 leases in the Beaufort Sea off Alaska's North Slope. It was the Spanish oil and gas major's first acquisition in the state.

Shell and Eni exchanged working interests in the contiguous outer continental shelf leases in November 2006. At that time Eni had a 60 percent interest in the acreage and Shell had 40 percent. Repsol picked up its 20 percent interest from Eni.

The exploration block is operated by Shell in the federal waters north of the Oooguruk, Nikaitchuq, Northstar and Kuparuk units, extending east to midway above the Prudhoe Bay unit.

Shell's spokesman in Alaska, Curtis Smith, told Petroleum News Sept. 21 that the leases are in water depths ranging from 3 to 24 meters.

Identifying drill sites

"The objective of the partnership is to acquire 3-D seismic with a view toward identifying future drill sites," Smith said.

In its press release Repsol said "exploration activities" could start in 2009-10.

When asked by Petroleum News if

Repsol contact in U.S.

Jorge S. O. Milanese
Upstream Business Development
Repsol YPF S.A.
2001 Timberloch Place, Suite 3000
The Woodlands, TX 77380
TELEPHONE: (281) 297-1102
EMAIL: jmilanese@repsolyopf.com

Repsol was looking at additional investments in Alaska, Jorge S. O. Milanese referred the question to Repsol's headquarters in Madrid. Milanese is in upstream business development and is based in The Woodlands, Texas.

Madrid officials had not replied by the time The Explorers went to press on Nov. 1.

At the Alaska Natural Gas Development Authority board meeting on May 9, 2007 ANGDA CEO Harold Heinze said that Repsol had recently established an "upstream position" in Alaska.

In April, Heinze met with Repsol as part of a series of meetings with companies that might have an interest in building a gas pipeline from the North Slope to Lower 48 markets. He was told Repsol had already entered Alaska, but was not given particulars.

In early September, Drue Pearce, the federal coordinator for Alaska gas pipeline

projects, said she had heard Repsol was one of several companies that had expressed interest in building a gas pipeline from the North Slope. But Pearce also said she didn't have any inside information that suggested Repsol was still interested.

An integrated oil and gas company engaged in all aspects of the petroleum business, Repsol has 30,000 employees and is one of the 10 largest private (not government-owned) petroleum companies in the world. It was founded in 1986 and in 2006 had a net income of approximately \$1.7 billion.

The company also operates in Latin America, the Middle East, and North Africa. Repsol owns Argentina's largest oil company, and has operations in more than 28 countries. The bulk of Repsol's assets are in Spain and Argentina.

Repsol operates five refineries in Spain and four in Latin America and produces chemicals, plastics and polymers. The company sells gasoline under the brands Campsa, Petronor, and Repsol at more than 6,900 service stations in Europe and Latin America.

Repsol is one of Spain's largest sellers of liquefied natural gas.

According to Dow Jones, in mid-September 2007 Repsol signed a \$15 billion contract to supply natural gas to Mexico from its Peruvian operations. ♦

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Shell never really left Alaska

2007 Beaufort drilling plans on hold due to a court order, Odom says will continue to listen, learn, work with local people

By **KAY CASHMAN**
Petroleum News

When Shell re-entered Alaska in October 2001 with the \$2.4 million acquisition of 56,000 acres on the North Slope, Alaskans watched to see what the U.S. E&P arm of Royal Dutch Shell would do next.

Formerly a Cook Inlet basin producer, Shell left Alaska in 1998 after more than 40 years of activity that included exploration drilling in almost all of the state's offshore basins with oil and gas potential, including the Chukchi Sea, Beaufort Sea, Gulf of Alaska, Bering Sea and Cook Inlet.

But Alaskans were disappointed because a year after Shell's return the mega-major put its new North Slope leases up for sale.

Land and exploration staff from three oil companies told Petroleum News that Shell had said the Alaska leases, which were south of the Kuparuk River unit, didn't "stack up against Shell's deepwater Gulf of Mexico holdings as an investment."

There were no takers for the leases, so in 2004, Shell surrendered them to the State of Alaska.

Remained AOGA member

"We felt that the potential of the area did not meet our investment criteria," Shell spokeswoman for EP Americas Kelly op de Weegh told Petroleum News in October 2004. "But I want to stress, our decision to surrender what we consider to be a small, non-material leasehold does not affect our goal to continue evaluating investment opportunities in Alaska."

"That specific area" of the North Slope does not interest Shell, she said, asking Petroleum News to "stress that we do not view this as an exit from Alaska."

"Even though Shell sold its last producing asset in 1998, Shell has remained an AOGA member," she said, which the

Alaska Oil and Gas Association confirmed.

Sakhalin, West Siberia, Alaska

Op de Weegh's assertion that Shell was still interested in Alaska coincided with remarks made a month earlier to Oil Daily by Shell's global exploration director, Matthias Bichsel.

He said Shell had completed an 18-month, "thorough evaluation" and that the company "wants to develop a bigger exploration position in Alaska," which it sees — alongside North Africa, the Russian Arctic and the global deepwater — as "one of the key areas of upstream potential for the international oil and gas industry."

Bichsel also mentioned Shell's continued interest in Sakhalin and West Siberia.

"You have a bit of a theme there — Sakhalin, West Siberia and Alaska — which is the Arctic, which requires big funds, which requires technology, tenacity, staying power, which I think companies like ours are very well suited to."

Wins Beaufort leases

In March 2005 Shell won 84 Beaufort Sea leases in a U.S. Minerals Management Service lease sale. (MMS estimates suggest that about 7 billion barrels of oil and 32 trillion cubic feet of gas can be recovered from under the Beaufort Sea.)

Within a few months of winning the outer continental shelf tracts, the company purchased EnCana's Beaufort leases, opened an office in Anchorage, and hired Tom Homza, formerly with EnCana in Alaska, to manage it.

On a visit to Anchorage in August

2005, Annell Bay, Shell's vice president of exploration for the Americas, said Shell had done an extensive review that encompassed all aspects of doing business in Alaska, including "geological, technical, environmental, political, social and certainly commercial. We have re-looked at the elements and the opportunities in Alaska and feel like now is the time to come back" and build "another successful venture."

She described Shell's Beaufort lease position as "a platform for us to build on."

Fox, Toohey, Ahmaogak

In January 2006, Shell named three top officials for its Alaska operation in Anchorage: Rick Fox, asset manager; Cam Toohey, government and external affairs manager; and George Ahmaogak Sr., community affairs manager.

At the time of the appointments, Alaska Exploration Manager Chandler Wilhelm said, "Although production is years away business planning and stakeholder engagement work is already under way."

In 2006, Fox had been with Shell for 30 years. Earlier in his career he worked in Alaska's Bering, Beaufort and Chukchi seas, and was lead drilling foreman on the Chukchi Sea exploration team led by Shell.

Toohey, a lifelong Alaskan, most recently had been special assistant to the secretary of the U.S. Department of the Interior.

Ahmaogak, a lifelong Alaskan and Barrow whaling captain, had just finished two terms as mayor of the North Slope



Shell production

Worldwide: 3.3 million boe
Alaska: none (yet)
Time period: Average daily for first three quarters 2007



RICK FOX



CAM TOOHEY



GEORGE AHMAOGAK SR.



CHANDLER WILHELM

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SHELL

Borough.

Vision for Bristol Bay

Shell said it was interested in other parts of Alaska, not just the far north.

In October 2005, Anchorage Daily News fisheries and oil reporter Wesley Loy attended a meeting that gave a glimpse of how Shell would communicate with people in areas it was interested in exploring and developing.

"Major oil companies often prefer to hold their cards close to the vest," Loy reported. "But in the first week of October a land agent from Shell International Exploration and Production in Houston candidly laid out the company's Bristol Bay vision for commercial fishing representatives meeting at the Hilton Anchorage Hotel."

Shell's plan, Loy wrote, would involve two to four "offshore production platforms in the bay's fish-rich waters — which are now off-limits to drillers — and piping natural gas across the rugged Alaska Peninsula to a new processing plant and tanker port on the Gulf of Alaska." Gas would be super chilled into liquefied natural gas, or LNG, for shipment to the West Coast via Mexico or Canada.

Shell would face many regulatory, geologic and business hurdles to move forward, a federal official told Loy. "But it does demonstrate rising industry interest in a place that historically has shunned drillers. And it signals a new chance for Alaska to cash in on the great global competition to supply the energy-hungry Lower 48 with gas."

The Shell land agent, Gregg Nady, said

fishermen and oilmen have peacefully coexisted offshore for decades around the world, and the same could hold true in Bristol Bay.

Nady said Shell was among several oil firms that in 1988 spent more than \$95 million for Bristol Bay leases, only to see spill-wary fishermen, environmentalists and Alaska politicians persuade the federal government to buy back the leases in 1995.

That lease sale was nearly 20 years ago, Nady noted. "That's 20 years of track record for the industry operating offshore that we didn't have back then. We feel it's a great track record."

Since 1988 Bristol Bay residents "have warmed to oil and gas, mainly due to salmon prices collapsing in the face of competition from foreign, farm-raised salmon. A harvest that was worth more than \$200 million at the docks in 1990 has dwindled to less than half that, causing major job and public revenue losses for local people and governments," Loy wrote.

Nady said Bristol Bay gas could sustain a liquefaction plant in Balboa Bay, near Sand Point, for 25 years.

What's more, he offered, oil industry helicopters have been known to save fishermen in distress, and Shell has a "good neighbor policy" — in case of damage to fishing equipment.

Eye on Chukchi

Early on, Shell was telling the Native people, governments and special interest groups of northern Alaska that it was interested in going back into the Chukchi Sea, which stretches west of the Beaufort Sea to Russia.

Following MMS Chukchi lease sales in

In February 2007 Fox said the availability of new oil and gas technologies was one of the things that attracted Shell back to Alaska's offshore.

1988 and 1991, several companies led by Shell drilled five offshore exploration wells in the Chukchi, all of which encountered hydrocarbons. (The 1988 Chukchi sale was the largest in Alaska's OCS, topping \$478 million.)

Technology key

In a late 2006 speech Wilhelm said the petroleum systems "of the Arctic are truly world class," but being in the right place doesn't get you there — state-of-the-art technology is critical.

The short operating season is a challenge, he said, noting Shell uses a real-time operations center with a satellite connection to adjust well execution. The company was also working on research and development: extending the season; cost reduction; systems reliability; and subsea systems.

"We have a long history of innovation and our experience in the deepwater we think can serve as a guide for the possible impact of technology in bringing oil and gas from hostile offshore environments to market," Wilhelm said.

Building a legacy

In February 2007 Fox said the availability of new oil and gas technologies was one of the things that attracted Shell back to Alaska's offshore.

He characterized Shell's current Alaska initiatives as pursuing two fronts — investigations that focus on finding new prospects, including the preparations for future lease sales, and work associated with known prospects.

Work on the first of those fronts involves the acquisition of 3-D seismic data in the Beaufort and Chukchi seas, while work on the second front involves exploration drilling preparations and drilling, primarily for the investigation of known prospects.


Sivulliq in 2008?

On the second front Fox said Shell was focusing initially on the Sivulliq prospect area.

Formerly known as Hammerhead, Sivulliq lies due north of Flaxman Island



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SHELL

on the western side of Camden Bay. It contains a known oil pool penetrated by two exploration wells drilled by Unocal in 1985 and 1986.

Shell participated in the original Hammerhead drilling and Fox was on the drillship that tested the oil discovery.

According to information published by MMS, Hammerhead contains an estimated 100-200 million barrels of technically recoverable oil in a Brookian sand reservoir. But the oil pool had not been fully delineated, which was what Shell was planning to start with a three-well program during the 2007 open water season.

In 2008 and 2009 the company hoped to drill another six to eight wells.

Drilling plans included one deep target with a depth approaching 14,000 feet; most of the other wells would likely drill to depths of less than 8,000 feet, Fox said, depending on the results of the 2007 program.

Shell planned to use two drilling vessels, the Kulluk and the Frontier Discoverer, for the program, as well as a fleet of ice-rated vessels for support of

the drilling operations.

9th circuit will decide

In February 2007, MMS approved Shell's Sivulliq drilling plan after determining that the proposed exploration wouldn't cause significant harm to endangered bowhead whales or the environment.

On July 24, after months of negotiations, Shell signed a conflict avoidance agreement with the Alaska Eskimo Whaling Commission for the company's 2007 open water exploration program. That agreement included a commitment by Shell to take measures to avoid disturbing the Cross Island hunt for bowhead whales near the drilling area. Under the agreement, Shell would only move one of its drillships, the Frontier Discoverer, into the Sivulliq area prior to the Cross Island hunt. The Discoverer would cease drilling operations on Aug. 25, move out of the area within two days and return with the Kulluk drillship after the end of the hunt, to continue the drilling program.

Hard on the heels of the signing of the conflict avoidance agreement came a final determination by Tom Irwin, commissioner of the Alaska Department of

Natural Resources, that Shell's exploration plan was consistent with the Alaska Coastal Management Plan. (The North Slope Borough had challenged an initial consistency determination by Alaska's Office of Project Management and Permitting.)

But anti-development groups, the Alaska Eskimo Whaling Commission and the North Slope Borough were hitting federal agencies with lawsuits and administrative appeals, protesting approval of Shell's drilling plans. (The borough and whaling commission have long believed that offshore exploration activity threatens subsistence hunting activities, especially the hunting of bowhead whales.)

The groups said regulators failed to adequately consider the potential impacts of industrial noise and spills associated with oil exploration. On Aug. 15 the U.S. Court of Appeals for the 9th Circuit ordered Shell to suspend its operations until the appeals were settled. The court scheduled the case for a Dec. 4 hearing, which nixed any possibility of Shell drilling in 2007.

Shell requested reconsideration by the court, but lost.

Because of the drilling delay, Shell had to release workers, including 150 Alaska

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Shell prepared for the worst

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And in the case of Shell's proposed offshore drilling activities in the Beaufort Sea offshore Alaska those preparations have included the construction of the Nanuq, a 300-foot, ice-strengthened oil spill response vessel, and the chartering of the Arctic Endeavor, a 200-foot oil spill response barge. The company has also chartered a 500,000-

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SHELL

Natives.

High on community involvement

From the start Shell made an effort at getting Alaskans involved in its offshore plans, especially the North Slope Native communities, governments, subsistence groups, whalers, and locally owned companies.

Local involvement went way beyond having people say "okay" to what Shell was doing, Fox said. It meant having local people fully involved in Shell's operations.

Fox described a vision of life in a village home in which "there will be someone sitting at the (dining) table who is involved in our business, telling the truth about what is happening and making their family proud of what they're accomplishing."

"We believe that's essential," Fox said.

Committed to working it out

In mid-September 2007, Petroleum News published a guest editorial from Marvin Odum, executive vice president of Shell Exploration & Production-Americas, in which he said Shell would "continue to listen and learn from the people and communities of the North Slope and residents across Alaska," looking for "common ground."

"Important work and discussions are ongoing with Mayor Itta and we are heartened by the progress being made," Odum said.

"We will only have a successful program in Alaska if it benefits not only the current residents of the entire state, but the next generation as well."

MMS

In early October Randall Luthi, whom the Bush administration appointed director of MMS in late July, said the federal government would continue fighting to clear the way for Shell's Beaufort drilling program.

On Oct. 9, government lawyers filed papers arguing that the court challenges should be thrown out because they were groundless and, in some cases, were lodged after a deadline had passed.

Randall Luthi said his agency would stand behind its decision to let Shell drill. "I'm proud of the environmental work that we've done," he said.

Luthi, who is an attorney, said he couldn't predict how the court might ultimately rule. However, he and MMS's Alaska director, John Goll, said they have no plans to back off leasing new Arctic offshore acreage to prospective drillers.

The agency has a sale scheduled for early 2008 in the Chukchi.

A full environmental impact statement already has been done for that sale, Goll said. ♦

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Hauling boom from the Nanuq during a practice exercise in Valdez

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PREPARED

barrel double-hulled tanker, to hold and carry away any oil that Shell might have to mop up as a result of an oil spill.

The idea is to have the oil spill response kit on the water, at the drill sites, ready to respond immediately to any emergency, Rick Fox, Shell's asset manager for Alaska, told Petroleum News.

"Should it be a diesel transfer spill, should it be any kind of accident that we might have, we have a team ready to go," Fox said. "We can deploy our equipment and begin recovering within 45 minutes."

"We have a total of 24 vessels in the oil spill response program," said Susan Moore, Shell's Alaska operations manager. In addition to the three major vessels, there are 11 smaller boats, including mini-barges and boom towing vessels, mounted on the decks of the Nanuq and the Endeavor, she said.

However, the first line of defense against an oil spill is to prevent one happening. In that regard, an oil explorer's biggest nightmare is the possibility of a blowout, in which oil under pressure spouts from an out-of-control well. But a blowout is a very rare occurrence nowa-



Deploying a workboat from the Nanuq

days, Fox said.

"There have been no blowouts in an Arctic environment that we have any

The first line of defense against a blowout is the use of modern well logging technology that enables conditions at the bottom of the well to be monitored continuously while a well is being drilled, Fox said.

record of," Fox said. But Fox emphasized that the rarity of blowouts does not lessen the need to be vigilant.

"We know what's at stake here to the communities and to our own program," Fox said.

The first line of defense against a blowout is the use of modern well logging technology that enables conditions at the bottom of the well to be monitored continuously while a well is being drilled, Fox said.

"We actually have the capability of detecting subtle changes in the formation as we go," Fox said. "You are able to detect things that are indicators of pressure ... as well as having the ability to control the direction of the drilling."

Note: The rest of this story can be found at <http://www.petroleumnews.com/pnads/852248489.shtml>. It was run in the Sept. 2, 2007, issue of Petroleum News.

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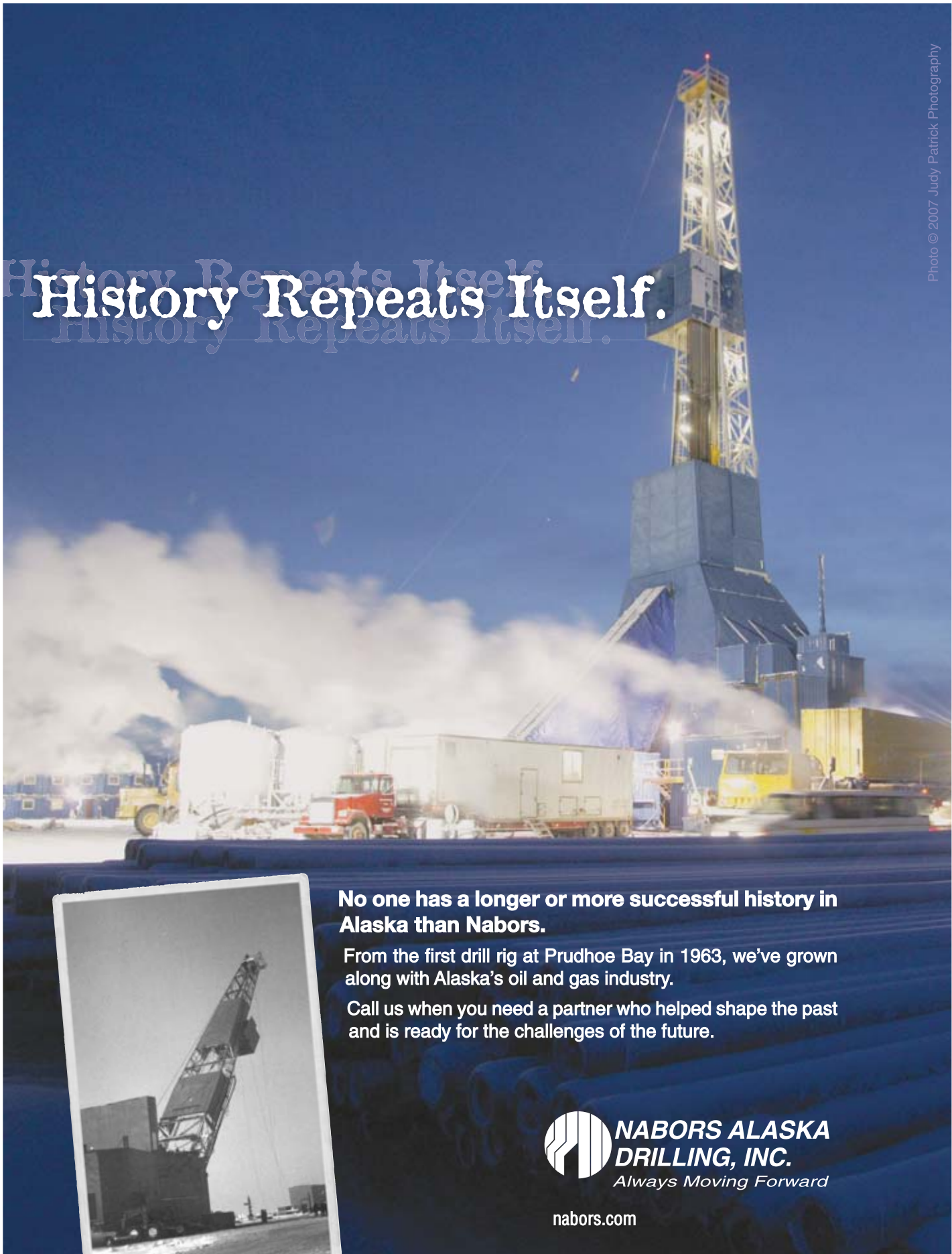
A photograph of two men wearing white hard hats and safety glasses, reviewing documents on a clipboard. They are standing on an offshore oil platform. One man's hard hat has "NANA/Colt" and "PUTTER" written on it. The background shows industrial structures and pipes.

The logo for NANA/Colt Engineering, LLC, featuring the company name in a bold, blue, sans-serif font.

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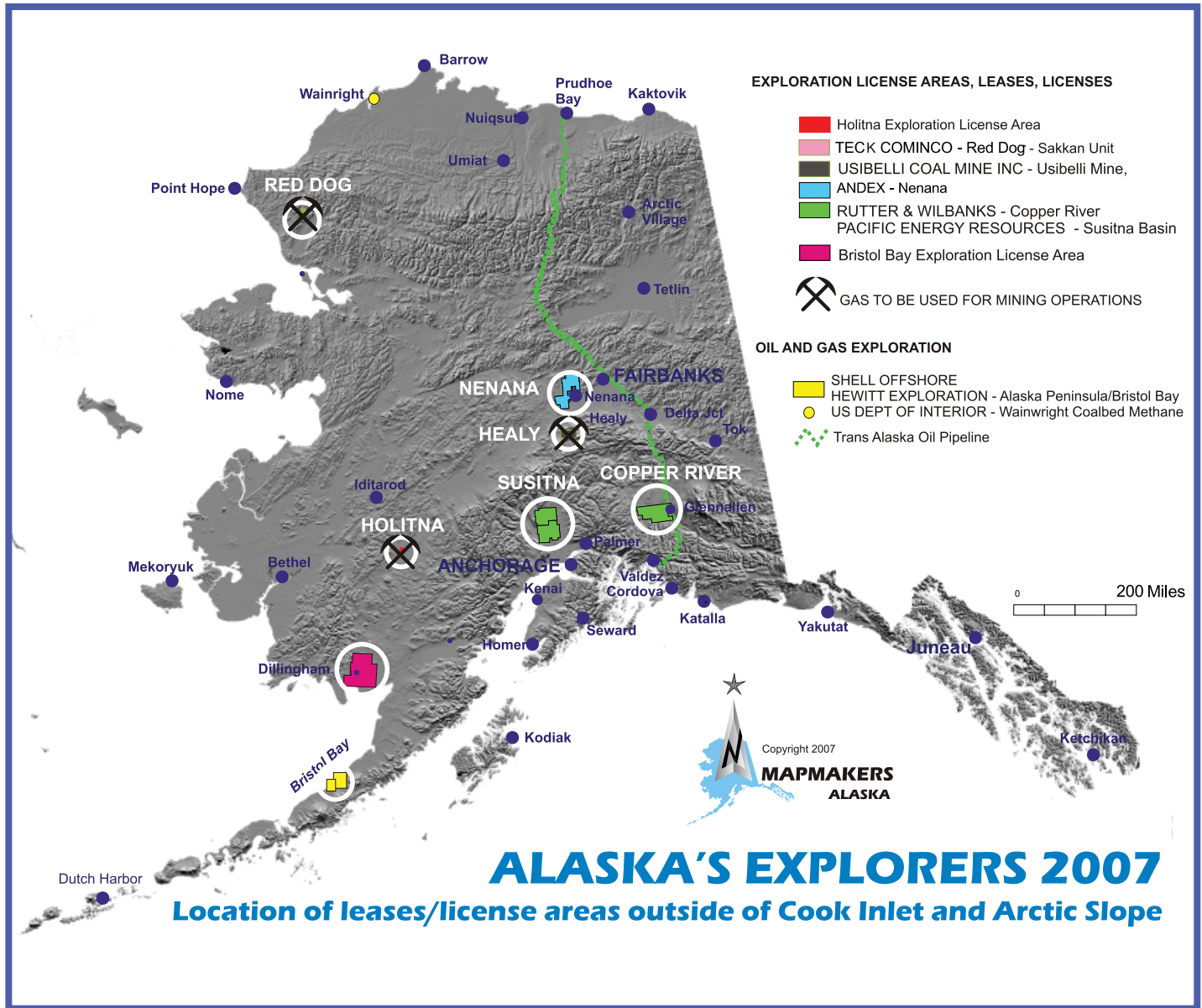
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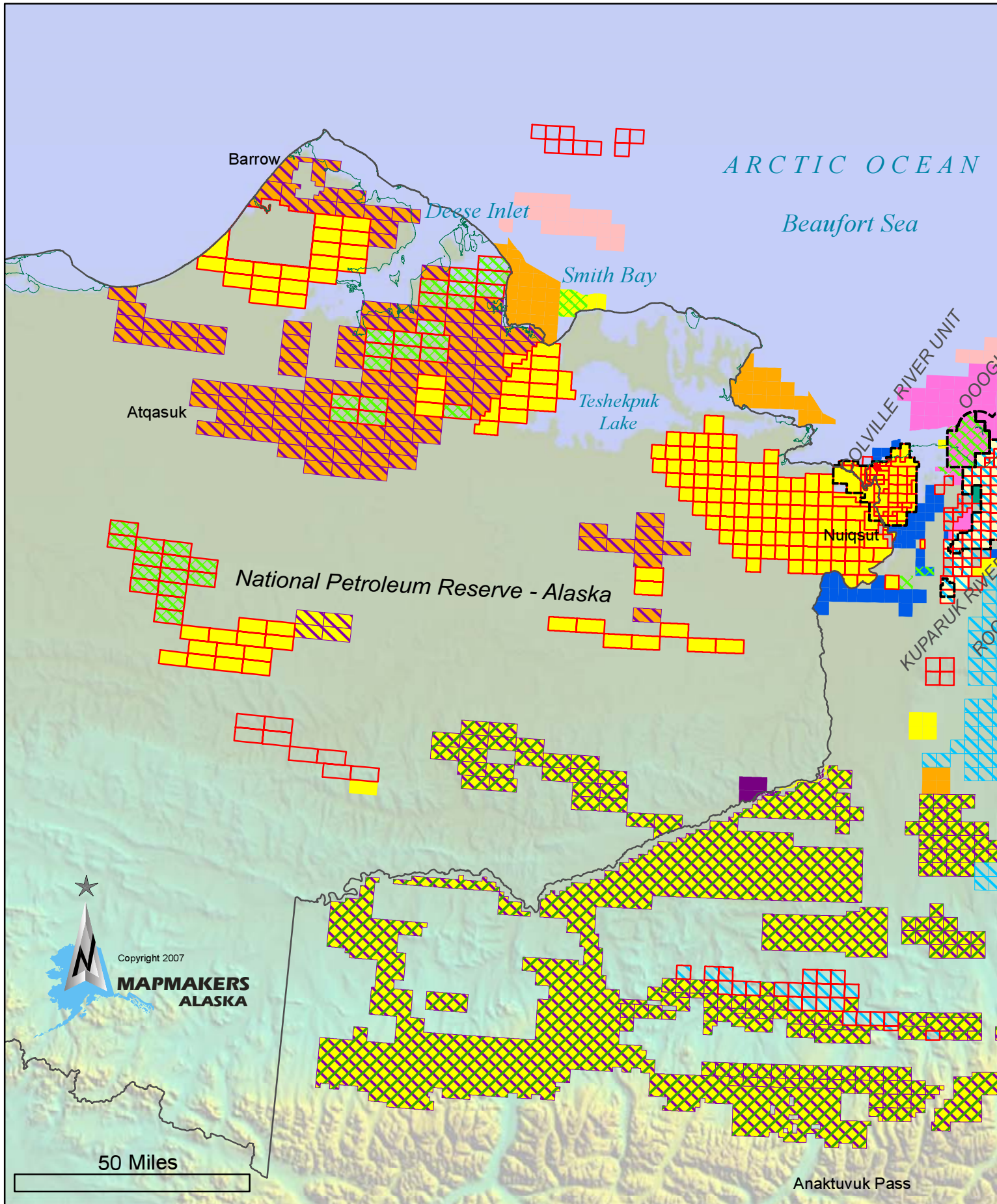
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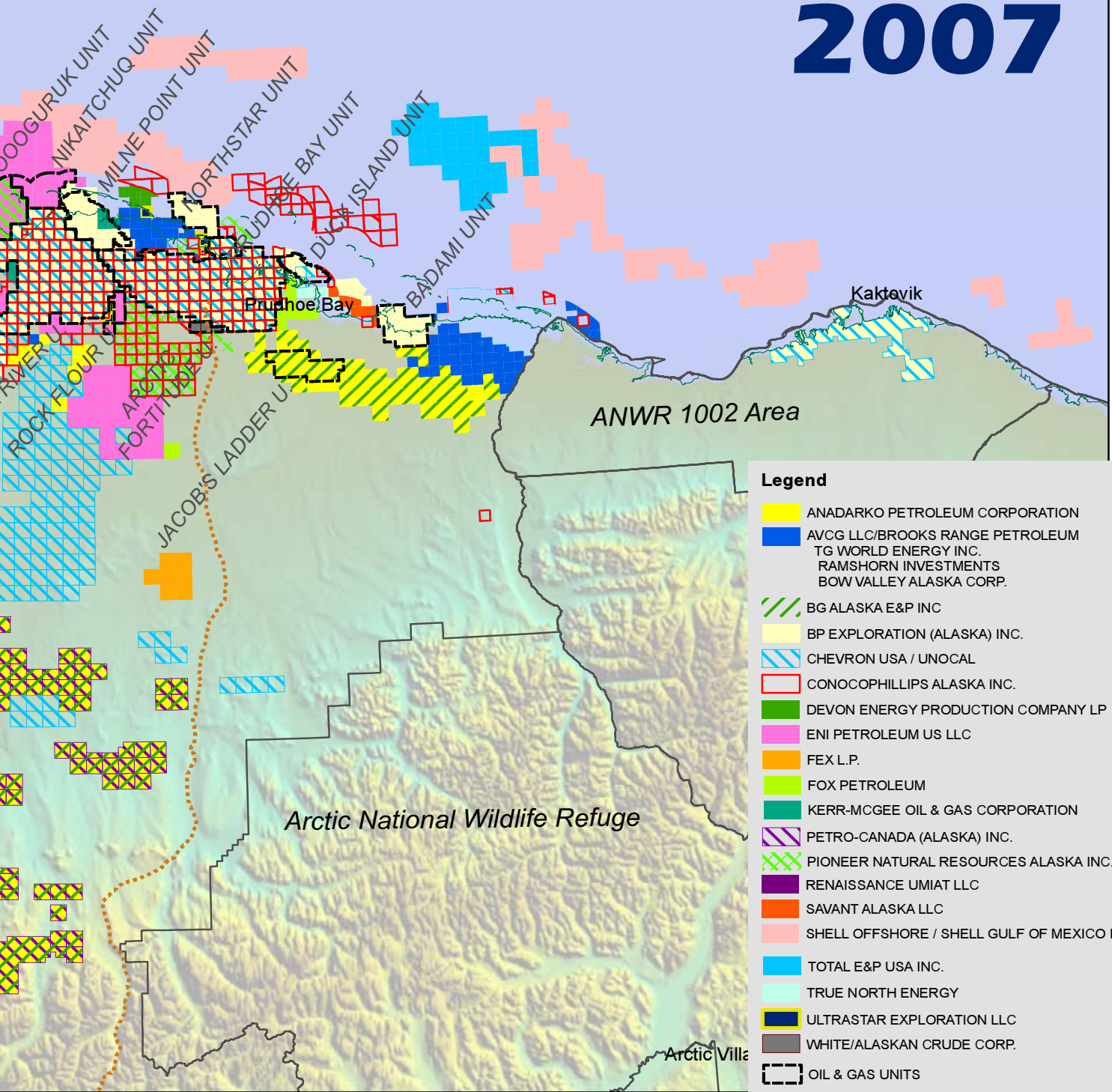
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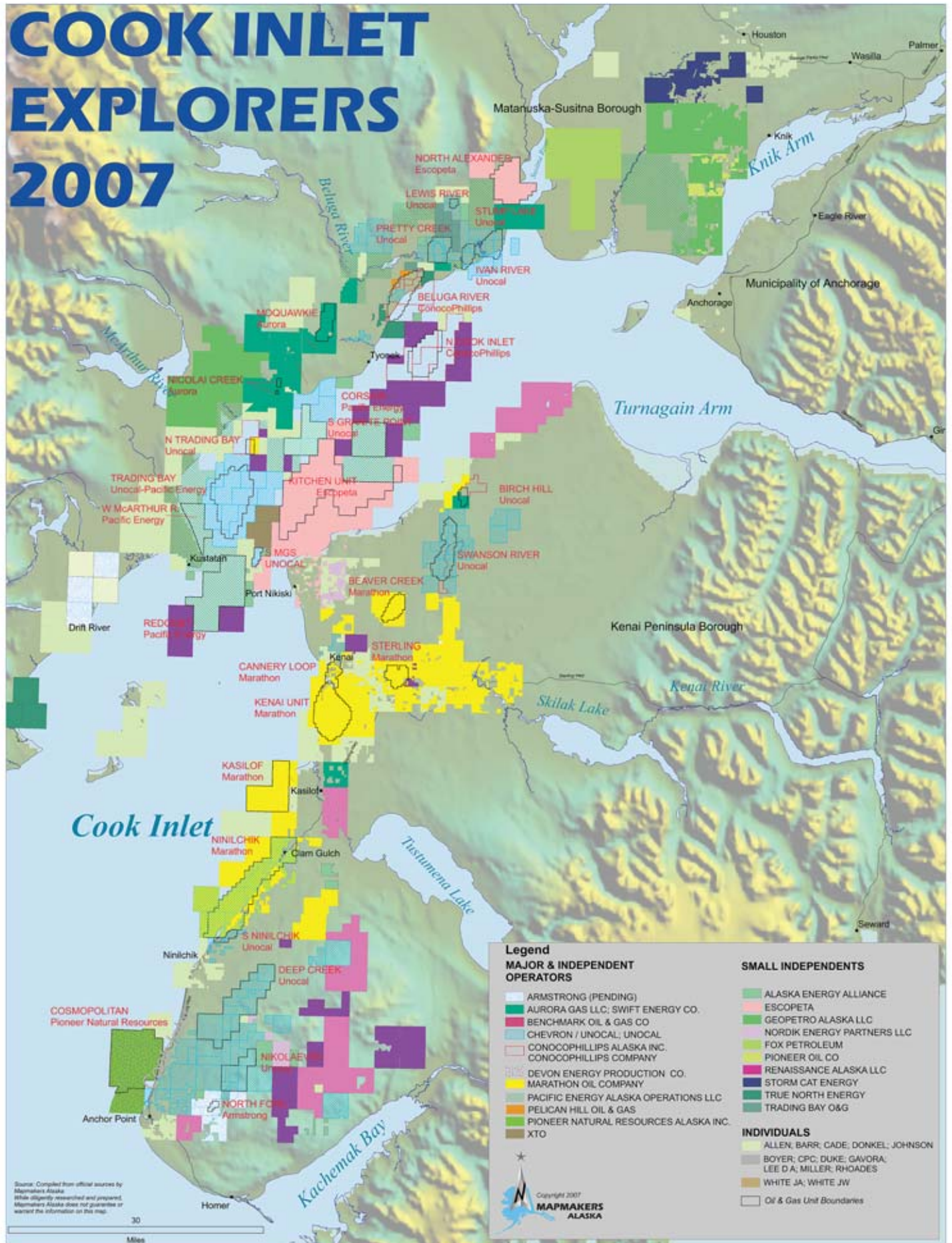
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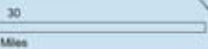
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Anadarko to drill first ANS gas well

Has two rigs under contract, drilling 2 Brooks Range gas prospects, going back to finish Jacob's Ladder

By **KAY CASHMAN**
Petroleum News

Anadarko Petroleum and its partners in the Brooks Range Foothills, BG Alaska and Petro-Canada, plan to drill the first two natural gas exploration wells in northern Alaska this winter. Gas discoveries to date have been an accident of oil exploration.

Anadarko and its partners hold oil and gas rights covering some 2.2 million acres between the Canning and Colville rivers along the southern border of the North Slope, also referred to as the Brooks Range Foothills.

In April 2007, the Houston-based independent's Alaska spokesman, Mark Hanley, said the company and its Brooks Range partners would likely drill just one well on one of their four gas prospects in the 2007-08 North Slope exploration season, and one prospect per year after that if things were moving slowly with the proposed gas pipeline from the North Slope to Outside markets. But in September Anadarko told the state it would be drilling wells from ice pads on two gas prospects — Gubik and Chandler.

Obviously, something has changed since April, the most obvious thing being the passage of Alaska Gov. Sarah Palin's Alaska Gasline Inducement Act, which Anadarko supported.

Over the past few years Anadarko has talked about drilling a gas well, but before making the investment company officials wanted to be certain a gas pipeline would be built — and would accept gas under reasonable terms. Under AGIA builders of a North Slope gas line have to treat all gas sellers fairly, even if North Slope oil producers and gas owners BP, ConocoPhillips and ExxonMobil, competitors of companies such as Anadarko, win state approval to build the line.

Hanley has told Alaska legislators that nonowners of the gas line have to have access to it and know that the line would be expanded if they discovered new gas fields or developed known discoveries. Access to the pipeline and a reasonable tar-

iff were two of Anadarko's chief concerns, and something the company did not see likely under former Gov. Frank Murkowski's proposed gas line contract with BP, ConocoPhillips and ExxonMobil.

New rig for Foothills

Another reason Anadarko and its partners are drilling this year is because of lease stipulations: "We think they're valuable leases, so that's one of the motivations," Hanley said.

Getting started so that they'll be ready for a gas pipeline is important, but risky.

The issue, Hanley said, is not putting too much money into exploring if a gas pipeline doesn't go ahead in the next few years. Alaska is already challenged by long lead times for developments, and the companies "don't want to strand a lot of capital" by committing a lot of dollars if they don't think a gas pipeline is moving forward.

"There's (been) enough movement" on the gas line to motivate Anadarko to contract with Nabors Alaska Drilling to build a new a lightweight drilling rig and remote camp rig, which are scheduled to arrive on the North Slope in December 2007.

Nabors Rig 105 and the camp, Hanley said, would be owned and operated by Nabors, but were built at the request of the operator of the partnership "for a multi-year drilling program with extensions options" in the Foothills. The rig is a "mobile rig, not a wheeled rig, so it can be broken down and transported on rolligons."

Back to Jacob's Ladder

Anadarko has another rig under contract for winter 2007-08 drilling. The Akita 63 will be used on the other side of the North Slope at the company's Jacob's Ladder oil prospect, which Anadarko started drilling in the winter of 2006-07. The company told state officials it plans to go back in with a newly winterized Akita 63 to finish drilling.

Located 10 miles southeast of Prudhoe Bay, Jacob's Ladder is considered an oil prospect in the Wahoo formation of the Lisburne group, with a potential reservoir

in eroded cavities in Lisburne carbonate rocks. The eastern North Slope play is said to resemble the huge Yates field in Texas.

The Jacobs Ladder unit includes the Lisburne structure in the Ivishak formation of the Sadlerochit, rocks equivalent to the reservoir of Prudhoe Bay.

State Division of Oil and Gas geologists believe the Lisburne (Wahoo formation) structure in Jacobs Ladder could yield a range of 20-660 million barrels of oil equivalent and the Sadlerochit (Ivishak formation) structure could yield a range of 50-800 million barrels of oil equivalent.

Because the unit is located off the North Slope road system, Anadarko sought partners to help defray the expense of exploration. It secured Arctic Slope Regional Corp. and BG Alaska as

joint venture partners.

Depending on what it finds at Jacob's Ladder, Anadarko might do more drilling there or drill another nearby prospect.

On Native land

Gas wells planned for the first winter include the 5,000-foot Gubik No. 3 and the 12,500-foot Chandler No. 1. Anadarko said all surface and bottom-hole locations are on ASRC-owned lands; directional drilling may be used for one or more of the wells.

Anadarko said the planned drilling operations are along the east side of the Colville River near Umiat. Six proposed drilling locations at the Chandler prospect are southeast of Umiat. Six proposed Gubik prospect locations are northeast of Umiat.

The U.S. Geological Survey has estimated that the Gubik field, which was drilled by the U.S. Navy during oil exploration in 1951, holds some 600 billion cubic feet of recoverable gas in three horizons — the Prince Creek Formation and Chandler and Ninuluk formations.

Partners in risk

A commitment to finding large, long-term prospects in remote areas of northern Alaska underlies Anadarko's strategy in Alaska, Greg Hebertson, Anadarko's Alaska-



MARK HANLEY

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Time period: Average daily for first half 2007

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continued from page 54

ANADARKO

Canada frontier project manager, and Hanley, told Petroleum News in 2005. The company wants to develop large fields that can be hubs for the development of smaller prospects.

"We've been in Alaska since 1993 and we've been continually investing in Alaska ever since that time," Hebertson said. "We're looking for the hundreds of millions of barrels, and because they are far from infrastructure ... they need to be a substantial size."

Exploring for large petroleum accumulations far from existing infrastructure entails higher than average risk.

"As you get more and more frontier you get a higher reward, higher risk portfolio," Hanley said. To mitigate those risks, Anadarko works with partners that can share the risks and rewards, and can handle the commercial costs associated with operating in Alaska.

Anadarko has been partners with ConocoPhillips since the discovery of the Alpine field by an ARCO-operated partnership in 1994. In addition to partnering on the development of Alpine and its satellites in the Colville unit, Anadarko has an exploration joint venture with ConocoPhillips (operator) and Pioneer Natural Resources in the National Petroleum Reserve-Alaska.

The partners, which have drilled several NPR-A wells, including two wildcats in the winter of 2006-07, relinquished 300,000 acres in NPR-A in 2007 because of noncommercial finds and the costs of working so far from infrastructure.



JUDY PATRICK

The trans-Alaska oil pipeline stretches 800 miles from Prudhoe Bay to the terminal at Valdez.

Shippers, state praise 'first step'

Alaska officials and shippers Anadarko Petroleum Corp. and Tesoro Alaska Co. have hailed a federal judge's decision to lower tariffs for the trans-Alaska oil pipeline as "important" and beneficial.

But the ruling by Administrative Law Judge Carmen Cintron of the Federal Energy Regulatory Commission "is non-binding and reflects her opinion only," said Daren Beaudou, a spokesman for BP Exploration (Alaska) Inc., which owns slightly more than 50 percent of the pipeline.

"The commission has yet to decide the case. This is still in the early stages, and

see **STEP** page 57

Brief stint with Nikaitchuq

In 2006 Anadarko acquired Kerr-McGee, including majority interest in KMG's Nikaitchuq and Tuvaq units, under consideration for development as a merged unit. If Anadarko had kept the acreage it would have been the operator

of its own oil field and production facilities.

But in early 2007, Italian mega-major Eni made Anadarko an offer it could not refuse for all of Anadarko's acreage in both units and the surrounding area. ♦

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continued from page 56

STEP

the decision when it comes likely will be appealed by one or more of the parties," Beaudo said May 23.

"It is an important issue, and we are confident that we've complied with our agreement with the state and that we've followed the law," he added.

FERC's five commissioners are expected to review the case and render a final opinion by year's end or in early 2008.

Gov. Sarah Palin immediately praised the ruling May 17, saying that it "reaffirms the need to ensure low tariffs on oil and gas lines."

"This is why we spent a great deal of time working on structuring the Alaska Gasline Inducement Act to maximize value for the state and ensure low tariffs. We're pleased with the FERC decision, and we look forward to continued progress on this issue," Palin said.

State could collect \$600 million

"It's certainly a good thing, both in terms of moving forward with AGIA and oil revenues for the state," said Jon Iversen, director of the Division of Tax at the Alaska Department of Revenue. "We're looking at the assumption that the case will be resolved in 2010," Iversen said. If Cintron's ruling prevails, "the refund ... to the state would be around \$500 million, with about \$100 million more in interest."

The figures are based on state auditors' estimates of tariff overcharges from 2005 through 2008.

"For nonowner oil shippers on the pipeline, the judge's decision will significantly improve the economics of doing business in Alaska, and in turn, significantly improve the state's oil and gas investment climate," said Antony Scott of the Alaska Department of Natural Resources Division of Oil and Gas.

"The difference is on the order of \$3 a barrel. It's the equivalent of raising a company's stress price for making investment decisions. If a company decides to do business based on a stress price of \$30, then \$3 would be 10 percent. And that's a big deal!" he said. Scott recalled Conoco Inc.'s chairman and CEO complaining in the mid-1990s about the TAPS tariffs before that company pulled out of Alaska after developing the Milne Point field.

Conoco sued the pipeline owners over the tariffs, and did not return to

FERC's five commissioners are expected to review the case and render a final opinion by year's end or in early 2008.

Alaska until it merged with Phillips Petroleum Co. and became one of the pipeline's owners.

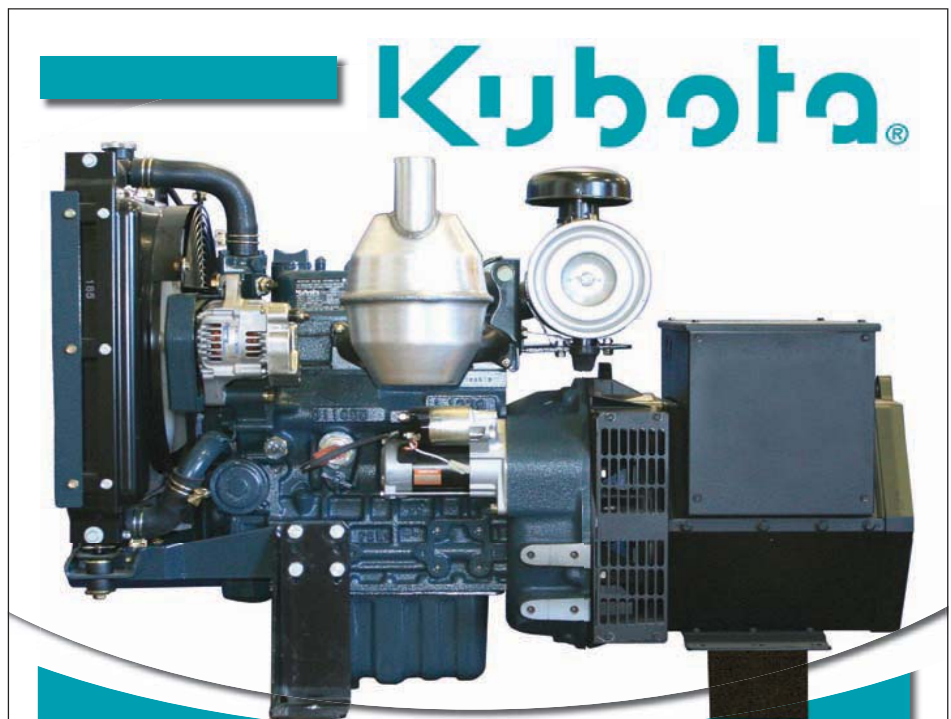
"Judge Cintron's ruling supported our contention that the TAPS rates were excessive," said Anadarko spokesman Mark Hanley. "Compared to this year's (tariff), which on average is \$5.11 a barrel, that's a considerable difference. It's a big first step."

The ruling also reinforces the Regulatory Commission of Alaska's decision several years ago to lower in-state tariffs to the \$2 a barrel range, Hanley said May 22.

The five pipeline owners appealed the RCA decision, which was upheld in a lower court and now awaits a decision by the Alaska Supreme Court.

—Rose Ragsdale

Editor's note: The above article is an abbreviated version of a sidebar. For the full story go to <http://www.petroleum-news.com/pdfarch/630315958.pdf#page=1>.



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Mat-Su CBM gets second chance

Fowler Oil & Gas gets unanimous approval from Matanuska-Susitna Borough to drill coalbed methane well; first okayed under tough new ordinance

By **KAY CASHMAN**

Petroleum News

When Fowler Oil & Gas Corp. first came on the scene in May 2007, it had been four years since an attempt to develop coalbed methane resources in Alaska's Matanuska-Susitna Borough collapsed amid an acrimonious argument involving the would-be developer, local residents, the borough and State of Alaska.



FOWLER OIL & GAS

Fowler Oil & Gas CEO and Chairman of the Board Bob Fowler, a graduate of Palmer High School and longtime Alaskan, believes that his company has the answer to developing coalbed methane without raising concerns about land access and possible pollution that plagued the previous effort. That effort was made by Evergreen Resources, which has since been bought out by Pioneer Natural Resources, which relinquished Evergreen's Mat-Su coalbed acreage.



ARLEN EHM

Bob Fowler told Petroleum News that he fully understands the concerns of the residents of the Matanuska and Susitna valleys.

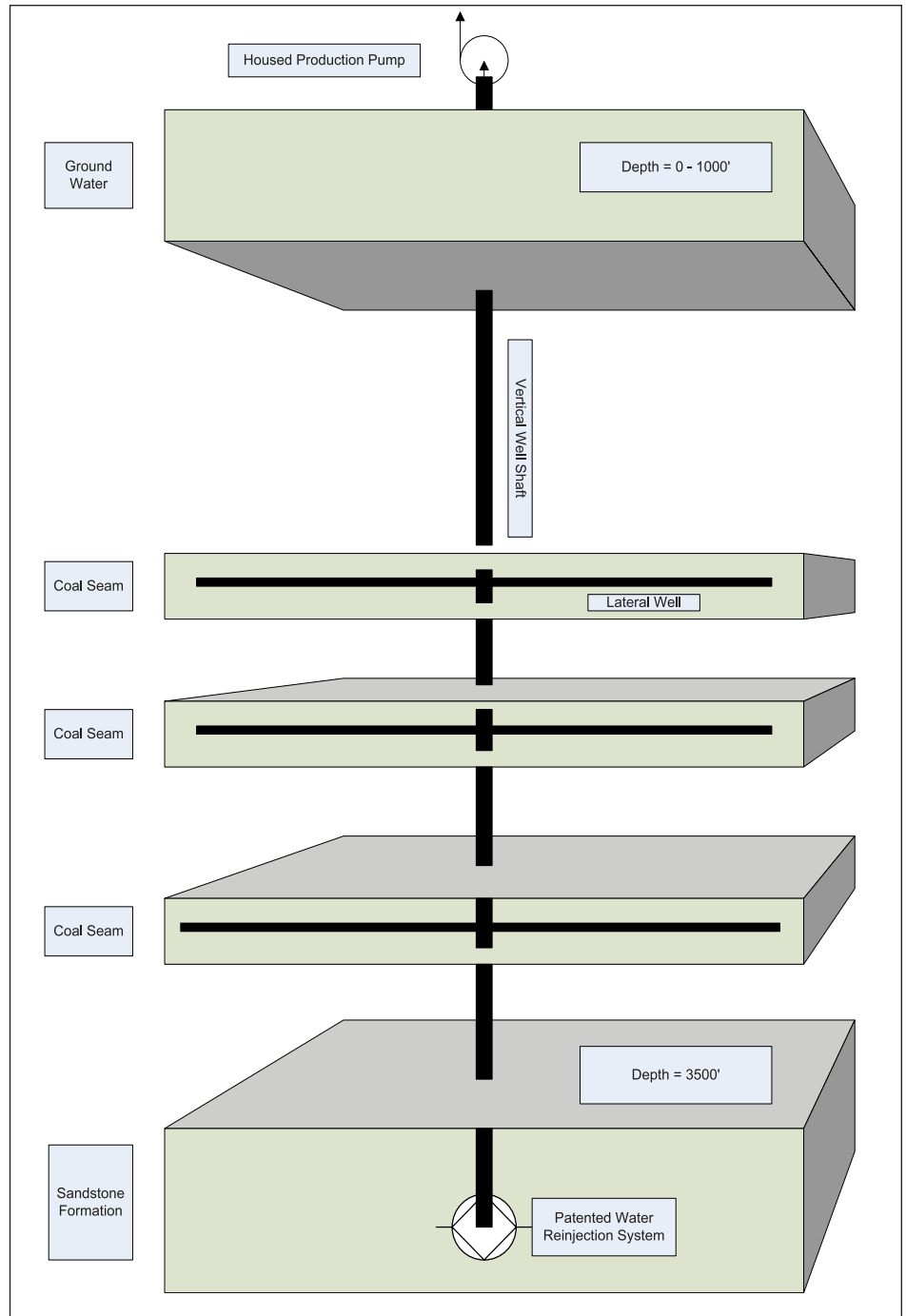
"Our family has been in the Valley for over 50 years and so I'm very familiar with the issues up in the Valley and how people would like to see economic development but also coupled with environmental protection," Fowler said.

A publicly traded company, Fowler Oil & Gas was founded in 2005 to pursue oil and gas opportunities in Alaska. Sister company, Native American Energy Group, is engaged in the development of oil and other minerals in Montana.

Fowler Oil & Gas shares technical staff, including geologists and operations managers, with Native American Energy.

On private land

Bob Fowler said his company was pursuing several coalbed methane sites in



COURTESY FOWLER OIL & GAS CORP.

Schematic diagram of the technique that Fowler Oil & Gas proposes to use for coalbed methane production in Southcentral Alaska. Patented technology will separate water from gas downhole, thus enabling the water to be disposed into a deep sandstone formation.

Southcentral Alaska, all on private land.

"We're working with private landowners who own their own mineral rights," Fowler said in May 2007. (Part of the 2001 to early 2003 controversy stemmed from

required access to privately owned surface land to drill into state-owned subsurface.)

The first of these sites, the Kircher block, received unanimous approval Oct. 1,

see **FOWLER** page 60

continued from page 59

FOWLER

2007, from the Matanuska-Susitna Borough Planning Commission for a conditional use permit to drill a coalbed methane well on the acreage, which sits on 749 acres of forest and farmland at the corner of Bogard Road and Trunk Road between Wasilla and Palmer. It was the first coalbed methane well approved under a tough ordinance passed by the borough in 2004 after Evergreen's unsuccessful attempt from 2001 to 2003 to get coalbed methane production established in the Southcentral Alaska valleys.

Praise from borough

The acting chief planner for the Mat-Su Borough, Eileen Probasco, said Fowler Oil & Gas' success with the borough was due to Bob Fowler's preparation before filing for the first permit.

Bob Fowler "really did his homework. ... He took the time to figure out what was needed to be in compliance with the new ordinance," Probasco told Petroleum News Oct. 2, 2007.

Sixteen people testified at the planning commission meeting in Wasilla Oct. 1, she said. "Twelve in favor and four

opposed. There were four commissioners acting on the request, all voted in favor" of the permit, which she said was issued in the form of a resolution with 18 findings to develop a coalbed methane operation from a well located in the southwest corner of Section 26, Township 17 North, Range 1 East.

Nine conditions were attached to the commission's approval, none of which were a surprise to Fowler, including a \$50,000 bond to cover abandonment, site reclamation and capping.

The findings also said the fortified steel, 10 by 20 by 10 foot, production equipment and security building had to be built to look like a "Colony barn," painted to blend in with the landscape, and could have no exterior lighting.

Drilling in spring 2008

Following the planning commission's decision, Fowler Oil & Gas President Arlen Ehm said that the well would be drilled in the spring of 2008.

"I didn't want to go out there and rig up, spud in the coldest and darkest months of the year," Ehm said. "You pay at least 150 percent when you try to push something through in the middle of the winter."

But the company does plan

to move equipment into a barn at the site during the winter of 2007-08, in order to avoid having to truck in heavy equipment during spring breakup, when road load limits are reduced, Ehm said.

Horizontal drilling key

A key element in Fowler's approach to coalbed methane development is the use of horizontal drilling technology. Anchorage-based M-W Drilling, the drilling contractor for the Kircher project, will drill a single vertical well to a depth of about 3,500 feet, Ehm said. Perforated horizontal wells sidetracked from that central well will then thread out through each coal seam penetrated by the vertical well.

The horizontal drilling technique will enable access to thousands of horizontal feet of coal seam from a single surface wellhead, thus eliminating the need for the profusion of surface wellheads that has blighted some coalbed methane developments, while enabling adequate production rates from a single well, Ehm said.

"We're draining a lot of acres off of one well bore," Fowler said.

Not only that. The specially designed coalbed methane drill rig has a mast that's only 60 feet high, but a capability of drilling laterally, Fowler said.

And once a coalbed methane site goes into production, the wellhead production facilities will be hidden inside a single 20-foot barn-like enclosure.

"They won't even see that it's a well," Fowler said. "... We're in and out on the drilling in about one month."

No surface water

The technology used will eliminate the water disposal problems that have often plagued coalbed methane production in the past, Fowler said. The technology uses the bottom part of the vertical well, below the level of the

coal seams, to dispose of the water into relatively deep sandstone formations. Thus, no produced water will reach the surface or enter the water table.

"We have a downhole separator which separates the gas from the water," Fowler said. "The gas flows up (the well). The water flows down into some special pumps that pump it into lower sandstone formations below the coal."

Downhole monitoring equipment will ensure that the disposed water meets state standards, Fowler said.

To prevent contamination of any water wells in the region around the production site, no coal beds less than 1,000 feet below the surface will be tapped. That will ensure that all production occurs below the depth of the water table, Fowler said. And sealed well casing, cemented to prevent water migration around the pipe, will also protect the water table.

EPA has approved

Fowler said that the U.S. Environmental Protection Agency has approved the technology for downhole separation of gas and water and that the technique has already been permitted in Texas and Kansas.

But what are the chances of finding economic quantities of coalbed methane in the Kircher unit?

"The Cook Inlet basin is a river of coal that comes all the way down from Talkeetna and up around Chickaloon, all the way down to Homer, onshore and offshore," Fowler said. The coal is very thick, cumulatively, and the seams are abundant and continuous throughout the area; and the coal contains large quantities of gas, he said.

Fowler Oil & Gas plans to deliver gas to the Enstar transmission pipeline at a low pressure, thus eliminating any possible compressor noise, Ehm said. ♦

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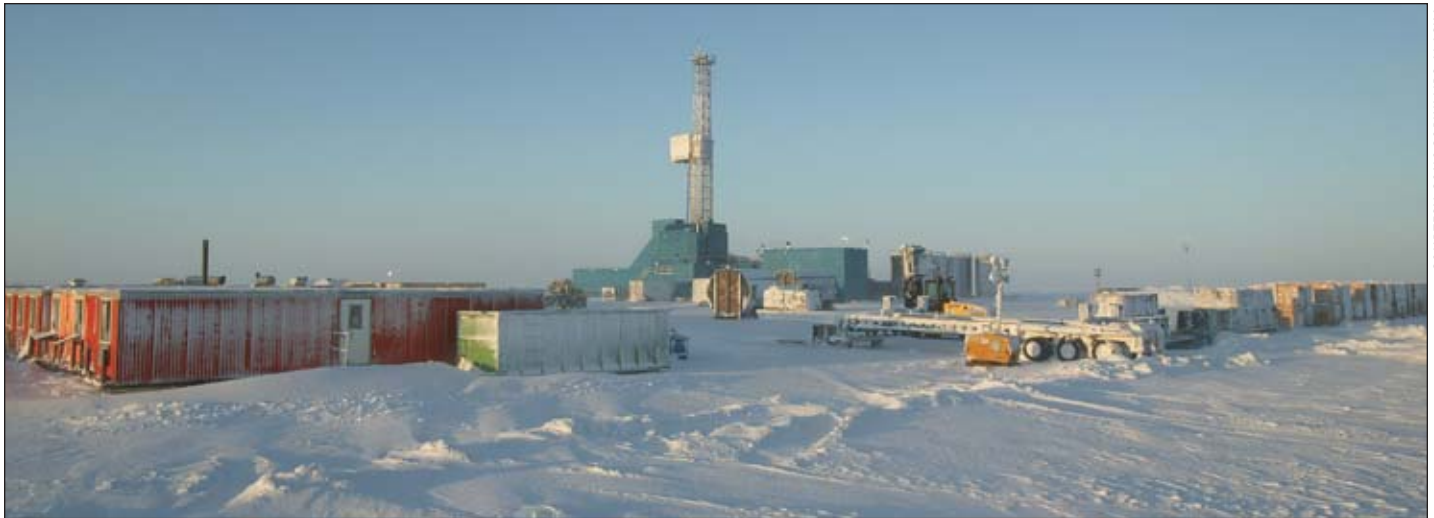
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Exploration work at Noatak

COURTESY CONOCOPHILLIPS ALASKA

ConocoPhillips drops 300,000 acres

Major and its independent partners focused on appraising previously announced NPR-A discoveries

By **KRISTEN NELSON**
Petroleum News

ConocoPhillips Alaska's exploration program reached into far western NPR-A last winter, 2006-07. In 2007-08 the company plans to drill closer in, with proposed exploration wells — the program had not yet received management approval when The Explorers went to press — focused on appraising discoveries previously announced on the eastern border of the National Petroleum Reserve-Alaska.

The company has alternated in recent winters between exploring close in and going farther out.

ConocoPhillips Alaska President Jim Bowles told the Resource Development Council's annual conference in November 2006 that 2005-06 exploration was focused close to existing infrastructure at Kuparuk and Alpine.

In 2006-07, he said, a bigger exploration program was planned, including "moving back into NPR-A."

The company would drill first at Noatak, south of Teshekpuk Lake, and

then move far west to drill at Intrepid, south of Barrow. Bowles said Noatak "probably will not be a large reserve potential," but if successful could be tied back to Kuparuk or Alpine.

Intrepid, more than 200 miles from Alpine, "needs to have a fairly large reserve base behind it" to be developed, Bowles said.

The wells were not successful and Pioneer Natural Resources said in May 2007 when it announced its first quarter earnings that the two NPR-A wells it participated in over the winter were "noncommercial."

The two NPR-A wells Pioneer participated in were Noatak and Intrepid.

Acreage culled

ConocoPhillips and partners Anadarko Petroleum and Pioneer have begun to cull their NPR-A acreage. The companies determined they have done enough drilling and relinquished 300,000 acres because of noncommercial finds and the costs of working so far from infrastructure.

"When you take a look at what led us to drop that (acreage), it ended up really being the high cost of exploration coupled with what we found, that basically

told us that it was uneconomic to pursue," Erec Isaacson told Petroleum News Oct. 1, 2007. Isaacson, ConocoPhillips Alaska's vice president of land and exploration, said the results of drilling in the winter of 2006-07 — as released by Pioneer — and "the cost increases and the pressures that we have associated with that ... led to an acreage relinquishment that we had earlier this year."

The relinquished tracts cover Noatak, the Kokoda wells drilled to the south of Noatak and the area where ConocoPhillips permitted the Nugget wells, Isaacson said.

The 41 tracts the companies relinquished effective Sept. 1 are along the western and southern edges of a large block of leases the companies hold in northeastern NPR-A running west from state land at the Alpine field to south of Teshekpuk Lake.

The company also relinquished a block of leases to the north on Harrison Bay.

Julia Dougan, associate state director of the U.S. Bureau of Land Management, the NPR-A landlord, told the Resource Development Council Sept. 20, 2007, that about 1.25 million acres have been leased in the northeast NPR-A in 1999



EREC ISAACSON



JIM BOWLES

JUDY PATRICK

ConocoPhillips production

Worldwide: 1.816 million boe
Alaska: 304,000 boe
Time period: Average daily for first half 2007 for worldwide production; 2006 daily average for Alaska, includes 145 mmcf gas per day

continued from page 61

CONOCOPHILLIPS

and 2002, "and about 800,000 acres are still under lease."

Also logistics challenges

The companies started drilling last winter at Noatak and "rolligoned everything over to our Noatak location" from the Kuparuk River field, Isaacson said. Noatak is south of Teshekpuk Lake, some 50 miles into NPR-A.

At Noatak they "built a 7,000-foot Herc runway, ice runway" and flew all of the equipment that would fit into the Hercules aircraft to Barrow, sending the rest overland by rolligon. When they finished at Intrepid, they flew out what they could "and what wouldn't fit in the Herc went from Barrow back to West Dock via the sea route because we were running out of time on the tundra," Isaacson said.

"Last season logistically was incredibly challenging," Isaacson said.

First there was a late start. "We didn't get approval to actually get ... on the snow until Christmas Eve, with the rolligons." Because of the lack of snow and the late freeze "we weren't able to chip as much ice as we normally



COURTESY CONOCOPHILLIPS ALASKA

Building an ice air strip at Intrepid

would in order to make the ice pads and the landing strips" at Noatak.

And because of climatic conditions near Barrow it took a long time to build the ice road to Intrepid.

Because of "all those challenging logistics ... costs were up considerably and so it ended up being an expensive exploration year last year."

And then, he said, referring to the release by Pioneer of the well results, the wells were "basically ... sub-commercial

or dry holes."

"So it was a big logistical effort without really anything to show from it."

Although ConocoPhillips did not release exploration costs, they offered a comparison of 2006-07 costs with the prior year, 2005-06.

"Exploration costs increased by at least 17 percent in the past year," the company's Alaska spokeswoman, Natalie Knox Lowman, told Petroleum News. She said "the challenging logistics for operating in the remote NPR-A resulted in further underestimation in total costs."

this winter's exploration have not been approved; that will happen in early December. But "I can tell you what we're looking at for this coming year," he said.

ConocoPhillips is looking at drilling a couple of wells in the "Alpine-Greater Moose's Tooth area — really exploration-appraisal wells." That drilling would "follow up on what we had discovered in that area." A flow test for one of the Rendezvous wells is also possible, he said.

No exploration seismic is planned but there is a possibility of development seismic, 4-D type seismic, over proven field areas.

Closer in this year

Isaacson said budgets for

see **CONOCOPHILLIPS** page 63



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CONOCOPHILLIPS

ConocoPhillips doesn't yet have "partner and management approval, but that's currently what we're looking at."

Isaacson said staging would be done using the ice road to Alpine — that road is built every year to move supplies to Alpine, which is not connected to the North Slope road system.

"And by doing ice roads (rather than the rolligon and Herc transport used last year) it allows you to use existing rigs that we currently have and so you don't face the high costs, high-cost environment that we encountered (last year).

"Still, it's not going to be cheap," he said.

Agencies hearing near Spark

Petroleum News reported earlier in the year that ConocoPhillips officials have mentioned to permitting agencies that one area possible for delineation drilling is near proposed Alpine satellite CD-7 at the Spark discovery in NPR-A. That information is in line with the five-year NPR-A drilling plan the company submitted to the U.S. Bureau of Land Management.

The Spark DD wells (Nos. 9-12) in that plan are in sections 21, 21, 28 and 21, respectively, of township 10 north, range 2 east, Umiat Meridian. All are in the Northeast NPR-A planning

area, directly adjacent to the proposed site for CD-7, which has been evaluated as a development node with permanent road access and a pipeline to Alpine. Spark is some 15 miles southwest of the Alpine oil field.

If the Spark and nearby Lookout (CD-6) discoveries are developed, as little as two miles of pipeline would be needed to connect the Spark DD sites, the agency said.

The Spark No. 1A discovery well tested 1,550 barrels per day of liquid hydrocarbons and 26.5 million cubic feet per day of gas. Spark was one of the discoveries announced in May 2001 by ConocoPhillips Alaska predecessor Phillips Alaska and Anadarko Petroleum. Other successful wells included the Spark 1, Moose's Tooth C, Lookout 1 and Rendezvous A and 2. All encountered oil or gas and condensate in the Alpine producing horizon.

Doyon 19 stays at Alpine

ConocoPhillips has two exploration rigs under contract that could easily be moved to the Spark DD well sites — Doyon Rig 141 at Kuparuk and Doyon Rig 19, drilling at Alpine satellite CD-4.

Isaacson said that "if we were going to be doing something off of ice" the company would probably use Doyon Rig 141, "the rig that we've used for exploration in the past."

Lowman said Doyon 19 "is the rig that stays at Alpine."

She said the rig is "at Nanuq right now and then when we build the ice road it will move up to Fiord to continue development drilling there." Fiord is a roadless satellite development within the Colville River Unit — the Alpine field — where drilling occurs only in the winter and the rig is moved in by ice road. Nanuq, the other Alpine satellite, is attached to the main Alpine facilities by gravel road.

Alpine, which ConocoPhillips operates, is not connected to the North Slope road system. In addition to Alpine, ConocoPhillips operates the Kuparuk River field on the North Slope.

Qannik facilities

The ice road to Alpine will be used to bring out equipment for the CD-2 pad extension for Qannik. Lowman said there are no facilities on the pad extension yet because the gravel is setting up.

The Qannik accumulation, which overlies the main Alpine

accumulation, was tested for 19 days in June 2006. When ConocoPhillips announced the discovery in July 2006 the company said average production was 1,200 barrels per day of 30-degree API gravity oil from a 25-foot sandstone at 4,000 feet subsea. The Alpine accumulation, at 40 degrees API gravity, is a lighter oil.

ConocoPhillips applied to the U.S. Army Corps of Engineers in 2006 to expand the CD-2 pad at Alpine for development of Qannik and to allow for additional storage for Alpine CD projects. The expansion would make room for 18 Qannik wells.

The Corps said gravel placement would be done in the winter of 2006-07, followed by facility construction and installation the following year with development drilling beginning in the spring of 2008 and production startup in the summer of 2008.

Isaacson said when the dis-

see **CONOCOPHILLIPS** page 64



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CONOCOPHILLIPS

covery was announced in July 2006 that the company had basically been drilling through Qannik to reach the Alpine accumulation, which is at about 7,000 feet sub-sea. They had seen the Qannik accumulation on logs, he said, and used exploration dollars to put in a well to test it.

3-D shot at Beluga

In Southcentral Alaska, ConocoPhillips operates the Beluga gas field on the west side of Cook Inlet and the North Cook

Inlet gas field, which is produced from the Tyonek platform in the inlet.

Isaacson said 3-D was shot over the Beluga field, basically development 3-D. "You always have the possibility that something of an exploration nature might fall out of that, because of the better data that you get associated with 3-D," so the data, which is being processed, will be evaluated for that.

Petroleum News editor's note: ConocoPhillips Alaska employs 1,100 people in the state, has a majority interest in 1.7 million gross acres in NPR-A, and nearly 2.6 million gross undeveloped acres in total outside of producing fields. ♦



JUDY PATRICK

ConocoPhillips Alaska building in downtown Anchorage

A word from ConocoPhillips Alaska to state, feds

When asked by Petroleum News for the key things that the State of Alaska and/or the U.S. government can do to attract more oil and gas company investment to Alaska, ConocoPhillips Alaska submitted the following comments:

Aside from a stable tax regime, access to resources is one of the top issues facing industry today. A key element of resource access is a fair and reasonable regulatory environment with timely and predictable permitting. Obtaining state permits is fairly straightforward, but the federal permitting outlook in Alaska, particularly the North Slope and adjacent Arctic Ocean, is unfortunately challenged.

Executive Order 13212

With the goal of attracting more oil and gas company investment to Alaska, federal agencies are supposed to follow President Bush's May 22, 2001, Executive Order 13212 — Actions to Expedite Energy Projects. This Order directed federal agencies to expedite review of permits or take actions to accelerate the completion of projects, while maintaining safety, public health, and environmental protec-

see COMMENT page 65

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COMMENT

tions. Furthermore, the Order directed agencies to establish an interagency task force to monitor and assist in their efforts to expedite their review of permits. This task force was also to monitor and assist agencies in setting up appropriate mechanisms to coordinate Federal, State, tribal, and local permitting in geographic areas where increased permitting activity is expected.

After two concurrent seasons of offshore seismic work in the Arctic, the National Marine Fisheries Service, representing the U.S. Department of Commerce, exceeded regulatory defined deadlines in issuing incidental harassment authorizations for marine mammals. Furthermore NMFS deferred significant federal decision-making authority to non-agency third parties in establishing unscientifically based permit conditions, including severe restrictions on timing of activity. With the Department of Commerce's goal being to promote commerce, it appears there would be more alignment on that goal with the NMFS.

Onshore, federal permitting inefficiencies exist between the federal National Environmental Policy Act process and the U.S. Army Corps of Engineers permitting process. In the case of the ConocoPhillips Alpine Satellites

EIS, the Bureau of Land Management worked collaboratively and in close coordination with the State of Alaska, the U.S. Environmental Protection Agency, the U.S. Fish and Wildlife Service and the Corps of Engineers in completing this 19-month, \$14 million effort. Two satellites, CD3 and CD4, were permitted concurrently with the EIS effort. These satellites are on-line and producing today. It was assumed alternatives analyzed and evaluated by BLM and the cooperating agencies during the EIS would be adequate to permit the next satellite, CD5. However, the Corps of Engineers' permit process duplicates some of the NEPA process elements previously completed. This has resulted in 30 months of additional analysis and added significant cost, and to date there is still no permit decision.

As an example, we believe BLM has struck a reasonable balance in management of the National Petroleum Reserve-Alaska, and served the interests of many stakeholders. We would like to see similar balance from other resource and stewardship agencies.

The cooperation and due diligence of federal agencies is a critical factor in the development of oil and gas resources on the North Slope. Companies planning to explore need to be able to rely on a stable, consistent and due-process regulatory system in order to make sound investment decisions.

Statoil Hydro enters Alaska; Ken Boyd 'man on the ground' for mega-major

In mid-2007, Norsk Hydro USA hired Ken Boyd as a consultant in Alaska. Jim Meek, manager of business development for the Houston-based affiliate of Norway's Hydro which merged in October 2007 with Norway's Statoil to become Statoil Hydro, said Boyd would be the company's "man on the ground" in Alaska, attending local meetings and events and assisting the mega-major in its "evaluation" of the state as a place to make oil and gas investments.

Neither Norwegian firm had assets in Alaska prior to the merger, but Meek did confirm that Norsk Hydro had joined both the Alaska Oil and Gas Association and the Resource Development Council for Alaska. Boyd was Alaska's deputy director of the Division of Oil and Gas for five years and director for six years, leaving the director's post in 2001 to become a consultant.

Statoil Hydro is the world's largest offshore operator, followed in order by Royal Dutch-Shell, Petrobras, BP, ExxonMobil, Woodside Energy, Chevron, Total, Eni, Hess and ConocoPhillips.

The Norwegian State holds about 62.5 percent of the merged entity.

Statoil Hydro has Arctic oil and gas interests offshore Norway. Prior to the merger Statoil said it was largely motivated by both companies' desire to expand outside Norway, where the competition for offshore acreage is intense amid high oil prices.



—Kay Cashman



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Benchmark Oil and Gas buying seismic, talking to operators

By **KAY CASHMAN**
Petroleum News

It took more than a year, but Benchmark Oil and Gas, along with other successful bidders, finally received its lease assignments from the State of Alaska for the 20 tracts it won in the May 2006 Cook Inlet areawide lease sale.

The Swedish independent bought its first Alaska leases at that sale, but was on semi-hold for the 14 months that followed.

Just before the leases were issued on July 30, 2007, Benchmark's exploration adviser Denise Stone told *Petroleum News*, "we don't officially consider ourselves leaseholders yet."

But the company had not been idle. "We are in the process of gathering information, looking at wells that have been drilled in the area," Stone said in July.

Other players & partners

"We're doing an evaluation as much as we can. ... We did buy some seismic and are reprocessing it right now."

In October, Stone told *Petroleum News* that Benchmark was "very pleased to receive our leases. ... At the moment, we do not have any definite exploration plans. We are still in discussions on how to proceed ... with evaluating and prioritizing our leases. We have bought seismic data in certain areas from the open market and are planning to buy more."

She also said Benchmark was "talking to other operators to see how we might work together," something another newcomer to Cook Inlet, Armstrong Cook Inlet (see story page 16), said it was doing on the southern Kenai Peninsula where both companies have oil and gas leases.



DENISE STONE

Leases in three areas

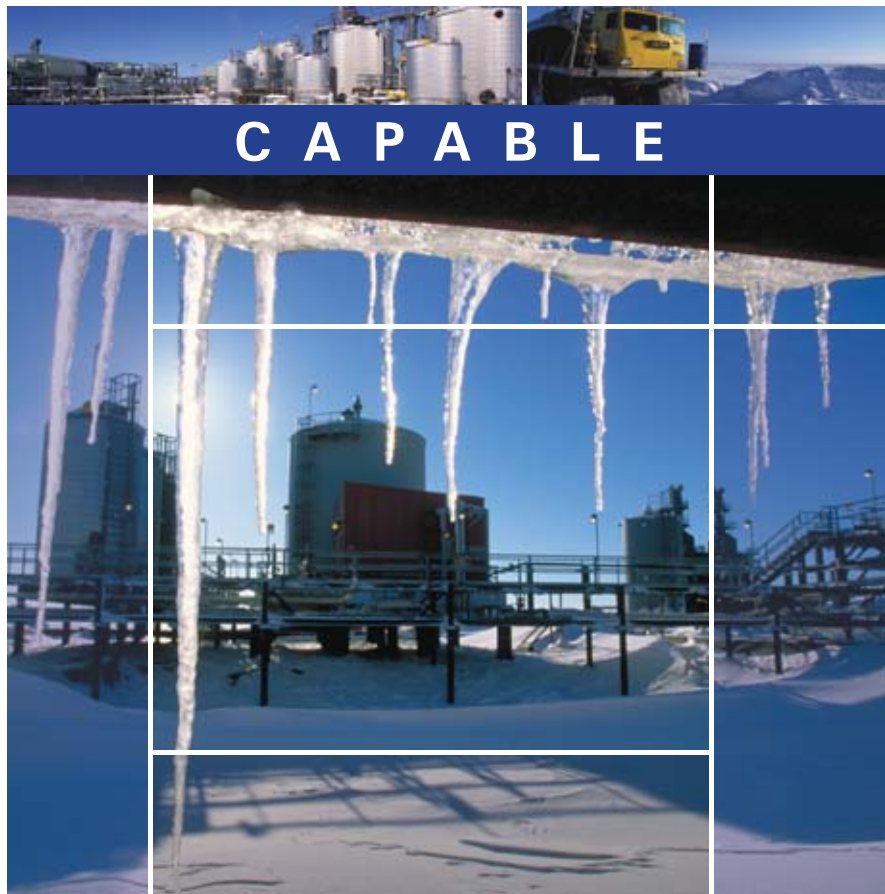
Benchmark's 20 leases are on 110,000 acres in three areas of the Kenai Peninsula: along the north coast of the peninsula, in the central peninsula and north of Kachemak Bay in the southern part of the peninsula. Stone said that the company's first exploration activities for its acreage involve looking at the work that has already been done in the Cook Inlet basin.

In evaluating the old well data and seismic the company is having to recreate the thinking behind exploration done in the 1960s and 1970s, and then build on that early work, she said.

Cook Inlet dovetails into Benchmark's strategy of exploring in emerging areas where there are opportunities to use



see **BENCHMARK** page 67



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BENCHMARK

state-of-the-art 3-D seismic technology, Andrew Wight, a Benchmark landman and the company's general counsel, said after the 2006 lease sale.

"The Cook Inlet in particular is an area that was developed quite some time ago and then it was ... put aside, with the focus shifting to the North Slope," he said. "We think there's a great opportunity there to apply some new technology. ... Technology is really the lynchpin of our business model."

Wight also said that Benchmark likes to explore in areas that larger companies have found unattractive.

"We feel like that gives us a niche, using our technology, to get in and do some things in areas that have been overlooked or neglected for whatever reason by larger companies," he said.

Benchmark started out in


1976 as a privately owned Texas independent. However, the Texas-based company went public as Swedish company Benchmark Oil and Gas AB in 2001.

Why Alaska?

Onshore Texas is Benchmark's core area for drilling and production.

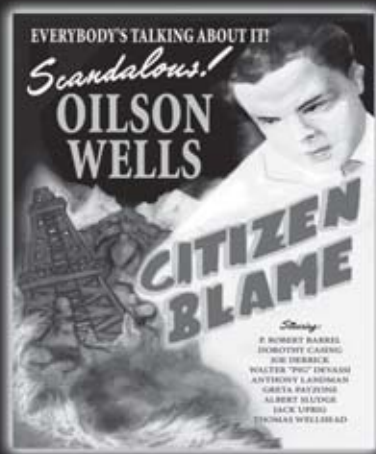
Stone attributed the company's interest in Alaska in part to the efforts of the staff from the Alaska Department of Natural Resources Division of Oil and Gas.

"If it wasn't for those folks coming down to Houston and being at the American Association of Petroleum Geologists' conference ... and the North American Prospect Expo, if they hadn't come and told the Alaska story as clearly and confidently as they did, I really don't think Benchmark would have participated as aggressively as it did in the lease sale," Stone said. ♦



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Eni moving forward with Nikaitchuq

Beaufort Sea project sanction expected by end of 2007, first oil 2009; Maggiore, Rock Flour undergoing evaluation

By **KAY CASHMAN**
Petroleum News

The signs are good that Eni will move forward with development of its Nikaitchuq unit offshore Alaska's North Slope in 2008.

On Oct. 5, 2007, the Houston-based affiliate of Italy's Eni SpA received State of Alaska approval on its application to expand the Nikaitchuq unit, more than doubling its size from 12,968 to 33,870 acres.

On Oct. 16, Eni took another step closer to development when it applied for state royalty modification on Schrader Bluff and Sag River production for 12 leases in the expanded 18-lease unit, which lies north of the Kuparuk River unit in the shallow waters of the Beaufort Sea.

On Oct. 26, Kelly Woomey, human resource manager for Eni US Operating Co. Inc. out of Houston, confirmed that company officials recently told state Division of Oil and Gas officials that Eni expects to sanction the project "by year-end."

If sanctioned, Nikaitchuq will likely be in production by 2009, Eni said in recent paperwork filed with the division.

Acting Division Director Kevin Banks told Petroleum News Oct. 12 that unit expansion was a "good sign" that Eni will move into development of Nikaitchuq. "It looks like things are moving ahead," he said.

First production facilities

Eni plans to build Nikaitchuq's processing facility at Oliktok Point.

If the Nikaitchuq unit were still operated by one of its first three owners — independents Armstrong Alaska, Kerr-McGee or Anadarko Petroleum — then Nikaitchuq would earn the distinction of being northern Alaska's second independent-operated oil field and its *first* oil field with an independent-operated processing facility. (Nearby Oooguruk is operated by independent Pioneer Natural Resources, and due to go into production in 2008. But ConocoPhillips will process Oooguruk oil



Nordica Calista Rig 3 drilling the Nikaitchuq No. 4 appraisal well.

at its Kuparuk River unit facilities.)

Nikaitchuq will not earn the distinction of having northern Alaska's first independent-operated processing facility because in 2006, a mega-major, Eni, became its majority owner and operator.

About a year after Eni acquired Armstrong's assets — including a minority position in Nikaitchuq — the Italian major acquired Anadarko's majority position in the Nikaitchuq and Tuvaq area leases. Anadarko had just acquired Kerr-McGee, which bought its majority interest in Nikaitchuq from Armstrong, just before drilling the Nikaitchuq discovery well.

So, if Eni does sanction Nikaitchuq development, it will gain the distinction of being the only major oil company that does not own a piece of the trans-Alaska pipeline system to operate both an oil field and production facilities in northern Alaska. Majors BP, ConocoPhillips and ExxonMobil own the biggest slice of all existing processing facilities on and offshore Alaska's North Slope; each has an affiliate that owns a large chunk of the trans-Alaska oil pipeline that stretches from Prudhoe Bay to Valdez.

PHOTO BY JUDY PATRICK/COURTESY KERR-MCGEE

Tuvaq, Kigun leases in expansion

The unit expansion added 10 leases to Nikaitchuq's existing eight leases, seven of which composed the Tuvaq unit and three additional leases, ADL 390615, 390616 and segment 2 of ADL 355024.

ADL 355024 was committed, in part, to the Kuparuk River unit in 1985 and in 1988 was committed in its entirety to the KRU in that unit's third expansion. There are two aerially differentiated segments of this lease, the division said, and the southern portion of the lease was not part of Eni's application.

Kuparuk working interest owners previously agreed to a farmout of segment 2 to Eni as 100 percent working interest owner. Segment 2 is commonly referred to as the Kigun portion of the lease. It received a new ADL, 391283, was contracted from Kuparuk and committed to the expanded Nikaitchuq unit.

As a result of assignments of working and royalty interest shares, Eni holds 100 percent of the interest in each lease in the expanded Nikaitchuq unit.

Schrader Bluff, Sag River

There are two different formations at Nikaitchuq, heavy oil at the shallower Schrader Bluff formation and light oil at the deeper Sag River.

The division said in its decision that "potentially commercially recoverable reserves" have been tested in both the Cretaceous Schrader Bluff and the Triassic Sag River formations.

Kerr McGee drilled six wells in the Nikaitchuq and Tuvaq units between 2004 and 2005. Three of the six tested oil from the Schrader Bluff or Sag River formations; Kerr McGee drilled two additional Schrader Bluff wells in 2006.

The Nikaitchuq No. 4, the Tuvaq No. 1 and the Kigun No. 1 all penetrated the Schrader Bluff formation, the division said. Only the first was tested: using an electric submersible pump to aid in production of the 16-17 degree API crude, the well tested at rates of up to 1,200 barrels per day.

The Nikaitchuq Nos. 1 and 2 encountered both Schrader Bluff and Sag River formations. The Nikaitchuq No. 3 had some



Eni production

Worldwide: 1.74 million boe
Alaska: none (yet)
Time period: Average daily
for first half 2007

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ENI

1,834 feet of net pay in the Sag River sandstone in a 3,000-foot horizontal section.

The No. 1 production tested at more than 960 bpd of 38-degree API crude in the Sag River and the No. 3 tested, with a pump, a range of 1,327 bpd to 760 bpd, of 32-degree API oil. The No. 2 was not tested.

Eni drilled two additional wells from Oliktok Point in the 2006-07 winter season.

Horizontal wells planned

The division noted that Eni has stated its intention to develop the Nikaitchuq Schrader Bluff formation with horizontal wells, and said there are some five years of Schrader Bluff well performance from initial completions at the Milne Point and Kuparuk River units. Eni "appears to assume" its development at Nikaitchuq will improve on previous Milne Point and Kuparuk River Schrader Bluff completions "by using the latest technology — horizontal and multilateral completions," the division said.

Sag River has been developed on a standalone basis at Milne Point and those "wells consistently show initial flush production followed by steep decline within the first year to

less than 50 percent of the initial rate" the division said. Tests done by Kerr McGee "showed similar initial production rates and comparable if not more pronounced decline," the division said, adding that stimulation and innovative enhanced oil recovery techniques might improve recovery from the Sag River at Nikaitchuq.

Future exploration possible

Eni said in its exploration plan that it conducted an "on-ice seismic experiment" in the vicinity of Nikaitchuq with Shell Offshore "at a cost of several million dollars." The results of the experiment "may result in substantial benefit to the Nikaitchuq unit and other state offshore leases in shallow waters by allowing parties to acquire seismic data on such leases during the winter season in a manner that should have greater stakeholder acceptance."

Following the expected submittal of a plan of development to Eni's management for project sanction prior to the end of 2007, Eni said it would approach the state soon after sanction for approval of the plan of development and one or more participating areas.

Eni said the schedule is to use results of the on-ice seismic

see ENI page 71

Eni's other Alaska exploration hot spots

Eni picked up its first Alaska leases — some 273,000 net acres — from Armstrong Alaska in late August 2005, and shortly thereafter opened an Anchorage office and hired Chester (Chet) Paris to manage its Alaska operations.

Strong interest in Beaufort

Eni said it acquired leases in Alaska after conducting an internal evaluation and regional studies that showed the North Slope and adjacent Beaufort Sea as areas with exploration potential for new oil and gas finds. It said its emphasis in Alaska would be of consistent growth, and that it was particularly interested in the Beaufort and Chukchi seas.

By late 2006, Eni's net acreage in northern Alaska had grown to 400,000 acres.

In November of that year, Eni announced it had reached an agreement with Shell to "exchange working interest" in 64 Eni and Shell leases offshore northern Alaska and "begin joint exploration activities" on the leases with Shell as the operator. The leases are in the federal waters of the Beaufort north of the Oooguruk, Kuparuk, Nikaitchuq, Northstar and Kuparuk units extending east to mid-way above the Prudhoe Bay unit.

Exploration activity included 3-D seismic acquisition and drilling a well by 2010, Eni said.

If exploration is successful Eni will have the option of taking over operatorship of the joint acreage, an Eni executive told Petroleum News.

The 64 blocks at the time were 60 percent owned by Eni and 40 percent owned by Shell.

In September 2007, Spanish oil major Repsol TYP joined the partnership, buying a 20 percent interest in the 64 blocks from Eni.

Shell's spokesman in Alaska, Curtis Smith, told Petroleum News the "objective of the partnership is to acquire 3-D seismic with a view toward identifying future drill sites."

In its press release Repsol said "exploration activities" could start in 2009-10.

Evaluating Rock Flour, Maggiore

Shortly after entering Alaska in 2005, Eni applied to form the Rock Flour unit which, when approved at the end of that year, would include five, 100 percent Eni leases purchased from Armstrong.

The Rock Flour unit is along the southeast corner of the Kuparuk River unit just a few miles west of the Prudhoe Bay unit.

In March 2006, Eni acquired more onshore North Slope acreage, bidding \$5.62 million at a state areawide lease sale for a block of 11 tracts southeast of Kuparuk and southwest of the Prudhoe Bay unit in an area near Rock Flour.

A state official at the sale said Eni was obviously consolidating its central North Slope lease position where the company appeared to be targeting Brookian plays — the lower Cretaceous unconformity at the base of the Brookian sequence lies at a depth of around 10,000 feet in the area of the Eni leases.

The nearby State Pipeline No. 1 well revealed some inter-

see HOT SPOTS page 71



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continued from page 70

ENI

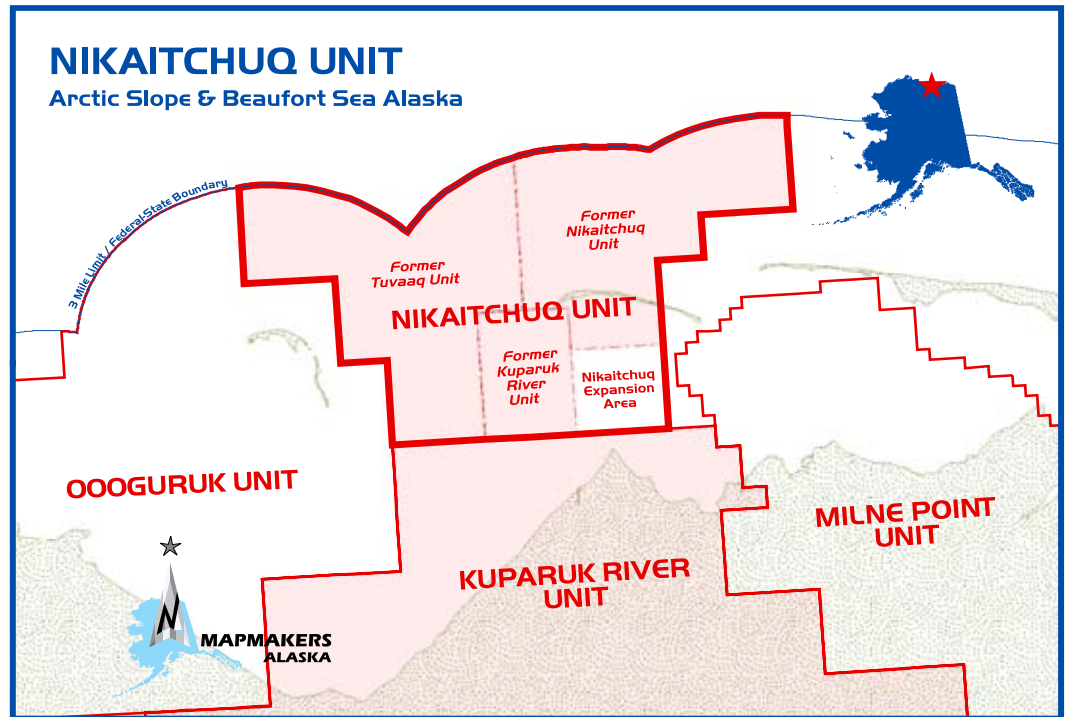
to develop a plan by July 2008 for “potential 3-D seismic acquisition covering parts of the expanded” unit with approximately 74 square miles of 3-D seismic to be acquired by September 2010.

Eni also said it would closely monitor improvements in drilling technology over the next few years “to determine if additional areas can be reached for development from then existing facilities.”

Newly acquired seismic would be used — along with prior seismic and drilling information — to develop future exploration plans by October 2011.

Development benchmarks

The Nikaitchuq development includes construction of a gravel pad with drilling, gathering and production facilities on Oliktok Point near the ConocoPhillips seawater treatment plant; construction of a gravel drilling island near Spy Island tied back via a 3.8-mile subsea flow line and utility bundle to Oliktok Point for fluid processing; construction of an approximately 14-mile pipeline from Oliktok Point to a tie-in near Kuparuk drill site 1Y for connection to the Kuparuk Transportation common carrier pipeline; and future modifications as required to accommodate actual results of well per-



formance.

Initial drilling would be from a 313,000-square foot pad at Oliktok Point. The small gravel island would be constructed shoreward of the barrier islands for future drilling.

Because Nikaitchuq has a “producible resource” that has been delineated, the division proposed — and Eni agreed — to a series of development benchmarks.

The division said in its Oct. 5 decision that requiring formation of a participating area by 2009 commits Eni to development of the expansion leases.

On Oct. 5, 2009, any portion of ADL 391283 not committed

to a participating area would be segregated and the portion not committed would automatically contract from the unit unless that area is covered in an approved plan of exploration or plan of development.

Other leases would contract out of the unit on Oct. 5, 2011, and Oct. 5, 2012, unless committed to a participating area covered by an approved plan of exploration or plan of development. ♦

continued from page 70

HOT SPOTS

esting Brookian Cretaceous sands, state geologist Paul Decker said at the time.

In the winter of 2006-07, Eni drilled two Rock Flour wells and another well at a prospect a few miles south called Maggiore.

In October 2007, Kelly Woomey, human resource manager for Eni US Operating Co. Inc., told Petroleum News

that, “the company is undergoing post well analysis and evaluation of the (Rock Flour and Maggiore) area for future plans.”

According to Rock Flour’s unit plan of exploration it does not have to drill another well at Rock Flour until the winter of 2008-09. Since the Maggiore operations were conducted under a lease plan, another well is not required to hold the leases in that prospect. ♦

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Petro-Canada: From operator to partner

By **KAY CASHMAN**
Petroleum News

A better headline for this story might have been "Petro-Canada: From possible operator to partner" because the company had not actually drilled a well in Alaska when it decided to continue to play the role of partner in its latest Alaska acquisitions.

In fact, the Calgary-based major staked eight well locations in 2006 and was moving forward with permitting a multiyear exploration drilling program in the undeveloped National Petroleum Reserve-Alaska when, in January 2007, it announced that it had formed a partnership with FEX, a subsidiary of Calgary-based Talisman Energy. FEX was the operator.

Since that time the two companies have cross-assigned the majority of their NPR-A leaseholdings, covering about 1.2 million acres. By October 2007, Petro-Canada's net position in NPR-A was just over 500,000 acres.

In the first quarter of 2007, FEX drilled

three exploration wells on the partners' NPR-A acreage.

The only place Petro-Canada and FEX aren't partnered in NPR-A is in the southeast corner, which is the western edge of 2.2 million acres that runs between the Colville and Canning rivers along the southern border of the North Slope, which is generally referred to as the Brooks Range Foothills or the North Slope Foothills. That acreage is jointly held by Petro-Canada, BG Alaska and operator Anadarko Petroleum.

When Petro-Canada joined Anadarko's joint venture in 2004, it contributed 430,000 acres of its own Foothills acreage, picked up since entering Alaska in 2001.

Aggressive explorer

The first headline about Petro-Canada in Alaska appeared in the May 28, 2001, issue of Petroleum News. It read, "Petro-Canada breaks policy, crosses U.S. border into Alaska" by Gary Park.

"Taking a leaf from the playbook of Alberta Energy Co., Petro-Canada has decid-

ed to get a foot in both Arctic camps by emerging as one of the leading bidders in the first North Slope Foothills Areawide Oil and Gas Lease Sale. . . . extending its substantial Arctic interests from the Mackenzie Delta into Alaska," Park wrote.

Company spokesman Chris Dawson told Park that Petro-Canada was "positioning ourselves for future exploration and development and the prospect of getting gas out of Alaska to the North American market" — a strategy that remains on the company's home page in 2007.

"For Petro-Canada, it's a mild reversal of a staged withdrawal over the past two years from any plays outside Canada," Park wrote, noting that even though Petro-Canada was not part of the Mackenzie Delta consortium looking at building a Mackenzie Valley gas pipeline, Petro-Canada (was) one of the "boldest" Mackenzie stakeholders . . . "kicking off Canada's first Arctic exploration in 24 years in partnership with Anderson Exploration."

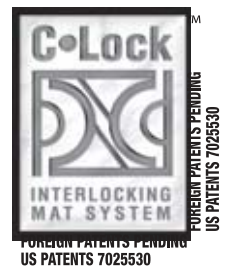
By the end of 2007 Petro-Canada will have invested close to C\$200 million in Alaska. ♦

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Marathon continues to chase inlet gas

Company sees significant opportunity in the Cook Inlet region but wants competitive gas pricing and a stable fiscal, regulatory environment in Alaska

By **ALAN BAILEY**

Petroleum News

Although oil and gas production in Alaska is declining, there are still plenty of resources to find and develop, Mitch Little, Marathon's Alaska production manager, told Petroleum News Oct. 2, 2007.

"While the (Alaska) industry is certainly maturing ... there are still significant opportunities that remain within existing fields and in terms of undiscovered resources," Little said.

Marathon is a major natural gas supplier in the Cook Inlet region and produces gas from the Kenai, Cannery Loop, Ninilchik, Beaver Creek and West Fork fields on the Kenai Peninsula and from the Chevron-operated McArthur River field on the west side of the Cook Inlet. Kasilof, the company's newest field, went on stream in November 2006, delivering gas through the Kasilof pipeline to the Kenai Kachemak pipeline on the western side of the Kenai Peninsula.



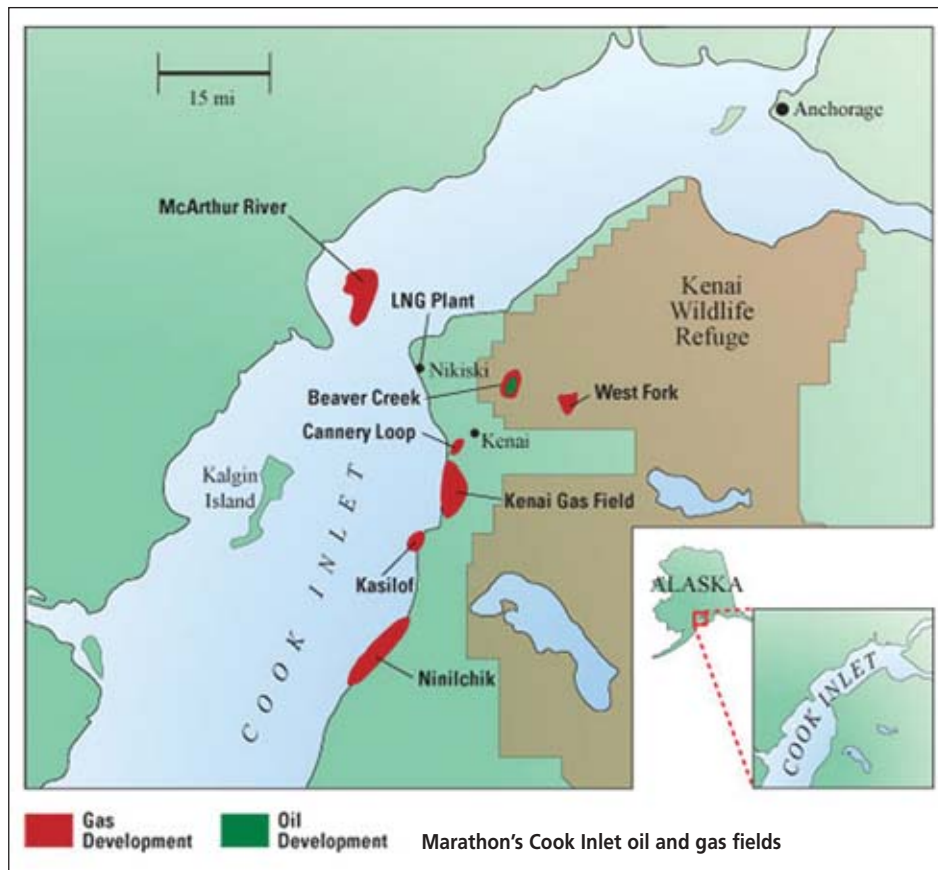
MITCH LITTLE

Market transition

Developing new resources in the Cook Inlet region depends on that market continuing its transition toward competitive pricing — the gas market in the Cook Inlet has in the past seen an excess of cheap gas, priced below market rates in the Lower 48 or elsewhere in North America, Little said.

"Those conditions have probably led to curtailed investment on the exploration and production side and potentially haven't resulted in as much conservation on the consumer side, or in the power generation or heating efficiency market," he said.

In other markets that have had to go through the same type of evolution, the transition in price levels has promoted the development of new gas supply sources, Little said. Little expects the same phenomenon to occur in Southcentral Alaska. But it is not yet clear



to what extent new gas supplies in the region will come from new Cook Inlet discoveries, from a North Slope gas line or from a combination of the two, he said.

Development of new resources in the Cook Inlet region also depends on a stable fiscal and regulatory environment that reduces the uncertainties in project decision making, he said.

Continued development

Meantime, Marathon continues to work its gas fields around the Cook Inlet — in 2007 the company focused on development drilling in four of those fields: the Ninilchik, Kenai, Beaver Creek and Sterling gas fields.

"We've had a fairly active drilling campaign, more or less a continuous drilling

program throughout the year utilizing our company owned Glacier drilling rig,"

Little said. "We've had drilling campaigns in four different field areas and by year's end we will have drilled nine additional wells."

The company has been using its Escape completion technology to exploit multiple reservoir sands, especially in the Beluga formation and in the Kenai gas field — the complex geology of the Cook Inlet may result in a single well penetrating as many as 10 to 15 individual reservoir sands, Little said.

"The Escape technology is a completion technique that allows us to perforate and fracture stimulate much more effi-



Marathon production

Worldwide: 190,000 barrels (liquids)
841 mmcf (gas)

Alaska: 200 barrels of oil
146 mmcf (gas)

Time period: Average daily for first half 2007

■ Sept. 9, 2007, reprint from Petroleum News

Little replaces Barnes in Alaska

The head of Marathon Oil in Alaska, John Barnes, is being replaced by T. Mitch Little who is moving to Alaska from Houston, where he has been managing the company's Libya assets, Little told Petroleum News Sept. 6.

The change was effective Aug. 13, the company said.

Barnes has accepted the position of director of U.S. Production Operations Strategic Projects, which means he'll be "leading the initial development of a strategic blueprint to guide the USPO business through its new expansion plan," Marathon said.

Barnes will continue to report to Steve Guidry, USPO regional vice president.

Little's title will be asset team manager for Alaska. He will also report to Guidry.

This will be Little's first assignment in Alaska, he said.

Little said he would be returning to Anchorage on Monday, Sept. 10.



JUDY PATRICK

JOHN BARNES

—Kay Cashman

continued from page 73

MARATHON

ciently and cost effectively than traditional methods," Little said. "We're able to complete zones of lower quality than were typically completed in the past. ... What it's ideally suited for is fields where there are multiple stacked reservoirs, especially if there are over four intervals that you want to complete simultaneously."

The company is also in the process of shooting a new 3-D seismic survey in the northern part of the Ninilchik field.

"We're looking to better characterize the known field area — the majority of the survey is over the field area," Little said. Marathon is also using the seismic survey to search for any new opportunities at Ninilchik, he said.

Marathon picked up nine tracts around the Ninilchik field in the State of Alaska's May 2007 areawide lease sale. Little characterized this lease acquisition as "the normal course of business," consolidating the company's Ninilchik position.

Sunrise prospect

On the exploration front, Marathon is moving forward

with its Sunrise gas prospect, also known as East Swanson, in the northern part of the Kenai Peninsula. The prospect lies in a Cook Inlet Region Inc. holding, inside the Kenai National Wildlife Refuge.

"We continue to be interested in the prospect," Little said. "We're advancing it through our normal evaluation processes and we've permitted, and plan to acquire additional 2-D seismic data over the prospect later this year. ... Plans beyond that would be contingent or dependent on what the seismic reveals."

And does Marathon have any interest in exploring deep in the Mesozoic section, below the conventional Cook Inlet Tertiary reservoir strata in any of the company's leases?

"We don't currently have plans focused on the deeper section, although ... we recognize there's some potential there," Little said. "We're not actively pursuing it right now."

Gas storage

In May 2006 Marathon started injecting gas into a gas storage facility that it had established in the Sterling for-

see **MARATHON** page 75

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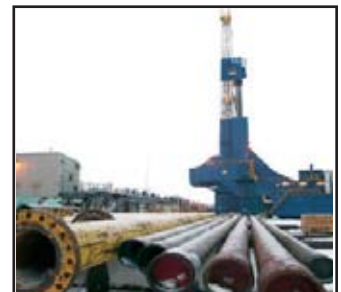
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MARATHON

mation pool 6 C1 and C2 sands of the Kenai gas field. That storage facility has been operating successfully, to enable Marathon to fulfill its contractual obligations to meet demand swings between summer and winter — excess gas can be injected into the storage facility during the summer when utility demand is relatively low and then retrieved during the winter when demand is high.

In 2007 Marathon drilled a second injection well in the facility.

“That (second well) provides us with some redundancy in case of a mechanical problem but also increases our instantaneous injection capability,” Little said.

But the company has no current plans to expand its Cook Inlet gas storage capacity.

“We continue to look at other options but ... those are going to be dictated by the prevailing economics of the time and some understanding of where markets are headed,” Little said.

Possibilities for gas storage depend largely on who has the economic incentives to develop either seasonal or peak load storage to accommodate the market requirements.

“In other areas those facilities are commonly built and operated by the local utilities, or in some cases by a third party, but in all those cases it’s where there’s a significant economic incentive for somebody to make that investment,” Little said.

And, in terms of technical options, a small LNG facility to handle needle peaking loads might make sense, he said.

“It’s typical of other gas markets where there are high seasonal swings,” Little said.

But whatever the mechanism for gas storage, achieving reliable gas deliverability through the ups and downs of seasonal demand ultimately costs money.

“It takes significant investment to meet the deliverability requirements — it’s not just the annual volume you’re concerned about. It’s the daily volume,” Little said.

The LNG plant owned by Marathon and ConocoPhillips at Nikiski on the Kenai Peninsula has in the past been able to help with meeting peak utility load by curtailing LNG production during periods of especially high winter gas demand. However, the export of LNG to Japan from the plant represents a significant component of the current Cook Inlet gas industry. The plant’s federal LNG export license expires in 2009 and the U.S. Department of Energy is currently reviewing an application for license renewal.

“We’re certainly hopeful that we’re going to get a positive decision in the near future,” Little said.

Operational safety

Little feels particularly proud of a new safety program that Marathon has been implementing to instill a heightened safety culture with the company’s employees and contractors.

“We’ve continued to emphasize our

overall philosophy of safe, clean and responsible operations,” Little said.

“We’ve instituted, over the past year or so, a new safety leadership program. In Alaska we’ve now trained over 100 of our company and contract employees. ... It’s about making sure that we all hold each other accountable and about learning more effective ways to encourage each other to work safely.”

And, as Marathon moves forward to 2008, what does the company have planned for Alaska?

“At this point I would see 2008 shaping up to look pretty similar to 2007,” Little said. “... We’d be looking to continue with a development-drilling program in our existing fields. We’ve got the two seismic surveys at north Ninilchik and Sunrise that we’ll be interpreting and evaluating next year.”

What happens beyond that will depend to a considerable extent on the continuing evolution of the Alaska gas market, he said. Historically, margins in the Alaska gas market have been slimmer than elsewhere because of high operating costs driven by a challenging climate and physical environment.

But transitioning to a more competitive gas market will not be easy.

“No doubt as the market transitions to a different pricing environment and different contractual responsibilities, it’s going to be difficult,” Little said. “It’s going to put strain on all of the stakeholders. But it’s that kind of change that I think is going to be necessary to access the future (Alaska) potential.” ♦



Taking a step back from Alaska?

By **KAY CASHMAN**
Petroleum News

Rutter and Wilbanks Corp. has not been able to secure a reasonably priced drilling rig for its Ahtna 1-19 well in Alaska's undeveloped Copper River basin, Bill Rutter III told Petroleum News Oct. 31, 2007. The well is 12 miles west of Glennallen and 180 miles north and east of Anchorage.

"We are hoping to partner with another company to mobilize a rig to Alaska and share that cost. The lack of competition in Alaska among the service providers (and the resultant unreasonable pricing) is the largest single impediment for independents to develop the state's resources, in my opinion," Rutter III said.



BILL RUTTER III

Started drilling in 2005

The Midland, Texas-based independent first started drilling the Copper River wildcat in February 2005 but high geologic pressures at a depth of 1,200 feet caused delays and cost increases in the drilling program. And when the well finally hit its planned depth of 7,500 feet the results proved disappointing.

"We never got enough gas to light a cigarette," Bill Rutter Jr. said at the time.

Rutter Jr. speculated that the well might have proved to be one of the most expensive onshore gas wells ever drilled in Alaska.

"We ended up drilling most of that well with 20 pound mud. Many would say that was impossible, but it wasn't impossible, just expensive," Rutter III said.

But the heavy drilling mud had damaged a potential gas reservoir formation part way down the well, effectively sealing that formation from possible gas production and thus leaving uncertainty about whether the well might in fact have encountered gas.

Another stab at it in 2006

In the fall of 2006 the company made an unsuccessful attempt to penetrate the damaged section of the reservoir rock adjacent to the well bore, using a Cad

In and out of Cook Inlet

Between October 2005 and the end of 2006, Rutter and Wilbanks bought — and sold — a "large leasehold" in the Cook Inlet basin, Bill Rutter III told Petroleum News in October 2007.

The company's sale of more than 110,000 acres in the Cook Inlet basin was to Renaissance Alaska. Rutter said he is hopeful Renaissance "will make some discoveries and add a lot of value to our retained interests there."

Rutter and Wilbanks has retained "overriding royalty interests on much" of the Cook Inlet acreage, and has a "working interest on the first well drilled on the offshore Northern Lights prospect."

Pressure Central snubbing unit.

"They got stuck again. ... They couldn't make the Perf Drill work; they couldn't get more than 3 or 4 feet out into the formation," Rutter III told Petroleum News in October 2006. "It was an expensive experiment and it didn't work. We're coming back in the spring with a drill rig."

Back in spring 2007

And the company did return in the spring of 2007, to drill a sidetrack well using a coiled tubing unit.

"It looks like we have a gas discovery in the upper Nelchina, which was our main objective. We're getting some real good gas flows," Rutter III told Petroleum News in late June 2007 after the first sidetrack well hit gas at a depth of about 4,350 feet.

But excessive amounts of water flowing from the well raised question marks about the viability of the find, Rutter Jr. said — although the sidetrack was producing gas, the well was also producing water at the rate of about a barrel per minute. That rate of water production would render the well uneconomic to develop.

However, it was impossible to say how much of the water was coming from the reservoir formation and how much was coming from higher up in the well.

"We know water was coming before

we hit the gas," Rutter Jr. said. "After we hit the gas we're not sure whether there was any additional water or not."

Again, fall 2007

The company decided to resolve the problem by drilling a second sidetrack in August and to case it down to the Nelchina reservoir. That would determine how much water was flowing from the reservoir and enable a decision on whether to continue drilling.

There are several potential reservoir sands in the Nelchina and the second sidetrack would initially target sands low down in the upper Nelchina, Rutter Jr. said. Since water tends to sink below gas, excessive water in that part of the formation would indicate that excessive water also exists in the lower Nelchina.

"If it's making an uneconomic amount of water we'll probably just plug it," Rutter Jr. said.

If, on the other hand, the water production isn't excessive, drilling will continue down into the lower Nelchina, to test the sands there.

But the upper Nelchina definitely contains high-pressure gas — gas which reached the surface in the June discovery had to overcome 4,000 pounds of pressure applied by well fluids and the back pressure required to circulate water, Rutter Jr. said

To drill the second sidetrack, the company would need a conventional drilling rig.

That's where the Rutters plans fell apart. They couldn't find rig at a day rate they could justify.

So what about the risks and costs entailed in Rutter and Wilbanks' Glennallen drilling marathon?

"This is a risky deal, but we have a long history of taking risks. We have been wildcatters for three generations and see no reason to stop now," Rutter Jr. told Petroleum News in 2005.

He obviously wasn't kidding. ♦

Editor's note: In addition to its Copper River basin project, Rutter and Wilbanks is partners in a prospect near Umiat in northern Alaska with Renaissance and Arctic Falcon. Bill Rutter III said, "an evaluation program should get under way this winter." (See related story on page 84.)

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The Oooguruk island

Exploring on pause, development on go

Pioneer focusing on Oooguruk development, Cosmo delineation; exploration still on hold due to disappointing results, concern about Alaska's tax regime

By **KAY CASHMAN**
Petroleum News

Dallas-based Pioneer Natural Resources has no immediate plans to resume its Alaska oil and gas exploration program, Timothy Dove, Pioneer's president and chief operating officer, said on Sept. 27, 2007, during a media tour of the company's new Beaufort Sea Oooguruk field. The last time the big independent drilled an exploration well in Alaska was two years ago, in the winter of 2005-06.

Subsidiary Pioneer Natural Resources Alaska has seen little success in its Alaska exploration to date, Dove said, so is instead focusing on earlier North Slope exploration success that led to approval of the development of the Pioneer-operated Oooguruk oil prospect in the Beaufort Sea, expected to come



TIMOTHY DOVE

online in the first quarter of 2008.

"Based on the lack of success ... we're definitely slowing down our investments, until we make the next decision on where to go in terms of exploration," Dove said.

In 2005 Pioneer brought the new Doyon-Akita truckable Arctic Fox 1 drilling rig to the North Slope, with the intention of using this portable rig to drill multiple exploration wells in each winter exploration season. During the 2005-06 season the company drilled three wells with the new rig: the Cronus No. 1 well and, jointly with ConocoPhillips, the Hailstorm No. 1 and Antigua No. 1 wells. But all three wells were unsuccessful.

In May 2007 Pioneer shared more bad news:

see **PIONEER** page 79



PIONEER
NATURAL RESOURCES

Pioneer production

Worldwide: 106,000 boe
Alaska: 3,130 barrels
Time period: Average daily
for 2006

continued from page 78

PIONEER

This time from its exploration partnership in the National Petroleum Reserve-Alaska with Anadarko Petroleum and ConocoPhillips. Operated by ConocoPhillips the partnership had drilled two wells in the Noatak and Intrepid prospects in NPR-A in the winter of 2006-07, and both wells were “noncommercial,” largely because of operating so far from infrastructure. (Intrepid, south of Barrow and more than 200 miles from the Colville River unit, was the farther of the two from existing infrastructure.)

Appraisal well at Cosmo

But all is not bad news.

In addition to its investment at Oooguruk, Pioneer is also spending money on its Cosmopolitan prospect, offshore in the Cook Inlet basin. On Sept. 9, 2007, it spud the Hansen 1A L1, a sidetrack, from private land on a bluff overlooking the body of water also known as Cook Inlet.

The appraisal well, which was drilled with Rowan Rig 68, is off the southwest coast of the Kenai Peninsula.

Pioneer spokesman Tadd Owens said in September that drilling and testing would take between 120 to 140 days.

“The gross recoverable resource potential is 30 to 50 million barrels of oil,” he said. If the well is successful Pioneer is looking at 12 more horizontal directional wells for development.

Former Cosmopolitan unit operator ConocoPhillips Alaska drilled a long-reach well and sidetrack, the Hansen No. 1 and Hansen No. 1A, from the onshore site in 2003, but since that time Pioneer has bought out all the working interest owners, including ConocoPhillips, Devon Energy and Forest Oil, taking over as operator of the unit. ConocoPhillips retained a small royalty share, Owens said.

The 25,000-acre state-federal unit is approximately two miles offshore. The onshore pad is six miles north of Anchor Point and one-half mile west of the Sterling Highway.

Cosmopolitan’s oil accumulation was discovered by Pennzoil in 1967 in the 12,112-foot vertical Starichkof State No. 1, drilled offshore with a jack-up rig. The company recovered 30 barrels of 20 degree API gravity oil from a drill stem test at about 6,900 feet and 21 barrels from

see **PIONEER** page 80



JUDY PATRICK

KEN SHEFFIELD



COURTESY JUDY PATRICK/PIONEER NATURAL RESOURCES ALASKA

The onshore portion of the pipeline from the offshore Oooguruk oil field. The Oooguruk island can be seen in the distance.



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continued from page 79

PIONEER

a drill stem test at about 6,800 feet. Pennzoil reported encountering the top of the Hemlock formation at 6,745 feet. A second well, also drilled in 1967, found some gas at 4,000 feet but water in the Hemlock formation at 7,355 feet some two miles from the first well.

In 2005 Dove said the 2003 Hansen well and sidetrack "tested at a stabilized rate of 600 to 800 barrels a day over different intervals that lasted for three to four months."

Only drilling from onshore drilling is being considered at this time, Owens said.

Pioneer's tentative development schedule calls for permitting in 2008, facility construction in 2008-09 and development drilling in 2009-10. If the development gets approved by Pioneer's board, the Texas independent is hoping for first production in 2010.

Pioneer is looking at both trucking and pipeline options for Cosmopolitan oil.

Oooguruk startup close

The man-made island for the 70 million-barrel Oooguruk oil field is in the shallow waters of Harrison Bay off Alaska's North Slope, Nabors Rig 19-AC dominating one end of the rectangular island, while a variety of structures including workshops, storage tanks and crew accommodations is crammed into the remainder of the gravel surface. Eight thousand pale buff bags of gravel, each weighing 13,000 pounds, are stacked protectively in neat rows around the island's perimeter.

Oooguruk will be the first producing oil



The Doyon-Akita truckable Arctic Fox 1 drilling rig.

field in northern Alaska operated by an independent oil company rather than one of two oil majors — BP and ConocoPhillips. Pioneer has said peak production for the Oooguruk project will be in the range of 18,000 to 20,000 barrels per day from the Kuparuk and Nuiqsut formations.

But Pioneer will not be processing the oil; ConocoPhillips will handle that at the Kuparuk River oil field.

The 12-inch pipeline that will carry oil from Oooguruk to ConocoPhillips' onshore facilities runs through an outer 16-inch pipeline that provides secondary containment, were oil to leak from the inner pipe. The pipeline bundle also includes separate lines for water and gas injection, plus a diesel fuel line and an electrical power transmission cable for the island. The bundle is buried beneath the seabed along the 5.7-

mile route to shore, from where the lines traverse above ground to facilities at Kuparuk unit well pad 3H.

At the Kuparuk well pad a separator unit will split gas from the produced liquids for metering purposes. The gas will then be recombined with the liquids before all of the produced fluids flow into a Kuparuk flowline for processing in Kuparuk field Central Processing Facility 3.

In addition to building the Oooguruk island and production facilities, Pioneer has constructed an onshore camp at Oliktok Point on the east side of Harrison Bay, to act as an equipment staging area and support base for Oooguruk construction and operation. "We'll be drilling for about three years and we'll have 65 or so people out on the island," Pioneer Operations Manager Joey Hall said in September. "And once drilling is

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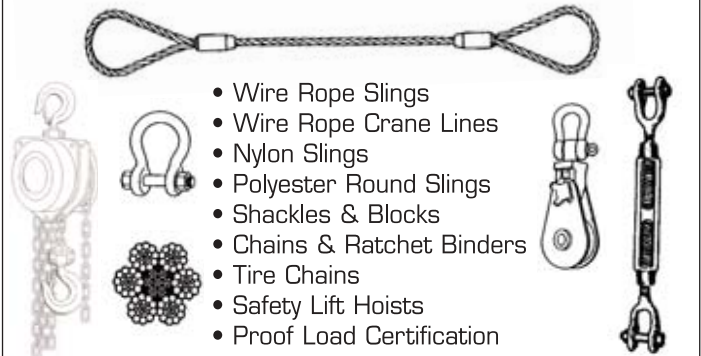
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PIONEER

complete we'll have a staff of about 12 people out there."

Good fit

So, with Oooguruk moving steadily toward production, what is the significance of the new oil field for Pioneer?

Fields such as Oooguruk fit well into the portfolio of an independent oil company such as Pioneer but are too small to interest major oil companies, said Dove. Pioneer has currently booked about 900 million barrels of proven oil equivalent reserves, so an additional 70 million barrels will have a good impact, he said.

"For a company like us, it's right in the sweet spot," Dove said.

Dove said that Pioneer has really liked operating in Alaska because the state has welcomed independent oil companies and new investment. However, he cautioned against business problems caused by uncertainties in the state's tax regime — although Pioneer expects to make a good investment return on the \$350 million that the company is contributing to the \$500 million Oooguruk project, taxation changes would change the economics of the project and

could place that return at risk.

"That's a substantial part of our capital budget for a few years," Dove said. "That would be a drop in the bucket for a major. But if we have a poor investment outcome on that amount of money ... that is a major problem for our company."

'Can do' attitude

Pioneer's lack of bureaucracy coupled with an innovative "can do" attitude, enabled the challenging and complex Oooguruk project to be carried out in just five years, from discovery to production, Dove said.

"I think we've probably set the land speed record for getting this first project done, but it still takes a lot of time," he said.

Ken Sheffield said that Alaska service companies have proved critically important to project success — those companies have brought essential Alaska expertise that Pioneer needed, he said. Sheffield (no relation to Pioneer Natural Resources Chairman and CEO Scott Sheffield) is the president of Pioneer Natural Resources Alaska, which is based in Anchorage.

"I can't say enough about the contribution and cooperation that we've had from the

Talk of drilling Gwydyr Bay leases

In mid-2007 Pioneer Natural Resources Alaska officials told companies interested in leasing the Doyon-Akita Arctic Fox drilling rig for 2007-08 exploration drilling that the rig was not available; that Pioneer was hoping to use the rig to drill its Gwydyr Bay leases north of Prudhoe Bay the coming winter.

Pioneer was initially going to drill and put its Gwydyr Bay leases into production before Oooguruk.

In January 2005 the company said it planned to drill two Gwydyr wells during the winter of 2005-06 as part of its plan to "commercialize several small oil discoveries" that would tie into Prudhoe infrastructure. The previous fall Pioneer applied to the State of Alaska for exploration and production permits that included a four-acre gravel pad and a 2.8-mile gravel access road to a site three miles north of Prudhoe's T Pad, which is in the vicinity of BP's Pete's Wicked No. 1 exploration well.

"The Gwydyr Bay area contains relatively small isolated hydrocarbon accumulations" discovered during exploration by BP and ARCO, Pioneer said in its applications. "These oil fields have not previously been developed due to their relative isolation and size."

The company proposed "to utilize a simple design and cost structure to develop these outlying fields." A six- to 12-month drilling program was planned with a conventional diesel-powered drilling rig, a coiled-tubing workover rig, waterflood and gas lift facilities, Pioneer said at the time.

When Petroleum News asked Pioneer about Gwydyr Bay, company spokesman Tadd Owens said Aug. 15, "At this time we are focused almost entirely on our Oooguruk and Cosmopolitan projects. We continue to evaluate other business opportunities in Alaska, however our plans beyond Oooguruk and Cosmopolitan for the 2008 season have not been finalized."

On Oct. 22, 2007, Owens reiterated that position.

Alaska service community," Sheffield said.

And if Pioneer succeeds at Oooguruk, the way is open for other independents to follow, Dove said.

"Ours is a kind of bellweather project," he said.

Pioneer, one of the United States' largest independents, first entered Alaska in October 2002, when it purchased a 70 percent working interest in Armstrong Alaska's Northwest Kuparuk prospect (name later changed to Oooguruk). ♦



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Small independents in high gear

Five small E&P gas companies plan to drill exploration wells on Alaska's North Slope winter 2007-08

By **KAY CASHMAN**
Petroleum News

Five small independent oil and gas companies expect to drill exploration wells on Alaska's North Slope in the winter exploration season of 2007-08. In the past, the highest number of small independents drilling wells in any single season was one.

The five companies are Brooks Range Petroleum Corp. Group, UltraStar Exploration, Savant Alaska, Alaskan Crude and Renaissance Umiat.

Four of the companies will operate their own wells; one, UltraStar, will have a geologist on the well who calls the shots, but BP will actually do the drilling from a Prudhoe Bay unit pad with a Nabors rig it already has under contract.

Of the five, only three independents have drilled on the North Slope in the past — UltraStar's sister company Winstar drilled an Oliktok well in 2003, BRPC Group drilled two wells on two prospects in the winter of 2005-06, and a predecessor to Alaskan Crude drilled the well it is re-entering this coming winter.

So, technically, four companies are drilling wells, and one is doing a re-entry.

But if Alaskan Crude is successful it might result in the development of a new oil and/or gas field on the North Slope.

BRPC Group, 3-4 wells

BRPC Group was organized by Alaska Venture Capital Group in 2006, but two Kansas oilmen, Bo Darrah and Bart Armfield, formed AVCG in 1999 to explore "leftovers" on the North Slope.

AVCG formed an operating arm, Brooks

Range Petroleum Corp., and brought former ARCO Alaska President Ken Thompson on board to bring in partners to help finance exploration and development on the Slope.

BRPC Group consists of AVCG, its operating subsidiary Brooks Range Petroleum and three well-funded partners — TG World Energy Inc., Nabors subsidiary Ramshorn Investments Inc. and Bow Valley Alaska Corp.

Thompson said in October 2007 that BRPC Group is hoping to drill as many as four wells this winter, 2007-08, on three different North Slope prospects. But first it will go back in to complete and test its North Shore 2006-07 exploration well, one of two drilled in the Gwydyr Bay area northwest of Prudhoe Bay. Sak River No. 1 was a dry hole, but BRPC Group said the other well, North Shore No. 1, looked like an oil strike. "We plan to complete and test this well this winter," Thompson said.

The partners also ran a 130-square mile 3-D seismic survey over both their acreage, and surrounding acreage, in their Gwydyr Bay prospect area last winter, investing more than \$44 million on land,

seismic and drilling, he said.

"This winter our joint venture group will be among the most active of explorers as we plan to shoot over 200 square miles of new seismic data on the extreme western and eastern sides of the Central North Slope and to drill up to four exploration wells."

BRPC Group has Nabors 27 Rig under contract and is planning to drill one or two wells near North Shore No. 1, Thompson said, in hopes it "can discover a sufficient volume of oil to warrant a commercial development at Gwydyr Bay."

The partners are also planning to drill a prospect south of the Alpine field, which is part of ConocoPhillips' Colville River unit.

\$40 million budget

"We will drill our Tofkat No. 1 well (Titania prospect area) ... and also drill a fourth exploration well on a prospect to be named," spending more than \$40 million on seismic and drilling in the winter of 2007-08, Thompson said.

If the "North Shore oil completion test is as suspected and one of the wells strikes oil close by, we may proceed with North Shore development with more substantial capital investment in the winter exploration season of 2008-09."

TG World said in an October press release that if Tofkat No. 1 is a discovery, the partners "may choose to drill a side-track well this winter season to help delineate the reservoir extent."

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BO DARRAH



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The 2007 seismic shot over the Gwydyr Bay prospect area "has identified two small satellite prospects to North Shore No. 1 that can be reached from the North Shore No. 1 drilling pad," TG World said. "The first satellite prospect is expected to be drilled after Tokkat No. 1 well operations are completed."

The partners expect to select another well to drill during the 2007-08 season "from prospects in the Gwydyr Bay area covered by proprietary 3-D seismic data," TG World said. "Final prospect selection is awaiting delivery and interpretation of the pre-stack depth-migrated seismic volume."

In reference to the upcoming 2007-08 seismic program, TG World said the 3-D would be shot over portions of the BRPC Group's lease holdings in the Slugger and Titania-Big Island prospect areas. Prospects developed from these surveys would be candidates for drilling in 2008-09 and 2009-10.

UltraStar targets April

UltraStar managing member, Jim Weeks, told Petroleum News Oct. 31, 2007, that the company has made "progress" on negotiations with BP, and now expects its Dewline Deep No. 1 well to be drilled from BP's Point McIntyre 1 drill pad "in the early April (2008) timeframe."

Weeks said "BP will manage the operation, but we will have an onsite geologist to make necessary decisions."

Weeks first talked about drilling the Dewline prospect, which is west of Point McIntyre in the Prudhoe Bay



JIM WEEKS

JUDY PATRICK

unit, in 2005.

But the owners (overlapping) of UltraStar and its sister company Winstar Petroleum, considered it essential to have a commercial arrangement for producing and selling oil before committing money to drilling a well. Without the use of existing facilities it would be uneconomic to develop the modest sized accumulations that Winstar and UltraStar seek, Weeks said.

Dewline Deep oil would be processed at the nearby BP-operated Lisburne facilities where Point McIntyre oil is processed.

That's still the plan, but what's come out of the negotiation with BP since 2005 is a slightly different approach.

The plan now, Weeks said, is to petition the state Division of Oil and Gas to expand the Prudhoe Bay unit to include the UltraStar lease with the Dewline Deep No. 1 well location, rather than keeping it independent.

But what's come out of the negotiation with BP since 2005 is a slightly different approach. The plan now, Weeks said, is to petition the state Division of Oil and Gas to expand the Prudhoe Bay unit to include the UltraStar lease with the Dewline Deep No. 1 well location.

BP has agreed to it, and thinks the other Prudhoe owners will also agree, Weeks said.

"Putting us in the unit puts us under BP's contingency plan, and so forth. We will have to buy insurance to indemnify BP and the other PB owners, but we think it's a good idea," he said.

The expansion has to be applied for prior to drilling in April.

"We've just finalized a document that has to be filed with the expansion papers ... called a joinder. It establishes the terms and conditions under which UltraStar joins the PBU," Weeks said.



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Charter key agreement

Weeks sees a document called the Charter for the Development of the Alaskan North Slope, signed between the State of Alaska, BP and ARCO in 1999, as critical for small companies wishing to explore on the Slope. The charter obligates BP and ConocoPhillips to provide access to their North Slope facilities for third-party satellite fields on "reasonable commercial terms."

And there's a requirement for binding arbitration in the event of stalled negotiations.

"Without the charter we wouldn't even be here," Weeks said.

The charter also requires BP and ConocoPhillips to purchase oil from small producers, enabling small producers to avoid the need to establish costly shipping arrangements for their oil.

Another provision of the charter, a requirement that BP and ConocoPhillips make seismic data available for license, has proved vital for Winstar and UltraStar. It's simply too expensive for a small company to shoot 3-D seismic over a small lease area on the North Slope, Weeks said.

And this 3-D seismic proved to be the critical factor in finding its Dewline Deep prospect — UltraStar obtained some additional seismic from the Prudhoe Bay owners to pinpoint the prospect. That seismic increased the coverage from eight square miles to 23 square miles, a critical factor in tying seismic times to depths under the permafrost, Weeks said.

But don't expect another major oil field. Although the prospect shows good potential, the oil accumulations are likely to be modest in size — the drilling isn't going to find 100 million barrels, Weeks said. "At Gwydyr Bay the Ivishak has notoriously small fault traps."

A word from Savant to state, feds

When asked what Savant saw as major obstacles to exploring and developing oil and gas fields in Alaska, Greg Vigil, Savant's executive vice president and chief operating officer, e-mailed the following reply:

Barriers to entry are: 1. Permitting process is too cumbersome. We have multiple bonds on file with multiple state agencies. This should be streamlined to have one bond with the state that is applicable to all state agencies. Cost to permit our exploration well will exceed \$500,000 and have been required to interact with multiple agencies to permit the well — way too much redundancy — the state will have a hard time attracting independents as long as this is the case.



2. Acreage held by unit and production is excessive. Acreage clearly outside unit pools is allowed to be held by the unit indefinitely by the state. They should contract all of their acreage to the PA (participating area) for a given unit instead of allowing any tract in contact with the PA to be held. This would either encourage unit owners to develop the fringe acreage or lose it to those who would be willing to do so.

Also there are numerous cases of old production tests holding leases for decades. The state should not allow leases to be held by production for an unreasonable amount of time. Independents generally like to explore around existing fields and this makes it difficult.

3. Exploration pollution bond is a major barrier to entry. We will have to obtain insurance for roughly \$800,000 to comply with our C-Plan bond +/- \$75 million. The state would encourage more independents to come to Alaska to explore if they would set up a trust fund to indemnify C-Plan requirements. When was the last time there was an exploration blowout on the Slope? Bad policy.

4. Lack of a stable tax regime. Uncertainty creates confusion and risk. We are still trying to understand the most recent legislation and how it will impact our ongoing and future efforts. The state needs to quit tinkering with the tax laws for E&P companies if it wants to encourage additional exploration. We factored the tax credit legislation into our original decision to enter and now we are not sure if they will be around when we finally drill.

5. Infrastructure. How many discoveries have been made but never developed because of a lack of infrastructure on the Slope. The second largest gas field in Wyoming was discovered because the exploration well was drilled just off a county road!!!! 10 tcf of gas found because infrastructure was available to a family-owned independent, McMurry Oil Co. — Jonah field. (John Martin and Mick McMurry are Savant investors; I am a former employee and shareholder of McMurry as well.)

Gov. Sarah Palin: Encourage, foster and enable independents to explore and good things will happen.

But what's considered a very small field on Alaska's North Slope — 5 million to 20 million barrel range — is a big coup anywhere else in the country. Especially at

today's oil prices.

UltraStar and Winstar are based in Petersburg, Alaska.

Savant fully funded, ready to roll

Savant Alaska, a closely held limited liability company that is an affiliate of Denver-based Shaw Resources, was "fully capitalized to go forward" with exploration when it won its first Alaska leases in the state's March 1, 2006, Beaufort Sea areawide lease sale.

The company wasn't looking for partners; just a drilling rig.

It wasn't able to get permitted and a rig in time for 2006-07, but the company is set to drill its Beaufort Sea Kupcake prospect in the upcoming season of 2007-08.

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"We have Kuukpik No. 5 under contract to drill the well and expect to spud before Feb. 15, 2008," Savant COO and Executive Vice President Greg Vigil told Petroleum News in mid-October 2007.

Kupcake is adjacent to BP's Liberty prospect and is expected to hold approximately 100 million barrels of recoverable oil.

The Kupcake well site is in 14 feet of water about three miles offshore in Foggy Island Bay, approximately 8,000 feet west of the Liberty No. 1 discovery well. Savant plans to drill to a depth of 11,000 feet in section 29, T11N, R18E, UM in order to test the Kemik formation. (BP has pegged Liberty's recoverable oil at between 120-130 million barrels and is currently moving toward field development.)

The Kupcake project has an approved oil spill plan and is completely permitted except for the "APD permit from AOGCC," which the company can't get until it becomes "a signatory on Prudhoe Bay unit ballot 201 for waste disposal," Vigil said in August.

"Once we have that document ... become a signatory, we can get our APD,"

he said.

By mid-October things had progressed: "We should submit the final permit to drill by the end of the month. BP has indicated the ballot is circulating amongst the PBU owners."

Although Savant was not looking for investors in its project, the company has been expanding its prospect lease base.

In late 2006, independent True North Energy Corp., also a newcomer to Alaska and a leaseholder in the Cook Inlet basin, farmed-in 120 acres into Kupcake where Savant held 1,291 acres. No cash was involved in the deal. Vigil said in October 2007 that Savant expects the final acreage ownership in the pooled area to be 91.5 percent Savant's, and 8.5 percent True North's.

"We hope to enter into a couple of farm-in agreements proximal to our acreage. The deals are imminent and we will comment once they are official," he said.

In addition to Kupcake, Savant has 14,646 acres under lease from the State of Alaska, Vigil said. "We have evaluated 193 square miles of 3-D seismic data under license from BP (Badami and NW Badami surveys). We have additional prospects but do not care to comment on them at this

time given their sensitive nature."

Erik Opstad is Savant's operations contact in Alaska.

In April 2007, the company hired F.X. O'Keefe, the former head of BP's exploration department in Alaska, as its director of business development. O'Keefe is "primarily responsible for advancing the company's growth platform in Alaska," Vigil said in April.



F.X. O'KEEFE

When asked if Savant was interested in acquiring more oil and gas leases north of the Brooks Range, Vigil said yes, but not elsewhere in the state.

Kenai first, then Burglin

Following an Oct. 29, 2007, decision by the Alaska Oil and Gas Conservation Commission to further reduce the potential unassisted oil flow from the North Slope Burglin No. 33-1 well, San Antonio-based Alaskan Crude says it will proceed with plans to re-enter the well in the winter of 2008. But first, Alaskan Crude will re-enter the Amarex Moose Point No. 1 well on

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Southcentral Alaska's Kenai Peninsula.

"We'll drill Amarex well first, then send our rig to the North Slope to re-enter the Burglin 33-1 well in the Arctic Fortitude unit," Jim White, president of Alaskan Crude, told Petroleum News Oct. 30. "... Our first plan (for Burglin) is to test the Ugnu, and then evaluate what we have and make a decision as to the next step. ...The area is oil and gas prone."

One and a half miles south-east of the Deadhorse airport, the 6,363-acre Arctic Fortitude unit sits on the south side of the Prudhoe Bay unit, immediately east of the NE Storms unit, within three state leases — ADL 389178, ADL 38179 and ADL 389177.

Similar to Aurora's rig

Alaskan Crude's drilling rig has a top drive and is similar in size to Aurora Gas's AWS 1 rig, White said. "Nice little pony — actually, it's a race horse," he said. "The rig is set to go at Amarex. We're waiting for cold weather to freeze the ground."

Alaskan Crude will use a snow road to truck its light-weight drilling equipment three miles from the Haul Road



Small independent Renaissance will likely be sharing some ice road and logistical costs with big independent Anadarko Petroleum in the 2007-08 exploration season.

to the Burglin well, White said.

The original Alaskan Crude Corp. drilled the Burglin well down to Ivishak formation in 1984-85. The well was suspended in 1985 and the original company subsequently went bankrupt. Jim White later bought the company and acquired the Burglin leases in a state lease sale.

A key issue in the delayed drilling at Burglin has been the need for an oil spill contingency plan. Under state statutes and regulations, a company drilling an oil well needs a contingency plan for responding to an oil spill up to a maximum potential rate of unassisted flow for the well.

Going back and forth with

AOGCC over a period of months, Alaskan Crude eventually amended its drilling plan to re-enter only the Ugnu formation. As a result, on Oct. 29 AOGCC reduced the unassisted oil flow potential for the well to 115 barrels per day, for an Ugnu test.

White, a long-time Alaska oil and gas investor and explorer, said he drilled his first well "in Alaska in 1977."

Renaissance has Arctic Wolf

Renaissance Umiat executive Mark Landt told Petroleum News in October 2007 that the company was in the process of permitting 10 wells in the Umiat oil field, which straddles the eastern border of the National Petroleum Reserve-Alaska.

Because the Umiat reservoir, which holds very light oil, is just 200 to 1,400 feet deep, Landt expects to get seven or eight wells drilled this winter using the Doyon-Akita Arctic Wolf rig, which Renaissance has under contract.

The company, he said, would likely be sharing some ice road and logistical costs with big independent Anadarko Petroleum, which plans a well at the nearby, undeveloped Gubik gas field.

In addition to drilling, Renaissance plans to contract

with PGS Offshore to shoot 2-D and 3-D seismic in the Umiat field area, Landt said.

The U.S. Geological Survey estimates Umiat holds 70 million barrels of recoverable oil, but Renaissance has put estimates closer to 100 million barrels.

Landt said the U.S. Navy drilled 11 wells in the Umiat field in the 1940s and 1950s, plus a deeper test well, the No. 1 Seabee, in 1979. The reason the field has not been developed is "generally due to the remoteness from infrastructure and pipelines and due to historically low oil prices," he told Petroleum News in March 2007.

One challenge the field poses is that some of the oil is in permafrost, he said.

Renaissance contracted with ASRC Energy Services for permitting, environmental and community outreach, Landt said.

Renaissance Umiat, a limited liability corporation, was founded on March 1, 2007. Sister company Renaissance Alaska LLC, a Cook Inlet basin leaseholder, was founded in November 2006.

Renaissance Alaska is owned by its employees and ARC

Financial Corp.

Renaissance Umiat is owned by Renaissance Alaska, Rutter and Wilbanks Corp. and Arctic Falcon Exploration LLC.

James Watt is president and CEO of Renaissance Alaska; William Allen

Huckabay, executive vice president of exploration and production; Mark Landt, executive vice president of land and administration; Michael Cook, vice president of drilling and operations; Vijay Bangia, vice president of reservoir engineering; David J. Doherty, chief geologist, and Charles Gartmann, chief geophysicist. Renaissance Alaska is the sole managing member of Renaissance Umiat. ♦

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MARK LANDT

Storm Cat Energy drops out of Alaska

By ROSE RAGSDALE
For Petroleum News

Storm Cat Energy Corp., less than two years after drilling an exploration well in the coalbed-methane-rich Matanuska-Susitna Borough, has dropped its pursuit of natural gas reserves in Alaska.

Instead, the Denver-based independent is pouring \$40 million this year into development of coalbed methane fields in the Powder River basin of Wyoming and the Elk Valley of British Columbia and a conventional gas discovery in the Fayetteville Shale region of Arkansas.

"We still hold the acreage we had when we last spoke about Alaska," Storm Cat spokesman William Kent told Petroleum News Oct. 8. "But Alaska is not in our core areas, and we had pipeline and service access issues there. We certainly believe our prospect is very good. However, given limited capital, our decision was economically based in terms of risk-reward. We have no plans for development in Alaska in the near future."



■ Oct. 14, 2007, reprint from Petroleum News

Company entered Alaska in '05

In 2005, Storm Cat roared into Alaska, picking up about a dozen State of Alaska and Mental Health Lands Trust leases in oil and gas lease sales. The company still holds half a dozen leases, covering about 24,500 net acres, according to Kent.

In January 2006, Storm Cat drilled an exploratory well, Northern Dancer No. 1, near the Pioneer Unit in Mat-Su, and reported positive results from initial well tests. Though the company spent \$3 million on the project in 2006, all has been quiet on the Alaska front since.

Fourteen months later, Storm Cat told the Securities and Exchange Commission that it was "in the process of evaluating potential and costs based on equipment availability" of the well.

Shortly afterward, Storm Cat's outspoken President and CEO J. Scott Zimmerman resigned after taking a leave of absence to pursue other opportunities. Zimmerman is no longer connected with the company,

Kent said the changes reflect the limited resources of Storm Cat rather than a lack of promise in Alaska. "We believe the potential is there, but we're a small company with limited capital. We have to spend it on projects that will bring us cash flow in a timely order."

despite earlier reports that he would keep his seat on Storm Cat's board of directors.

Since April, Storm Cat has appointed a new CEO, former consultant Joe Brooker, and apparently shifted its focus away from Alaska.

In August, the company ceased to list Alaska among its assets in official statements though it continued to include development acreage it holds in Alberta.

Kent said the changes reflect the limited resources of Storm Cat rather than a lack of promise in Alaska.

"We believe the potential is there, but we're a small company with limited capital. We have to spend it on projects that will bring us cash flow in a timely order," he added. ♦

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BP 'exploring' in known fields

Company uses technology to access vertical 'string of pearls' that lie above developed North Slope fields

By **KRISTEN NELSON**
Petroleum News

BP Exploration (Alaska), no longer active in traditional exploration in Alaska, is focused on exploring for — and recovering — resources through technology.

BP is the operator at Prudhoe Bay, the largest oil field in North America, and at the Endicott, Milne Point and Northstar fields — all on Alaska's North Slope, and is working on plans to develop its Liberty prospect through extended reach drilling from Endicott. BP is also a major working interest owner in the Kuparuk River field.

BP is a successful explorer worldwide, Scott Digert, the company's resource manager for full-field waterflood in the Greater Prudhoe Bay business unit, told Petroleum News in an Oct. 9, 2007, interview.



SCOTT DIGERT

The company has "done really, really well in remote basins," areas like the deepwater Gulf of Mexico and in the deepwater off Angola, Digert said. But in Alaska, it wasn't "seeing that same sort of success" and is now focusing on where it thinks the big remaining resources are in Alaska, "around the existing oil fields," including undeveloped oil at Prudhoe Bay and heavy oil across the slope.

"We actually know where it is. The problem is getting it out," he said.

Frank Paskvan, Prudhoe Bay western



STEVE SUTHERLIN

BP's headquarters in Alaska are in its largest city, Anchorage.

region subsurface development manager, said that at Prudhoe Bay, with 30 years of development, there have been "a series of projects, wells, reservoir techniques and facility expansions that have substantially improved our ultimate recovery."

Seismic helps with recovery

Original oil in place at Prudhoe Bay was 22.6 billion barrels of oil, Digert said, with an estimated recovery rate of 42 percent, or some 9.5 billion barrels. To date, more than 11 billion barrels have been produced and the belief now is that another 2 billion to 2.1 billion barrels, can be recovered.

"We know where the oil was to start — before we started moving things around — so now the question is, of the oil that's left, where is it?"

One thing that helps with oil recovery is three-dimensional seismic with its "much finer vertical resolution." Faults can be seen on a smaller scale, Digert said, probably around 20 feet vs. 60 feet originally.

Four-dimensional seismic, comparing seismic with that shot earlier over the same area, can show "changes in fluids or pressure from the injection that we've done," he said, and "...

helps you identify where are the pockets that you're not sweeping out" either in the gravity drainage area or with water. "And now you can start targeting the sidetracks into these smaller and smaller remaining pockets of oil."



FRANK PASKVAN

And with new technologies — coiled tubing drilling and multilateral wells — "you can now start to envision how you can actually target these smaller and smaller pools, things that we couldn't have even done two or three years ago."

2,500 wells drilled

Information on remaining oil also comes from "a pretty active appraisal and delineation effort within Prudhoe," Paskvan said. Some 2,500 wells have been drilled, and starting in the mid-'90s, BP did appraisal drilling "on what you might call initially discovered satellite reservoirs."

This included delineating the western satellite pools and it also included the Put reservoir, "an accumulation that was included in the (Prudhoe Bay) initial participating area," he said.

The Put was found in early field drilling and "we've gone back in the last half-dozen years, figured out where that hydrocarbon is gas and where that hydrocarbon is oil; where the reservoir quality is the best and where it's not so good; where we should put in water injectors; and where we should put in oil producers," Paskvan said.

"The Sag River formation falls in exactly the same category," Digert said. "It's something that we've known about;

continued from page 90

BP

we've drilled through it."The Sag is minor compared to the Ivishak, and sits right above it. It's "much tighter. It's still nice, light oil, but it's a much more difficult reservoir to produce from. It's thin and tends to be broken up by the faulting more; and it's much less productive." When Sag River is commingled with Prudhoe Bay Ivishak production, Sag may only be contributing 1 to 2 percent of the total.

Vertical development

"The State of Alaska talks about a string of pearls," Paskvan said. "... And I think they thought of it as ... stringing pearls along the Barrow Arch," and fields have been added laterally across the North Slope.

"But we're stringing pearls vertically," he said.

Referring to a schematic of stratigraphy in the western satellite area of Prudhoe Bay, Paskvan noted that the Schrader Bluff Orion accumulation lies above the lighter-oil Borealis pool — and both lie above a Sag-Ivishak accumulation. Above all is the Ugnu, the heaviest

oil on the North Slope, which is not yet being developed.


Development started with the deeper, light oil. Deeper, lighter oils have a lower viscosity — they flow more readily. The Schrader Bluff-West Sak formation is heavier oil, but it can be waterflooded, and 100 million barrels have been produced to date.

The "transforming technology" for Schrader Bluff-West Sak production was horizontal drilling, Digert said, "drilling these long horizontal producing wells." Production went from an initial 200 barrels per day with wells that dropped off quickly to 50 bpd with "wells that have come on above 1,000 barrels a day," he said.

"They still decline pretty fast, but you're starting from a much higher point so it's been absolutely transformational in our ability to now drill this lighter heavy oil."

Western region development

Paskvan said the number of developed



BP production

Worldwide: 3.7 million boe
Alaska: 235,700 boe
Time period: Worldwide daily average for first three quarters of 2007

oil pools at Prudhoe has doubled in recent years.

Four of those accumulations — Aurora, Borealis, Orion and Polaris — are in the western region development area at Prudhoe Bay, the area west of the Kuparuk River.

"The western region is kind of a microcosm of the North Slope story, because you've got Ivishak development first

(deeper, lighter oil), more than 250 million barrels produced to date from the western region," from more than 220 wells producing some 50,000 barrels per day, Paskvan said.

"And we're unlocking the heavy oil resource as we're moving through ... the reservoir," he said.

Western region development started with "Eileen West End development in 1988, continued with the Borealis reservoir installation in 2001 of L and V pads," he said.

Z pad is being expanded now and a new pad, I, is proposed for the far north-

see BP page 92

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continued from page 91

BP

west corner with startup planned for 2011.

"We're adding a gas partial processing plant on Z pad," and will use gas-lift to get more oil out of the reservoir.

Paskvan said I pad appraisal wells were drilled in the winter and spring of 2006 and engineering is being done for the area today. Z pad expansion should be put in next year, he said, with startup in 2009; I pad would be installed in 2011.

This is the long-term forecast, he said. Full funding has not yet been approved.

"Western region development is ... such a large program that we broke it into separate projects," Paskvan said. Some elements are operating — which accounts for the 50,000 bpd from the area — other components have not been sanctioned, but are budgeted over the next five years.

At least half a billion has been spent recently on the western region, Paskvan said, excluding the original Eileen West End work.

\$2 billion in future

The Western region development is an ongoing five- to 10-year program with an estimated \$2 billion in future investments.

At least half a billion has been spent recently on the western region, Paskvan said, excluding the original Eileen West End work.

Original oil in place at Prudhoe Bay was 22.6 billion barrels of oil, Digert said, with an estimated recovery rate of 42 percent, or some 9.5 billion barrels. To date, more than 11 billion barrels have been produced and the belief now is that another 2 billion, 2.1 billion barrels, can be recovered.

The current project involves some 400 people.

Because Prudhoe is mature, Paskvan said the challenge is to process and reinject all of the gas that is produced with the oil and produce all of the seawater needed to supplement produced water for waterflood.

With equipment fully employed, there is no idle equipment for a project like western region development.

Because of that, sealift modules will be required for western region development, with three sealift modules planned for the project. That's happening because "the drilling successes, the recovery successes, have created an opportunity to put in a new facility," Paskvan said.

The target is a 2010 sealift, he said. Long-lead materials commitments have been made to preserve the option.

If that portion of the project is approved, the sealift modules would come up in summer 2010 and the start-up target would be the fourth quarter of 2010.

Light oil technologies

For lighter oil Prudhoe Bay develop-

ment is underpinned by waterflood technologies and enhanced oil recovery through miscible gas injection.

Examples of new technologies used with lighter oils are low salinity waterflood and Nalco's Bright Water™.

Talking about low-salinity waterflood, Digert said BP thinks that "by changing the chemistry of the water we inject and actually engineering that chemistry, we can increase recovery in zones that have already been flooded by mobilizing some of the oil that's been left behind" by earlier waterflood. "And in some cases we see that as being as much as 10 percent of the oil that was originally in place," and at BP's Milne Point field, he said, the original oil in place is about a billion barrels.

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Idaho newcomer in Cook Inlet

Newcomer Duke Oil & Gas-Alaska LLC joined the bevy of small companies and investor consortiums that clamored for tracts in Alaska's Cook Inlet areawide oil and gas lease sale May 24, 2006. Its leases were finally issued on July 30, 2007.

The Boise, Idaho-based company hired a Juneau company to act as its agent and longtime Alaska oil patch executive and political activist Randy Ruedrich to serve as its "attorney in fact" for the lease sale.

In September 2007, Ruedrich told Petroleum News now that "the leases finally have been issued" he's "talking to the principals" about the next step.

Duke won tracts 216 and 218, on the west side of the inlet, offering \$75,514 and \$86,458 for the two onshore parcels, respectively.

An independent, Duke is 100 percent owned by John Brad Duke of Star, Idaho, according to Division of Oil and Gas filings.

Tracts 216 and 218 are about 12 miles north of the Drift River Terminal near Bachatna Creek. Tract 216, in fact, has the Union-Bachatna Creek well on its border, a penetration drilled years ago presumably by Union Oil Co. of California, according to Matt Rader, a permitting specialist for the division.

The parcels also appear to be close to the 20-inch diameter Cook Inlet Pipeline, which is a good sign because

any oil discovered there would be close to infrastructure, Rader said.

"The closest production is the West McArthur River and Redoubt Shoal oil fields which are about 24 miles to the northeast," he added.

—Petroleum News



The Boise -based company hired longtime Alaska oil patch executive and political activist Randy Ruedrich to serve as its "attorney in fact."

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XTO more than doubles oil reserves

By **KAY CASHMAN**
Petroleum News

XTO Energy, operator of the Middle Ground Shoal field in Alaska's Cook Inlet basin, is a good example of what an independent oil company can achieve in prolonging the life of an aging oil field.

Middle Ground Shoal, produced from two platforms offshore the Kenai Peninsula, began production in 1967.

By the time Cross Timbers Oil Co. (predecessor to XTO) purchased the field in 1998, production was at 3,600 barrels per day and falling.

XTO's strategy is to handpick complex, aging, producing properties that still contain undiscovered hydrocarbons, and double the reserves. Most of the fields are purchased from major oil companies — in this case Shell Oil — which have a higher overhead that makes many mature fields uneconomic.

The Fort Worth independent brings in a team of top development personnel to develop hidden reserve upsides.

XTO purchased Middle Ground Shoal in 1998, identifying 12 million barrels of reserves upon acquisition. Through XTO's development

XTO ENERGY

XTO production

Worldwide: 45,851 barrels
1,297,350 mcf
Alaska: 3,130 barrels
Time period: Average daily for first half 2007

program, the property now has reserves of 24 million barrels. Production has ranged from 3,000 to 4500 barrels per day in the 10 years XTO has operated the property.



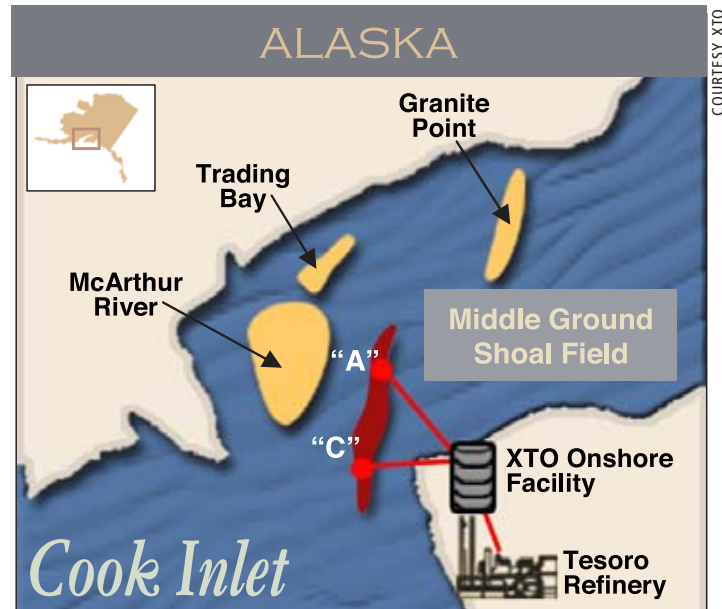
KYLE HAMMOND

Better investments outside Alaska

Production began slipping closer to the lower range of that production average in 2006. Unfortunately, XTO had more profitable investment targets outside Alaska, so

since late 2005 only one new sidetrack has been drilled in Middle Ground Shoal — for a total of 12 — and only three existing wells received workovers, Kyle Hammond, XTO's top executive for Alaska, told Petroleum News in October 2007. (There were no workovers in 2006.)

By mid-2007 oil production was down to 3,130 barrels per



COURTESY XTO

day.

Nonetheless, under XTO's ownership reserves were doubled. Hammond said each of the 12 sidetracks averaged about 700,000 barrels.

How do they do it?

Middle Ground Shoal consists of a shallow dipping east flank and a steeply dipping west flank separated by a faulted crest. Production comes from multiple zones within the Tertiary Tyonek formation, "primarily ... from the Hemlock member of the Tyonek," Hammond said.

The complexity of the field presented the kind of challenge that XTO likes to turn into an opportunity. The company focused on developing the more difficult west flank of the field where the strata are essentially tipped on end. XTO has drilled directionally through the formation and then went back and penetrated the formation again on the bottom side of the well, Hammond said.

Constantly doing maintenance

He said the company uses "pressure maintenance to keep production up on an ongoing basis. We filter Cook Inlet water and inject it into the reservoir to

maintain pressure. Our focus over the past few years has been maintaining production through coil tubing work on producers, injection well workovers, and artificial lift optimization."

And even though it hasn't drilled a sidetrack recently, in 2007 XTO replaced its pipeline surveillance system. "This is a system designed to provide immediate notice of any problem with the pipeline 24 hours per day," Hammond said. "We are constantly doing maintenance on our facilities to identify, repair or replace worn or aging vessels, equipment, pipes, and/or valves."

Other Alaska properties

Is XTO interested in buying other mature fields in Alaska?

"We look at deals and/or properties from time to time," Hammond said, "but we're not actively pursuing any Alaska deals at this time."

XTO has periodically talked about testing the Jurassic, but the idea has not resurfaced since 2002, and Hammond said XTO is "not considering the Jurassic in the near term."

Scott Griffith, based in Kenai, is the top company official in Alaska. He reports to Hammond. ♦

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Union Energy takes Kavik leases

A new company won three leases in the State of Alaska's annual North Slope areawide lease sale on Oct. 24, 2007. Union Energy (Alaska) LLC, which gave the Division of Oil and Gas a contact address in Switzerland, spent \$449,971 in the sale.

The three leases were formerly in the Kavik unit east of the Haul Road and just west of the Arctic National Wildlife Refuge.

The Kavik gas field was discovered in 1969 shortly after discovery of Prudhoe Bay in a thrust-faulted anticline, David LePain, chief of DGGs energy resources section, told Petroleum News after the lease sale.

"The reservoir interval includes some of the same rock units as Prudhoe Bay, including the Ledge Sandstone Member of the Ivishak and Sag River sandstone. Gas-in-place volumes were recently estimated by the USGS at 165 billion cubic feet, with technically recoverable reserves at 115 billion cubic feet," LePain said.

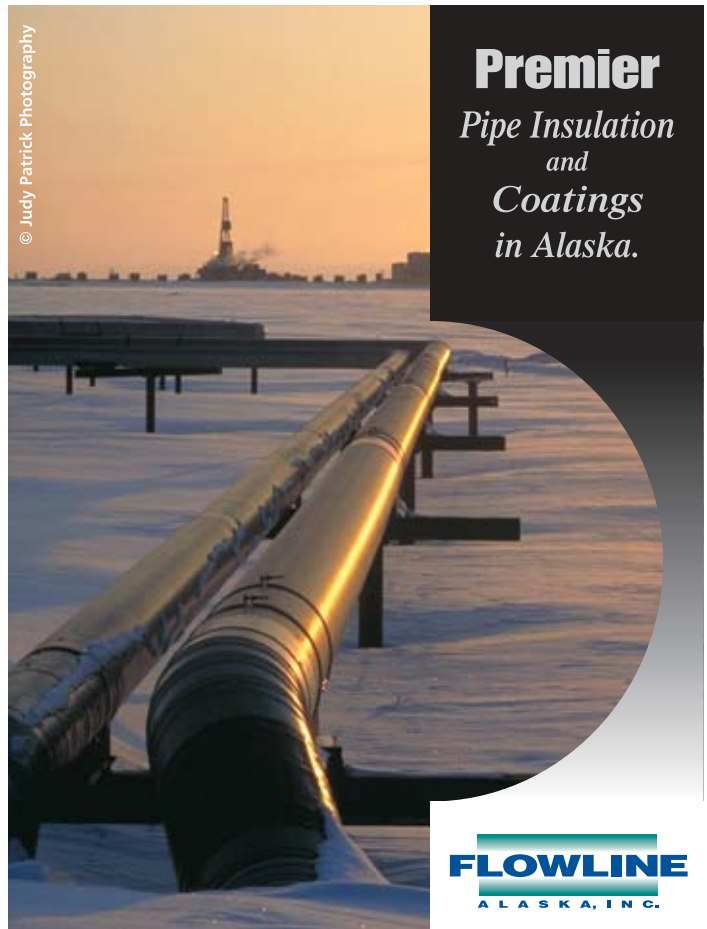
As of Oct. 31, it's not apparent whether Union Energy is a land speculator/investor or an E&P company. The firm's general manager is James Fitzsimons. His phone number in Switzerland is 011 41 91 980 4104.

According to the division, Union Energy bid in a 2006 Cook Inlet areawide lease sale, but its bids were rejected because it submitted a check drawn on a foreign bank. State regulations require checks to be from U.S. banks.

—Kay Cashman

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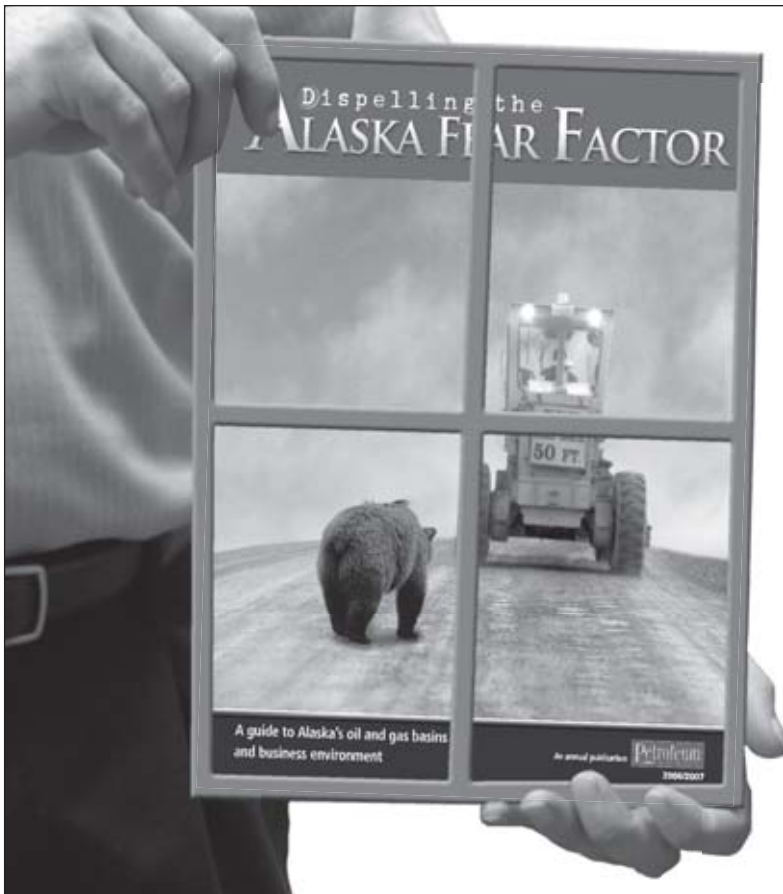
RDC is the Resource Development Council for Alaska, Inc., a statewide, non-profit, membership-funded organization made up of businesses and individuals from all resource sectors, business associations, labor unions, Native corporations and local governments. Through RDC these interests work together to promote and support responsible development of Alaska's resources.

RDC was formed in 1975, originally as the Organization for Management of Alaska's Resources (OMAR). After three years working to obtain a trans-Alaska gas pipeline, RDC changed its name to reflect its broader agenda of education and advocacy on all resource issues in Alaska.

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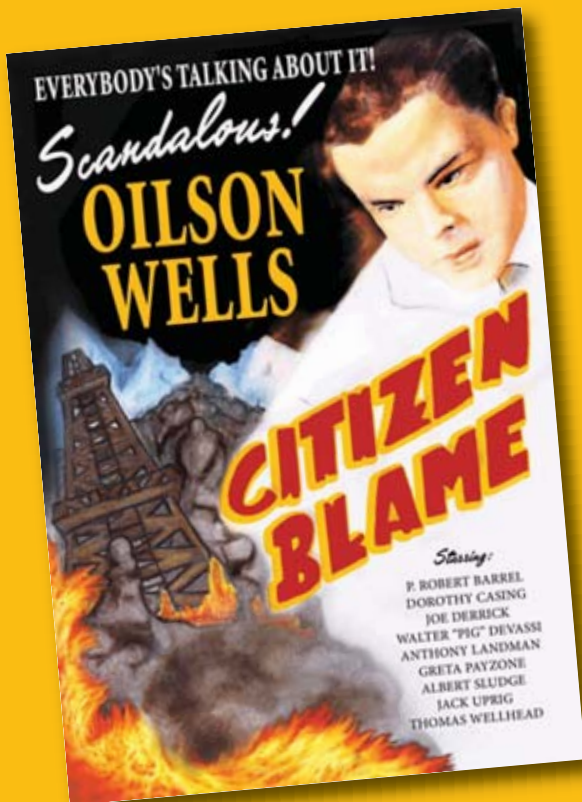


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