



AADE festival a tasty event



The American Association of Drilling Engineers Alaska chapter held its annual Fin, Feather, Fur, Food Festival May 15. The event was supported through corporate sponsorships, cooking team entry fees and ticket sales. For more on the event, see page 8.

When you're down, you're down...; war of words on gas line progress under Gov. Palin

REELING FROM LOW COMMODITY PRICES, the Canadian petroleum industry got some soothing words from Alberta Premier Ed Stelmach, author of his province's widely condemned royalty overhaul.

Under the new regime, that took effect Jan. 1, Alberta producers paid the province C\$500 million less in the first three months of 2009 than they would have under the old system, he cheerfully told the industry.



ED STELMACH

Edmonton Journal.

Stelmach said that on his trips to Calgary people "come up and give you a hug on (the royalty) issue. Or they'll say thanks. Or they may say, well, on this one issue I may disagree with you, but I know the direction you have to take," he said, in defending his government's insistence it was entitled to collect a fairer share of natural resource royalties.

For now, that is costing a government that has fallen back into deficit budgets a lot of money it could use for infrastructure spending.

However, Stelmach said the sliding scale of royalties will see the province collect more as oil and natural gas prices rise because the regime doesn't penalize companies at a time when they're struggling to make profits, but squeezes them harder when times are good.

see INSIDER page 17



EXPLORATION & PRODUCTION

Arctic oil, gas riches

USGS: 30 percent of undiscovered gas and 12 percent of oil in the Arctic

By ALAN BAILEY

Petroleum News

The U.S. Geological Survey has published the detailed results of its recent Arctic oil and gas assessment. The agency had issued the general conclusions of its assessment in the summer of 2008, as reported in Petroleum News at that time. But the agency, in an article featured in the May 29 edition of the journal "Science," has now released its final assessment findings, including evaluations of the uncertainty associated with the resource estimates.

83 billion barrels

USGS says that in total there may be 83 billion

And the assessment points to northern and Arctic offshore Alaska as a premier region in which to search for new oil; this region may also hold large quantities of gas, although the preponderance of undiscovered gas may lie offshore northern Russia.

barrels of undiscovered, technically recoverable oil and 1,550 trillion cubic feet of undiscovered, technically recoverable natural gas in the Arctic, volumes that the agency says represent 13 percent of worldwide remaining undiscovered oil and 30

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EXPLORATION & PRODUCTION

Thomson legal battle rages

Palin sounds conciliatory note at Exxon lunch; hails project launch, local hiring

By WESLEY LOY

For Petroleum News

ExxonMobil has resumed drilling at Point Thomson after many years, and Gov. Sarah Palin actually had some words of praise in early June for a company she has jabbed from time to time.

But these developments mask the continuing feisty legal struggle between the oil titan and the state over ultimate control of the enormous Point Thomson oil and gas field, located on state land some 60 miles east of Prudhoe Bay.

The chief outstanding issue is whether the courts will uphold the state's decision to terminate the Point Thomson unit for failure to produce oil and gas. The state also has taken away leases within the

former unit.

In recent weeks, lawyers on both sides have exchanged lengthy legal filings in Alaska Superior Court, where ExxonMobil, the field operator, and other major Point Thomson stakeholders are appealing the state unit termination.

In a filing on May 26, lawyers for ExxonMobil, BP, Chevron and ConocoPhillips argue the state has no justification for "the forfeiture of the approximately \$920 million" the working interest owners have invested to date in Point Thomson.

Lack of trust

The oil company lawyers further say state officials and attorneys are perpetuating "a fictive account of

see THOMSON page 19

NATURAL GAS

Throwing fact at fiction

Analysts, industry take issue with claims Canadian gas can't compete with US shales; no clear-cut winner found in comparison of 3 years of FDE&A costs

By GARY PARK

For Petroleum News

There are early signs of a groundswell among analysts and industry leaders to counter the prevailing wisdom that Canadian gas producers have no hope of competing with U.S. shale gas plays.

Canada's notorious high-cost structure, with the Western Canada Sedimentary basin rated as the world's most expensive operating region, and the lack of infrastructure to get gas from British Columbia's remote shale plays to major North American markets are frequently cited as stumbling blocks.

Nova plan backed by 6.8 tcf marketable gas

The potential for British Columbia's Montney shale formation has been further strengthened in a regulatory application by Nova Gas Transmission, which told Canada's National Energy Board it is supported by 6.8 trillion cubic feet of marketable gas.

In submitting plans for its proposed C\$251 million Groundbirch system, Nova (wholly owned by TransCanada) said the 36-inch pipeline can also draw another 700 billion

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Petroleum News

A weekly oil & gas newspaper based in Anchorage, Alaska

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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

Doyon Drilling

Dreco 1250 UE	14 (SCR/TD)	Prudhoe Bay DS 06-65	BP
Sky Top Brewster NE-12	15 (SCR/TD)	Stacked at Deadhorse	Available
Dreco 1000 UE	16 (SCR/TD)	Prudhoe Bay A-31a	BP
Dreco D2000 UEBD	19 (SCR/TD)	Alpine CD2-74	ConocoPhillips
OIME 2000	141 (SCR/TD)	Stacked at Deadhorse	Available
TSM 7000	Arctic Fox #1	mobilizing late June, early July to Cook Inlet for drilling at Beluga	ConocoPhillips
	Arctic Wolf #2	Mobilizing	Rampart Energy

Nabors Alaska Drilling

Trans-ocean rig	CDR-1 (CT)	Stacked, Prudhoe Bay	Available
AC Coil Hybrid	CDR-2	Kuparuk 1C-07A	ConocoPhillips
Dreco 1000 UE	2-ES	Prudhoe Bay, Stacked out	BP
Mid-Continental U36A	3-S	Milne Point MPL-43A	BP
Oilwell 700 E	4-ES (SCR)	Prudhoe Bay GPB D-13	BP
Dreco 1000 UE	7-ES (SCR/TD)	Prudhoe Bay DS15-29B	BP
Dreco 1000 UE	9-ES (SCR/TD)	Prudhoe Bay DS 02-33B	BP
Oilwell 2000 Hercules	14-E (SCR)	Stacked	Available
Oilwell 2000 Hercules	16-E (SCR/TD)		Available
Oilwell 2000	17-E (SCR/TD)	Stacked, Point McIntyre	Available
Emsco Electro-hoist -2	18-E (SCR)	Stacked, Deadhorse	Available
Emsco Electro-hoist Varco TDS3	22-E (SCR/TD)	Stacked, Milne Point	Available
Emsco Electro-hoist	28-E (SCR)	Stacked, Deadhorse	Available
Emsco Electro-hoist Canrig 1050E	27-E (SCR-TD)	Point Thompson PTU-15	ExxonMobil
Academy AC electric Canrig	105-E (SCR-TD)	Chandler #1	Anadarko
Academy AC electric Heli-Rig	106-E (SCR/TD)	Demobilization rig shut down	Chevron

Nordic Calista Services

Superior 700 UE	1 (SCR/CTD)	Prudhoe Bay Drill Site 4-35a	BP
Superior 700 UE	2 (SCR/CTD)	Prudhoe Bay Well Drill SiteR-21a	BP
Ideco 900	3 (SCR/TD)	Kuparuk Well 3C-02	ConocoPhillips

North Slope - Offshore

Nabors Alaska Drilling

OIME 1000	19-E (SCR)	Oooguruk ODSN-37	Pioneer Natural Resources
OIME 2000	245-E	Oliktok Point OP04-P07	ENI
Oilwell 2000	33-E	Northstar, Stacked out	BP

Cook Inlet Basin - Onshore

Aurora Well Service

Franks 300 Srs. Explorer III	AWS 1	Rigging up on Kaloa 3	Aurora Gas
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Marathon Oil Co. (Inlet Drilling Alaska labor contractor)

Taylor	Glacier 1	KBU 42-6x	Marathon
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Nabors Alaska Drilling

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	Kenai SLU 41-33RD	Chevron

Rowan Companies

AC Electric	68AC (SCR/TD)	Stacked, Kenai	Pioneer Natural Resources
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Cook Inlet Basin - Offshore

Chevron (Nabors Alaska Drilling labor contract)

	428	Rig shut down by operator request	Chevron
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XTO Energy

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

Kuukpik

	5	Stacked in Kenai	Available
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Mackenzie Rig Status

Canadian Beaufort Sea

SDC Drilling Inc.

SSDC CANMAR Island Rig #2	SDC	Set down at Roland Bay	Available
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Mackenzie Delta-Onshore

AKITA Equitak

Modified National 370	64 (TD)	Racked in Inuvik	Available
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Central Mackenzie Valley

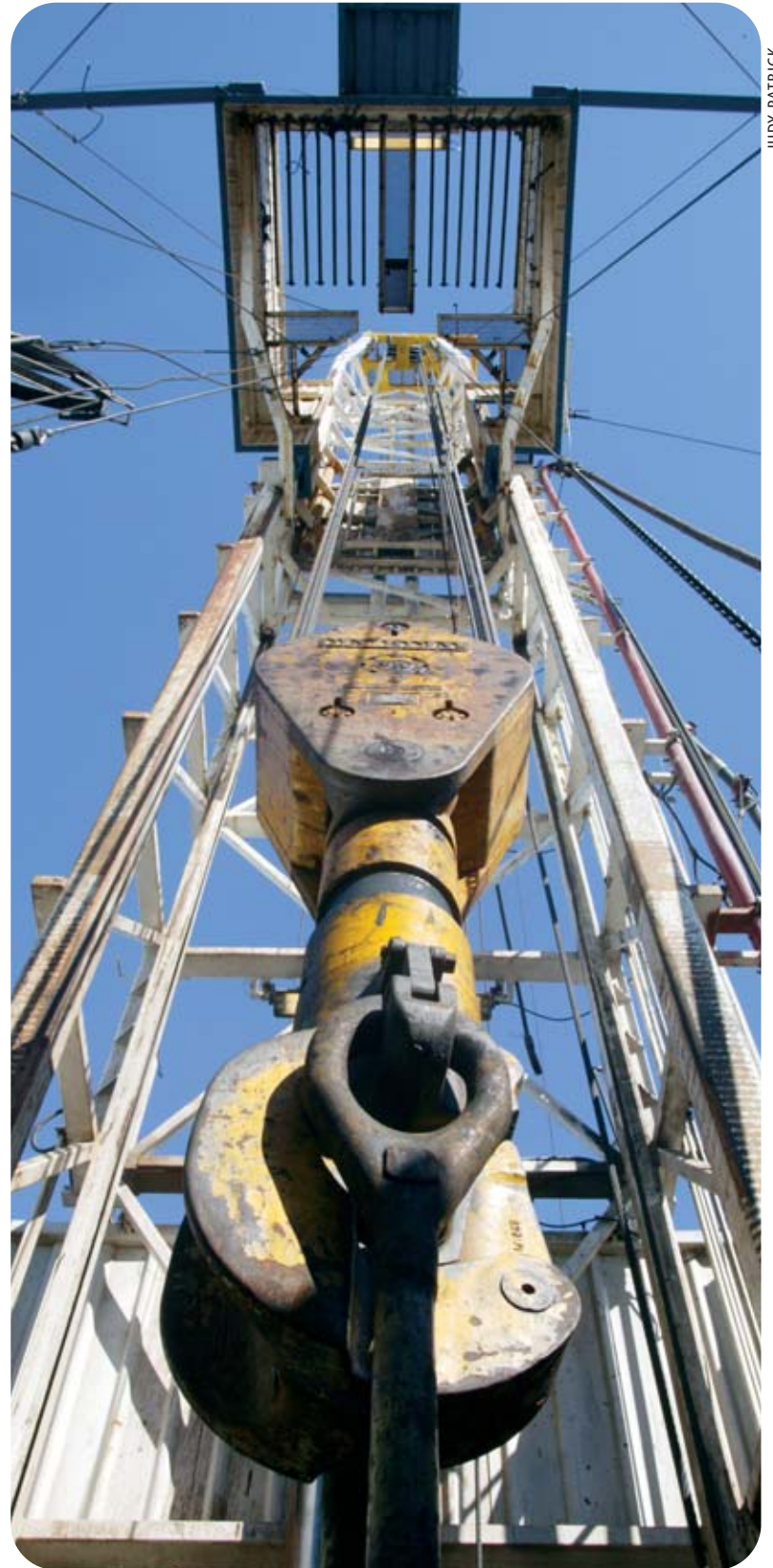
Akita/SAHTU

Oilwell 500	51	Racked in Norman Wells, NT	Available
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The Alaska - Mackenzie Rig Report as of June 4, 2009.
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 Marti Reeve



JUDY PATRICK

Baker Hughes North America rotary rig counts*

	May 29	May 22	Year Ago
US	899	900	1,877
Canada	90	74	176
Gulf	54	53	65

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

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● PIPELINES & DOWNSTREAM

Did FERC underestimate life span?

Shippers, state seek rehearing of federal regulator's conclusion that the trans-Alaska oil pipeline's usefulness will end in 2034

By ROSE RAGSDALE

For Petroleum News

Shippers on the trans-Alaska oil pipeline and the State of Alaska have asked the Federal Energy Regulatory Commission to reconsider recent rulings in which it concluded that the useful life of the 800-mile conduit effectively ends in 2034.

Anadarko Petroleum Corp. and the state submitted separate requests for rehearing May 29 on this single issue. The state and Anadarko, Tesoro Corp. and Tesoro Alaska Co. also protested the commission's summary resolution of the issue in an April 16 order and requested a rehearing in a May 15 filing.

The filings reflect the latest concerns raised before FERC in a long-running dispute over interstate shipping rates charged

by owners of the pipeline, which transports crude produced on Alaska's North Slope to tidewater in Valdez.

In the April 29 order, the commission responded to a March 31 filing by ExxonMobil Pipeline Co. in which the carrier proposed to change its 2009 interstate shipping rate for its share of capacity on the pipeline, effective May 1.

The commission ruled last year in a June 2008 order known as Opinion No. 502 that interstate shipping rates calculated using a method established in a 1985 court settlement were "unjust and unreasonable" and directed the pipeline's carriers to use actual costs to recalculate interstate shipping rates for the years 2005-08.

On Jan. 28, 2009, the pipeline's five owners — BP Pipelines (Alaska) Inc., ConocoPhillips Alaska, Unocal Pipeline

Co., Koch Pipelines (Alaska) LLC and ExxonMobil Pipeline Co. — filed a new interstate rate for calendar year 2008 in compliance with Opinion No. 502.

But the shippers and the state protested the tariff, citing various problems with it, including the incorrect "useful life" estimate.

On April 16, the commission issued an order in which it accepted the 2008 rate on an interim basis, subject to refund, and directed a FERC administrative law judge to hold a public hearing on most of the issues raised and to correctly calculate a 2008 interstate tariff for the pipeline. The carriers have appealed this ruling.

In the April 29 order, FERC accepted and suspended ExxonMobil's proposed 2009 rate to become effective May 1, subject to refund, and ordered a public hearing to resolve the aspects of the protests that did not overlap concerns about the 2008 rates and to determine correct interstate shipping rates for 2009.

However, the commission dismissed the "useful life of the pipeline" issue in both rulings as one it already decided in Opinion No. 502.

Issue needs current review

The shippers and the state, meanwhile, are pressing their argument that the commission erred in summarily disposing of

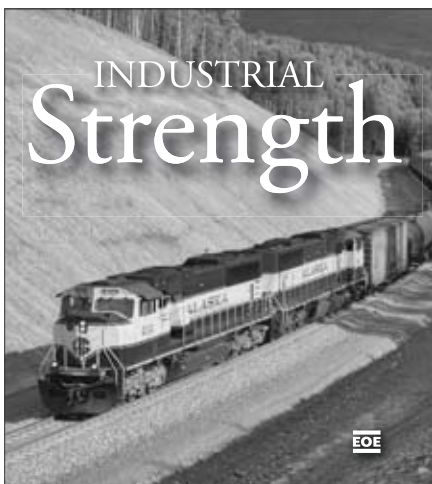
the "useful life" issue in the two April orders. They said the decision relied on the commission's earlier calculation in Opinion 502 that the useful life of the pipeline ends in 2034 and said this was a mistake for a variety of reasons. Among the reasons cited:

The 2034 date adopted in Opinion No. 502 was not based on a reserve study of the oil resources that will be transported by the trans-Alaska oil pipeline, which is the type of evidence the commission typically relies on to determine a pipeline's remaining useful life.

Rather, the 2034 date reflected the extension of the pipeline right of way, which was the longest extension permitted by law.

"In this regard, it is important to recognize that the participants in the Opinion No. 502 proceeding agreed on a number of rate inputs, such as life of line, throughput, and operating expenses, with the principal focus being on the methodological question of whether the TSM should continue to be used to set TAPS rates. Thus, adoption of the 2034 life of line in Opinion No. 502 for the 2005-2006 TAPS rates should in no way be taken as a fully litigated resolution of that issue, nor should it preclude the parties from presenting new evidence, including reserve studies, to determine the appro-

see LIFE SPAN page 5



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PUBLICATIONS

Eric Lidji heads to Pittsburgh; Wesley Loy moves to Petroleum News

Petroleum News reporter Eric Lidji is on his way to Pennsylvania after accepting an associate editor's position at the Jewish Chronicle, a weekly newspaper in Pittsburgh. Former Anchorage Daily News reporter Wesley Loy is taking Lidji's place at Anchorage-based Petroleum News.

During his year and a half at Petroleum News, Lidji covered exploration, in-state gas issues and oil company investment in Alaska.

"Eric did an excellent job for us," Petroleum News publisher and executive editor Kay Cashman said June 3. "He'll be missed."

Lidji will continue working with Petroleum News on a freelance basis, she said, primarily on special publications such as The Explorers and Big Risk, Bigger Rewards magazines.

Loy, a freelance writer, worked for more than 10 years as a business reporter at the Anchorage Daily News, covering oil and gas and commercial fisheries for most of that time.

"We're very happy to be working with Wesley. He's not only a talented writer, but he's very knowledgeable about the oil and gas industry in Alaska," Cashman said.

Loy was born and raised in Tennessee, and holds a bachelor's degree in journalism from the University of Tennessee, as well as a master's in Southern studies from the University of Mississippi.

Southern studies is a regional version of American studies that combines the study of history, literature, economics, art, music and the general culture of the American South.

Lidji left the weekly Petroleum News at the end of the third week in May. Loy began writing for the newspaper the following week.



WESLEY LOY

—PETROLEUM NEWS



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● SAFETY & ENVIRONMENT

Canada's government: After you, U.S.A.

Environment Minister Prentice says regulations need to be harmonized; backs off having regs by fall with 2010 implementation date

By GARY PARK
For Petroleum News

Forget about "Made in Canada." Let's go with "Made in the U.S.A."

That seems to be the thinking of Prime Minister Stephen Harper's Canadian government as it ponders delaying implementation of rules limiting greenhouse gas emissions by six years until 2016 to match a proposed U.S. timetable.

Environment Minister Jim Prentice indicated to reporters in a conference call May 28 that Canada has effectively abandoned its earlier commitment to develop regulations by the fall of 2008 and enforce them on Jan. 1, 2010, which calls into question Harper's stated goal of lowering GHGs by 20 percent from 2006 levels by 2020, although Prentice insists that target is unchanged.



JIM PRENTICE

"In terms of our industrial competitiveness — protecting jobs, investments — we will need to ensure that the application dates for Canadian climate change policies are harmonized with the United States, or at least that we give close consideration to how and when individual sectors of the American economy will be regulated," he said.

Prentice said that will affect the "pure industrial sector," which represents about 30 percent of total Canadian emissions.

"The actual effective dates of those regulations will be subject to the discussions we are having with our international and continental partners," he said.

Part of plan for Copenhagen

The adjusted timeline is also intended to be part of

whatever plan Canada takes to Copenhagen this December when the world is supposed to agree on a joint strategy for tackling climate change to succeed the Kyoto Protocol which expires in 2012.

All of which undermines one of the government's proudest boasts that it was showing the way to the United States and that it would develop a "Made in Canada" strategy.

Prentice said Canada plans to arrive at Copenhagen with policies that relate to all sources of GHGs in Canada, which "will be tabled sequentially, once I am satisfied they represent what's in the best interests of our country."

"In the case of any regulations we bring into law in Canada, we will ensure that careful attention is paid to what our major trading partner (the U.S.) is doing, what their regulations are and when their regulations come into law," Prentice said. "And at this point what's under discussion in the United States starts in 2012" and will be phased in over four years.

Decisions to vary by sector

The decisions to harmonize regulations with those of the U.S. will vary by economic sector, he said, noting Canada's electrical industry is already much cleaner than that of the U.S., while the auto industry is completely integrated, so it makes sense to have the same rules for fuel-economy or tailpipe-emissions standards.

Defending the proposed delay, Prentice said the issues are "very complex and it will take us through 2010 to develop the regulatory framework we're talking about. So 2012 is not that far away."

He said that while drafters of Canada's legislation are "mindful" of the current economic and budget challenges that did not have a direct impact on their work because the concerns relating to climate change regulations extend over a much longer timeframe.

Critics say failure to move costing Canada influence on US

The Alberta-based Pembina Institute said Canada "must develop and implement regulations urgently if we are to have a chance of influencing U.S. decisions, ending uncertainty that is bad for business and meeting emissions reduction targets that are aligned with science."

Matthew Bramley, the director of Pembina's climate change program, said it is obvious federal officials have no understanding of the threat or the urgency of global warming.

He said Canada has had four different plans in the past decade, but never adopted the actual implementation regulations.

"Canada's reputation is going to remain stuck at rock bottom," he said.

Graham Saul, executive director of Climate Action Network Canada said "absolutely nothing" has happened in the two years since the government released a plan and indicated that regulatory actions was imminent.

Alberta endorses shift

Alberta Premier Ed Stelmach endorsed the shift in strategy, arguing Canada was moving "very fast" in adopting more aggressive environmental standards.

He said the delay will provide Alberta with the time it needs to get carbon capture and storage projects up and running.

Stelmach said he would like to shift the environmental focus off the oil sands to coal-fired electricity generation, which is the largest source of Alberta's GHGs.

"We will do our part through carbon capture, but allow us to put projects in place so that we can get the amount of carbon down."

Alberta has earmarked C\$2 billion in seed money to help finance the development of CCS technology through research and pilot projects. ●

continued from page 4

LIFE SPAN

priate life of the TAPS line to be used in setting rates for 2008 forward," the shippers and the state told the commission.

They also said the Opinion No. 502 proceeding did not consider issues related to the carriers' strategic re-configuration program, into which the owners poured hundreds of millions of dollars in a multiyear effort to upgrade and streamline the pipeline system's operation and extend its useful life. The shippers and the state also have challenged the carriers for including the strategic re-configuration costs in the tariffs and that issue was set for hearing in the April 16 order.

Ample evidence of longer life

The shippers and the state now argue that participants in that hearing should be permitted to investigate and present evidence regarding the life of the trans-Alaska oil pipeline and the life of the North Slope fields given the new facts related to the SR project.

They said ample evidence — including technical studies, Alyeska documents, relevant financial reports, statements of the carriers' production affiliates, as well as statements of the carriers' own witnesses — indicates that the remaining economic life of the pipeline extends well beyond 2034.

Included in the evidence, the challengers said, is one witness' testimony that the U.S. Geological Survey places estimates of technically recoverable, undiscovered oil resources in the central North Slope alone at between 2.6 billion and 5.9 billion barrels. Estimates of undiscovered oil resources expand when offshore reserves and those outside the central North Slope

are taken into account.

If resources in the Arctic National Wildlife Refuge, the National Petroleum Reserve, Yukon Flats and the Chukchi and Beaufort seas are included, estimates of undiscovered reserves total about 54 million barrels of oil.

The challengers also cited a report by the BP Prudhoe Bay Royalty Trust in 2008 that "BP Alaska expects continued economic production from the Prudhoe Bay field at a declining rate through 2075."

In addition, a study titled "Report on the Estimated Life of the North Slope Proven Reserves" presented to the Alaska State Assessment Review Board as part of ongoing proceedings concerning the trans-Alaska oil pipeline tax assessment concluded that the pipeline will flow an average of 196,000 barrels per day in 2050, 16 years after the 2034 end-life date determined by Opinion No. 502, the shippers told FERC. The figure was based on data from the Alaska Department of Revenue Tax Division.

"Thus, the life of TAPS is clearly a disputed issue of material fact, which warrants a hearing under Commission precedent," the shippers wrote.

Lastly, the challengers argued that "res judicata" principles, or rules that prevent an issue from being re-litigated, do not bar such a hearing, since that doctrine does not apply to litigation concerning rate inputs that change over time. Accordingly, the commission should grant rehearing and set the life-of-line issue for hearing so that the 2008 trans-Alaska oil pipeline rate, which the April 16 order recognizes as the "going-forward" rate, will be based on current evidence, including reserve studies and SR impacts, bearing on the remaining economic life of the pipeline, they concluded. ●

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NATURAL GAS

Jeffress, Rogers join ANGDA board

Alaska Gov. Sarah Palin has made two new appointments and one reappointment to the board of the Alaska Natural Gas Development Authority.

Newly named are William R. Jeffress and Brian D. Rogers; the governor reappointed Kathryn K. "Kate" Lamal.

Leaving the board are Bob Favretto, named to the board and reappointed (in 2003 and 2006) by Gov. Frank Murkowski, and Lorie Hovanec, named to the board by Palin in December 2006.

Frank Bailey of the Office of Boards and Commissions told Petroleum News in an e-mail that of the three members whose terms expired in June, only Lamal requested reappointment.

Of the seven members on the board two, board President Scott Heyworth and Dan Sullivan, recently elected mayor of Anchorage, have been on the board since it was established in June 2003. Lamal and Don Benson, the board's vice president, were named by Palin in 2007. Pat Ryan was named to the board this March.

ANGDA was created by a statewide voter initiative in 2002. Its statutory mission is to develop a natural gas pipeline from the North Slope to Prince William Sound or Cook Inlet.

Jeffress, Rogers, Lamal

Jeffress, of Anchorage, is principal consultant and manager for the Alaska office of SRK Consulting Engineers and Scientists. He has nearly 20 years experience as environmental manager and engineer at Nevada and Alaska mines and directed the Alaska Department of Natural Resources' Office of Project Management and Permitting. Jeffress earned a bachelor's degree in agriculture from the University of Nevada, Reno.

Rogers, of Fairbanks, is an educational administrator and former public official and economic policy analyst. He had been interim chancellor of the University of Alaska Fairbanks since 2008, and was recently named chancellor. Rogers has served as vice president of finance for the University of Alaska on the university's Board of Regents. He earned a master's degree in public administration from Harvard University's John F. Kennedy School of Government.

Lamal, of Fairbanks, has been vice president for power supply of Golden Valley Electric Association since 2001, and was the cooperative's environmental officer from 1993 to 2001. Lamal earned a bachelor's degree in geology from the University of Washington in Seattle in 1980, and a master's degree in geology from Western Washington University in Bellingham in 1983.

—KRISTEN NELSON

SAFETY & ENVIRONMENT

Whale found on bow of oil tanker

An oil tanker struck an endangered humpback whale and carried it on its bow into Port Valdez.

National Oceanic and Atmospheric Administration spokeswoman Sheila McLean says crewmen June 1 on an escort vessel spotted the 40- to 50-foot whale on the bow of the tanker Kodiak as it docked.

Valdez residents say they can't remember a similar incident in the 30 years that tankers have been pulling in to pick up oil from the trans-Alaska pipeline.

Officials say they don't know if the whale was alive when it was struck by the ship.

Federal officials say it would be too expensive to send a team to determine how and when the whale died. They plan to tow the carcass to sea and sink it.

—THE ASSOCIATED PRESS

FINANCE & ECONOMY

Crude oil rises to new high for '09

By CHRIS KAHN

Associated Press Writer

Oil prices on June 4 set a new high for the year, buoyed by a weaker dollar, the first drop in unemployment numbers since January and renewed expectations that crude will extend its rally this year.

Benchmark crude for July delivery was up \$3.35 to \$69.47 a barrel on the New York Mercantile Exchange. Oil climbed as high as \$69.56 earlier in the day.

In London, Brent prices rose \$2.85 to \$68.73 a barrel on the ICE Futures exchange.

Oil prices, which have rallied for three months, soared the first week of June to their highest levels since November. Crude now fetches nearly twice its February price, mostly on the expectation that the dismal U.S. economy could be stabilizing.

The government said June 4 that the nation's unemployment rolls fell for the first time in 20 weeks. The Labor Department said the number of people filing for jobless benefits dropped by 15,000 to 6.7 million.

Still a huge surplus

However, experts say the market is filled with more enthusiasm than is warranted by the huge surplus of petroleum in the U.S.

On June 4, the Energy Information Administration said the country's supply of natural gas rose more than expected last week to 2.34 trillion cubic feet. Natural gas is a major energy source for power plants, and the bloated inventory is a sign of how much manufacturers and other industries have slowed down.

"It's certainly hard to see anything in the fundamental numbers to support" higher crude prices, said Michael Lynch,

see **PRICES** page 7

ALTERNATIVE ENERGY

NMFS questions CI tidal power impact

The National Marine Fisheries Service has sent a letter to the Federal Energy Regulatory Commission, questioning the adequacy of proposed environmental studies for a pilot tidal power system that Ocean Renewable Power Co. wants to install in Alaska's upper Cook Inlet, in an area identified as prime beluga whale habitat in a Cook Inlet beluga whale conservation plan. The area in question is also used by fish and is the site of salmon runs, NMFS said. In October NMFS listed the Cook Inlet beluga whale as endangered under the Endangered Species Act.

OPRC has proposed installing a single tide-powered turbine module in Cook Inlet in 2010, 42 feet below the water surface at low tide, either near Fire Island or near Cairn Point in Knik Arm, with the possibility of adding four more modules in 2012. If the hydrokinetic system pans out it could supplement electricity supplies in Southcentral Alaska, supplies that are currently highly dependent on Cook Inlet natural gas.

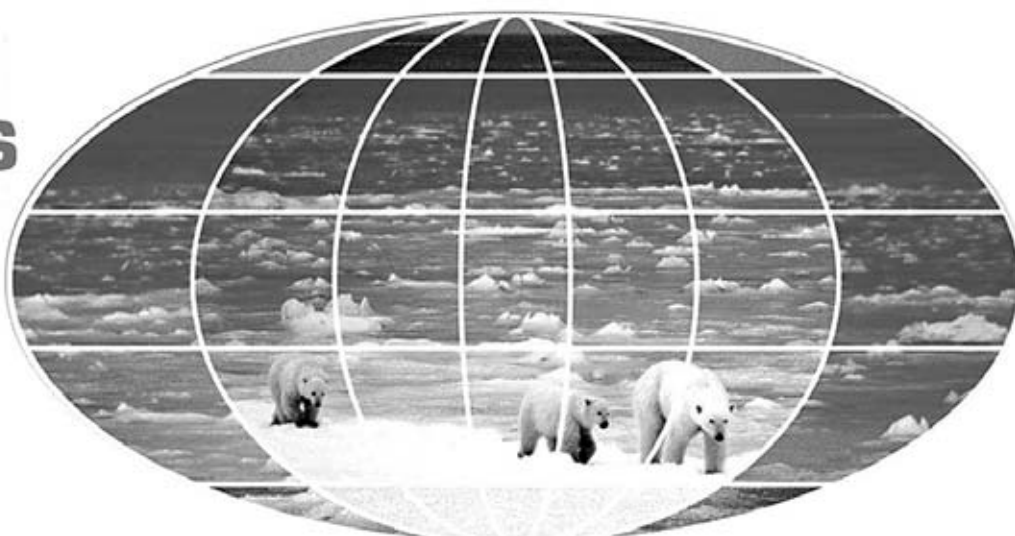
NMFS says that although it supports the development of tidal power as a potential new energy source, the agency is also concerned about the possible impact of turbine blade strikes, underwater cables, industrial noise, electromagnetic radiation and habitat alteration on marine wildlife. The agency wants baseline environmental studies that precede installation of the pilot power plant to be extended from a proposed single summer field season in 2009 to at least a two-year time span, with more comprehensive wildlife monitoring arrangements than have currently been proposed.

The agency also says that OPRC's stated intent to apply for an Incidental Harassment Authorization for beluga whales suggests that a formal consultation on potential beluga whale impacts will be necessary, under the terms of section 7 of the Endangered Species Act.

—ALAN BAILEY



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• UTILITIES

Enstar applies to increase delivery rate

PETROLEUM NEWS

Enstar Natural Gas Co., the Southcentral Alaska natural gas distribution company, has applied to the Regulatory Commission of Alaska to increase its base rate, the rate the company charges to deliver natural gas to customers.

Enstar said this will be the first increase in that rate since 1984. The proposed increase does not include an increase in the cost of natural gas. That cost, Enstar said "is paid by customers, dollar for dollar, without a profit or other kind of Enstar mark-up," with RCA establishing the rate for collecting the cost of gas each January.



COLLEEN STARRING

Enstar said an October 2008 order from RCA required it to make the filing for the base rate increase. The company said it expects RCA to hold hearings on the filing, which would increase the bill for a typical residential customer by about 4.7 percent. The new base rate would go into effect sometime in 2010.

Includes storage study costs

The company's filing includes recovery of costs to investigate gas storage options, costs of complying with federal pipeline inspection mandates and normal increases in the costs of goods and services. Enstar said that even with the proposed increase, base rates for service from Enstar — adjusted for inflation over the last 25 years — "will be far less than they were in 1984."

"This is Enstar's first base increase in 25 years," Colleen Starring, president of Enstar Natural Gas, said in a June 1 statement. She said Enstar serves almost twice as many Southcentral homes and businesses as it did in 1984.

"The modest base rate increase Enstar

The company's filing includes recovery of costs to investigate gas storage options, costs of complying with federal pipeline inspection mandates and normal increases in the costs of goods and services.

has proposed is necessary to give Enstar a reasonable opportunity to recoup its costs of providing service, including the cost of capital needed for investment to provide service to customers," she said.

Starring said the company has invested more than \$108 million in its gas distribution and transmission system since 2001, "excluding expenditures for development of storage and a 'bullet line' from the North Slope."

'Pro-conservation' rate design

More than 97 percent of Enstar's customers will be shifted to a single fixed charge rate, the company said. That means the only cost based on the amount of usage is the recovery of gas consumed by customers.

Enstar said this is a "pro-conservation" rate design and is a trend throughout the country, as well as fitting well with a program by the Alaska Housing Finance Corp. to encourage conservation through installation of high efficiency heaters and other energy saving measures.

Enstar is proposing that most residential customers pay \$28.47 per month for service. Most small commercial customers would pay \$67.96 per month. The company said this rate design is similar to local water, phone and cable TV.

Large commercial and industrial customers would pay a traditional combination of fixed and usage-based rates, but gas costs would still be billed as a separate component on the bill.

Enstar serves more than 130,000 customers in Anchorage, Mat-Su and Kenai Peninsula. ●

GOVERNMENT

NSF funds Alaska region research vessel

The National Science Foundation's first major award under the American Recovery and Reinvestment Act will go to help construct the Alaska region research vessel, a 242-foot ship to be operated by the University of Alaska Fairbanks.

A May 27 statement from the office of Sen. Mark Begich, D-Alaska, said the vessel has a hull specifically designed to operate in seasonal Arctic sea ice and the open waters surrounding Alaska.

"This research vessel will be a boon to science and the State of Alaska and will help solidify the University of Alaska's pre-eminence as America's Arctic university," Begich said. "This ship will help scientists better understand climate change, ocean acidification, the melting of the Arctic Ice Cap and the impacts on our fisheries and communities."

UAF was selected by NSF in 2007 to lead the construction and operation of the vessel, including all tests and science trials. The ship is expected to be completed in 2013, with science operations beginning in 2014. According to UAF's proposal, the ship will be headquartered out of the Seward Marine Center.

UAF selected in 2007

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"We are pleased that our first major award under the Recovery Act will allow NSF to invest in such a large-scale project that will have immediate and long-term benefits to the American economy," said NSF Director Arden Bement Jr. "With rapid changes occurring in the Arctic region, the ARRV will greatly improve our ability to monitor and assess these changes in a timely and safe manner for the benefit of our nation and the world."

According to the NSF and UAF, the research vessel will be the first in the U.S. academic research fleet capable of breaking ice up to 2.5 feet thick, and will open up the ice-choked waters of the Alaska region to scientists from all over the world. It will carry more than 500 researchers and students annually. The three-year construction phase of the project will support 4,350 jobs; 750 directly at the shipyard and as many as 3,600 in the broader economy. The NSF has stated it will make sure the ARRV is built in a U.S. shipyard.

—PETROLEUM NEWS

continued from page 6

PRICES

president of Strategic Energy & Economic Research. "The psychology has shifted, and people seize on the bullish news and ignore the bearish news."

On June 3 a Commerce Department report showed a smaller-than-expected rise in factory orders. And the Institute for Supply Management, a trade group of purchasing executives, said the services sector shrank in May below economists' estimates at the slowest pace since October.

The dollar also fell against the euro and the yen, a move that tends to push oil prices higher since the benchmark contract is traded in U.S. currency.

In other Nymex trading, gasoline for July delivery rose 5.89 cents to \$1.9605 a gallon and heating oil gained 5.88 cents to \$1.7972 a gallon. Natural gas for July delivery added 2.6 cents to \$3.792 per thousand cubic feet. ●

—Associated Press writers Pablo Gorondi in Budapest, Hungary and Alex Kennedy in Singapore contributed to this report.

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AADE Cook Off gives back to the community

The American Association of Drilling Engineers Alaska chapter has celebrated another successful Fin, Feather, Fur, Food Festival. The annual event was held May 15 at Kincaid Park in Anchorage and was supported through corporate sponsorships, cooking team entry fees and ticket sales.

Last year more than 20 teams participated in the cook-off and 1,000 tickets were sold.

This year, out of the 22 participating teams, BP Alaska Halibrewskies took first place for the best dish, beer battered halibut, shrimp and scallops; the Unique Machine team Wild Hogs took second place; and the Schlumberger team Schlumberger TailGators took third.

Unique Machine won for best desert, bananas napoleon.

This year's festival was organized by Alaska AADE chapter Chairman Jim Patton from Weatherford and nearly 20 volunteers. The event has raised nearly \$100,000 in the last six years.

Funds from the event are divided to help support local charities, such as the Kid's Kitchen, Downtown Soup Kitchen and Bean's Café; and AADE engineering educational initiatives such as the Knowledge Box and AADE's scholarship fund.

Educational initiatives are intended to educate students on the benefits of the oil industry to society and on career opportunities within the industry.

"It's all the people in the industry trying to give back," said Patton, "and they do a good job of it."

The AADE, a nonprofit volunteer organization, was founded in New Orleans in 1978 and comprises an affiliation of nine independent chapters, including Alaska, with more than 5,000 members and governed by an AADE National Board.

The knowledge box is a traveling exhibit showcasing the many aspects of the oil and gas industry, including teacher resources, hands-on activities and interactive lessons correlated to state and National Science Standards.

—MARTI REEVE

Photos by Jim Patton, Theresa Collins and Marti Reeve



Schlumberger drill team has spirit.



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SAFETY & ENVIRONMENT

Theory and practice in CCS technology

There's a huge worldwide drive towards the use of carbon capture and sequestration, but broad implementation faces several hurdles

By ALAN BAILEY
Petroleum News

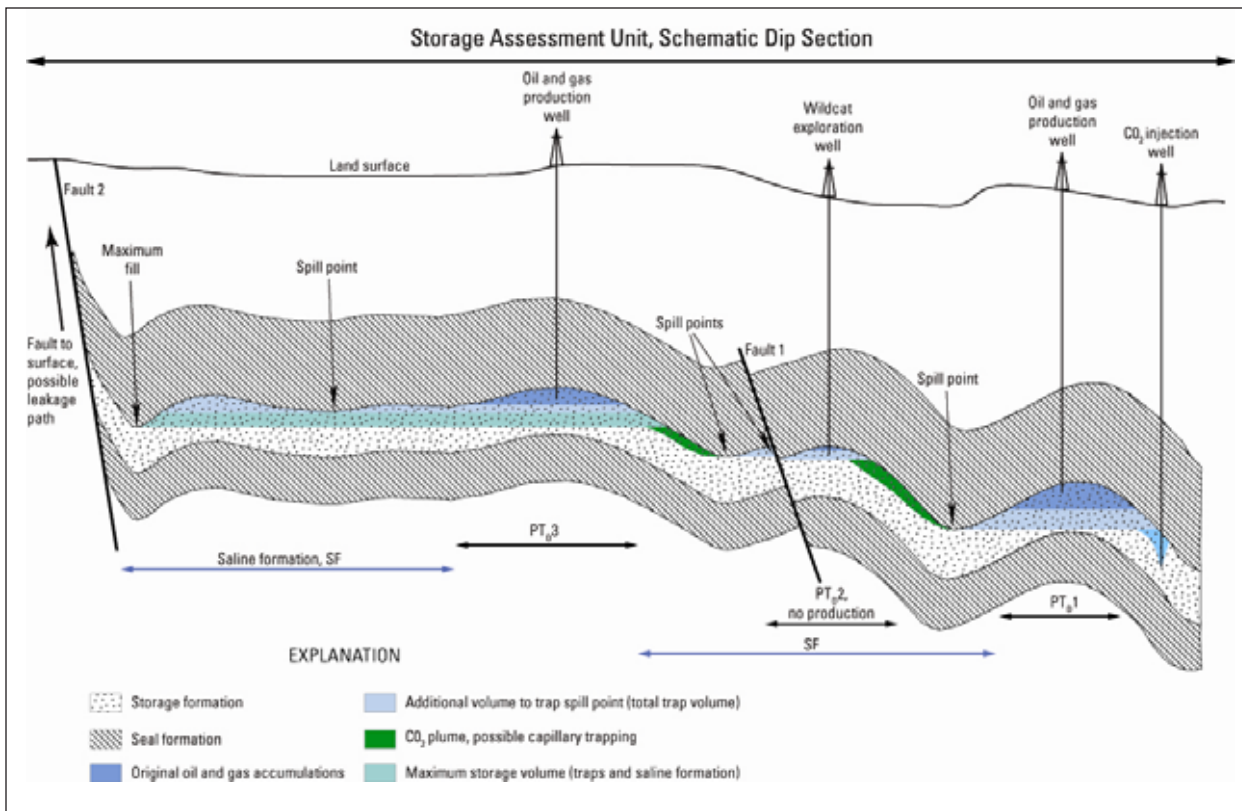
Widely blamed for an acceleration in global warming, man-made carbon dioxide has become something of a symbol for human-induced environmental degradation. And in the debate about how to minimize future volumes of this gas in the Earth's atmosphere and oceans, given our likely continued dependence on carbon-based fossil fuels, many people are pinning their hopes on somehow storing the gas in places where it can do no harm. In fact, this type of long-term storage, a technique referred to as carbon capture and sequestration, or CCS, appears to underpin most schemes for minimizing future levels of atmospheric carbon dioxide.

But, how close is the possibility of the widespread use of CCS? And what are the issues involved in the most commonly considered CCS approach, that of taking the carbon dioxide out of fuel or exhaust gas streams, and then pumping it deep underground?

Several countries, including Canada, European Union countries and Australia, have initiated major CCS research and development projects while, in the United States, the Department of Energy is sponsoring a major CCS research program involving partnerships between DOE, state agencies, universities and private companies. The DOE program is transitioning from a phase involving small-scale field tests of CCS technologies into the start of some large-scale tests of prototype storage facilities in various parts of the country: The idea is to test different techniques for carbon dioxide storage; to determine infrastructure requirements; and to work out what type of regulations might be required for a commercial storage operation.

Three commercial applications

But although worldwide there is a long list of planned CCS projects, there are in practice only three CCS applications in commercial operation, Diane Shellenbaum, a petro-



A typical sequestration site might involve injecting liquid carbon dioxide into an underground rock reservoir involving folded and faulted rock strata. The carbon dioxide will tend to float above water in the reservoir, spilling and migrating sideways and upwards from one structure to the next as each structure fills. Faults that cut through the strata may allow the carbon dioxide to leak from the reservoir.

leum geophysicist with Alaska's Division of Oil and Gas and a member of a state team investigating options for reducing carbon dioxide emissions from Alaska, told Petroleum News May 29. Those applications are at Weyburn in Saskatchewan, Canada; the Sleipner gas field in the North Sea; and the In Salah natural gas project in Algeria.

The Weyburn system, operating since 2000, involves

pipng carbon dioxide about 200 miles from a coal gasification plant in North Dakota for enhanced oil recovery in the Weyburn oil field (there are many projects that sequester produced carbon dioxide as part of enhanced oil recovery programs, but these projects do not typically capture carbon dioxide from industrial processes). At Sleipner and In Salah, carbon dioxide, removed from produced natural gas

see **CCS TECHNOLOGY** page 10

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Photos courtesy of Alaskan Artist Ben Hagedorn

continued from page 9

CSS TECHNOLOGY

as part of purification prior to gas export, is injected back into an underground reservoir.

In general, a CCS implementation involves four distinct components: capturing the carbon dioxide; dehydrating and transporting the carbon dioxide to the sequestration site; compressing and injecting the carbon dioxide into storage; and monitoring what happens to the sequestered carbon dioxide, Shellenbaum said.

Because produced gas can naturally contain some carbon dioxide, an initial step in carbon dioxide capture, the first of the CCS components, may be fuel gas treatment, as at Sleipner and In Salah. Then, in a situation where carbon dioxide is captured from a power plant, one option is to process the fossil fuel into hydrogen, to use as fuel for the plant, and carbon dioxide for sequestration. Alternatively, carbon dioxide can be scrubbed from the flue gas after combustion using a chemical fluid such as amine. Another possibility in a power station is to use oxygen rather than air in the fuel combustion process, thus producing an exhaust containing carbon dioxide and water, from which the water can be condensed to leave

Redoubt Volcano vents carbon dioxide

With so much world attention on human-generated carbon dioxide emissions, it's easy to forget that carbon dioxide also comes from natural sources.

For example, Redoubt Volcano on the west side of Alaska's Cook Inlet is spewing carbon dioxide into the atmosphere during its current eruption. According to data from the Alaska Volcano Observatory, the volcano emitted about 15,000 tonnes of carbon dioxide per day during May. If extrapolated to a possible eruption duration of nine months, that rate of emission would result in total emissions of 4 million tonnes, an amount that comes close to 10 percent of Alaska's total annual emissions of human-generated carbon dioxide, Diane Shellenbaum, a petroleum geophysicist with Alaska's Division of Oil and Gas, told Petroleum News.

—ALAN BAILEY

a carbon dioxide-rich gas stream.

Stored as liquid

If the carbon capture site is distant from the carbon sequestration site, the carbon dioxide must be shipped by pipeline or road tanker between the two sites. Then, for sequestration, the carbon dioxide would be compressed for injection down a well into a suitable rock formation to a depth in excess of perhaps 2,500 to 3,000 feet, where pressures and temperatures would cause the carbon dioxide to remain stable as a liquid, Shellenbaum said.

Storing the carbon dioxide as a liquid rather than as a gas greatly reduces the volume of rock required for storage while also reducing the likelihood of the sequestered material escaping from the reservoir, Shellenbaum explained. And, like oil, liquid carbon dioxide tends to float above water in a reservoir, she said.

Then, over time, the carbon dioxide may dissolve in the water, to form a relatively heavy liquid that sinks.

"Ideally that's what you'd like for long-term storage," Shellenbaum said. Or, better still, the carbon may react chemically with

material in the reservoir to become a solid mineral, she said.

However, a key to successful underground sequestration is the location of a suitable impervious rock that will seal the carbon dioxide into an underlying reservoir rock — for successful carbon sequestration, carbon dioxide needs to remain trapped underground for perhaps thousands of years, thus rendering a storage reservoir with even quite slow leakage somewhat worthless.

Depleted fields

Given the importance of having an effective seal rock in a situation that can form a fluid trap, the usual first choice for carbon dioxide storage is a depleted oil or gas field, thanks to the fact that the properties of the field reservoir and seal rocks will already be well established. Trying to develop a storage facility at some new site would require an exploration project, involving the determination of underground structures and rock properties, Shellenbaum said.

However, where a power plant is located far from existing oil and gas fields, as is the situation for some coal-fired power plants in the Lower 48, it will be necessary to explore for a suitable carbon dioxide reservoir or build a carbon dioxide pipeline. In this type of situation deep, well-sealed reservoirs containing brine are likely candidates, in part because this type of reservoir will avoid contamination of potable water that might be tapped by water wells. Other possibilities being investigated include fractured volcanic rocks, where the carbon dioxide may react with the rock material to form solid minerals.

Once a CCS system starts operating it will probably be necessary to use techniques such as seismic or gravity surveys to monitor what happens to the carbon dioxide in the underground reservoir, both to verify that the reservoir is not leaking and to track the migration of the carbon dioxide within the reservoir. Tracking the migration of the carbon dioxide will be important because of the possibility of the material migrating from the originally intended reservoir location into a new reservoir site, perhaps subject to some different subsurface land ownership rights, Shellenbaum explained.

And the various complications that will be inherent in any CCS arrangement will require government regulations, regulations that do not currently exist in the United States but which the Environmental Protection Agency is currently developing, Shellenbaum said. Lack of regulations would impede the development of a commercial CCS project, in part because of the risk of environmental lawsuits.

"There are still a lot of unknowns," Shellenbaum said. "I wouldn't think anyone would take the risk."

Very expensive

However, the biggest impediment to a commercial CCS development is the high cost of building and operating the various components of a CCS system. At Weyburn, the value gained from carbon dioxide enhanced oil recovery pays for the CCS costs; at Sleipner, where carbon dioxide has to be removed from produced gas regardless of whether the gas is sequestered or vented to the atmosphere, the cost of sequestration is presumably offset by savings in Norwegian carbon emissions taxes.

An operational CCS system at a power plant, for example, will significantly increase the cost of power — according to a 2005 report by the Intergovernmental Panel on Climate Change, CCS may increase the cost of electricity by anywhere from 21 to 91 percent, depending on the type of power generation technology involved. Consequently, there's no real way of making CCS financially viable without some

see **CCS TECHNOLOGY** page 13



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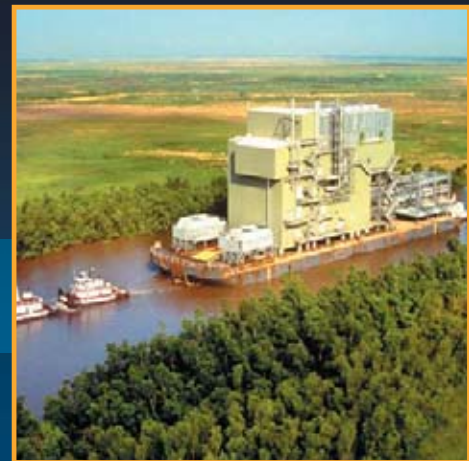
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● EXPLORATION & PRODUCTION

BP plans seismic in Canadian Beaufort

By GARY PARK
For Petroleum News

A year after rolling the dice in the Canadian Beaufort Sea, BP has served notice it will conduct a three-dimensional seismic program this summer.

It told the National Energy Board that its Pokak 3-D program will cover a minimum 466 square miles and, if ice and weather conditions permit, could be expanded to 596 square miles.

The work involves two 100-percent-owned Exploration Licenses, which BP acquired last year for work commitments of almost C\$1.2 billion, including a record C\$1.18 billion for EL 449.

Although no cost estimate has been disclosed, BP said CGGVeritas, using the Norwegian-registered seismic vessel Viking Vision, is expected to carry out the seismic work within a 90-day period from late July to October.

The company told the NEB it expects to take advantage of the short operations season by gathering the seismic data for 24 hours a day.

If conditions are unfavorable, BP plans to return to the Beaufort in the same period of 2010.

If conditions are unfavorable, BP plans to return to the Beaufort in the same period of 2010.

Water depths for the base seismic targets range from 230 feet to 345 feet, while an expanded program area has water depths of 197 feet to 426 feet.

Should ice or weather conditions prevent or limit the program, BP is proposing an optional 3-D or 2-D program, with the 2-D data supplementing available industry data gathered from existing BP leases and Significant Discovery Licenses.

Assessment under way

The NEB is currently conducting an environmental assessment of the program, taking into account public responses.

So far the Inuvialuit Renewable Resource Committee has concluded the proposed program would have no significant impact on the environment or on Inuvialuit wildlife harvesting, but Ecojustice (previously the Sierra Legal Defense Fund) said in a letter to the NEB on behalf of the World Wildlife Fund-Canada that it is concerned that the sound of air guns could upset the behavior of beluga and bowhead whales, causing temporary or permanent hearing loss.

BP said last year it acquired the Beaufort licenses to grow and add to its "business development activities" and viewed the frontier region as a chance to improve North America's energy supply and enhance security.

During an exploration period in the 1970s and 1980s, when Canadian government grants covered up to 80 percent of well costs by companies owned at least 75 percent by Canadians, the major discovery occurred in 1984 when Gulf Canada Resources (since acquired by ConocoPhillips) estimated its Amauligak discovery contained 350 million barrels of oil and 1.4 trillion cubic feet of natural gas. ●

● EXPLORATION & PRODUCTION

State approves Northeast West Sak PA

By KRISTEN NELSON
Petroleum News

The Alaska Division of Oil and Gas has approved a new participating area at Kuparuk, the Northeast West Sak PA.

In a May 29 decision the division said the new participating area includes portions of three state oil and gas leases within the Kuparuk River unit, some 2,688 acres. The NEWS PA includes acreage overlying the West Sak and Ugnu formations six miles northwest of the existing West Sak participating area.

The state approved formation of the West Sak PA in 1997 and expansions of that PA in 2004 and 2007.

The NEWS PA, however, is separate from the existing West Sak PA.

"Lack of communication between the NEWS PA and the WSPA warrants a separate participating area," the division said.

Three wells completed

ConocoPhillips Alaska, the Kuparuk River operator, has completed three wells in the proposed NEWS PA as unit tract operations and the division said confidential information submitted by ConocoPhillips indicates the West Sak reservoir within the NEWS PA is capable of

ConocoPhillips has drilled one horizontal multilateral producer and two supporting multilateral injection wells since February 2008 targeting West Sak sands within the proposed NEWS PA. The production well, 3K-102, has averaged more than 1,200 barrels of oil per day.

producing or contributing to production in paying quantities.

Drilling is from drill site 3K and production will be processed through existing Kuparuk River unit facilities.

The NEWS PA is in the northeastern portion of the Kuparuk River unit and targets the West Sak sands, part of the West Sak-Schrader Bluff sands that occur throughout the Kuparuk, Milne Point, Prudhoe Bay and Nikaitchuq units.

"Individual sand bodies, separated by interbedded non-reservoir siltstones and mudstones, range from a few feet to about 40 feet in thickness," the division said.

Alaska Oil and Gas Conservation Commission order 406 defines pool rules for West Sak, and the proposed NEWS PA lies within the West Sak oil pool boundary, the division said, with the stratigraphic limit of the pool defined as the equivalent of the interval between 3,742

feet and 4,156 feet measured depth in the 1971 ARCO West Sak No. 1.

Structural dip in east

Kuparuk River unit West Sak sands have reservoir depths ranging from 2,700 feet true vertical depth in the southwestern portion of the unit to some 3,800 feet in the northeast.

The division said the eastward structural dip of the West Sak causes increasing reservoir temperatures in the east and an associated decrease in the viscosity of the oil. Reservoir temperatures range from 60 degrees Fahrenheit in the shallower western area to 80 degrees F in the deeper eastern area, while the API gravity of the oil varies between 10 degrees and 22 degrees and viscosity varies from about 30 centipoises to more than 300 centipoises.

ConocoPhillips has drilled one horizontal multilateral producer and two supporting multilateral injection wells since February 2008 targeting West Sak sands within the proposed NEWS PA. The production well, 3K-102, has averaged more than 1,200 barrels of oil per day. The division said ConocoPhillips plans to complete additional NEWS wells in 2010.

AOGCC data shows some 40.6 million barrels of oil have been produced from the West Sak formation at Kuparuk through March. ●



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• EXPLORATION & PRODUCTION

ANS May production up 7% from April drop

By **KRISTEN NELSON**
Petroleum News

Alaska North Slope crude oil production averaged 714,913 barrels per day in May, up 6.7 percent from an April average of 670,030 bpd. April production was driven down by a drop of almost 15 percent in Prudhoe Bay production and a rebound in Prudhoe production made a positive difference of more than 40,000 bpd in May-over-April production.

Prudhoe Bay May production averaged 360,816 bpd, up 12.7 percent from the April average of 320,120 bpd. Prudhoe Bay April production was affected by proration on the trans-Alaska oil pipeline early in the month related to the tanker schedule and by preventative maintenance at the field.

Tanker issues also affected May production (see related story on this page).

Prudhoe Bay is operated by BP Exploration (Alaska) and volumes include the initial producing area and satellites at Midnight Sun, Aurora, Polaris, Borealis and Orion.

Lisburne, part of greater Prudhoe Bay and also operated by BP, averaged 31,029 bpd in May, up 32.5 percent from an April average of 23,421 bpd. April production at Lisburne was also affected by maintenance. Lisburne includes production from Point McIntyre and Niakuk.

The BP-operated Endicott field averaged 13,623 bpd in May, up 8 percent from an April average of 12,618 bpd.

BP's Milne Point field averaged 30,517 bpd in May, up 1.8 percent from an April average of 29,990 bpd.

Other fields had decreases

Other North Slope fields had month-over-month decreases.

The BP-operated Northstar field averaged 23,154 bpd, down 3.4 percent from an April average of 23,969 bpd.

The Alpine field averaged 107,486 bpd in May, down 2.8 percent from an April average of 110,554 bpd. Alpine, operated by ConocoPhillips Alaska, is the major field in the Colville River unit and includes production from satellites at Fiord, Nanuq and Qannik.

The ConocoPhillips-operated Kuparuk River field averaged 148,288 bpd in May, down 0.7 percent from an April average of 149,358 bpd. Kuparuk production includes satellites at Tabasco, Tarn, Meltwater and West Sak, as well as the Pioneer Natural Resources Alaska-operated Ooguruk field.

Production on the North Slope is also seasonally affected by warmer weather because gas compression is less efficient when temperatures rise. The Pump Station No. 1 temperature averaged 28.9 degrees Fahrenheit in May, compared to 6.9 degrees F in April.

Cook Inlet continues to fall

Production from Cook Inlet, dramatically cut in April by the shutdown of the Drift River terminal on the west side of the inlet due to volcanic eruptions at Mount Redoubt, averaged just 3,522 bpd in May, down 31.4 percent from an April average of 5,134 — that number a drop from almost 11,000 bpd in March.

ANS crude oil production peaked in 1988 at some 2 million barrels a day; Cook Inlet crude oil production peaked in 1970 at more than 227,000 bpd. ●

• EXPLORATION & PRODUCTION

High Valdez inventory forces slope cuts

Lack of tanker capacity could be one reason for 20% proration ordered by Alyeska Pipeline in mid-May, dropping production 16%

By **WESLEY LOY**
For Petroleum News

North Slope oil production unexpectedly tumbled for a couple of days in mid-May after Alyeska Pipeline Service Co. directed producers to prorate their production by 20 percent.

Spokespersons for Alyeska, which operates the 800-mile trans-Alaska pipeline and the tanker dock at Valdez, said high inventory levels in the mammoth storage tanks at the terminal were approaching capacity. Thus, the flow of oil down the pipeline needed to be cut back.

Alyeska issued the proration order at noon May 17, spokesman Matt Carle said.

The day before, total North Slope oil production was 744,068 barrels, Alaska Department of Revenue figures show. For May 17, production was down by 9.6 percent to 672,986 barrels, and on May 18 production was off by 15.9 percent to 625,548 barrels.

Proration ended by around 5 p.m. on May 18, Carle said. Daily production went back above 700,000 barrels the next day and for most of the remainder of the month.

Alyeska couldn't say

Carle and another Alyeska spokesper-

son could not say what caused high inventory well in excess of 6 million barrels for several days in mid-May.

Typically, equipment breakdowns, rough weather hampering tanker loading at Valdez, or planned pipeline maintenance events are among the leading reasons why Alyeska prorates North Slope production.

None of those scenarios was to blame this time, however, and no one seemed able to pinpoint the root cause of the high oil inventory and the May 17 proration notice — the third issued this year, Alyeska spokeswoman Katie Peszneckner said.

State officials and oil company representatives offered plenty of potential factors: a shortage of tanker capacity, the Flint Hills refinery at North Pole drawing less state royalty crude out of the pipeline due to a recession-related decline in jet fuel demand, cool temperatures favoring strong North Slope oil production, and

weak market demand for Alaska oil at West Coast refineries.

Flint Hills spokesman Jeff Cook acknowledged the refinery had been taking less oil, but he noted: "We're a relatively small portion of the oil going down the line."

Alan Dennis, royalty manager for the state Division of Oil and Gas, also doubted lower Flint Hills oil demand caused the proration. In fact, he said, proration events often generate "finger pointing" as to their cause.

Tanker capacity one factor

Tanker capacity appeared potentially lower than normal during May. ConocoPhillips spokeswoman Natalie Lowman said one of the company's tankers was out of service for inspection and maintenance. However, the company chartered a smaller ship, the Seabulk Pride, to work as a backup starting in late

April, she said.

Reuters reported one of the large tankers hauling Alaska oil for ExxonMobil, the SeaRiver Long Beach, made an unusual delivery of North Slope crude to a Louisiana oil port in the Gulf of Mexico in late April. Speculation was that the tanker, facing a mandatory retirement date at the end of the year, is heading to scrap. The Long Beach is the last remaining single-hull ship among the 15 tankers in the Alaska trade.

Jennifer Duval, petroleum economist with the Alaska Department of Revenue, said she's noticed consistently higher inventories at Valdez since last fall — in the high 4 million- to 5 million-barrel range — and she wonders if perhaps market conditions are causing it.

"There's an underlying trend going on," she said. "It very well could be market-related. The West Coast isn't seeing a lot of action. The refineries aren't taking oil so I guess we've got to store it." ●

continued from page 10

CCS TECHNOLOGY

form of carbon tax, carbon cap-and-trade system or enhanced oil recovery application to offset the costs.

But with Congress debating carbon cap-and-trade legislation as part of a general trend towards government-driven initiatives to reduce carbon emissions, CCS research programs being conducted by DOE and by individual states are preparing the road for a carbon-constrained future.

"We're seeing it coming down the line, and states like Virginia that are heavily coal-dependent are trying to get ahead of the curve," Shellenbaum said. ●

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NATURAL GAS

Koreans join Kitimat LNG lineup

Thwarted attempts over many years by companies to build LNG export terminals on British Columbia's coast are suddenly closer than ever before to opening up Asian markets for Canadian gas, with Kitimat LNG signing a second deal with a prospective buyer, raising its tentative sales to 44 percent of planned capacity.

The privately held company said June 1 it has reached a memorandum of understanding with Korea Gas Corp., Kogas, covering 40 percent of its proposed output of 5 million metric tons a year, five months after inking a similar deal with Japan's Mitsubishi for 1.54 million metric tons a year, although negotiations are still under way to finalize that deal two months after the expected closure.

While making strides at the Asian end, Kitimat LNG has yet to secure gas supplies from Canadian gas producers — most likely in the Horn River and Montney plays of British Columbia — although President Rosemary Boulton told the Calgary Herald that Kitimat LNG is confident deals are close.

She said Canadian producers have indicated they are "very supportive" of participating in an alternative route out of the North American marketplace.

Boulton said the appeal stems from current gas prices of about US\$4 per million British thermal units in New York, compared with US\$10 in Asia.

Kogas world's largest

Kogas is the world's largest single LNG importer, which provides a major lift to Kitimat LNG's plans and its goals of seeking financing before the end of 2009 and starting engineering work in early 2010.

The project includes a C\$1.2 billion Pacific Trail gas pipeline — a joint venture by Pacific Northern Gas and Galveston LNG, the parent company of Kitimat LNG — covering 300 miles from the shale plays of British Columbia to Kitimat and a C\$3 billion export terminal on Haisla First Nation land near Kitimat. The preliminary target date for completion of the pipeline is 2013.

The pipeline and terminal have received the necessary British Columbia and Canadian government environmental assessment go-aheads.

In addition to their purchase deals, Kogas and Mitsubishi have options to acquire equity stakes in the terminal.

Kitimat LNG said it is in talks with other potential terminal users and investors for terminal capacity, off-take and equity.

Kogas Chief Executive Officer Kangsoo Choo said in a statement that the agreement with Kitimat LNG is "key to our ongoing efforts to ensure a secure supply of natural gas for Korea in the long-term."

"We are pleased to add natural gas from Canada to our portfolio and tap into the country's growing sources of supply."

—GARY PARK

NATURAL GAS

Native American moves to oust Fowler

Both sides say they control Palmer-based Fowler Oil & Gas, which has been planning coalbed methane development in Mat-Su

By ELIZABETH BLUEMINK

Anchorage Daily News

The Palmer entrepreneur who championed a new era of coalbed methane development in the Mat-Su is locked in a vicious battle with his business partners, who have made a bid to force him out.

The head of the New York-based company Native American Energy Group said the week of May 25 that Fowler Oil & Gas Corp. shareholders recently voted to remove Bob Fowler, the founder of the Palmer-based drilling company, from his job as the company's sole director.

Fowler disputes that he has been removed from the job. He said he is the sole director of the company and cannot be removed without his own consent.

Joe D'Arrigo, the head of Native American Energy, said May 29 in an e-mail that Fowler was removed "for cause" but declined to give details to a reporter. His company specializes in minerals and renewable energy projects on Native land in the Lower 48 but like Fowler Oil & Gas, it hasn't done any drilling recently.

"Undeniably Mr. Fowler will dispute our authority to carry out this action," D'Arrigo wrote in the e-mail.

Accusations

Native American Energy provided more detail about its accusations about Fowler in a letter the week of May 25 to some people who had been involved with his Mat-Su coalbed methane exploration project. The letter accused Fowler of a slew of misdoings, including falsifying corporate records, breaching agreements and misrepresenting the relationship between Fowler's firm and Native American Energy.

In the letter, the company says that the shareholders of Fowler Oil & Gas voted to install D'Arrigo as the sole director, president, secretary and treasurer of the Palmer company.

The letter says Native American Energy merged with Fowler's company in late 2007, owns all of the stock and has been paying Fowler's salary, rent, utilities and other costs. The letter says the new name of Fowler Oil & Gas is NAEG Alaska Corp., and it wants to move ahead with the coalbed methane drilling in Mat-Su "once we properly assess the outstanding obligations and exposure he (Fowler) has left us with."

The Palmer company has fallen behind on its own schedule for drilling. A coalbed methane well off the Trunk Road in

Palmer was supposed to be producing methane by now, though the company has not yet run out of time under its Alaska Oil and Gas Conservation Commission and Mat-Su Borough drilling permits.

Joe Kircher, who oversees the Trunk Road property slated for drilling, refused to discuss the recent events. "We're on a fact-finding mission ourselves," he said.

"I really don't want to comment until I get to see both sides of what's happening," Kircher said.

State regulators said May 29 they had not received anything from Native American Energy about the Fowler Oil & Gas shake-up.

Backlash

Fowler has his own slew of allegations against Native American Energy. He said the company violated federal securities law and breached and defaulted agreements and funding obligations it inked with the Palmer company.

In an e-mail May 30, he said he still retains control of the Palmer company, despite what Native American Energy says.

Fowler said he hasn't decided yet how to respond to Native American Energy's actions to remove him from the Palmer company. On the morning of May 30, the Palmer company's Web site worked, but by afternoon, it was "under construction."

In the e-mail, Fowler said he has a number of options, legal and non-legal, to preserve the interest of Mat-Su landowners, and Fowler Oil & Gas royalty holders and creditors.

Bad history

Both Fowler and the New York company have gotten in hot water with financial regulators in the past.

Last year, for example, the U.S. Securities & Exchange Commission accused Native American Energy of "corporate hijacking," assuming the name of another company to avoid filing required documents. The SEC de-listed the company from the over-the-counter "pink sheets" bulletin where its stock was traded. The company has said that it plans to apply for re-listing.

Six years ago, in a civil case, the city of San Francisco accused a now-defunct computer firm that Fowler ran of paying kickbacks to a city official and stealing money from the city. Fowler said he did nothing wrong and that he was victimized by a "rogue employee." ●

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GOVERNMENT

Pickett re-elected as RCA chairman

On May 27, during a Regulatory Commission of Alaska public meeting, the RCA commissioners unanimously re-elected Commissioner Robert Pickett as RCA chairman. Pickett, whose initial one-year term as chairman ends on June 30, the end of the State of Alaska administration's fiscal year, will now remain at the helm of RCA until June 30 2010.

—ALAN BAILEY

State seeks contractor to vet tax credits

The Alaska Department of Revenue is looking to hire a contractor to audit applications for oil and gas exploration tax credits.

The contract will run about a year and will be worth up to \$300,000, a May 11 public notice says.

A state solicitation says the contractor will review applications prior to the department issuing production tax credit certificates for the amount of credit to be allowed against production taxes due, or to be purchased by the state.

The contractor "will verify that the credit applicant seeks credit only for expenditures allowed" under state law, the solicitation says.

The Revenue Department is aiming to award the contract by June 12.

—WESLEY LOY

EXPLORATION & PRODUCTION

Aurora plans new well at Nicolai Creek

Aurora Gas has applied to the U.S. Army Corps of Engineers for a permit to construct a gravel drilling pad on the western coast of Alaska's Cook Inlet, three-and-a-half miles west of Granite Point, to drill the Nicolai Creek No. 11 well in the Nicolai Creek gas field. The drilling project is also undergoing a review for consistency with the Alaska Coastal Management Plan.

Although Aurora hopes to establish a gas storage facility in its Nicolai Creek field, the new well is a development well to enhance gas production from the field, and not part of a gas storage development, Scott Pfoff, president of Aurora Gas, told Petroleum News.

Aurora is currently in the process of drilling the Kaloa No. 3 well, near Granite Point, as part of a three-well 2009 in-field drilling program on the west side of Cook Inlet, using Aurora's own drilling rig. Kaiser Francis Oil Co., Aurora Gas' 90 percent owner, has sanctioned funding for the Kaloa and Nicolai Creek wells but has yet to sanction the third well of the program, the Moquawkie No. 5 well, Pfoff said June 4.

In 2008 Aurora restarted drilling in its Cook Inlet gas fields after a two-year, litigation-related hiatus. The company operates the Kaloa, Lone Creek, Moquawkie, Three Mile Creek and Nicolai Creek fields, all on the west side of the inlet.

—ALAN BAILEY

EXPLORATION & PRODUCTION

State contracting Redoubt Shoal unit

Alaska's Division of Oil and Gas said May 27 that it is contracting the Pacific Energy Resources-operated Redoubt unit on the west side of Cook Inlet from 23,526 acres to 15,206 acres by removing two of the five state leases originally in the unit. The decision followed a Feb. 9 letter from division Director Kevin Banks to Pacific Energy notifying the company of the proposed unit contraction and requiring comments on the proposal by March 13.

In a May 27 letter announcing the division decision, Banks said that division had already agreed with Pacific Energy on the termination of the G-0 gas-only participating area, one of two participating areas within the unit, because that participating area had not produced gas since 2005. The other participating area, the Hemlock participating area, sources oil for the still-producing Redoubt oil field but will be reduced in size as a consequence of the division decision.

In his Feb. 9 letter Banks said that, although Pacific Energy's latest Redoubt plan of development specifies the re-drilling of four existing wells and the drilling of two new wells in the Hemlock participating area, the plan of development "does not provide specific commitments to the development activities," nor does it propose any development activities within the two leases that division has now decided to remove from the unit. And, under the terms of the Hemlock participating area approval, the state could reduce the size of the participating area to 160 acres around the development wells that were in place on Dec. 1, 2008, Banks said.

Banks said the division had declined a request from Pacific Energy to defer the final redetermination of the Hemlock participating area until the two new wells had been drilled because, he said, Pacific Energy had not committed to a drill-by date or bottom-hole locations for the wells.

"Without specific commitments for additional Hemlock PA wells, there is no basis to further postpone the redetermination," Banks said.

And, in issuing the unit contraction decision, Banks said that since Feb. 9 the division had discussed the proposed final redetermination with Pacific Energy "numerous times" and had also met with the company in April, but that Pacific Energy "neither responded nor submitted proposed redetermination tract allocations."

Anyone impacted by the unit contraction can appeal the decision within 20 days of the decision being issued.

—ALAN BAILEY

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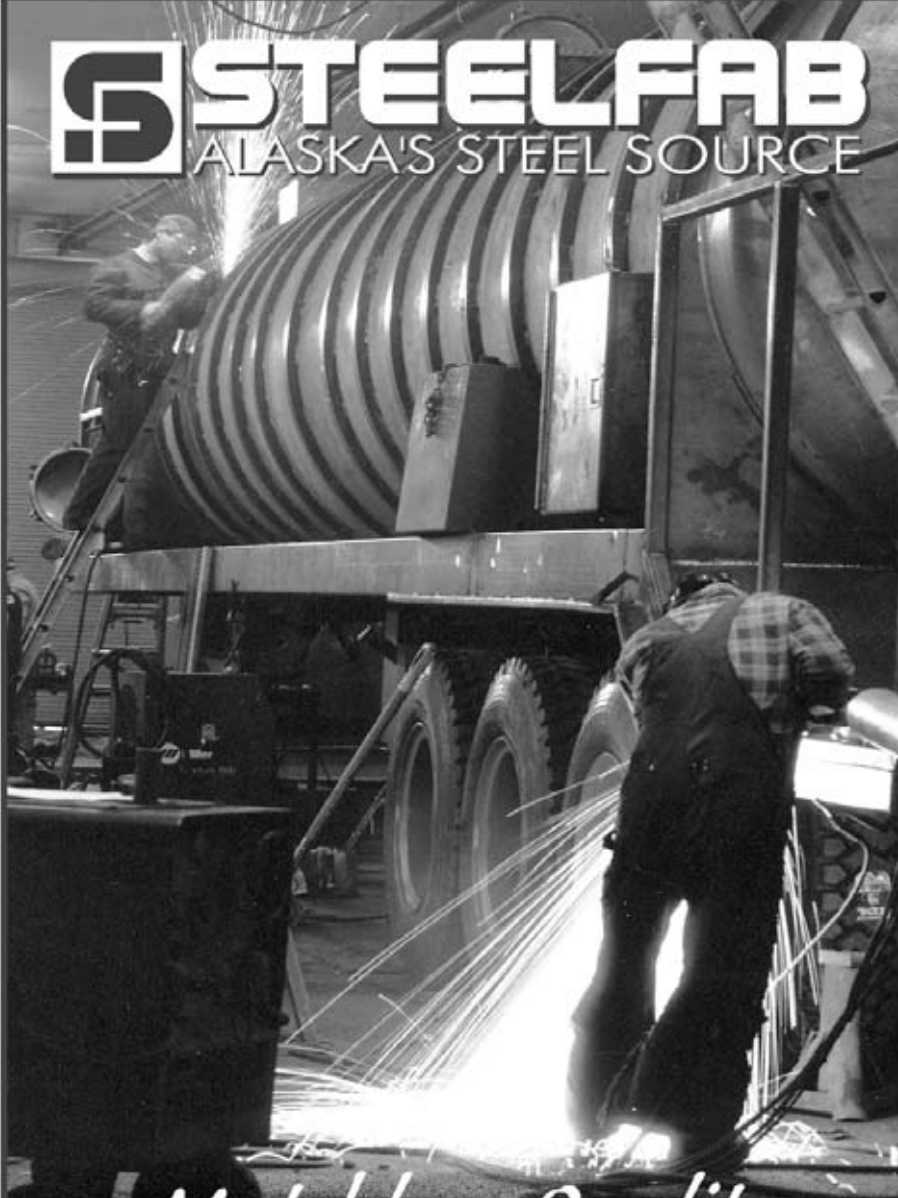


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LABORATORY

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Business Spotlight

Alta Air Logistics

Alta Air Logistics provides innovative logistics and transportation services for clients in Alaska and around the world, offering high quality solutions for customers operating in a variety of environments and unique challenges. The staff at Alta Air Logistics is a team of dedicated experts, who listen to the shipping needs of its customers.

A career in transportation for Shiloh A. MacCabe began in 1993, learning about the industry by working closely with Alaska's major oil and gas producers, and support and construction companies. For several summers, Shiloh spent her time working in sport fishing lodges in Katmai National Park and near Denali National Park. She also enjoys deepwater fishing. She has a life goal to always do the right thing and to pass that on to her two children.



SUSAN CRANE

Shiloh A. MacCabe,
Logistics Coordinator

—MARTI REEVE



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Oil Patch Bits



Carlile featured in 2009 'Ice Road Truckers'

Carlile said May 28 that its Alaska Truckers of Carlile Transportation Systems were featured May 31 on the History Channel's season premiere of Ice Road Truckers. The 2009 season focuses on the challenges faced on the Haul Road and the ice roads of the North Slope of Alaska. The Alaska chapter of Ice Road Truckers strongly emphasizes the importance of safety preparedness, challenging the industry to deliver 6,000 loads of freight to the oil camps on Alaska's North Slope in just 12 weeks. While tackling the 500-mile-plus stretch from Fairbanks to the remote outpost of Deadhorse, the truckers experienced unexpected weather, virtual whiteouts and treacherous terrain like never before.



Carlile Transportation driver Carey Hall

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Safety in the workplace is at the core of Carlile's priorities and drives its operation decisions. Carlile enforces a zero tolerance policy for any inappropriate driving performance. For more information visit www.carlile.biz.

ConocoPhillips funds 'outdoor stories' transcripts

As reported in the Fairbanks Daily News-Miner on May 31, "Alaska Tracks: Sharing outdoors stories of old," by Randy Zarnke, president of Alaska Trappers Association, a new series will begin appearing June 14 in the newspaper.

"For the past 12 years, I've traveled around Alaska, recording oral history interviews with men and women who live an active outdoor lifestyle," Zarnke said. "Thanks to support from the Outdoor Heritage Foundation of Alaska and the Alaska Trappers Association, we now have nearly 150 interviews in our collection," representing people from approximately 50 different Alaska communities.

CD's of selected interviews are sold through ATA. In response to numerous requests for written versions of the interviews, Zarnke said the News-Miner will begin running the transcripts in Sunday Features sections, thanks to the generosity of ConocoPhillips Alaska, which provided the funds to cover the cost of transcribing the audio recordings.

Houston-based ConocoPhillips, one of Alaska's largest oil and gas explorers and producers, is known worldwide for its technological expertise in reservoir management and exploration, 3-D seismic technology, high-grade petroleum coke upgrading and sulfur removal.

Canadian Mat Systems FRP raises drill platform

Canadian Mat Systems Inc. said May 29 that it is helping the oil and gas industry reduce its environmental footprint with the first Fiber Reinforced Raised Drill Platform.

The high-capacity composite RDP elevates an entire drilling operation above ground, eliminating impact to fragile ecosystems. The RDP's unique design eliminates seasonal constraints and the cost of environmental reclamation. Re-usable and lightweight, RDP panels can be lifted by helicopter and are easily transported to remote areas. Platform panels can accommodate drilling rigs up to 1.5 million pounds and fully loaded tractor trailers. The unique corrosion- and chemical-resistant product, built with modular FRP panels on a steel structure, provides a durable work surface for oil and gas exploration. Canadian Mat Systems Inc. is a leading manufacturer of temporary structural foundation panels commonly called "Mats." The panels are used to support operational activity in areas of low weight-bearing soil conditions.

For more information visit www.matsystems.ca.

Schlumberger, 20 years of Oilfield Review

Schlumberger said June 1 the 20th anniversary edition of Oilfield Review has been published. This quarterly publication is a sought-after source of state-of-the-art oilfield technology for Schlumberger's clients, employees and others interested in the technological advancements taking place within the oil and gas industry.

The publication, which is distributed worldwide, is printed in English, Spanish, Chinese and Russian. Circulation has grown to approximately 30,000. "It's always reassuring for me to see copies of the Oilfield Review on clients' desks, especially when they show me copies they keep in their bookcases — in some cases, complete sets beginning with the first edition," said Rod Nelson, vice president of communications, Schlumberger.

Authors from a wide cross section of Schlumberger clients, research institutes and the world of academia are enlisted to develop the technical articles along with Schlumberger technical experts.

For more information visit www.slb.com/oilfieldreview.

ExxonMobil kicks off 19th annual CSJP

ExxonMobil said June 2 that 75 students and agencies officially kicked off the 19th annual ExxonMobil Community Summer Jobs Program at the Dallas Arboretum. The eight-week paid internship program, now in its 38th year nationally, offers nonprofits much-needed help during the busy summer months and encourages college students to pursue careers in the non-profit sector and to be active members of their communities.

ExxonMobil provides more than \$267,000 to cover intern salaries and program administration expenses.

"Our ExxonMobil CSJP is much more than a paycheck or a summer job; it is an opportunity for our community to interact with the leaders of tomorrow and encourage them in their careers and futures. It is also an opportunity for the interns to become active participants in their own communities," said Robert Lanyon, manager, corporate citizenship and community investments, ExxonMobil.

Editor's note: All of these news items — some in expanded form — will appear in the next Arctic Oil & Gas Directory, a full color magazine that serves as a marketing tool for Petroleum News' contracted advertisers. The next edition will be released in September.

continued from page 1

INSIDER

Despite the price it is paying, Stelmach said the government is not praying for a return to oil at US\$150 a barrel.

What he would prefer is a slow, steady rise, not one that will send Alberta back to a frenzy of expansion and hurt global economic recovery.

"We don't need \$100-a-barrel oil," he said. "We need just a good price, say an \$80 market, something that will be balanced and let the economy catch up."

—GARY PARK

Begich asks for national leadership on gas line

A WAR OF WORDS ERUPTED IN EARLY JUNE over how much progress there has been in getting Alaska's North Slope natural gas to market.

Alaska's junior senator, Democrat Mark Begich, asked in a June 1 speech to the World Trade Center why dirt wasn't being turned on the project.

It's an often-heard question from the Beltway since Congress voted to assist the project with loan guarantees and permitting assistance in late 2004. The impatience of the Lower 48 for Alaska gas has been a frequent item in annual addresses by members of Alaska's congressional delegation to the Alaska Legislature.

Begich said in remarks prepared for the talk that he joins "a growing chorus

both here and in Washington who are frustrated with the lack of progress" on an Alaska gas pipeline project, including the president and his top advisors. Begich said he met with President Barack Obama in the Oval Office and the president raised the issue of progress on the pipeline.

More national attention is warranted, he said.

"Instead of treating it as an Alaska project, I am urging the Obama administration to elevate the Alaska gas line to the national energy agenda," Begich said.

Gov. Sarah Palin, a Republican, said in a June 3 statement that substantial progress has been made on the project, and noted that since the 2007 passage of the Alaska Gasline Inducement Act the state now has two competing projects, both of which have made significant progress.

"We must believe that you are uninformed about the current situation in Alaska regarding this project," Revenue Commissioner Pat Galvin and Natural Resources Commissioner Tom Irwin said in a June 3 letter to Begich.

Galvin and Irwin, who are charged under AGIA with moving the state-licensed project forward, said they were "surprised and dismayed" at the senator's comments.

Galvin and Irwin told Begich that progress is being made every day on the Alaska gas pipeline project, but cautioned that "lead time required to execute the project successfully is measured in years, not days or months."

The men also said Alaskans appreciate the bipartisan support the project has received, adding "AGIA was designed to protect values critical to the state and national interests by providing for lower tariffs on the pipeline, ensuring expansion opportunities for new gas discoveries, and protecting against basin control."

As for national discontent with the progress of the project, Galvin and Irwin said they have heard nothing from the president or members of his administration "that reflects frustration with the significant progress that is now occurring."

—KRISTEN NELSON



SEN. MARK BEGICH



TOM IRWIN



PAT GALVIN

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RICHES

percent of remaining undiscovered gas, and which lie within a total area of land and ocean amounting to about 6 percent of the total area of the Earth's surface. The resource volumes published in Science differ slightly from the volumes that USGS published in 2008, a statistical quirk of the agency now quoting median volumes rather than mean volumes. Donald Gautier, one of the Science article's authors, told Petroleum News June 1.

To put the single-number resource volume estimates into perspective, given the uncertainties in the resource assessment, USGS has published ranges of volumes that are thought to have a 90 percent probability of existing in the Arctic. Those ranges are 44 billion to 157 billion barrels for oil, and 770 tcf to 2,990 tcf for gas.

USGS has also estimated a mean volume of 5.3 billion barrels of natural gas liquids.

And the assessment points to northern and Arctic offshore Alaska as a premier region in which to search for new oil; this region may also hold large quantities of gas, although the preponderance of undiscovered gas may lie offshore northern Russia.

69 units

USGS conducted its assessment by delineating 69 areas, known as assessment units, each encompassing an Arctic region with distinctive geology and with geologic characteristics conducive to the formation of oil and gas. USGS geologist Dave Houseknecht told Petroleum News in July 2008 that the assessment units are rather broader than areas such as the National Petroleum Reserve-Alaska that have been assessed by USGS in the United States — the broad assessment units in the Arctic assessment reflect the relatively low resolution inherent in evaluating a region the size of the whole of the Arctic.

Using available geologic data from a variety of sources, the USGS geologists characterized the geology of each assessment unit, and then assessed the possible sizes and quantities of oil and gas pools in each unit by comparison with analogous worldwide geologic settings where oil and gas have been found. The scientists discounted from further evaluation those Arctic assessment units thought to only contain individual hydrocarbon accumulations of less than 50 million barrels of oil equivalent.

Potential for significant find

One upshot of this screening of the assessment units was a finding that the mean probability of an accumulation size more than 50 million barrels of oil equivalent across all assessment units is 41 percent, a figure somewhat lower than the average of 50 to 60 percent for similar regions worldwide. That difference reflects a view that the petroleum potential of Arctic basins is a little lower than that of similar basins elsewhere, a view that relates to subtle differences between the geology of the Arctic and the geology of other regions, Gautier told Petroleum News.

By combining estimated accumulation numbers, sizes and hydrocarbon types for each of the assessment units that remained after the accumulation-size cutoff, the USGS team derived estimated total volumes of oil, gas and natural gas liquids for each unit, together with estimated ranges of volume that have a 90 percent probability of being present. The team then combined all of the data to derive total estimates and confidence intervals for the whole of the Arctic.

In doing all of this, the team found that 60 percent of the total oil resource is likely to exist in just six assessment units, with the Arctic platform, the unit that encompasses

On the Web



See previous Petroleum News coverage:

"90 billion barrels," in June 15, 2008, issue at www.petroleumnews.com/pnads/164337763.shtml

"USGS assessment adds to Greenland picture," in June 15, 2008, issue at www.petroleumnews.com/pnads/164337763.shtml

the northern Chukchi Sea, the North Slope of Alaska and the Alaska Beaufort Sea, standing out as particularly prospective, with a mean estimated resource of 28 billion barrels of oil and a 90 percent probability of holding somewhere between 14 billion and 47 billion barrels.

"The Alaska platform is already a well-known petroleum-producing area; new discoveries there could maintain the flow of Alaska oil for years to come," the Science article says.

In terms of oil, the offshore region off and to the west of the Mackenzie Delta comes second to the Arctic platform with an estimated mean of 6 billion barrels of oil and a possible range of 2.5 billion to 12.5 billion barrels. The north Barents basin (estimated mean of 5.3 billion barrels), the Yenisey-Khatanga basin (estimated mean of 5.2 billion barrels), the northwest Greenland rifted margin (estimated mean of 4.9 billion barrels) and the north Danmarkshavn salt basin off northeast Greenland (estimated mean of 4.3 billion barrels) constitute the remainder of the top six assessment units.

More gas

On a barrels-of-oil-equivalent basis, the USGS estimated volume for undiscovered Arctic gas is more than three times the estimated volume for oil. Not only that, but the largest likely undiscovered Arctic gas accumulation may be nearly eight times the size of the largest likely oil accumulation, thus making gas development more likely to be viable than oil development.

Two-thirds of the undiscovered gas is likely to exist in four assessment units: the south Kara Sea (estimated mean of 607 tcf), the south Barents basin (estimated mean of 184 tcf), the north Barents basin (estimated mean of 117 tcf) and the Alaska platform (estimated mean of 122 tcf). And with the first three of these units lying off the north coast of Russia, and with the south Kara Sea by itself thought to hold almost 39 percent of the undiscovered Arctic gas, Russia likely has rights to a substantial portion of undiscovered gas resources north of the Arctic Circle.

"Although substantial amounts of gas may be found in Alaska, Canada and Greenland, the undiscovered gas resource is concentrated in Russian territory, and its development would reinforce the preeminent strategic resource position of that country," the Science article says.

However, it is important to understand that with few wells drilled and little seismic data available in many of the areas included in the USGS assessment, the assessed volumes of oil and gas are subject to huge uncertainty.

"I would emphasize that this is a very uncertain area and these are probabilistic estimates with a great deal of uncertainty associated with them," Gautier said when the initial assessment results were announced in 2008.

And, being estimates of resources theoretically recoverable using conventional drilling and production techniques, the estimates do not take into account the technical difficulties and economic challenges of operating in hostile weather with ice-laden water, perhaps far offshore. ●

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THOMSON

the history” of the Point Thomson unit in alleging the industry repeatedly failed to honor its commitments there.

They question Department of Natural Resources Commissioner Tom Irwin’s impartiality, and say he “took every opportunity to disparage and minimize” the industry’s commitments when, in April 2008, he rejected ExxonMobil’s 23rd Plan of Development — the company’s final attempt to keep full control of Point Thomson by offering a firm promise of drilling and production.

Irwin said at the time that he couldn’t trust ExxonMobil to carry out the plan, an outlook ExxonMobil’s lawyers say was unwarranted.

“It is in fact being carried out on the North Slope and in Alaska today, a year after DNR said it would not be,” the oil company lawyers say in their May 26 court filing. “An enormous drilling rig is at Point Thomson, the first two wells are being drilled, the process of acquiring permits for a gas cycling and oil production facility is under way, and the entire project and all necessary activities are fully on schedule for production in 2014, just as the WIOs said. Over \$120 million was spent last year, and \$250 million is committed to be spent next year, for this production process.”

Irwin cleared drilling

The drilling is occurring only because Irwin, after a five-day hearing to consider oil company appeals of a state ruling that Point Thomson leases had expired, on Jan. 27 of this year made a major policy reversal. He rendered a conditional decision allowing Exxon to keep two of the 31 leases on ExxonMobil’s promise to start drilling a pair of wells into those leases right away.

The state subsequently issued ExxonMobil a permit to build a 50-mile ice road for hauling the upgraded Nabors Rig 27E to the remote field on the Arctic Ocean shoreline.

ExxonMobil spud the initial well on May 8. It’s the first hole to be drilled into the Point Thomson reservoir since 1983.

Development of Point Thomson long has been a goal of frustrated Alaska politicians, and for good reason. The field holds an estimated 8 trillion cubic feet of natural gas — nearly a quarter of all the known gas reserves on the North Slope — plus hundreds of millions of barrels of oil. Production of such resources would mean potentially billions of dollars in tax and royalty revenue for the state, plus a substantial number of jobs.

But ExxonMobil and other stakeholders at Point Thomson have pointed to the lack of a gas pipeline and the extreme technical challenges of tapping the high-pressure reservoir as reasons why one of North America’s richest undeveloped fields hasn’t produced since its discovery in 1977.

Importance of unit

Although the state has cleared ExxonMobil to proceed with drilling, the issue of whether the state was right in terminating the Point Thomson unit continues to loom as a vital question.

Unitization is the glue that binds together leases with different owners, ensuring orderly and efficient field development. Unit designation is necessary to realize the full potential of an oil and gas deposit, and it also allows companies to retain otherwise expired leases.

If ExxonMobil and the other oil companies prevail in court and defeat the state’s unit termination, it certainly would give them a huge boost in controlling Point Thomson’s fate. If the state wins, however, its power would be affirmed, potentially

clearing the way for a resale of Point Thomson acreage.

ExxonMobil demonstrated the importance of unitization when it attempted to go around DNR and petitioned another state agency, the Alaska Oil and Gas Conservation Commission, to organize a new Point Thomson unit. The commission declined.

State officials appear to view their permission for ExxonMobil to drill on two Point Thomson leases as something of a test.

Irwin, in his Jan. 27 approval, said “failure to diligently pursue drilling operations in good faith for the purpose of production will result in the automatic termination of these leases.” He said he would deal with unitization issues later.

Kudos from Palin

Palin, who last year ran for the vice presidency and who as governor has tilted with ExxonMobil including its chief executive, Rex Tillerson, on June 2 issued a press release saying she had attended an “appreciation luncheon” the company sponsored for contractors and others working on Point Thomson.

“It goes without saying that I’m glad Point Thomson is finally feeling the drill bit,” Palin told attendees, according to a

transcript of her speech.

She characterized the drilling start as a “collaborative effort,” and as she often does, invoked the Alaska Constitution and its mandate that state natural resources be developed for the maximum benefit of Alaskans. She praised ExxonMobil for hiring predominantly Alaska contractors for the Point Thomson project.

“The road to get to this point hasn’t been easy,” Palin said. “It’s taken years, and just looking at the time of day that the first well was spudded — 2:30 a.m. — it sounds more like childbirth than drilling a well!”

“And there have been more than a few labor pains in the process to get to where we are today. Following a grueling administrative and legal hearing process, Department of Natural Resources Commissioner Tom Irwin authorized the drilling operation on January 27, allowing mobilization of the drilling rig. He provided guidance to regulatory officers on permitting to allow drilling to begin as quickly as possible when issues were resolved. Here again, working together to find solutions that mutually serve our interests, results in great things happening for Alaska.”

The governor’s conciliatory words, however, probably won’t have much impact on the complex court battle between ExxonMobil and the state over

the former Point Thomson unit.

The 57-page court filing from the oil company lawyers on May 26 was in reply to the state’s 127-page brief filed April 1. “As the court will see,” the state brief says, “DNR’s decision to terminate reflects careful consideration, and it is well-supported.”

“Perhaps the most striking thing” about the oil company arguments, the state’s brief adds, is the “covert theme” that DNR never wanted the industry’s proposed remedy for unit termination — the 23rd Plan of Development — to pass muster.

“Nothing could be further from the truth,” the state’s lawyers write. The state long has wanted to see full field development, but the oil companies showed Commissioner Irwin a “refusal or inability to acknowledge their past failures to follow through” on Point Thomson commitments, the state brief says.


The state lawyers are asking Superior Court Judge Sharon Gleason to uphold Irwin’s unit termination, while lawyers for ExxonMobil and the other oil companies are urging her to reverse it.

Gleason has scheduled oral argument for July 20. Lawyers in the case believe she’ll rule well before the end of the year.

The loser is expected to appeal to the Alaska Supreme Court. ●

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FACT

But new research by FirstEnergy Capital covering the outlook for finding, development and acquisition costs, along with the emergence of new technologies and new knowledge, are seen as grounds for hope.

FirstEnergy analyst Darren Engels put to the test claims that U.S. shale players have a huge edge over WCSB producers, noting the U.S. plays have received a "lot of attention for massive land positions, enormous initial production rates and low costs."

To determine the "true results" he stacked up some Canadian companies with a significant weighting to gas resource plays, or that have significant amounts of gas in place, against a few U.S. producers with shale plays.

No clear-cut winner

Engels found there was no clear-cut winner based on three-year average FD&A costs and cash flow recycle ratios.

Based on 2008 results, he said there was little to separate U.S. players such as Chesapeake Energy and EOG Resources from Canadian producers such as Trilogy Energy Trust, Strom Exploration, Peyto Energy Trust, ARC Energy Trust, Birchcliff

It is "far too early to say that the U.S. shale players have better costs and better recycle ratios than Canadian players."

Energy and Celtic Exploration.

Applying the three-year average he drew a similar conclusion when stacking EOG, Chesapeake and XTO Energy against Peyto, Storm, Celtic, Birchcliff, Trilogy and Progress Energy Resources.

While some U.S. players were nearer the top end of the spectrum, there was not much to differentiate them from Canadian companies.

Engels concluded it is "far too early to say that the U.S. shale players have better costs and better recycle ratios than Canadian players."

He said U.S. producers are "at the better end of the spectrum, but they're not a heck of a lot ahead of the lower-cost producers in Canada."

However, he conceded there is still a lot to learn about gas resource plays, including future development capital needs, operating costs, decline rates and what government incentives will be available to keep different regions competitive.

In summary, he said it is "just too early in the game to say there are a true winner

and a true loser, whether it's north or south of the (Canada-U.S.) border."

Drop in costs forecast

A FirstEnergy presentation by Engels and Steven Paget on FD&A costs forecast a possible drop of 25-35 percent this year from the all-time peak in 2008.

Their report pointed to an average US\$16 per barrel of oil equivalent of proved plus probable reserves from last year's US\$22.72.

But Engels cautioned that the slump in exploration drilling could reduce reserve additions this year, affecting FD&A costs and recycle ratios.

Confident that the emergence of resource plays, new technologies and new understanding will yield better costs and recycle ratios, he said that could also lead to a positive impact on costs and reserve additions in more mature conventional plays.

Engels said reduced exploration also puts downward pressure on service and capital costs that should last until commodity prices improve and stabilize.

He said gas prices will take longer to recover than oil as production declines eat into the supply bubble that has pushed prices under US\$4 per million British thermal units from US\$13 last summer.

Unconventional competitive

Peter Lindner, president of DeltaOne Capital Partners, said gas from Canada's unconventional sources is competitive with the U.S., but conventional gas is uneconomic and will clearly decline for a number of years.

Greg Stringham, vice president of the Canadian Association of Petroleum Producers, said that as Canada improves its technology and builds gathering and transportation infrastructure to its unconventional resources "it will be back to a much more competitive shale-gas-on-shale-gas competition."

Mike Dawson, president of the Canadian Society of Unconventional Gas, said WCSB gas is being "challenged to be competitive relative to other supplies in North America, predominantly the shale supply basins of the U.S. Midwest and Southern U.S."

Over the long term "we are seeing the decline of natural gas production in Western Canada being driven primarily because of lower gas prices and a lack of competitiveness in the North American market."

Dawson said the higher transportation costs and shorter exploration season in Canada has been further eroded by Alberta's new royalties. ●

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NOVA

cubic feet from other sources.

It said Groundbirch will be designed to carry about 1.66 billion cubic feet per day, with five potential customers having committed to transportation agreements for an initial 115 million cubic feet per day in 2010, increasing to 1.13 bcf per day by 2014.

Nova estimated the drainage area contains 28.5 tcf of original Montney gas in place, yielding 6.8 tcf of marketable gas based on a 25 percent recovery factor and 4 percent shrinkage.

It said the forecast is based on discussions with area producers who participated in its binding open season and data from public sources.

40 tcf marketable estimate

The British Columbia government's Ministry of Energy, Mines and Petroleum Resources estimates the entire Montney

formation has 318 tcf of original gas in place and marketable volumes of up to 40 tcf.

Nova's application said the formation varies in quality from conventional gas straddling the Alberta-British Columbia border to unconventional gas farther west.

The company said current industry activity has been concentrated on unconventional tight and shale gas resources, which has generated the demand for additional pipeline capacity out of the region.

"The magnitude of these resources supports the conclusion that (Groundbirch) will provide needed transportation capacity for many years," the regulatory filing said.

The pipeline is planned to cover about 49 miles across the border into Alberta, where it would feed into TransCanada's pipeline network.

Nova's 15-year forecast of productive capacity covers both Montney and other conventional resource volumes and estimates capacity will climb to 1.44 bcf per

day by 2024 from 255 million cubic feet per day in 2010.

The application said producers expect an average 12 wells per section will be drilled, ranging from eight to 15 wells, but Nova is basing its forecast on an average drilling density of 7.5 wells per section.

Imperial not so bullish

Nova's bullish predictions are tempered by Imperial Oil, which shares almost 200,000 acres with ExxonMobil in British Columbia's Horn River shale play.

Imperial Senior Vice President Randy Broiles said the partnership might eventually have a pilot project that can produce 20 million to 30 million cubic feet per day within a couple of years.

"The production pilot ... is critically important to understand what we're going to be able to achieve from a cost standpoint," he said. "The early engineering has been under way for several months.

"We've got some tough technical nuts

that we're trying to crack that relate to the tightness of the shale and how do we go through massive fracs in a very cost-effective way to ensure that gas is profitable," Broiles said.

He said that although results from a winter drilling program were "encouraging" there are "many unknowns" in the play.

ExxonMobil Chief Executive Officer Rex Tillerson offered another insight into the company's thinking on shale gas May 27, telling reporters the "technology has come a long way. ... In terms of shale gas, there is a pretty bright future."

He said the company is now facing a decision on "whether large-scale development" of its worldwide shale positions "will be attractive."

Alberta has shale potential

Whatever the outlook, the windfall success to the British Columbia government of its shale deposits has grabbed Alberta's attention, with the government-owned Alberta Research Council making a case to advance commercial production in the province.

A council engineer, Kirby Nicholson, said estimates of Alberta's shale resources are about 300 tcf, prompting the ARC to propose a joint industry project, involving ARC funding along with federal and Alberta tax and royalty credits, with the goal of achieving high initial production revenue.

Mike Dawson, president of the Canadian Society for Unconventional Gas, told a conference that as technology moves ahead in the United States and British Columbia, Alberta's significant shale potential will become more economically attractive.

"It truly is a technology play," he said. "We've gone through a major paradigm shift in how we look at reservoirs. Traditionally, we didn't consider the rocks from which we're now producing gas as reservoirs because the porosity or permeability of these reservoirs was so low we couldn't get the natural gas out of the ground.

"With the application of horizontal drilling and multistage fracture stimulations ... we're actually able to access these very tight reservoirs."

—GARY PARK

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