

page Rural Energy Conference gets look at AEA's new planning document

Vol. 15, No. 18 • www.PetroleumNews.com

A weekly oil & gas newspaper based in Anchorage, Alaska

Week of May 2, 2010 • \$2

Latest from Greening of Oil



Missing Mac Ackers? Don't worry. Petroleum News had been giving up space to help get the column off the ground. Now that it's a success, readers are getting more PN coverage and can still follow the Latest from Mac Ackers at www.greeningofoil.com. This week has already been reviewed as her best yet, addressing natural oil spills, the Cape Cod wind farm fight, and President Obama's seemingly sudden avoidance of his administration's offshore drilling position. She's waiting to hear your take.

BP Alaska staff sent to Gulf **Deepwater Horizon rig disaster**

The Deepwater Horizon catastrophe in the Gulf of Mexico is making an impact on BP's Alaska operations.

Alaska employees with certain expertise are Spill update, page 15 going south in response to

the incident, in which the Transocean Ltd. semisubmersible rig Deepwater Horizon, drilling an exploration well for BP about 41 miles offshore Louisiana, exploded on April 20 and later sank. Eleven of the rig's 126-member crew died in the

Among the BP Exploration (Alaska) Inc. workers transferring out due to the disaster and a massive effort to control

see GULF RESPONSE page 17

Governor signs in-state gasline bill; new team will develop plan

What have been seen as uncoordinated — or at times even competing efforts to move an in-state gas pipeline project forward were centralized April 26 when Alaska Gov. Sean Parnell signed House Bill 369.

HB 369, sponsored by House Speaker Mike Chenault, R-Nikiski, creates the Joint In-State Gasline Development Team and puts Dan Fauske, the chief executive officer and



executive director of the Alaska Housing Finance Corp., in charge of that team. The effort will be housed at AHFC and run as an AHFC subsidiary.

The purpose of the team is to develop an in-state natural see GASLINE BILL page 18

Enstar, CEA in agreement

Two largest gas users support each other in new round of contract deliberations

By ERIC LIDJI For Petroleum News

ome might shudder at the prospect of more gas supply deliberations in Southcentral, but two recent contracts are getting a much more agreeable reception than 2008 proposals.



The two largest gas users in the state, Enstar Natural Gas and Chugach Electric Association, recently signed separate supply contracts with Marathon Oil Co. Both utilities sought approval from the Regulatory Commission of Alaska in early April, and now both of the utilities are publically supporting each other before the RCA.



COLLEEN STARRING

On April 20, Chugach CEO Brad Evans asked the RCA to approve the new Enstar-Marathon contract. Though not offering details, Evans noted that while the Enstar contract differs from Chugach's 2009 contract with ConocoPhillips and its 2010 contract with Marathon, those "differences are to be

expected due to differing operating characteristics. Overall, Chugach believes, this is a reasonable and constructive contract."

On April 23, Enstar President Colleen Starring made a similar assessment about the proposed contract between Chugach and Marathon Alaska

see SUPPORT page 17

EXPLORATION & PRODUCTION

Ribbons of tundra ice

Evolving ice-road construction techniques extend North Slope exploration seasons

By ALAN BAILEY

Petroleum News

ith virtually all exploration drilling on Alaska's North Slope done in the winter when snow and ice protect the tundra from vehicles and other equipment, the construction of ice roads has become a vital factor in maximizing the length of the annual exploration season. Consisting of multiple layers of solid ice formed by spraying water along a required transportation route, ice roads melt and disappear in the summer, typically leaving no trace of their existence within a relatively short time.

Government agencies only allow vehicles to operate off the regular North Slope road system in

Given all of the ice-road-impacting variables such as temperatures, snow depths and stream crossings, the U.S. Department of Energy is sponsoring the development of an Internet-based ice-road decision support system for ice-road planning.

appropriate winter conditions, when the ground is sufficiently frozen and the snow cover sufficiently deep to protect the delicate Arctic tundra: The construction of ice roads enables operators to build the necessary tundra protection along required trans-

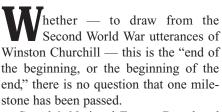
see ICE ROADS page 19

NATURAL GAS

Milestone for Mac gas line

Formal regulatory hearings end with NEB promising a decision in September

By GARY PARK For Petroleum News



Canada's National Energy Board and KEN VOLLMAN its Joint Review Panel have wrapped up public hearings into the proposed Mackenzie Gas Project, more than four years after they started and millions of dollars over original cost estimates for a process that the participants agree has caused frustrating delays.



But the hopes of some that Canada is still on track to commercially develop its Arctic natural gas (and perhaps its oil) resources are not yet dashed.

And the final words of NEB Chairman Ken Vollman in Inuvik on April 22 amounted to a welcome pledge.

"Now we have our work cut out for us ... (but) you can expect to receive our decision, with reasons, in September 2010," he said.

If, indeed, the NEB meets that deadline, and makes its recommendations on the economic and engineering aspects of the MGP, the venture will

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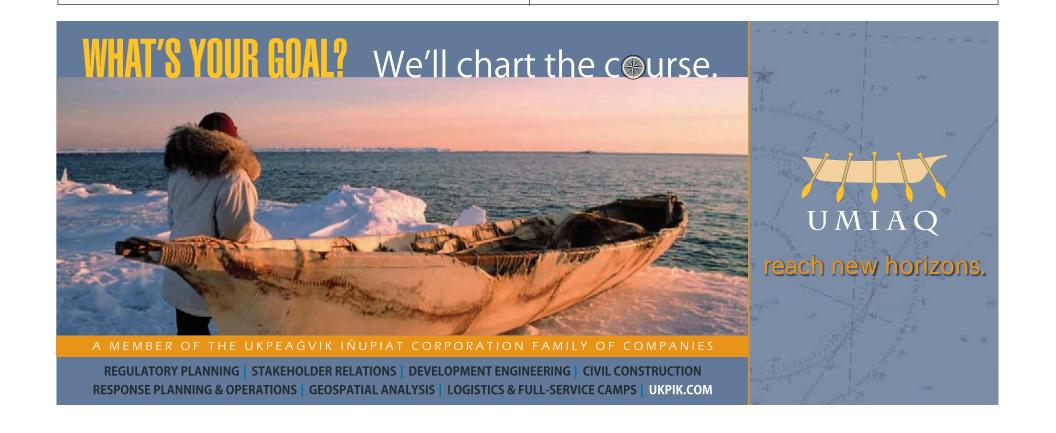


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Cleanup efforts continue in Gulf; BP will drill relief well; government offers Department of Defense help in containing spill



Alaska - Mackenzie Rig Report

Available

Available

ENI

Operator or Status

Rig No. Rig Owner/Rig Type Rig Location/Activity

Alaska Rig Status

North Slope - Onshore

Doyon Drilling Dreco 1250 UE 14 (SCR/TD) Prudhoe Bay P2-22A Sky Top Brewster NE-12 15 (SCR/TD) Stacked Doyon Yard Kuparuk River Field 2L-310 Dreco 1000 UE 16 (SCR/TD)

ConocoPhillips Dreco D2000 UEBD 19 (SCR/TD) Alpine CD3-123 ConocoPhillips **OIME 2000** Prudhoe Bay DS 4-29 141 (SCR/TD) TSM 7000 Stacked at Prudhoe Bay Arctic Wolf #2 FEX/Available

Nabors Alaska Drilling

CDR-1 (CT) Stacked, Prudhoe Bay Available Trans-ocean rig ConocoPhillips AC Coil Hybrid CDR-2 Kuparuk 1E-15 Dreco 1000 UE 2-ES Prudhoe Bay, Stacked out Mid-Continental U36A 3-5 Stacked, Milne Point ΒP 4-ES (SCR) Oilwell 700 E Prudhoe Bay DS 17-08 ΒP Prudhoe Bay DS 15-27 Dreco 1000 UF 7-ES (SCR/TD) BP Dreco 1000 UE 9-ES (SCR/TD) Orion L-203 BP Oilwell 2000 Hercules ConocoPhillips 14-E (SCR) Kuparuk 2A-27 Oilwell 2000 Hercules 16-E (SCR/TD) Stacked at Prudhoe Bay Unit Brooks Range Petroleum West Pad 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 Stacked, Deadhorse Emsco Electro-hoist 28-E (SCR) Available Point Thompson PTU-16 Emsco Electro-hoist Canrig 1050E 27-E (SCR-TD) FxxonMobil Available Academy AC electric Canrig 105-E (SCR/TD) Stacked at Deadhorse

Nordic Calista Services

OIME 2000

Academy AC electric Heli-Rig

Superior 700 UE 1 (SCR/CTD) Prudhoe Bay Drill Site 2-34B Milne Point Well Drill Site R-26A 2 (SCR/CTD) Superior 700 UE BP Kuparuk Well 2T-30 ConocoPhillips Ideco 900 3 (SCR/TD)

Stacked at Deadhorse Oliktok Point OP23-WW02

106-E (SCR/TD)

245-E

North Slope - Offshore

BP (rig built & being assembled by Parker)

Top drive, supersized Endicott SDI for Liberty oil field BP

Nabors Alaska Drilling

OIME 1000 19-E (SCR) Oooguruk ODSN-15i Pioneer Natural Resources Oilwell 2000 Northstar, Stacked out

Cook Inlet Basin - Onshore

Aurora Well Service

Stacked out at West Mac, will be used Franks 300 Srs. Explorer III AWS 1 Available for Cook Inlet Energy workover in May

Doyon Drilling

TSM 7000 Arctic Fox #1 Stacked at Beluga Available

Marathon Oil Co. (Inlet Drilling Alaska labor contractor)

On maintenance until June 1 then Taylor Glacier 1 Marathon Oil going to Paxton #4

Nabors Alaska Drilling

Stacked, Kenai Continental Emsco E3000 273 Available Available Franks 26 Stacked IDECO 2100 E 429E (SCR) Stacked, removed from Osprey platform Available Rigmaster 850 129 Kenai SLU 41-33RD Chevron

Rowan Companies

68AC (SCR/TD) Stacked Kenai, Cosmopolitan AC Electric Pioneer Natural Resources

Cook Inlet Basin - Offshore

Chevron (Nabors Alaska Drilling labor contract)

XTO Energy National 1320 Coil tubing cleanout planned off Platform XTO A in the near future C (TD) National 110 XTO Kuukpik Stacked in Kenai Available

Mackenzie Rig Status

Canadian Beaufort Sea

SDC Drilling Inc.

SSDC CANMAR Island Rig #2 SDC Set down at Roland Bay Available

Central Mackenzie Valley

Akita/SAHTU

Oilwell 500 Racked in Norman Wells, NT Available The Alaska - Mackenzie Rig Report as of April 29, 2010. 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



Baker Hughes North America rotary rig counts*

	April 23	April 16	Year Ago
US	1,482	1,491	955
Canada	110	122	65
Gulf	52	55	49

Highest/Lowest

US/Highest December 1981 US/Lowest 488 **April** 1999 Canada/Highest 558 January 2000 Canada/Lowest April 1992 *Issued by Baker Hughes since 1944

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EXPLORATION & PRODUCTION

ExxonMobil seeks Point Thomson air permit

Company continues preparations for high-pressure gas cycling development; battle over unit's fate awaits Alaska Supreme Court action

By WESLEY LOY

For Petroleum News

xxonMobil continues to lay the groundwork for its natural gas cycling project in the Point Thomson field on Alaska's North Slope.

Meantime, the legal fight between ExxonMobil and the state over control of the Point Thomson unit seems to have hit

On April 20, the Alaska Department of Environmental Conservation announced it was proposing to issue an air quality control "minor permit" to ExxonMobil for a two-well drilling operation at Point Thomson.

The permit is intended to regulate nitrogen dioxide pollution from a range of equipment ExxonMobil is using at Point Thomson, where the Nabors 27-E rig

The court conflict has been in a holding pattern since Feb. 5, when lawyers for DNR petitioned the Alaska Supreme Court to review an unfavorable Superior Court decision.

already has drilled at least one of the wells to depth. Other equipment covered under the air permit includes boilers, heaters, a gas flare, a waste incinerator, generators and various diesel engines.

In February, ExxonMobil said it had successfully drilled and cased the first development well at Point Thomson, the PTU-15 injector well with a measured depth of more than 16,000 feet. The PTU-16 producer well also has been at least partially drilled.

The Point Thomson field straddles the

Beaufort Sea shoreline about 60 miles east of Prudhoe Bay.

ExxonMobil intends to produce gas condensate for shipment down the trans-Alaska oil pipeline.

The company has pledged to begin 10,000 barrels a day of condensate production by year-end 2014. It says the \$1.3 billion project will feature at least five wells.

Laying the groundwork

The air quality permit adds to the raft of preparatory work ExxonMobil is pursing for its project, which involves unusually robust wells and other equipment to handle the extreme high pressures of the Point Thomson reservoir.

ExxonMobil says it will be the highest-pressure gas cycling operation in the

The U.S. Army Corps of Engineers is preparing an environmental impact statement for the project.

The Army Corps held a series of public and agency scoping meetings in January to discuss the project and take comments. The meetings were held in Fairbanks, Kaktovik, Nuiqsut, Barrow and Anchorage.

In a recent newsletter, the Corps said it received more than 300 comments on the project.

"Concerns raised in scoping focused primarily on potential effects to subsistence resources, such as access and migration patterns," the newsletter said. "Other concerns included possible noise, as well as impacts to air and water quali-

Environmental groups have said they believe Point Thomson's three work pads are too close to the beach, making them vulnerable to possible erosion.

ExxonMobil has discounted the erosion threat, and says the drill sites need to be close to the water's edge so the directional wells can reach the reservoir beneath the Beaufort Sea.

The Corps expects to release the draft EIS late this fall.

Court conflict on hold

Although ExxonMobil is now well along on the development, the work is proceeding under unusual circumstances.

The leaseholders including unit operator ExxonMobil, BP, Chevron and ConocoPhillips are fighting in court, and administratively before the Alaska Department of Natural Resources, to retain the Point Thomson unit and the underlying leases.

Beginning in 2005, frustrated state officials took steps to reclaim the Point Thomson acreage, saying the oil companies had failed to develop the field three decades after its discovery.

Despite the still unresolved legal conflict, DNR Commissioner Tom Irwin allowed ExxonMobil to start drilling in 2009. ExxonMobil executives say the drilling shows their commitment to develop Point Thomson, which holds an estimated 8 trillion cubic feet of gas — about a quarter of all the known gas reserves on the North Slope.

The court conflict has been in a holding pattern since Feb. 5, when lawyers for DNR petitioned the Alaska Supreme Court to review an unfavorable Superior Court decision.

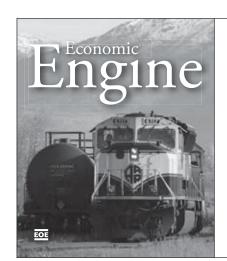
In that ruling, Superior Judge Sharon Gleason of Anchorage reversed Irwin's 2008 decision to dissolve the Point Thomson unit. The unit designation is important because it keeps alive a collection of old leases that would otherwise expire.

Gleason held that the Point Thomson leaseholders were wrongly denied a state hearing under a key section of the Point Thomson unit agreement. State lawyers argue no such hearing is necessary.

The Point Thomson leaseholders are urging the Supreme Court not to accept the state's appeal.

The high court's website has indicated for weeks now that the state's petition is "ready for decision." ●

> Contact Wesley Loy at wloy@petroleumnews.com



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OWNER: Petroleum Newspapers of Alaska LLC (PNA) Petroleum News (ISSN 1544-3612) • Vol. 15, No. 18 • Week of May 2, 2010 Published weekly. Address: 5441 Old Seward, #3, Anchorage, AK 99518 (Please mail ALL correspondence to:

CIRCULATION REPRESENTATIVE

P.O. Box 231647 Anchorage, AK 99523-1647)

Subscription prices in U.S. — \$98.00 1 year, \$176.00 2 years, \$249.00 3 years Canada — \$185.95 1 year, \$334.95 2 years, \$473.95 3 years Overseas (sent air mail) — \$220.00 1 year, \$396.00 2 years, \$561.00 3 years "Periodicals postage paid at Anchorage, AK 99502-9986."

POSTMASTER: Send address changes to Petroleum News, P.O. Box 231647 Anchorage, AK 99523-1647.

ADDRESS P.O. Box 231647 Anchorage, AK 99523-1647

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LAND & LEASING

Division calls for new lease sales info

The Alaska Division of Oil and Gas is requesting new information which has become available since the best interest findings were issued for three upcoming areawide oil and gas lease sales: Beaufort Sea, North Slope and North Slope

The current Beaufort Sea areawide BIF was issued Nov. 9, 2009; the current North Slope areawide BIF was issued July 15, 2008; the current North Slope Foothills BIF was issued Feb. 7, 2001.

The documents are available on the division's website www.dog.dnr.alaska.gov/oil.

The division said it will supplement the BIFs or issue decisions of no substantial new information in July.

The proposed date for the sales is October; the call for new information closes May 26.

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EXPLORATION & PRODUCTION

Oil sands ready to take flight

Raymond James report says Alberta oil sands will attract C\$178 billion over next 10 years; add 2.6 million bpd to production

By GARY PARK

For Petroleum News

he Alberta oil sands will accumulate new capital expenditure of C\$178 billion over the next 10 years — despite sluggish growth in the first three years of the decade — and 2.6 million barrels per day of incremental production, raising the total to 4 million bpd, predicts financial services consultant Raymond James.

The company's report, co-written by Justin Bouchard of RJ Ltd's energy group in Calgary, said the initial pace will be slowed because of project delays during the 2008-09 commodity downturn.

But the assessment was emphatic that the oil sands are "back in fashion ... after a temporary hiatus away from the market's spotlight."

It said a number of companies have resumed or pushed forward with development plans — a trend it expects to continue through 2010, while oil sands merger and acquisition activity, as reflected by Sinopec's pending C\$4.65 billion purchase of ConocoPhillips' 9.03 percent stake in Syncrude Canada, demonstrates that "outside interest in the oil sands remains robust."

Raymond James singled out three projects among many announcements of expansions or go-aheads for new projects: Devon Energy's doubling of output from Jackfish Phase 2 to 70,000 bpd by 2012; ConocoPhillips' and Total's ramping up to 110,000 bpd from 27,000 bpd by 2015 at their joint-venture Surmont Phase 2; and Phase 1 of the Husky Energy-BP joint-venture at Sunrise, targeting output of 60,000 bpd in 2014.

The forecasts are tied partly to the company's own West Texas Intermediate price forecast of US\$82 per barrel in 2010, US\$95 in 2011 and US\$100 in 2012 and beyond

Two categories of projects

In comparing the two distinct categories of oil sands projects — mining and in-situ — Raymond James estimated the breakeven costs at the typical in-situ operation (whether steam-assisted gravity drainage or cyclic steam stimulation) is US\$55 per barrel for WTI crude and US\$70 per barrel for mining projects. That is based on the company's long-term natural gas price forecast of C\$6 per thousand cubic feet

The report favored in-situ projects, despite "some level of resource risk," partly because of the smaller environmental footprint, but it said that investing in in-situ opportunities makes it essential to "gauge the quality of the asset and to invest with an experienced operational team."

On the other hand, mining projects "do not carry as much risk in terms of recovery, because the recovery techniques are far more basic, and resource homogeneity is not as significant an issue as it is with insitu development."

The report identified inflationary pressures and environmental regulation as the chief barriers to "an even more aggressive push into oil sands development."

It noted that during the heyday of development, inflation was so out of control that many projects experienced cost overruns of 100 percent and more.

For that reason "it is not surprising that every oil sands project announced since the downturn has been an in-situ project," Raymond James said.

The report identified inflationary pressures and environmental regulation as the chief barriers to "an even more aggressive push into oil sands development."

"Not only do these projects offer lower capital intensities, but they are also less exposed to inflationary pressures, largely due to a smaller portion of spending attributable to labor costs," the report said.

It said the concern over environmental regulation relates to "the magnitude of future regulatory impact, rather than speculation over whether policy actions will be taken," especially revolving around what the United States will do on the carbon front, given that the Canadian government has said it will follow the U.S. lead.

The report said California's low carbon fuel standard, which is being pondered by 11 other states, restricts the carbon intensity of transportation fuel, inherently affecting the oil sands more than conventionally produced oil.

For the time being, however, Raymond James said the substantive effect of U.S. state-level regulation is immaterial for oil sands development, although it must be closely followed.

Conclusions echoed

The conclusions in the report were effectively echoed at an April oil conference in Calgary, when Nicholas Olds, incoming vice president of oil sands at ConocoPhillips, said his firm remains committed to the resource despite its asset sale to Sinopec, which he said "is no reflection of a strategic shift from the oil sands."

David McColl, the Canadian Energy Research Institute's research director, said the ConocoPhillips-Sinopec deal puts Canada about two-thirds of the way towards a banner M&A year (without including last year's C\$20 billion Suncor Energy takeover of Petro-Canada in the comparison).

He said 2010 could be the year of megadeals, especially in the oil sands, with the Sinopec deal showing there is plenty of interest from foreign buyers in the oil sands and raising hopes for a pipeline to the British Columbia coast to open up new markets in Asia.

Even so, McColl said it makes more financial sense to export oil sands crude to the United States.

"You could say it makes sense to build a pipeline, export the product and suddenly we are no longer reliant on a single market," he said. "But is 200,000 or 500,000 bpd out of 2, 3 or 4 million bpd going to make a big difference, or make us more diverse? It could happen, but probably isn't going to in the long run."

Contact Gary Park through publisher@petroleumnews.com



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NATURAL GAS

No misconduct, Conoco says about CRU

Company says electric generation created confusion about gas sales at Colville River, didn't exceed AOGCC offtake allowances

By ERIC LIDJI For Petroleum News

The perception that ConocoPhillips made early and excessive natural gas sales from the Colville River field comes from confusion in how sales volumes were reported at the North Slope field, the company told the Alaska Oil and Gas Conservation Commission.

"(ConocoPhillips) maintains that it has not exceeded the allowable field offtake rate for the sales of gas to Nuiqsut and that there may be confusion arising from how 'sales' are reported to the AOGCC," Paul Dubuisson, North Slope operations manager for ConocoPhillips, wrote in an April 26 letter to AOGCC Chairman Dan Seamount.

In 2007 the AOGCC gave ConocoPhillips permission to ship 1 million cubic feet of natural gas per day from the Colville River unit to the nearby village of Nuiqsut to meet a contractual obligation. In March 2010, the AOGCC began investigating ConocoPhillips, saying records suggested the company made early and excessive gas sales.

According to Dubuisson, that suggestion comes from a reporting quirk, not misconduct.

In reports to the AOGCC, ConocoPhillips included both the gas it used to make electricity to power field operations and the gas it sent to Nuiqsut. The company did this because the definition of "gas sales" in the August 2006 agreement that manages Colville River gas — signed by the field owners, the state and Nuiqsut — includes gas used to make electricity, as well as gas or any gas-powered energy delivered to a third party.

ConocoPhillips uses Colville River gas to make electricity to power the shipping pumps on the Alpine pipeline. "Without the use of those shipping pumps, no oil production from the Colville River field could be transported from the field to be sold," Dubuisson wrote.

Itemization requested

On March 16, 2010, the AOGCC asked ConocoPhillips

"(ConocoPhillips) maintains that it has not exceeded the allowable field offtake rate for the sales of gas to Nuiqsut and that there may be confusion arising from how 'sales' are reported to the AOGCC."

—Paul Dubuisson, North Slope Operations Manager for ConocoPhillips

to itemize the two sales volumes — electricity and deliveries to Nuiqsut — in future reports, according to Dubuisson.

"If the AOGCC wishes to handle the reporting of those gas volumes differently in the future, (ConocoPhillips) requests that the AOGCC inform and discuss with (ConocoPhillips) any new reporting format," Dubuisson wrote

The electricity issue also explains why the reports make it seem like ConocoPhillips began shipping gas to Nuiqsut before getting authorization from the AOGCC, according to Dubuisson. ConocoPhillips began using Colville River gas to make electricity when the field came online in November 2000. Once the August 2006 agreement went into effect, though, ConocoPhillips began reporting gas volumes used to make electricity, even though it would not actually begin making shipments to Nuiqsut until June 2008.

Metering might be moot

The investigation is also looking into an apparent discrepancy between the sale volumes ConocoPhillips reported to the AOGCC and the production volumes the company reported to the Department of Natural Resources for the purpose of royalty calculations.

Dubuisson sent the AOGCC a chart breaking out the volumes of gas used to make electricity at Colville River and the volumes sent to Nuiqsut between January 2006 and February 2010, saying that the figures match the volumes

reported to DNR.

In his March 31 letter opening the investigation, Seamount referred to volumes listed on a DNR website. Dubuisson wrote that the website "is intended to show monthly royalty production volumes. That website may show initial volumes reported but may not be updated to reflect any corrections or adjustments. (ConocoPhillips) cannot otherwise explain the discrepancies but can provide the actual volumes reported to DNR."

The initial AOGCC letter also questioned ConocoPhillips' metering practices. Those questions would likely become moot if the AOGCC accepts ConocoPhillips' explanation.

However, Dubuisson noted that ConocoPhillips measures gas shipped to Nuiqsut differently than the gas used locally for electricity. Because the locally used gas is still owned by ConocoPhillips, the company does not measure those volumes according to the "custody transfer standards" used when gas is transferred from one company to another.

For the gas used to make electricity, ConocoPhillips measures volumes by calculating how much electricity it produces and how much gas is needed to make electricity.

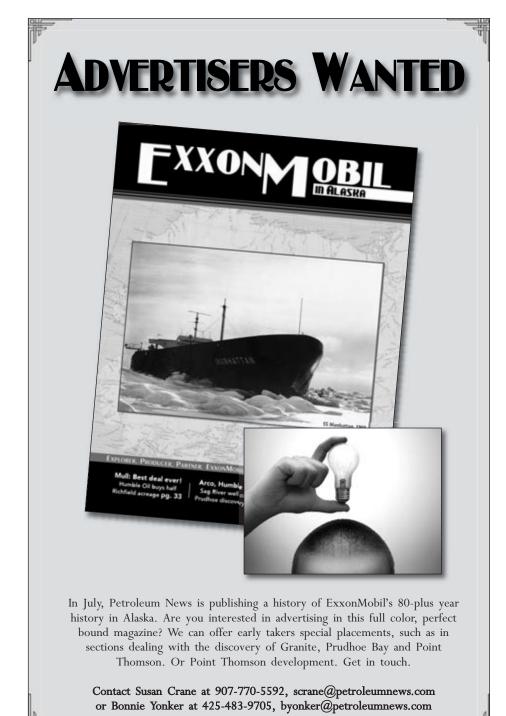
Gas sales rare on Slope

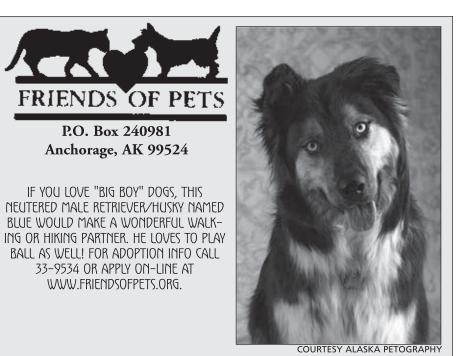
The producing fields on the North Slope are listed as oil fields for the time being, where natural gas is mostly used on site as fuel or pumped back into reservoirs to increase oil production. The Nuiqsut contract is a rare example of natural gas going to a third party.

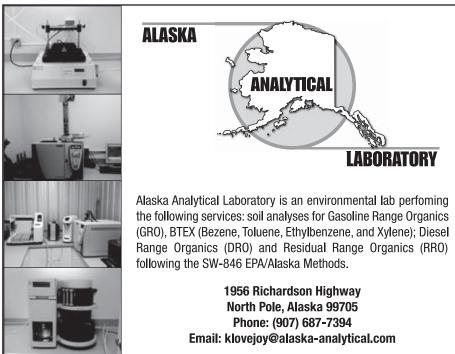
The AOGCC monitors natural gas use on the North Slope as part of a broader goal to optimize ultimate recovery of oil today and for natural gas, should that market open

The AOGCC previously declined to discuss this matter while its investigation is ongoing. ●

Contact Eric Lidji at ericlidji@mac.com







● FINANCE & ECONOMY

Lau keeping Husky on tight leash

Reporters, analysts barred from annual meeting; told company had nothing of 'significance' to announce; CEO heads back to Hong Kong to oversee spinoff of Asian O&G operations

By GARY PARK

For Petroleum News

ohn Lau is leaving Husky Energy in much the same way that he has run Canada's third largest oil and refining company — with his hand firmly on the controls.

In one of the oddest decisions anyone could remember, Lau's final appearance before the company's annual meeting, after 17 years as chief executive officer, was placed off limits to most reporters and analysts.

Only the Calgary Herald, Nickle's Daily Oil Bulletin and a few chosen analysts were granted entry.

A Husky spokesman said the "guest" list was restricted "because we weren't having a news conference and we didn't have anything of significance to announce."

The company also wanted to direct attention to its upcoming first-quarter results, he said.

That left reporters and analysts to suggest that Lau was settling some scores with those who had speculated — often aided and abetted by Lau himself — on the chances of a Chinese state-run company taking over Husky; the chances of a joint-venture with a major refining company; and the chances of Husky's Asian assets being spun off into a separate company.

Lau, a Hong Kong-born accountant and turnaround expert, was picked to lead Husky by Li-Ka-shing, one of the world's wealthiest men who individually and through his flagship company Hutchison Whampoa owns 72 percent of the Canadian company.

The Husky rescue

He set about rescuing what was widely known in Calgary as the Husky "dog," with a debt to cash flow ratio of 15 times, turning it into one of the industry's top performers by embarking on a painful restructuring and making a series of skillfully timed acquisitions to solidify the recovery.

In a rare public show of frustration six years ago — when he first announced his departure from Husky in 2005 — Lau said he had received little backing from Husky management in his efforts to pull the company out of its financial hole, saying he was viewed as a "stranger and an intruder."

Although inclined to stick to tightly scripted presentations, Lau occasionally delivered some of the industry's most memorable quotes.

He once predicted Husky was destined to become "one turbo-charged puppy";

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In overseeing the birth of yet another project, Lau will leave another imprint on Husky and nobody is betting his influence will end there.

said he would not resign until the Huskyoperated White Rose oil field offshore Newfoundland was completed, giving him the chance to "make sure my baby's growing up"; and, in answer to those who said Husky demanded too high a takeover price, said: "Of course we're expensive, because the return is good. You don't expect to get a Cartier watch by paying a Seiko price, right?"

Growth strategy

The Lau-directed growth strategy saw Husky buy the Saskatchewan government's 50 percent stake in an upgrader, giving it the ability to process heavy oil from its northern Alberta operations, and buy Canadian East Coast offshore assets from Talisman Energy and Gulf Canada as a launching pad to expand its presence in the region.

That was followed by a flurry of deal making, including the C\$800 million acquisition of Marathon Oil's holdings in Western Canada; a lively, though short-lived exploration program in the Central Mackenzie Valley, highlighted by the region's first discovery in 85 years; a 2007 deal with BP to create an integrated North American oil sands business consisting of upstream and downstream operations; and advancing the planned 200,000 barrels per day Sunrise oil sands project to the point of corporate sanctioning later this year.

Impressive legacy

Lau's legacy is impressive: Husky has raised its heavy oil output from 12,000 bpd in 1993 to 100,000 bpd and its booked Canadian heavy oil reserves to 120 million barrels; it has 10 billion barrels of in-place heavy oil resource and is seeking a partner to develop its major stakes in carbonate formations, likely the next generation of

oil sands development; and it is testing various non-thermal enhanced recovery techniques.

Lau's decisive and some said heavyhanded management style included a decision by Husky to abandon membership in the Canadian Association of Petroleum Producers, reinforcing his reputation as an industry lone wolf.

In 2002, Husky stunned the oil patch by disclosing it had held "discussions" with PetroChina and "other parties" regarding possible transactions, but added "there is no assurance that any transactions will occur."

Two years ago he turned the tables on analysts who saw only one outcome for Husky — a hostile takeover.

He said Husky was actively looking to acquire an international rival and would spend as much as C\$15 billion on a growth program to 2020.

Now the possibility of either selling out to or teaming up with elements of China's powerful state-run energy companies is likely to dominate Lau's future.

In returning to Hong Kong he will "assume responsibility for leading the development of the company's businesses in the Asia-Pacific region, including existing businesses in Indonesia and the South China Sea."

In partnership with China National Offshore Oil Corp., Husky last year reported a second "significant" deepwater gas find in the South China Sea, pointing to "huge potential" in an area where CNOOC and its partners plan to invest US\$29.3 billion over the next decade developing the reserves.

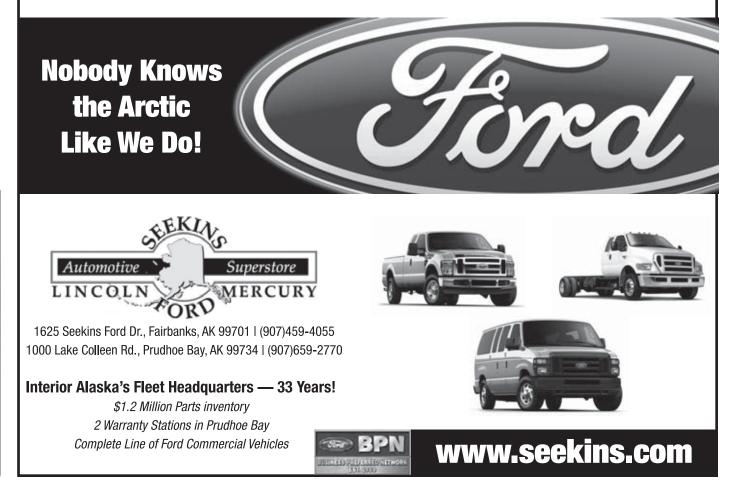
Coinciding with Lau's relocation, Husky has reiterated its plans to complete a spinoff of its Asian oil and gas operations by the end of 2010.

In overseeing the birth of yet another project, Lau will leave another imprint on Husky and nobody is betting his influence will end there. •

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ALTERNATIVE ENERGY

Energy plan released at annual conference

Alaska Energy Authority releases new energy plan, which calls for big gains in energy efficiency, conservation, and renewables

By STEFAN MILKOWSKI
For Petroleum News

Statewide energy coordinator Steve Haagenson rolled out a new energy planning document in late April meant to help communities across Alaska develop sustainable, affordable sources of energy.

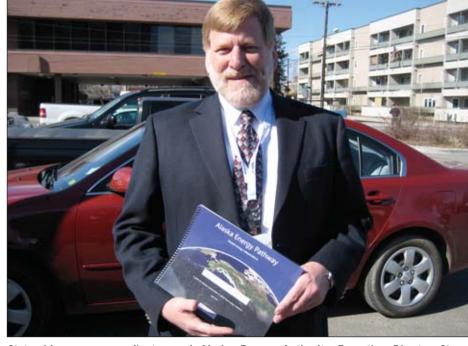
The "Alaska Energy Pathway" builds on the resource inventory and energy technology analysis the Alaska Energy Authority completed in 2009. It incorporates the Integrated Resource Plan developed for the Railbelt region, and it offers individualized development plans for 227 non-Railbelt communities.

The plan restates the goal of generating 50 percent of the state's electricity from renewable sources by 2025, and incorporates a new goal of reducing energy consumption by 15 percent by 2020 through energy efficiency and another 5 percent through energy conservation.

"This document is really a next step," Haagenson said as he released the new report April 27 at the 6th Rural Energy Conference in Fairbanks.

Haagenson told the record crowd of almost 450 business, community, and government representatives that the plan will rely on people like them to carry it forward. He likened a mandate to the list of chores his wife gives him. "It doesn't get done," he said. "Nothing personal at all — it's just not my list."

"What I want to do is engage Alaskans in making this their list," Haagenson went on. "This is their list of things they can do locally, with their own resources, and pulling together to get their future secured."



Statewide energy coordinator and Alaska Energy Authority Executive Director Steve Haagenson showed off AEA's new energy planning document April 27 at the Rural Energy Conference in Fairbanks. The document builds on the energy inventory AEA released last year.

Report on CD

The report, most of which is contained on a compact disc, contains reams of information, including the entire integrated resource plan for the Railbelt, an analysis of using propane in villages, energy-saving tips, and community assessments that estimate current energy usage and project savings from energy efficiency and renewable energy. The plan also provides initial cost estimates for using renewable energy for heating in addition to electrical generation.

Haagenson said non-Railbelt regions already generate 63 percent of their electricity from renewable sources, thanks mostly to hydroelectric plants in Southeast. By investing in efficiency and renewables, the non-Railbelt regions could increase that figure to 91 percent, saving nearly 30 million gallons of fuel per year and reducing greenhouse gas emissions by 77 percent, he said. The regions could also increase the percentage of non-fossil fuel heating sources from the current 10 percent to 45 percent.

The challenge for the Railbelt, Haagenson said, will be to come up with financing for the major electrical generation projects identified in the integrated resource plan. That study found that Railbelt utilities will need to invest roughly \$7.5 billion in the next 20 years, but have only \$1 billion to \$2.5 billion in debt capacity.

Haagenson said AEA worked with the University of Alaska Fairbanks' Alaska Center for Energy and Power, the engineering firm WHPacific Inc., the cost-estimating firm HMS Inc. and many others on the report. He said AEA will accept comments on the draft report through May.

A gathering of energy minds

According to sponsors, nearly 450 people from almost 100 different communities attended the 2010 Rural Energy Conference, held April 27 to April 29 in Fairbanks. The event included three days of presentations and technical sessions on topics ranging from ocean energy to food security. The conference was sponsored by AEA, ACEP, the Denali Commission, and Chena Power.

ACEP director Gwen Holdmann said the conference is meant to provide a venue to share ideas and experiences, successes and failures. This year's theme was "New energy for sustainable communities."

Several speakers praised the wide-reaching energy legislation passed this year by the Alaska Legislature and described a growing effort at the state level to reduce energy consumption and get off fossil fuels.

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Ideas abound for energy storage

As rural communities begin to develop wind and other forms of renewable energy, many are also pursuing energy storage devices to help integrate the systems with existing diesel generation and mitigate swings in energy production and demand.

Kotzebue Electric Association now has more than a megawatt of installed wind capacity, according to General Manager Brad Reeve. But wind power varies on a daily and seasonal basis, and diesel generators are turned on and off thousands of times a year to mitigate the swings.

To reduce the number of diesel starts and allow diesel generators to run at efficient levels when they're on, the utility is planning to install a large "flow battery" that will be able to regulate power frequency and store excess power. Reeves said the battery, made by the Massachusetts company Premium Power Systems, will be able to provide 500 kilowatts for more than 7 hours, or roughly as much as is needed to meet the daily spikes in demand around breakfast, lunch and dinner. "We're looking at using less diesel at the end of the day," he said.

The Anchorage company Intelligent Energy Systems is working on several energy storage systems, including flywheels and heating units. CEO Dennis Meiners said flywheels can provide frequency regulation and an emergency power source to provide energy until a back-up generator can be started. The heating units are designed to provide frequency regulation and affordable space heating by capturing excess energy produced from wind turbines.

—STEFAN MILKOWSKI

"There is state leadership now on energy efficiency that we didn't have just a few years ago," said Chris Rose, executive director of the Renewable Energy Alaska Project.

Jack Hébert, president and CEO of the Cold Climate Housing Research Center, said CCHRC is designing homes that can reduce energy consumption by 80 percent. But he cautioned that rural communities will have to be designed differently if they are to be sustainable. He noted that a third of CCHRC's staff live in cabins without running water. "That's what they can afford, so that's what they have."

see ENERGY PLAN page 17

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NATURAL GAS

Encana turns pitchman

Big producer sells gas as source of power, transportation fuel; campaign could have positive spinoffs for Arctic development

By GARY PARK

For Petroleum News

eading North American natural gas producer Encana has its own motives for touting the wider, greater use of gas to generate power and fuel motor vehicles.

In the process, however, it could become an indirect lobbyist for development of Arctic gas in Alaska and Canada's

Encana Chief Executive Officer Randy Eresman never lets a chance pass him by these days without pitching the cost effectiveness and environmentally sustainable advantages of gas over coal, noting that gas is now competing with coal as a fuel source for power generation in the United States.

"We think that could very quickly remove some of the current surplus supply," he told analysts.

Eresman said the message is starting to be heard, but faces a challenge to win over utilities, who remember a few years ago when the gas industry put our dire warnings that it was running out of sup-

He said that even Encana believed those forecasts until unconventional gas development in North America's shale and tight deposits started taking place and, faced with indications of 100 years' supply, it began looking at ways that would help support gas demand.

"We have a long-term reliable supply of natural gas in North America and the end use of this fuel makes the most economic and environmental sense in any efficient production mode," he told Encana's annual meeting.

Power generation

Eresman said the leading opportunity for gas is as a fuel source for power generation, noting there is excess capacity at gas generating plants, which are typically operating about 25 percent of the time compared with 80 percent for coal-fired

"There is a real opportunity to switch over," he said. "The question has always been at what cost," he said, adding that Encana is forecasting long-term gas prices of \$6-\$7 per thousand cubic feet.

Because of the current low price, gas is actually forcing coal out of the market and if a carbon tax or cap-and-trade system was imposed that pace could accelerate, he said.

Encana Chairman David O'Brien said the dramatic change in his company's own reserves and resources amounts to a "real game changer," but it will take time to convey that point to politicians.

"With the advantage in terms of clean energy of natural gas and its cost competitive nature, I think over the next period of time you will see a dramatic increase in the use of gas both in power generation and transportation," he said.

Eresman told analysts that Encana is thinking about proceeding with \$500 million of optional spending this year to advance its system of "gas factories" for its key resource plays by combining its technical gains, advanced manufacturing practices and operational abilities in regions such as Haynesville in the Texas-Louisiana area to demonstrate "what the future might be."

For the first quarter of this year, the

company's bined operating and administrative costs were \$1.02 per thousand cubic feet, about 18 percent below guidance because of lower field operating costs long-term RANDY ERESMAN incentive costs.



The company said that in the emerging Horn River shale gas basin of British Columbia, operating efficiencies are making rapid gains.

They include drilling 16 horizontal wells from a single pad and 20 fracture stimulations per well, with laterals extending 8,500 feet.

Fueling stations needed

As part of its gas sales job, Encana is

also asking the Canadian government for C\$1 billion to kick-start the construction of a network of hundreds of compressed and liquid natural gas fueling stations along Canada's busiest highway from Windsor, Ontario, to Quebec City.

It also wants federal tax incentives for trucking companies to convert their 18wheelers from diesel to natural gas engines —an idea that a government spokesman said would get consideration as an "alternative and renewable" fuel

Eric Marsh, Encana's executive vice president of natural gas economy, said natural gas is entering an age where it will be "abundant and affordable," requiring more ideas for making gas an "acceptable fuel for the future."

Despite all that enthusiasm, Jeff Wojahn, president of Encana's U.S. division, said the scramble to develop shale has is attracting some "storm clouds," as the global economic recovery raises steel prices by 6 to 8 percent this year.

Eresman conceded that "inflationary pressures are becoming a concern to us."

But he also said the current gas price environment is "unsustainably low given what it costs to balance a normal market. Therefore, we plan to invest based on what we believe to be a more sustainable long-term price. Over the long-term, we are confident that we can profitably grow production as we work to capture market share from higher-cost producers," he

And Encana sees no why reason why it can't reach its goal of doubling gas output from the current 3 billion cubic feet per day within five years, he said. •

> Contact Gary Park through publisher@petroleumnews.com



Open Season Starts Now

The first North Slope natural gas open season in the history of Alaska is now underway. Over the next three months, natural gas shippers can evaluate detailed plans for the Alaska Pipeline Project and reserve capacity in the pipeline.

The Alaska Pipeline Project offers a choice of two pipeline routes, one from the North Slope to Alberta, Canada, and one to Valdez, Alaska. Both options would provide opportunities for distributors to deliver gas from the pipeline to Alaskan communities.

The Alaska Pipeline Project open season will be conducted from April 30 through July 30, 2010. For more information about this historic step, visit the open season section of our website.

www.TheAlaskaPipelineProject.com/open_season



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SAFETY & ENVIRONMENT

Polar bear deterrence guidelines proposed

The U.S. Fish and Wildlife Service has published proposed guidelines for deterring polar bears from interactions with people or from gaining access to property.

"The deterrence guidelines would, if approved, be voluntary and are intended to reduce occurrences of interactions between bears and humans in manners safe for both," Fish and Wildlife said April 23. "They provide clear guidance for minimizing incidental encounters with polar bears, but will not change the legal status quo for any activities in Alaska."

The guidelines would complement provisions of the Marine Mammals Protection Act that allow Fish and Wildlife to authorize techniques such as the use of noise to chase bears from areas of human population or from work sites. The MMPA also allows the lethal take of polar bears in defense of life but not in defense of property, Fish and Wildlife said.

The recommended deterrence techniques include the physical protection of property and people using barriers such as rigid fencing and caging, and the use of more active measures such as the use of noise to discourage a bear from an undesirable interaction with human activity.

And in keeping with the intent of the MMPA, the techniques would deter bears without risking the death or injury of the animals.

"While some parties may believe they do not go far enough, we do not believe more active deterrence measures are appropriate for these guidelines," Fish and Wildlife said

Comments on the proposed guidelines are due on or before May 26.

—ALAN BAILEY

EXPLORATION & PRODUCTION

USGS to conduct Cook Inlet assessment

The U.S. Geological Survey is going to conduct a new assessment of oil and gas resources in Alaska's Cook Inlet basin, USGS geologist Rick Stanley told the Alaska Department of Natural Resources 2010 Technical Review Meeting April 21. The assessment will encompass those parts of the basin that lie onshore and under the state waters of the upper Cook Inlet.

Stanley has been participating in a multiyear DNR research program, investigating the petroleum geology of Cook Inlet and obtaining geologic information to help in exploration for oil and gas.

USGS plans to conduct a meeting in September to review what is now known about Cook Inlet geology and geophysics, and hence to identify potential oil and gas plays, to act as a basis for estimating resource volumes. The agency will then carry out the actual assessment in February 2011, Stanley said.

In late 2009 DNR published an assessment of remaining natural gas reserves associated with existing gas fields and of potential gas reserves in some specific, known exploration prospects. And a 2010 study by Petrotechnical Resources of Alaska for three Southcentral Alaska power and gas utilities evaluated the economics of developing the probable remaining natural gas reserves.

In contrast, rather than evaluating known or probable reserves in specific places, the USGS assessment will estimate undiscovered volumes of both oil and gas resources across much of the basin. The last USGS assessment of the region, completed in 1995, took a broad look at the whole of southern Alaska, rather than just Cook Inlet. In 2006 the U.S. Minerals Management Service published its most recent Cook Inlet assessment, encompassing offshore lands on the outer continental shelf, primarily in the lower Cook Inlet and not overlapping the area that USGS will assess.

—ALAN BAILE\

LAND & LEASING

Schedule filed in OCS lease sale appeal

By ALAN BAILEY
Petroleum News

The parties in the appeal in the U.S. Court of Appeals for the District of Columbia against the U.S. Minerals Management Service 2007-12 outer continental shelf lease sale program have filed a schedule for resolving the case. The disputed lease sale program includes the 2008 Chukchi Sea lease sale that raised \$2.6 billion in bonus bids.

Shell is planning to drill up to three Chukchi Sea exploration wells in 2010 in leases that it purchased in the 2008 lease sale.

In a document filed with the D.C. court on April 27 the parties in the appeal say that the petitioners may ask the court for an injunction to block Shell's Chukchi Sea drilling program until the appeal case is resolved.

The D.C. court originally upheld the appeal in April 2009, saying that MMS had not done an adequate environmental analysis of the potential impacts of oil and gas leasing in the Alaska OCS. The court subsequently directed MMS to rework that environmental analysis for reconsideration.

On April 2 the U.S. Department of the Interior published its proposed revised environmental analysis and lease sale program, affirming the 2008 Chukchi Sea lease sale. This preliminary revised program is now

In a document filed with the D.C. court on April 27 the parties in the appeal say that the petitioners may ask the court for an injunction to block Shell's Chukchi Sea drilling program until the appeal case is resolved.

going through a 30-day public review and the secretary of the Interior could issue a final version of the revised program as early as May 17, the parties in the appeal case say.

The parties say that in parallel with issuing the revised program, the secretary of the Interior will file with the court a motion to dismiss the appeal. There will then follow a 28-day period during which the parties will file responses to Interior's motion and replies to those responses. If the court then determines that Interior's revised lease sale program complies with the court's 2009 opinion, the court will dismiss the appeal against the program.

If, however, the court does not accept the new environmental analysis it could send the lease sale program back to Interior for further revisions, presumably leaving continuing uncertainty around the status of the Chukchi Sea leases issued in 2008. ●

Contact Alan Bailey at abailey@petroleumnews.com

SAFETY & ENVIRONMENT

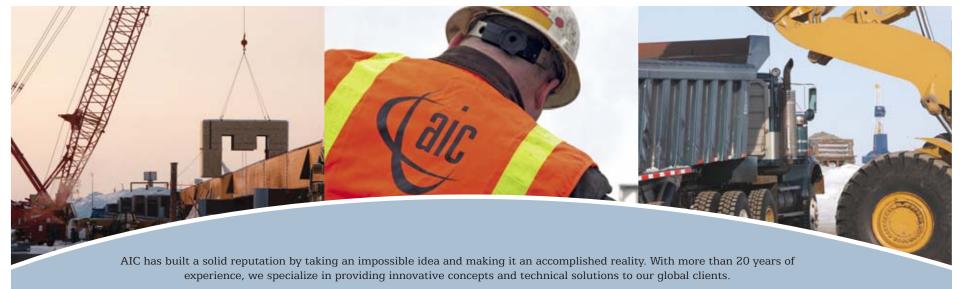
Produced water discharge at Kuparuk

The Alaska Department of Environmental Conservation said April 26 that ConocoPhillips Alaska discovered and reported a produced water spill from the Kuparuk 3R well 22 flowline the morning of April 25.

DEC said an undetermined amount of produced water was released from an injection flow line to a reserve pit at R pad, well 22, at the Kuparuk River field.

DEC said the injection line has been shut-in, depressurized and de-inventoried. Spill response technicians had determined the spill area and were using hand tools and a skid steer loader to remove contaminated snow from the spill area.

—PETROLEUM NEWS



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• EXPLORATION & PRODUCTION

Explorers may soon return to Nunavut

Federal, territorial agencies are working to lure companies back to High Arctic after recent jump in petroleum resource estimates

By ROSE RAGSDALE

For Petroleum News

oil and gas exploration in the High Arctic regions of Canada's Nunavut Territory may be on the cusp of a comeback after an abrupt halt a quarter century ago when oil prices plummeted.

In 1986, explorers departed to focus on the more accessible Beaufort Sea and East Coast of Canada, after scoring 20 impressive oil and/or gas discoveries in Nunavut,.

The majority of the deposits are in the Sverdrup basin, a vast sedimentary formation that sprawls across half a million square kilometers of Nunavut's ragged Arctic coastline from the northern tip of Greenland to the edge of the Beaufort

After nearly two decades of drilling, explorers had tapped oil or gas formations in the Sverdrup basin, Baffin Bay and several other areas of Nunavut.

In one relatively small area of the Sverdrup basin, alone, explorers found three large petroleum deposits: Cisco, estimated to hold 1 billion barrels of oil equivalents; Drake Point, a natural gas field with 6 trillion cubic feet on Melville Island; and Hecla just offshore in the Prince Gustaf Adolf Sea with 2 billion barrels oil equivalents and 10 tcf of gas.

Only one oil field, at Bent Horn on Cameron Island to the southeast, went into production, primarily to supply fuel to the nearby Polaris lead-zinc mine. Between 1985 and 1996, the field proBeaufort Sea – Mackenzie Delta
55 trillion cubic feet gas/
5 billion barrels oil*
Large potential under active exploration committed in last 2 years
Large discovered resource: 6 tof proposed for development onshore
by Mackenzie Gas Project. Additional resources in 50 plus discovered
fields in the basin.

Mackenzie Valley
10 tof/500 million barrels*

Under active exploration for oil and gas

Cas Project

Under active exploration for oil and gas

Testimates of unbeaute
Discovered gas resource in Colvite
Hills

Production from Norman Wells

Oal Cas potential

Low

Very Low

Testimates of ubbasis

Production from Norman Wells

OIL AND GAS IN CANADA'S NORTH

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duced 3 million barrels of oil so light and sweet that the miners were able to burn the unrefined crude to power their operation

Nearly 25 years later, oil and gas exploration and development is a wistful memory in Nunavut. But Canada and the territorial government are working to change that, hoping to lure industry to return with a combination of enticing new geological data and streamlined regulations.

"It's just a matter of time until the petroleum industry returns to Nunavut," petroleum geologist Peter Frampton told Petroleum News in a recent interview in Iqaluit, Nunavut.

"Since industry moved to eastern Canada and over to the Beaufort Sea, it has been easy to underestimate these areas. But the companies are moving this way. It's a natural progression, and we're pretty excited," said Frampton, who is senior advisor for petroleum resources at the Government of Nunavut's Department of Economic Development and Transportation.

In 2008, some oil and gas companies expressed interest, indicating that they wanted changes in some regulations governing certain areas of Nunavut.

"They indicated that they want unitiza-

tion changes to give the companies incentives to determine who owns what percentage of the deposits in the Sverdrup basin," Frampton said.

Higher resource estimates

Further fueling a revival of interest are recent petroleum resource estimates for Nunavut. Based on data obtained from bedrock geological surveys taken in the 1960s and 1970s, the U.S. Geological Survey had estimated Nunavut's resource to total 67 billion barrels of oil equivalent.

Today, territory's vast land mass — one-fifth the size of Canada — along with its offshore areas, is considered much more prospective, hosting between 9.2 billion and 23 billion barrels of oil and between 97.3 tcf and 262.3 tcf of natural gas, according to USGS and Geological Survey of Canada estimates.

And even these geological assessments may underestimate the territory's potential resource, according to Frampton.

"Only 180 wells have been drilled in all of Nunavut, where just one company drills hundreds of wells in western Canada," he said. In Frobisher Bay where fewer than 10 wells were drilled, for example, explorers discovered a gas field with 3 tcf to 4 tcf of gas, he observed.

Frampton said some geologists theorized after the industry departed in 1986 that the big oil and gas find in the Sverdrup basin is yet to be made.

see NUNAVUT page 13



continued from page 12

NUNAVUT

He cited the Baffin Bay region in northeastern Nunavut across the water from Greenland as being another focus of renewed interest.

The USGS recently completed a new estimate for undiscovered oil and gas resources in the sea north of the Arctic Circle between west Greenland and eastern Canada, which includes the Baffin Bay licensing area. The mean estimate for oil and gas in the region was calculated at more than 18 billion barrels of oil equiva-

"Recent indications are this area could be just as big as the Mackenzie Valley and the Beaufort Sea," Frampton said. "And back in 1981, the Baffin Bay region was considered likely more prospective for oil and gas than Greenland."

Exploration in Greenland

Greenland since has jumped to the forefront of petroleum exploration in the eastern Arctic. The country has sponsored numerous seismic surveys and is forging ahead with development of offshore oil and gas fields on its side of Baffin Bay and Davis Strait.

This summer, Greenland is set to drill four wells in offshore areas, Frampton

Greenland's Bureau of Minerals and Petroleum also planned a major bid round for the Baffin Bay area. The deadline for submission of applications for this licensing round was May 1. Applicants could apply for licenses in 14 predefined blocks varying in size between about 8,000 square kilometers and 15,000 square kilometers. The country's total licensing area in Baffin Bay covers about 151,000 square kilometers.

TGS NOPEC, a Norwegian contractor, has acquired new 2-D seismic data in the Baffin Bay area. The firm's 2009 seismic program, its 10th consecutive year of performing seismic surveys in the Arctic, was designed to assist in the evaluation of



Peter Frampton, a petroleum geologist for the Government of Nunavut, said he believes the oil and gas industry will return to Nunavut in the near future because the Arctic territory's prospectivity for petroleum resources has increased dramatically in recent years and the Canadian and territorial governments are taking steps to show their support for resource

the Baffin Bay area prior to the bid round.

Industry also has showed considerable interest in the Baffin Bay licensing round. A prequalification round for the area ended Oct. 1 with 13 international oil companies applying to become approved group included operators. The ExxonMobil, StatoilHydro, BP, Japan National Oil Corp., Texaco and Shell.

The Government of Greenland has said it will follow the 2010 bid round with licensing rounds in the Greenland Sea in 2012 and 2013.

Renewed interest in Canada

Frampton said TGS got permission from Canada to do modern high-resolution prospecting on Nunavut's side of Baffin Bay on a speculative basis.

"They indicated that they've seen some very, very interesting geological phenomena that they wish to follow up on. (To do speculative prospecting,) they must make a significant investment, and they must expect to get a return on that investment," the geologist said. "It's been very good news for us."

The federal government, meanwhile, has resumed geological mapping in the Far North with a C\$100 million over five years (2008-13) in a new Geo-mapping

for Energy and Minerals Program to fill the large gaps in knowledge of the coun-₹ try's energy and mineral resources.

GEM has budgeted C\$22 million for this year's program, which will focused mainly on mapping areas of the Arctic, including a 2-D seismic survey of Baffin Bay and Foxe basin and aeromagnetic surveys of northern Baffin Island and in offshore areas.

In 2009, the Canada-Nunavut Geoscience Office studied the potential of hydrocarbon systems in Paleozoic outcrops on Melville Peninsula on the western margin of Foxe Basin.

Nunavut's government, meanwhile, is taking steps to advance its cause with

"We're working with the National Energy Board and (Indian and Northern Affairs Canada) to identify problems and obstacles in our regulatory framework and smooth them out," Frampton said.

INAC is also working on a mapping tool for petroleum and environmental

"Usually that type of assessment or analysis is done prior to a licensing round for oil and gas exploration," he said.

A joint ice study currently under way by the Nunavut government, Fisheries and Oceans Canada and the private sector "is the kind of engineering assessment that is needed to ship petroleum from the region," Frampton added. •

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GOVERNMENT

Murkowski calls for Arctic priorities

Now is a critical time for international relations in the Arctic, said U.S. Sen. Lisa Murkowski, R-Alaska, in her keynote speech April 28 at a conference on U.S. strategic interests in the High North.

"It has been identified that there are two paths that we can go down in regards to international relations — one is a path of competition and conflict, and the

other is one of cooperation and diplomacy," Murkowski said. "I believe the decision on which path we ultimately take will require dynamic leadership."

A high priority issue needing leadership is the U.S. ratification of the Convention of the Law of the Sea Treaty, the United Nations convention that provides a framework for international agreements on jurisdiction over extended areas of Arctic Ocean continental shelf, Murkowski said. Ratification of the treaty has remained stalled since its submission to the U.S. Senate in 1994, but without first acceding to the treaty the United States cannot submit its data



LISA MURKOWSKI

regarding its extended continental shelf to the commission established under the treaty, she said.

Murkowski said that she thinks that, although some posturing is going on over national jurisdiction in the Arctic Ocean, actual actions suggest that Arctic nations are seeking cooperative solutions to Arctic issues. However, it is important that nations which do not have Arctic Ocean coastlines but which have interests in the Arctic be included in discussions about the region's future, Murkowski said, praising Secretary of State Hillary Clinton's support for this position at a recent Arctic

Murkowski also mentioned some U.S. Arctic initiatives that she has been supporting, including a study into the feasibility of developing a deepwater Arctic port for the U.S. Navy and the U.S. Coast Guard; a USCG assessment of its Arctic infrastructure needs; the refurbishment of a USCG icebreaker; and a study into the need for new U.S. icebreakers.

-ALAN BAILEY



NATURAL GAS

Interior lawmakers ask about gas options

Ramras and Coghill want to know how consumers will be protected if a bullet line is built after a trucking operation begins

By ERIC LIDJI For Petroleum News

airbanks-area lawmakers want to know how state regulators would protect consumers if two separate efforts to bring northern gas to the Interior materialize in the near future.

If an in-state gas pipeline should come online after a proposal to truck liquefied natural gas to Fairbanks become operational, Fairbanks natural gas customers might be stuck paying down the debt on an obsolete project, Sen. John Coghill and Rep. Jay Ramras wrote in an April 12 letter to Regulatory Commission of Alaska Chairman Bob Pickett.

Coghill and Ramras also want to know what existing regulations have to say about a local market where consumers suddenly have more than one option for getting natural gas.

Contemplating a \$250 million proposal by the Alaska Gasline Port Authority to truck North Slope LNG to Fairbanks, the two lawmakers wrote, "Our overarching concern is whether a 20-year amortization on a project that may take three years to complete can compete with a small diameter natural gas pipeline that may be completed in five to seven years."

The trucking proposal requires building new liquefaction and re-gasification facilities on the North Slope and in the Interior. Coghill and Ramras believe this infrastructure "will be burdensomely complex and expensive" compared to a 24-inch pipeline and would in turn make the local distribu-



JOHN COGHILL



JAY RAMRAS

tion grid more expensive for current and future customers.

"If an alternative source of natural gas becomes available, consumers must be entitled to migrate to the most affordable delivery system for gas available without carrying the burden of cost for an antiquated system," the two lawmakers wrote.

Gov. Sean Parnell recently signed a bill that reorganizes state efforts to have a plan in place by July 2011 for bringing gas to Fairbanks and Cook Inlet by the end of 2015.

Two plans for natural gas

Fairbanks homes and business mostly use heating oil and the local electric utility, Golden Valley Electric Association, primarily generates its power from coal and diesel.

When crude oil prices rose in 2008, policymakers in the Interior began searching for a way to break the region's reliance on crude oil products for heat and electricity

There are two efforts currently under way to bring more natural gas to

Fairbanks.

The first effort involves trucking liquefied natural gas from the North Slope to Fairbanks

The Alaska Gasline Port Authority recently took two major steps toward this goal, making a bid to buy privately held Fairbanks Natural Gas, which serves more than 1,100 customers in the region, and signing a 15-year LNG supply contract with GVEA.

If the deal goes through, the project could be operational by 2012.

The second effort is a much-discussed pipeline from the North Slope to Anchorage.

Although no plans have been sanctioned yet, several public and private proposals would bring northern gas into Southcentral on a line through Fairbanks to replace diminishing production in Cook Inlet. The most optimistic timelines have gas flowing by 2015.

The cost comparisons proposed by Ramras and Coghill are not so simple, though, especially because the in-state pipeline, or "bullet" line, is still just a proposal.

Because it's unclear whether the pipeline, if built, would be public, private or both, it's impossible to say what the profit motive would be. The port authority project would likely be priced to recover costs. Would a pipeline with tariffs that guarantee a specific rate of return for its owner, on top of maintenance and operations costs, still be cheaper?

Also, having two options for getting gas to Fairbanks doesn't necessarily mean two companies would be competing in the market. Fairbanks Natural Gas could simply buy gas supplies from both sources and charge customers a weighted average of the two.

What if both plans go ahead?

In addition to wondering about an obsolete trucking operation, Ramras and Coghill also wondered how the regulatory structure would work if Fairbanks has two gas sources

Presumably imagining a scenario where an in state pipeline led to the creation of a new gas company, Coghill and Ramras asked how the RCA would handle competition. For example, could a company get a certificate to provide natural gas deliveries in a part of the state where another company is already certificated to provide the same service?

And if the RCA did grant overlapping certificates, would the existing distribution grid suddenly become common carrier, where the owner must make space available to third-party suppliers, or would the new company need to build its own distribution grid?

There is a model in Alaska for two companies using one grid. In Southcentral, Aurora Power Resources markets natural gas on the existing Enstar Natural Gas network

The lawmakers also want to know if the purchase of Fairbanks Natural Gas by a public, not-for-profit entity would change the status of the utility in the eyes of the RCA

The RCA opened a legislative docket upon receiving the letter. The docket does not include a timeline for response. Before going into effect, the GVEA contract to buy LNG from the port authority must get RCA approval. The RCA would also have to approve any transfer of the Fairbanks Natural Gas certificate to operate in the Fairbanks area. ●

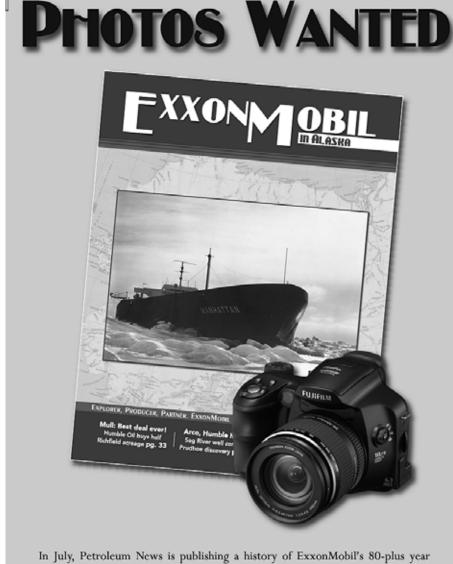
Contact Eric Lidji at ericlidji@mac.com



DOE unconventional fossil energy report

The U.S. Department of Energy is seeking comments from industry and academia on a draft report titled "Unconventional Fossil Energy: Domestic Resource Opportunities and Technology Applications." The report, requested under federal legislation appropriating funds for DOE fossil energy research, is intended to act as a basis for a future DOE research strategy by overviewing the status of the various unconventional fossil energy resources that exist in the United States. The legislation requires industry and academia input to the report.

see REPORT page 15



In July, Petroleum News is publishing a history of ExxonMobil's 80-plus year history in Alaska. Do you have photos or anecdotes from the 1920s through 2000 that we can use? Predecessors to Exxon and Mobil in Alaska might include some of the following: General Petroleum, Socony, Humble, Superior, Esso, Jersey and Anglo-American. Give us a call.

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• SAFETY & ENVIRONMENT

New oil leak in area of sunken rig

Cleanup efforts continue in Gulf; BP will drill relief well; government offers Department of Defense help in containing spill

By CAIN BURDEAU & BRETT MARTEL

Associated Press Writers

new oil leak was discovered at the site in the Gulf of Mexico where a drilling rig exploded and sank, and experts now estimate that five times more has been spilling into the water a day than previously believed, the Coast Guard said late April 28.

However, an official from BP PLC, which leases the rig, said he did not believe the newly discovered leak has increased the amount of oil spilling into the water beyond earlier estimates. Coast Guard Rear Adm. Mary Landry disagreed with his statement at a news conference and said she was relying on a new estimate from the National Oceanic Atmospheric Administration.

She said NOAA experts now estimate that 5,000 barrels a day of oil are spilling into the gulf. Officials had estimated the leak for days at 1,000 barrels a day.

The news came hours after crews tried a test burn on the massive spill to try to slow it from reaching the U.S. shoreline.

Doug Suttles, chief operating officer for BP, said he thinks the estimate of 1,000 barrels a day is accurate. He showed a diagram showing where the leaks are and said the newly discovered leak is upstream from the previous leaks.

"Due to its location, we do not believe this changes the amount currently believed to be released," he said.

When asked again, Landry stuck to the NOAA estimate and said it was based on aerial surveys, study of the trajectory of the oil slick and other factors.

The explosion on the Deepwater Horizon occurred April 20. Eleven people are missing and presumed dead; 115 escaped. The rig burned and subsequently sank.

Government offers military help

The Secretary of Homeland Security has briefed President Barack Obama on this new information and the government has offered to have the Department of Defense help contain the spill and protect the shoreline and wildlife, she said.

"It has become clear after several unsuccessful attempts to determine the cause" that agencies must supplement what's being done by the company, she said.

Crews late in the afternoon of April 28 started a test burn on the massive spill, which Landry noted was successful. Rig operator BP PLC had planned to continue the oil fires after the test, but as night fell, no more were lit. The burns were not expected to be done at night. No details about when more fires would be lit were mentioned during the late night news conference.

Crews planned to use hand-held flares to set fire to sections of the massive spill. Crews turned to the plan after failing to stop a 1,000-barrel-a-day leak at the spot where a deepwater oil platform exploded and sank

A 500-foot boom was to be used to corral several thousand gallons of the thickest oil on the surface, which will then be towed to a more remote area, set on fire, and allowed to burn for about an hour.

They had estimated about 42,000 gallons of oil a day was leaking into the Gulf from the blown-out well drilled by the Deepwater Horizon oil rig. That would be closer to 210,000 gallons a day with the new estimates. The cause of the explosion has not been determined.

Burn unusual for offshore U.S.

Greg Pollock, head of the oil spill division of the Texas General Land Office, which is providing equipment for crews in the Gulf, said he is not aware of a similar burn ever being done off the U.S. coast. The last time crews with his agency used fire booms to burn oil was a 1995 spill on the San Jacinto River.

"When you can get oil ignited, it is an absolutely effective way of getting rid of a huge percentage of the oil," he said. "I can't overstate how important it is to get the oil off the surface of the water."

The oil has the consistency of thick roofing tar.

When the flames go out, Pollock said, the material that is left resembles a hardened ball of tar that can be removed from the water with nets or skimmers.

"I would say there is little threat to the environment because it won't coat an animal, and because all the volatiles have been consumed if it gets on a shore it can be simply picked up," he said.

Authorities also said they expect minimal impact on sea turtles and marine mammals in the burn area.

A graphic posted by the Coast Guard and the industry task force fighting the slick showed it covering an area about 100 miles long and 45 miles across at its widest point.

"It's premature to say this is catastrophic. I will say this is very serious," said Coast Guard Rear Adm. Mary Landry.

From the air, the thickest parts of the spill resembled rust-colored tentacles of various thickness. The air was thick with the acrid smell of petroleum.

Amid several of the thicker streaks, four gray whales could be seen swimming in the oil. It was not clear if the whales were in danger

More than two dozen vessels moved about in the heart of the slick pulling oil-sopping booms.

Earlier April 28, Louisiana State Wildlife and Fisheries Secretary Robert Barham told lawmakers that federal government projections show a "high probability" oil could reach the Pass a Loutre wildlife area the night of April 30, Breton Sound on

May 1 and the Chandeleur Islands on May 2.

As the task force worked far offshore, local officials prepared for the worst in case the oil reaches land.

In Plaquemines Parish, a sliver of Louisiana that juts into the Gulf and is home to Pass a Loutre, officials hoped to deploy a fleet of volunteers in fishing boats to spread booms that could block oil from entering inlets.

"We've got oystermen and shrimpers who know this water better than anyone," said Plaquemines Paris President Billy Nungesser. "Hopefully the Coast Guard will embrace the idea."

But there was anxiety that the Gulf Coast was not prepared for the onslaught of oil.

"Our ability to deal with this would be like us having a foot of snow falling in Biloxi tomorrow," said Vincent Creel, a spokesman for the city government in Biloxi, Miss. "We don't have snow plows, and we're not equipped to deal with this."

The parish's emergency manager planned to meet in Houma on Thursday with a Coast Guard official to discuss whether volunteers can help, Nungesser said.

"We don't want to just sit by and hope this (oil) doesn't come ashore," Nungesser said

Relief drilling to begin

The decision to burn some of the oil came after crews operating submersible robots failed to activate a shut-off device that would halt the flow of oil on the sea bottom 5,000 feet below.

BP says work will begin as early as April 29 to drill a relief well to relieve pressure at the blowout site, but that could take months.

Another option is a dome-like device to cover oil rising to the surface and pump it to container vessels, but that will take two weeks to put in place, BP said.

Winds and currents in the Gulf have helped crews in recent days as they try to contain the leak. The immediate threat to sandy beaches in coastal Alabama and Mississippi has eased. But the spill has moved steadily toward the mouth of the Mississippi River and the wetland areas east

see GULF SPILL page 17

continued from page 14

REPORT

Unconventional resources considered include tar sands, heavy oil, gas from coal seams, shale gas, methane hydrate and unmineable coal.

The report suggests a research strategy that especially focuses on the development of residual oil in existing oil fields while also storing waste carbon dioxide in these fields; new research into the use of coal gasification as a method of developing unmineable coal; continued research into the production of natural gas from methane hydrate and the potential to use methane hydrate production as a means of sequestering carbon dioxide; continued research into the environmental and technical challenges associated with the development of shale gas and

tight gas sands; and the use of "advanced computational methods" in the evaluation of the cumulative environmental and socioeconomic impacts of the concurrent regional development of conventional and unconventional resources.

"Any strategy is subject to the limitations of our current understanding of the recoverable volumes of the unconventional resources and the publicly available information related to current research activities in the private sector," the report says. "However, we believe that these five elements should remain central parts of the Department of Energy's approach to R&D that supports development of U.S. domestic energy resources."

The report is available on the DOE website at www.netl.doe.gov/technologies/oilgas/index.html.

—ALAN BAILEY





ADVERTISER

Oil Patch Bits



UMIAQ names Renk new senior project manager

UMIAQ, a member of the Ukpeagvik Iñupiat Corp. said April 14 that Russel Renk, Ph.D., P.E., has been named senior project manager. Renk has a broad multidisciplinary background and more than 20 years of experience in construction, permitting, wastewater treatment and environmental remediation. He has worked with local, state, and federal entities to meet NEPA and other environmental and construction requirements. Throughout his career, he has worked with companies worldwide to develop energy resources including, coal, oil, oil sands, natural gas and geothermal reserves. Renk has published more than 30 reports and articles in civil and environmental engineering and holds two patents in the area of wastewater treatment. The UIC family of companies plays a key role



RUSSEL RENK

in advancing resource development projects, specializing in regulatory planning, stakeholder relations, development engineering, response planning and operations, geospatial analysis, civil construction, and logistics and full-service camps. UMIAQ offers a distinct advantage to its clients through its staff members' local knowledge and understanding of the political, cultural, land use, regulatory, and environmental conditions unique to the arctic and subarctic.

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Middle school students become 'Energy Einstein's'

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Alaska Resource Education, formerly AMEREF, said April 27 that 25 Central Middle School of Science students became the first "Energy Einstein's." Alaska Resource Education, in partnership with the Petroleum Club of Alaska, Baker Hughes and Shell Exploration and Production, presented the day-long Student Energy Education Day, exploring the fundamentals of energy by using Alaska Resource Education's standards-based K-12 curriculum.

Among the topics covered during this first "Energy Einstein's" program, students learned about the fundamentals of oil and gas production through presentations by Shell and Baker Hughes, including hands-on activities with drill bits, drilling muds and other components of the drilling process. They also learned about various career possibilities in the energy sector with an interview panel, and explored what middle and high school subjects are necessary to take advantage of those possibilities. The program will continue to grow during the 2011 school year with other sponsors and energy topics. Alaska Resource Education is a nonprofit organization in partnership with the State of Alaska Department of Education and private industry dedicated to ensuring Alaska's school age children learn about the role resources play in Alaska.

see OIL PATCH BITS page 17

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Companies involved in Alaska and northern Canada's oil and gas industry

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EXPLORATION & PRODUCTION

AK geologic materials inventory online

Want to know what core samples, rock microscope slides or other materials from Alaska oil and gas wells are available in the Alaska Geologic Materials Center? You can now open up Google Earth on your computer, find the well and click on the well symbol to find out. There's also a similar capability for mining prospects and boreholes.

This new online capability is the result of a GMC initiative to hook its inventory database into Google Earth, to make most of the center's oil, gas and mineral inventory more readily available to the public, GMC curator Kenneth Papp told Petroleum News April 28. GMC also sees online access as a means for the center to interact with the public, with people perhaps making suggestions for data additions or pointing out corrections to the existing inventory data, Papp said.

"The database we had was (previously) only available internally to staff and myself," Papp said.

The Alaska Department of Natural Resources operates the Alaska Geologic Materials Center in cooperation with the U.S. Bureau of Land Management, the U.S. Geological Survey and the U.S. Minerals Management Service. The center contains a major archive and library of Alaska rock samples and holds an almost complete collection of core and drill-cutting samples from oil and gas wells drilled in Alaska and on the Alaska outer continental shelf. The collection at the center also includes numerous microscope slides from well samples and many thousands of rock samples from the mining industry.

To use the interface you need to have Google Earth installed on your computer. Then click on the Google Earth GMC inventory link in the GMC inventory page of the GMC website. The GMC website is in the Alaska Division of Geological and Geophysical Services website at www.dggs.alaska.gov.

-ALAN BAILEY

continued from page 15

GULF SPILL

of the river, home to hundreds of species of wildlife and near some rich oyster grounds.

The cost of the disaster continues to rise and could easily top \$1 billion.

Industry officials say replacing the Deepwater Horizon, owned by Transocean Ltd. and operated by BP, would cost up to

\$700 million. BP has said its costs for containing the spill are running at \$6 million a day. The company said it will spend \$100 million to drill the relief well. The Coast Guard has not yet reported its expenses.

—Associated Press writers Janet McConnaughey, Michael Kunzelman in New Orleans, Melinda Deslatte in Baton Rouge and Holbrook Mohr in Jackson, Miss., contributed to this report.

continued from page 8

ENERGY PLAN

Tanana Chiefs Conference President Jerry Isaac urged attendees to become leaders and followers in a quest to cut the use of imported fuels in half in one year. "We know we're not going to do it in a year, but the idea is born," he said.

Regional planning

Railbelt utilities are continuing to work together despite the failure of legislation creating a joint Railbelt utility, according to Mark Fouts of Chugach Electric Association. At the least, utilities will have to create some entity to oversee the Northern Intertie, for which rules are set to expire in November, he said.

Chugach and the Matanuska Electric Association have already agreed to form a joint generation and transmission entity or enter into a power sales agreement, he added, and other utilities will likely join together out of necessity or to take advantage of opportunities like the state-backed Bradley Lake hydroelectric project. "Opportunities like that in the future will probably bring everybody together again," he said.

Robert Venables of the Southeast Conference said his group had envisioned a Southeast grid, with remote communities connected by long transmission lines, but is now focused on localized energy sources.

"The whole thing is technically feasible," he said of the connected grid, "but unfortunately economic viability is not the same as technical feasibility." ●

 $continued \ from \ page \ 16$

OIL PATCH BITS

Schlumberger strengthens position with GeothermEx

Schlumberger said April 27 that it has acquired GeothermEx Inc., a California-based global provider of expert geothermal consulting services. The acquired team operates as an integrated part of Schlumberger Geothermal Services, covering the full spectrum of resource exploration, development and production services. "Schlumberger has been providing technologies and services to the geothermal industry for many years," said Sanjaya Sood, vice president, Schlumberger Geothermal Services. "With the addition of GeothermEx our team is better equipped to offer innovative techniques to efficiently develop geothermal projects worldwide." Established in 1973, GeothermEx has developed numerous pioneering techniques for optimizing geothermal resources. Servicing hundreds of geothermal projects in more than 50 countries, GeothermEx specializes in geosciences, drilling, engineering, project development, reservoir management and economic analysis. Schlumberger is the world's leading supplier of technology, integrated project management and information solutions to customers working in the oil and gas industry worldwide.

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

GULF RESPONSE

leaking oil are Tony Brock, the Alaska subsidiary's vice president for health, safety, security and the environment.

"There are BP people from all around the world helping with various parts of the response to the Gulf incident, and he's one of them," Steve Rinehart, BP's Anchorage spokesman, told Petroleum News on April 28.

Brock arrived in Alaska in August 2007 to head BP Alaska's new "technical directorate," which was set up in the wake of the corrosion-related pipeline spills of 2006 in the Prudhoe Bay oil field.

He reported initially to Doug Suttles, who was then president of BP Alaska.

Suttles is now chief operating officer for BP exploration and production, and himself heavily involved with the Deepwater Horizon response.

Brock's transfer out of Alaska is not permanent, Rinehart said. He declined to specify other BP Alaska employees also headed south as a result of the rig disaster and spill.

BP said it had established an investigation team in Houston, and had staffed up its Houston crisis center to support the response.

Rinehart said he, too, might soon be among BP Alaska employees rotating into the Gulf region to work.

—WESLEY LOY

Contact Wesley Loy at wloy@petroleumnews.com

continued from page 1

SUPPORT

Production Co., or MAP.

"Based on our experiences with the challenges of negotiating to purchase natural gas to supply our customers' needs, we believe that Chugach's contract with MAP is a fair deal for Chugach's customers under current market conditions," Starring wrote to the RCA.

Starring added that by approving Chugach's multi-year contract, the RCA would prevent Chugach from having to buy gas at the last minute "when its bargaining leverage is negligible." If the contract is not approved, she wrote, "Chugach may be required to curtail service to its residential and industrial customers throughout Southcentral Alaska."

In their letters, both Evans and Starring stressed the importance of "regulatory certainty."

According to Evans, utilities need to know they can get supply contracts approved and recover costs through rates, while producers need pricing that encourages future exploration and development in the Cook Inlet. "Both utilities and producers need to know the process of reaching an agreement and securing regulatory approval can be accomplished as expeditiously and cost effectively as possible," Evans wrote.

Starring believes this certainty will improve market conditions in the region. "Timely approval of both contracts will reduce the risk that potential gas suppliers may perceive of a protracted regulatory review process that ends in contract rejection," she wrote.

Mutual support not a given

This hand-holding contrasts with the battles between the utilities in 2008, when Enstar Natural Gas wanted approval for supply contracts with Marathon and ConocoPhillips, and Chugach Electric Association argued the contracts set a bad precedent in the market.

The biggest debate in the Cook Inlet gas market is always price. Unlike the spot markets in the Lower 48, regulators set Alaska gas prices through long-term contracts. In the past, proposed and utilized mechanisms have tied Alaska gas to the Henry Hub price, to oil prices, and to indices of various gas producing basins and various gas consuming basins.

Because the RCA approves gas contracts, but does not regulate gas producers, utilities become intermediaries that must negotiate contracts on terms regulators will approve.

Chugach challenged the price terms in two contracts Enstar submitted in 2008, saying they made Cook Inlet a superb investment for producers, rather than making the region reasonably economic for the sake of keeping prices as low as possible for consumers.

Chugach argued that the higher prices would set a precedent for all future negotiations.

This debate prompted a war of words, both within the formal context of contract hearings as well as informally though public speeches by utility executives and industry watchers.

Some asked the RCA to approve the contracts, in order to ensure supplies would be available to meet expected shortfalls. Others asked the RCA to reject the contract, and tell Enstar to go back to the bargaining table with the producers to get lower pricing

The RCA ultimately rejected the contracts, and Enstar ended up taking advantage of a previously unused provision in its tariff that allows it to buy gas without regulatory approval as long as the contract does not increase the utilities total average cost of

The move gave Enstar the supplies it needed, but didn't resolve the larger dispute.

In August 2009, the RCA approved a contract between Chugach and ConocoPhillips.

While many hailed the first major supply contract approved by the RCA since 2001, two commissioners who voted to approve the contract also noted in a dissenting opinion that the larger issue of how to establish natural gas prices in Cook Inlet remained unresolved.

In 2009, the RCA also approved a contract between Enstar and Anchor Point Energy LLC for supplies coming from the North Fork unit in the southern Kenai Peninsula.

Adjusted Nymex pricing

The new Chugach and Enstar contracts use similar pricing mechanisms, but arrive at slightly different prices, one of the "differences" Evans referred to in his letter.

On April 2, Chugach submitted a contract to buy 42.3 billion cubic feet of gas from Marathon over the next two to four years. On April 9, Enstar submitted a contract to buy 16.5 bcf of gas from Marathon over the next two years, 90 percent of its needs.

Both contracts use natural gas futures on the New York Mercantile Exchange as a base that gets adjusted according to factors like demand, shut-in wells and price "collars."

The Chugach contract begins with a floor of \$5.90 and a ceiling of \$8.90 per thousand cubic feet and rises to \$6.50 and \$9.50. The Enstar contract includes a price floor of \$6.85 per thousand cubic feet and a price ceiling of \$9.70 per thousand cubic feet.

The comment periods for Chugach and Enstar end on May 7 and May 13, respectively. ●

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MAC MILESTONE

be ready to enter its next phases, including a negotiated fiscal agreement with the Canadian government, permits from the NEB and sanctioning by the corporate partners.

Sticking points

But there are just as many sticking points, covering decisions by the NEB on a permit sunset clause, pipeline tolling, access to the Mackenzie Valley pipeline by producers outside the main proponents (Imperial, Shell Canada, ConocoPhillips Canada, ExxonMobil Canada and possibly the Aboriginal Pipeline Group), and whether the Canadian government can negotiate a land settlement with the Dehcho First Nations, whose traditional territory covers about 40 percent of the pipeline route.

During the final few days of hearings, Imperial lawyer Don Davies left no doubt that "there must be sufficient progress on a fiscal framework (with the federal government) before the proponents re-staff the project team and resume engineering permitting and field work. And it means the major project permits must be received before the proponents make a decision to construct."

He viewed as unreasonable requests by the Northwest Territories government and the Inuvialuit Regional Corp. for the NEB to force Imperial and its partners to decide by Dec. 31, 2013, whether or not to start construction.

Davies said the proponents are requesting a deadline of Dec. 31, 2016, "in order to reasonably manage uncertainty and we continue to believe that request is reasonable, notwithstanding the collective frustrations of all of us."

"Clearly, there is frustration about delay," he said. "It is a frustration, I can tell you, that is shared by the proponents. But I can also tell you that the proponents do intend to proceed in the step-wise fashion set out in the project schedule."

Davies said a 2013 sunset clause would not force the proponents to speed up their decisions, nor would the 2016 sunset clause "cause the proponents to drag their heels."

Assurance before expenditures

Davies said the proponents also need a reasonable assurance before making the "considerable" expenditures needed to reach a construction decision that permits will not expire before work can start.

He also wondered how long it would take for northern regulators to review the project permit applications.

"If we were to use the Dehcho geotechnical program application as a precedent, the answer would be seven years and counting and, while we wouldn't suggest that that's the norm, is does illustrate the uncertainty of making timing predictions," he said.

"When you layer that on top of how long it will take to finalize a fiscal framework with the government of Canada, the uncertainty only gets greater."

Nellie Cournoyea, chair of the IRC and a former premier of the NWT, argued the project should not be held up by the Dehcho, saying that First Nations group "does not have the right to purposely put impediments in our way for no reason at all."

While conceding that pipeline con-

struction would significantly impact all regions along the pipeline route, once the pipeline was completed the impacts would be "minimal," except for regions that have either anchor fields or additional hydrocarbon reserves that could be fed into the pipeline.

Frustrations understood

Gwich'in Tribal Council President Richard Nerysoo said he understood the Dehcho frustrations and offered to work with the Dehcho to move negotiations forward.

He said the MGP could help create a "sustainable economy in the North, especially within the Dehcho, the Sahtu and Mackenzie Delta region. We don't think that the pipeline itself is the answer to all our problems, but it is a big opportunity for us."

Several participants in the final hearings said the pipeline would open up new fuels sources for Canada and North America as well as easing the NWT's dependence on federal transfer payments for 70 percent of its revenues.

Cournoyea had a blunt message for "physically distant and economically comfortable special interest groups," such as environmentalists, to end their opposition.

"If and when you can offer comparable economic opportunities to our communities and can provide tangible support to address those environmental and social issues we deem to be important to our future, only then will our hospitality be extended," she said.

Smith, representing L.E. Aboriginal Group, said many producers have left the North because of uncertainties and delays.

"The North does not need more mora-

gas pipeline plan, to be delivered to the

Legislature by July 1, 2011, providing

for a natural gas pipeline that is opera-

taking North Slope natural gas to mar-

While a spur line from a main line

toria; it does not need any more regulatory delays; ... it needs to enhance economic opportunity as soon as possible," he said.

Land claim settlement

Dehcho Grand Chief Sam Gargan said the MGP should not proceed until First Nations resolve the unsettled land claim and a land-use and resource management plan for Dehcho territory.

He said the Dehcho have "repeatedly been subject to direct and veiled threats (over the last decade) of false deadlines, as well as attempts to undermine and intimidate our leadership in an effort to get the Dehcho to take an ownership stake in the Aboriginal Pipeline Group."

Gargan said he hopes the Dehcho claims can be resolved by 2013, suggesting that is more than enough time, while Dehcho chief negotiator George Erasmus said an agreement in principle could be in place by summer 2011.

Chad Friess, with UBS Research, said the economics of the MGP remain the largest problem, when gas prices are currently at C\$4 per thousand cubic feet and tolls would be nearly C\$3. Although nobody expects gas will remain at its current level, it is tough getting approvals to commit to large capital projects when there is no certainty about when prices will improve.

Bob Hastings, an analyst with Canaccord Adams, said he was not surprised by Imperial's request for a 2016 sunset clause, given that shale gas in the U.S. and British Columbia is so much closer to storage and markets than Mackenzie gas that would carry high tolls. •

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accepted as the most economical way to provide gas for in-state

tional by Dec. 31, 2015.

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GASLINE BILL

use, there is concern that a main line may delayed, and in

kets outside the

state is generally

any event that it LESIL MCGUIRE

might not be operational before Cook Inlet is faced with a natural gas shortage. The Fairbanks area is served primarily by diesel fuel, although some natural gas is available, trucked from Southcentral as liquefied natural gas. A plan is under way to supply LNG to Fairbanks by truck from the North Slope.

Alternative leadership

A Senate bill, sponsored by Sen. Lesil McGuire, R-Anchorage, would have put the Alaska Railroad Corp.'s President and Chief Executive Officer Pat Gamble in charge of the project, but that effort faltered when Gamble was named to head the University of Alaska, leaving the railroad in search of a new chief executive.

The effort then became collaborative and McGuire said in an April 26 statement, "We each had to make compromises but the final version of the bill is something that we can both be proud of."

Parnell called it "a significant step toward bringing Alaska's gas to Alaskans and markets beyond."

Chenault said it was "a good day for Alaska — a good step forward" when the governor signed the bill and said in a statement that HB 369 provides an opportunity for job creation and energy security in the Railbelt and in other regions of the state.

"With Dan Fauske as the head of JIGDT, we think we put together a solid organization with all the key components to move an in-state gas line forward," Chenault said.

Parnell called it "a significant step toward bringing Alaska's gas to Alaskans and markets beyond."

"Our existing in-state gas pipeline am has worked aggressively on identifying the costs and the regulatory challenges for the bullet line option that would supply natural gas to the Railbelt for in-state use."

An effort begun by former Gov. Sarah Palin has been housed in the governor's office. The in-state gas pipeline coordinator remains in the governor's office.

The team, in addition to AHFC's Fauske, includes Bob Swenson, the instate gas coordinator; John Binkley, the chairman of the board of the Alaska Railroad; Harold Heinze, the CEO of the Alaska Natural Gas Development Authority; and the commissioner of the Department of Transportation and Public Facilities or a designee.

-KRISTEN NELSON

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ICE ROADS

portation routes.

And at the ice and snow road conference in Anchorage on March 30 experts in ice-road construction provided insights into the evolving world of ice-road design.

Extended seasons

Gary Schultz from the Alaska Department of Natural Resources, the agency that oversees off-road travel on state land, described to the conference the particular value of using low-impact, tundra-certified vehicles to pre-pack snow and spray water along a road route, before the natural snow and ice conditions reach the threshold for the general opening of winter tundra off-road travel. In years with low snow coverage, the road construction crew may even use ice chips from frozen lakes instead of snow for this type of pre-packing operation.

The pre-packing enables an early start to road construction, prevents winds from blowing the snow cover from the road route, speeds up the freezing of the ground and provides maximum protection to the tundra, Schultz said.

"Pre-packing works really, really well," he said.

Early planning

But successful ice-road construction depends on the planning, permitting and stakeholder communication that starts as much as a year before the ice road is needed, said Jeff Osborne from ConocoPhillips, a company that makes much use of North Slope ice roads.

And a key component of this planning is the clarification of the scope and purpose of the road, as a prelude to applying for the necessary permits for road construction, Osborne said.

"Take the time ... to understand the work and who's going to utilize the ice road," Osborne said. Then, having established the scope, allow for the unexpected by permitting the road for a bigger operation than is planned, he said.

It's best to check out the potential iceroad routing during the winter prior to the one in which the ice road is needed, Osborne said. It may prove beneficial, for example, to pre-stage equipment at a distant point on the route, to enable an early start to road construction — pre-staging equipment is best done during the winter off-road travel season, perhaps using an ice road built in that earlier winter. It is also essential to book the helicopter time needed to survey the route during the summer, given the high demand for summer helicopters use.

"The earlier you can get in front of what you need to do, the better off you are," Osborne said.

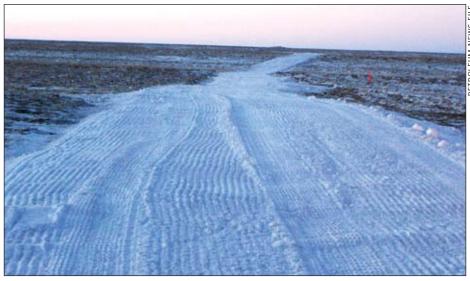
Summer route planning

Summer is then the time for discussions with landowners and government agencies about ice-road plans, while figuring out the precise route to be followed and determining any archaeological clearances that might be required.

One issue in route planning is the avoidance of ponds with water more than two feet deep, because these ponds will not be fully frozen by January and so could wreck havoc when a heavy load traverses an overlying road.

"You'd better go out and fly (the route) and walk it," Osborne said, commenting that some ponds may be too small for depiction on a map.

September and October are the months to meet with contractors to pin down a realistic road construction schedule and to



Pre-packing an ice-road route with snow and ice chips conserves snow, ready for road construction, as well as improving tundra protection.

set parameters for safety and other considerations.

It is also necessary to obtain approval from government agencies to start prepacking the road route. And once construction of the road is complete, the opening of the road brings issues that include road maintenance, the establishment of security checkpoints and perhaps the publication of a milepost guide for drivers.

The ice road is closed out at the end of the winter season, but the ice-road project doesn't end until August of the following year, when, following aerial surveys of the road route by helicopter, it is necessary to apply to the government agencies for final close out.

Jeff Miller, general manager of Cruz Construction, a company with extensive experience of building ice roads, confirmed the importance of early planning and good communications in ice-road projects.

Local knowledge

Miller emphasized the importance of

using local knowledge of an area where an ice road is planned. He also commented on the importance of identifying suitable water supplies for road construction.

"We need this information early, so we can figure out deals and make sure that we're going to be able to hit the (water) production that we anticipate," Miller said.

And during the summer the Cruz Construction would typically install ground temperature measuring equipment and weather stations along the road route, in preparation for the construction season, he said.

Miller confirmed the value of prepacking the ice-road route prior to the winter tundra travel season, using summer approved vehicles.

"To me this is the most important part of the construction process. ... If it's done right, it'll just set the framework for making a pretty successful project," Miller

Schultz also emphasized the importance of surveying road routes during the summer, when it is possible to see what type of tundra vegetation covers the ground and plan routes that cross the more resilient vegetation types. It is also possible to use data from geographic information systems to assess the vegetation cover, he said. There is also a project in progress to develop a new North Slope map depicting the vegetation cover.

"That's something that would be really useful for planning the ice-road routes," Schultz said.

Melissa Head from DNR said that she has been assembling vegetation cover data, to help companies with ice-road planning.

Sedge most resilient

Experience over multiple ice-road construction seasons has shown that sedge vegetation is especially resilient to any ice road impacts, Schultz said.

"In all the ice roads we've monitored after construction we've never seen a measurable impact on wet sedge vegetation," Schultz said. There was an instance where there was some thickness reduction in the active growth layer in moist sedge along an ice-road route, but that disturbance recovered within about four years, he said.

Tussock vegetation is, however, much more delicate than sedge and takes a long time to recover from any disturbance, Schultz said.

"The bulk of the plant is above ground," he said. "... Tussock tundra is just really a challenge for ice-road construction."

The pre-packing of snow and the sidecasting of water onto a road route have proved especially beneficial in protecting tussock tundra, Schultz said. He cited the example of a road pre-packed particularly early, ahead of the winter 2008-09 offroad travel season in the White Hills area of the North Slope. This road had to cross

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The evolving tundra-travel standards

In the decades since people started traversing the North Slope tundra to conduct seismic surveys and drill oil wells, the standards under which government agencies allow off-road travel have evolved in response to changing weather patterns and the need to maximize the time available for off-road exploration.

Unless using one of the few tundra-certified vehicles designed to impart an especially low pressure on the ground surface, no one can travel off-road on the Slope unless the ground is frozen sufficiently and the snow is deep enough to protect the fragile Arctic tundra. On state land in the central North Slope the Alaska Department of Natural Resources determines when frost and snow conditions have met required criteria for general off-road tundra travel, while also when necessary permitting specific projects at specific off-road sites that have met the tundra travel requirements.

The U.S. Bureau of Land Management performs a similar function to DNR in overseeing tundra travel on federal land in the National Petroleum Reserve-Alaska.

Six and 12

For many years the universal but somewhat arbitrary standard for permitting off-road travel was the so-called "six and 12" standard — a minimum of six inches of snow and a 12-inch depth of frozen ground. But in response to some very late tundra travel openings in the changing weather patterns of the 1990s, DNR conducted some systematic tests using actual industry vehicles to determine tundra-opening criteria based on measured data, Gary Schultz from DNR told the ice and snow road conference in Anchorage on March 30. Following these tests, the division changed the criterion for ground frost in the coastal plain of the North Slope to minus 5 degrees Celsius at a depth of 12 inches, while retaining the six-inch snow depth standard. However, in the Brooks Range foothills the division used the minus 5 C temperature standard but upped the snow-depth standard to nine inches to protect the tussock tundra that is particularly prevalent in that region, Schultz said.

The division also installed new equipment for monitoring ground conditions and split the state land into four distinct tundra opening areas — the eastern coastal plain, the western coastal plain, the lower foothills and the upper foothills — to enable the issuance of different tundra travel opening and closing dates in different areas.

BLM officially adopted the six and 12 standard for tundra travel, with official tundra-travel opening and closing dates, in northeast NPR-A in 1998, Shane Walker from BLM told the ice and snow road conference. But in 2004 the agency decided to not set any specific snow and ice standard, nor to set opening and closing dates, for tundra travel in northwestern NPR-A. Instead the agency elected to permit off-road activities on a project-by-project basis, using performance based standards for environmental protection, Walker said. In 2008 BLM applied this new permitting criterion to northeast NPR-A, he said.

"The purpose here is to encourage innovation," Walker said.

However, off-road travel stipulations are tied into specific oil and gas leases in NPR-A, with some leases still bound to the old tundra travel criteria in addition to the new performance-based standards, he said.

—ALAN BAILEY

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ICE ROADS

ground with tussocks but caused virtually no damage to the tussock vegetation, with the road location barely visible on the ground when checked out after the snow and ice had melted, Schultz said.

On the other hand, Head cited an example of a winter trail in the Brooks Range foothills, where tundra travel had opened but where it turned out that thin snow conditions in the area of the trail had resulted in significant tussock damage from vehicles. A similar trail in a higher-snow year had little tundra impact, she said.

Gordon Brower, deputy director for the planning department in the North Slope Borough, said that local knowledge from subsistence hunters on the North Slope confirms that wet areas of sedge vegetation are among the best places to travel.

Brower said that the borough works with North Slope operators to try to improve ice-road construction from one year to the next. A major issue for the borough is how ice roads under construction in the fall might impact the migration of caribou, he said. Involving local people with their experience of the land in the road permitting process has proved valuable, he said.

Stream crossings

Matthew Whitman, a fisheries biologist with the U.S. Bureau of Land Management, spoke about the design of ice-road stream crossings. With a need to minimize impacts on winter fish habitats, stream locations that freeze over completely in the winter are best for these crossings, he said.

And with several species of Arctic fish using North Slope rivers and streams as migration routes for spring spawning,

There was also discussion at the conference about the loss of experienced people, in both designing and building ice roads, as the workforce ages. Walker said that quite a bit of important knowledge about construction on the North Slope tundra has already been lost.

effective slotting and breaching of stream crossings at the end of the winter are especially important, Whitman said. For example, stream channels after breaching need to be broad enough to allow free fish movement and to avoid excessively fast water currents.

"By far the most prevailing problems are due to not breaching the crossing," Whitman said. "... On the other hand when crossings are slotted or breached properly they appear to be largely meeting their objectives."

Decision support system

Given all of the ice-road-impacting variables such as temperatures, snow depths and stream crossings, the U.S. Department of Energy is sponsoring the development of an Internet-based ice-road decision support system for ice-road planning. The system development, conducted by PBSJ Corp., Texas A&M University and the University of Alaska Fairbanks, is in the second year of a three-year program slated to end in September 2011, said Stephen Bourne, a project manager in PBSJ.

The system will integrate a wide variety of data, including North Slope topography, hydrology and vegetation, to help assess the optimum route for a proposed road. The idea is that if a system user specifies the end points of the road, the system will assemble all relevant data, analyze options and present the relevant information and potential routes to the user, said Kelly Brumbelow, associate professor of engineering at Texas A&M.

Michael Lilly, president of GW Scientific, told the conference about a computer-based decision support system that his company is developing in partnership with ConocoPhillips, DNR and BLM, with DOE funding, to improve the efficiency of the winter ice-road transportation network on the North Slope, including ice roads that support existing oilfield operations.

The objective is to improve various aspects of Arctic transportation by gaining a better understanding of factors such as snow distribution, soil strengths, soil temperature forecasting and water use, Lilly said. The system will enable access to a large amount of data relating to ice-road construction, he said.

Loss of experience

There was also discussion at the conference about the loss of experienced people, in both designing and building ice roads, as the workforce ages. Walker said that quite a bit of important knowledge about construction on the North Slope tundra has already been lost.

Miller said that Cruz Construction makes sure that it trains people who can work with and ultimately replace retirees who leave the company.

"We have a training program that does just that," he said.

And Osborne commented on the importance of ensuring that people coming out of high school and college realize that it takes several seasons on the Slope to really learn the ropes. Building ice roads is not something that people can simply learn to do in a classroom, Osborne said. •

