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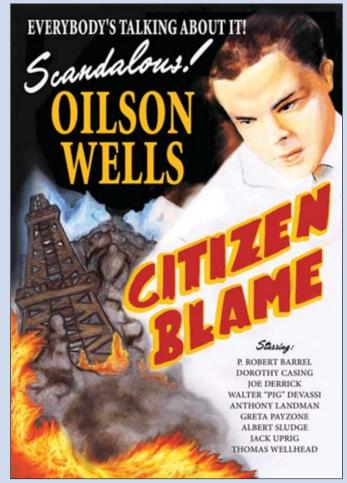
A weekly oil & gas newspaper based in Anchorage, Alaska



page ULSD facility canceled; Galvin says didn't qualify under 2006 PPT

Week of December 2, 2007 • \$1.50

PNA Book Club goes quarterly



PNA Book Club has changed the number of books its members receive from 10 per year to four, dropping the annual membership from \$299 to \$120 for U.S. members. The Canadian membership price will drop from \$360 to \$145 per year. Three out of the four books will be novels — i.e. fiction

PNA Book Club looks for oil and gas industry experts to participate in Author's Resource Center

PNA Book Club has changed the number of books its members receive annually from 10 to four, and is looking for

oil and gas industry experts to be part of its Author's Resource Center, the company said in a Nov. 29 press release. (PNA Book Club is owned by Petroleum Newspapers of Alaska, which also owns Petroleum News and its various special publications.)

"A lot of people supported our pur-



NATURAL GAS



TransCanada pitches new line across northern Alberta to gas-hungry sands

By GARY PARK For Petroleum News

ransCanada has dropped a broad hint about where natural gas from Canada's Arctic could end up by filing plans with regulators to build a C\$983 million pipeline across northern

Alberta to the oil sands region.

The system, with capacity to carry 1.5 billion cubic feet per day, is not immediately tied to the proposed Mackenzie Gas Project and TransCanada says that's not even part of its thinking.

But the application to the Alberta Energy and Utilities Board holds out the prospect of carrying Arctic gas at some point.

... it is positioned as part of the company's Alberta pipeline network that extends almost to the Alberta-Northwest Territories border, giving it the option of tapping into Mackenzie gas and possibly gas from the North Slope if a pipeline from Alaska enters Alberta.

TransCanada is the clear frontrunner to operate a pipeline along the Mackenzie River Valley to northern Alberta and, more recently, it has issued a

see ARCTIC GAS page 14

LETTER TO THE EDITOR **GCA sets record straight**

Consultant Gaffney, Cline responds to Petroleum News 'poor marks' story

Dear Petroleum News editor,

Although dated Nov. 16, 2007, the day the final ACES bill was passed by both the House and the Senate, Kristen Nelson's article "Alaska gets poor marks" devotes but a single line to testimony by Gaffney, Cline and Associates, GCA, where it quotes us as saying "... increasing oil taxes will make invest-

ments in the state more attractive to oil and gas companies," while it devotes 50 more lines to discussing reports and testimony by others from which you draw your headline "poor marks".

The article is unbalanced, and deserves a clearer explanation of what GCA actually said (all of which is on record), and what the ACES bill and Alaska's

INTERNATIONAL



production tax actually does.

In summary, what GCA explained in testimony was that, based on the company's own numbers, not only are existing infill drilling operations in the legacy fields exceedingly profitable, and will continue to remain so, but that the structure of Alaska's production tax:

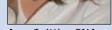
· Can differentiate between fields of differing production costs, taxing each according to its own profitability;

· Similarly, taxes (at current levels of profitability) existing production and new investments differentially:

· Contains levels of tax benefits and credits for

see LETTER page 10

pose, which is to educate authors, but were too busy to commit to reading 10 books, and we wanted to make it easy Book Club editor for people to get involved," book club



editor Amy Spittler said, noting that the annual membership price had been reduced from \$299 to \$120 for U.S. members, and from \$360 to \$145 per year for Canadian members.

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BREAKING NEWS

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Making headway in Arctic

Three major gas fields offshore Norway and Russia create new paradigms

Bv ALAN BAILEY Petroleum News

hen it comes to mega natural gas projects that push the technology envelope, they don't come much larger and more state of the art than the three projects on the Norwegian and Russian continental shelf described by Lars Hvalbye, StatoilHydro senior advisor, technology, at the Resource Development Council's annual conference in Anchorage on Nov. 14.

StatoilHydro, which is about 62.5 percent owned by the Norwegian State, is the world's largest offshore operator, followed in order by Shell, Petrobras, BP, ExxonMobil, Woodside Energy, Chevron, Total, Eni, Hess and ConocoPhillips.



A subsea template being lowered into the sea at the Ormen Lange field.

The massive Ormen Lange field off Norway's west coast and the Snøhvit field in the Norwegian Barents Sea went into production in October, while

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Petroleum News

A weekly oil & gas newspaper based in Anchorage, Alaska

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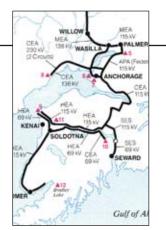
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National 1320

А

Alaska - Mackenzie Rig Report

Rig Owner/Rig Type	Rig No.	Rig Location/Activity	Operator or Statu
	Alaska	a Rig Status	
		Slope - Onshore	
Akita Drilling Ltd. Dreco 1250 UE	63 (SCR/TD)	Racked in Deadhorse	Anadark
Doyon Drilling			
Dreco 1250 UE Sky Top Brewster NE-12	14 (SCR/TD) 15 (SCR/TD)	Prudhoe Bay MPH-19 Kuparuk 1J-174	E ConocoPhillip
Dreco 1000 UE Dreco D2000 UEBD	16 (SCR/TD) 19 (SCR/TD)	Rig maintenance Alpine CD4-05	E ConocoPhillip
DIME 2000	141 (SCR/TD)	Kuparuk River Unit 2W-17	ConocoPhillip
SM 7000	Arctic Fox #1 Arctic Wolf #2	Stacked in Yard Stacked in yard	Pioneer Natural Resource
uukpik	5	Contracted to drill Kupcake #1, January 2008	mid Savar
abors Alaska Drilling		Charling Drugh as Day	Ausilah
rans-ocean rig Ireco 1000 UE	CDR-1 (CT) 2-ES	Stacked, Prudhoe Bay Prudhoe Bay DS 02-09C	Availab E
1id-Continental U36A	3-S	Kuparuk KRU2G-06	ConocoPhillip
ilwell 700 E	4-ES (SCR)	Milne Point MPL-20	E
reco 1000 UE reco 1000 UE	7-ES (SCR/TD) 9-ES (SCR/TD)	Prudhoe Bay V-07 Prudhoe Bay W-45	E
Vilwell 2000 Hercules	14-E (SCR)	Stacked	Availab
ilwell 2000 Hercules	16-E (SCR/TD)	Stacked	Availab
ilwell 2000	17-E (SCR/TD)	Stacked, Point McIntyre	Availab
msco Electro-hoist -2 IME 1000	18-E (SCR) 19-AC (SCR)	Stacked, Deadhorse On-site at Oooguruk	Availab Pioneer Natural Resource
msco Electro-hoist Varco TDS3	()	Stacked, Milne Point	Availab
msco Electro-hoist	28-E (SCR)	Stacked, Deadhorse	Availab
IME 2000 nsco Electro-hoist Canrig 1050E	245-E 27-E (SCR-TD)	Oliktok Point OPi2 Stacked	Anadark
ordic Calista Services			
uperior 700 UE	1 (SCR/CTD)	Prudhoe Bay well H-24a	E
uperior 700 UE leco 900	2 (SCR/CTD) 3 (SCR/TD)	Prudhoe Bay well DS18-13b Kuparuk well 2L-330	E ConocoPhilli
	North	Slope - Offshore	
abors Alaska Drilling ilwell 2000	33-E	Maintenance/mobilization North	nstar E
urora Well Service	Cook In	let Basin – Onshore	
ranks 300 Srs. Explorer III	AWS 1	Stacked at Nikiski	Availab
larathon Oil Co. (Inlet Drilling	Alaska labor cont	tractor)	
aylor	Glacier 1	Rig maintenance	Maratho
abors Alaska Drilling	4 (0 (0 0 7)		
lational 110 UE Continental Emsco E3000	160 (SCR) 273	Stacked, Kenai Stacked, Kenai	Availab Availab
ranks	26	Stacked	Availab
DECO 2100 E	429E (SCR)	Stacked, removed from Osprey	
igmaster 850 cademy AC electric Heli-Rig	129 106E (SCR/TD)	NNA-1 DS Happy Valley #13	Chevro Chevro
owan Companies			
AC Electric	68 (SCR/TD)	Drilling Hansen 1A-L1 well at Cosmopolitan	Pioneer Natural Resource
	Cook Inl	et Basin – Offshore	
Inocal (Nabors Alaska Drilling	labor contractor)		
lot Available			
(TO Energy		Platform A no drilling or works	vors at procept VT

The Alaska - Mackenzie Rig Report as of November 29, 2007. Active drilling companies only listed.

$$\label{eq:total_total_total} \begin{split} TD &= rigs \; equipped \; with \; top \; drive \; units \; \; WO \; = \; workover \; operations \\ CT \; = \; coiled \; tubing \; operation \; \; SCR \; = \; electric \; rig \end{split}$$

This rig report was prepared by Alan Bailey



National 110	C (TD)	Idle	XTO	Baker	Hughes No	orth America rot	ary rig counts*
		nzie Rig Status adian Beaufort Sea		Nov US Canada Gulf	vember 23 1,773 391 62	November 16 1,797 356 61	Year Ago 1,697 453 81
Seatankers (AKITA Equtak lab SSDC CANMAR Island Rig #2	SDC	Set down at Roland Bay	Devon ARL Corp.	Highest/Lowes US/Highest	t	4530	December 1981
AKITA Equtak Dreco 1250 UE	62 (SCR/TD)	Rig Racked in Inuvik, NT	Available	US/Lowest Canada/Highest Canada/Lowest		488 558 29 *Issued by B	April 1999 January 2000 April 1992 aker Hughes since 1944
Modified National 370	64 (TD)	Staged on barges in Mackenzie Delta	MGM Energy Group	Th		- Mackenzie sponsored by	0 1
						coPhill	

XTO

Platform A no drilling or workovers at present

NATURAL GAS

Alaska gasline applications due Nov. 30; public will see list of applicants right away, but not the actual applications

Nov. 30 is the due date for applications under Gov. Sarah Palin's Alaska Gasline Inducement Act, which offers incentives for gas pipeline proposals that meet the state's requirements. The State of Alaska's goal is to get a pipeline built that will take North Slope natural gas to markets both inside and outside the state.

Applications won't be made public immediately, although Sharon Leighow in the governor's press office told Petroleum News Nov. 28 that the state will release a list of those who apply. Before applications are made public the state will review them to ensure that they are complete. The Alaska Natural Gas Development Authority has already posted its applications for spur lines to Southcentral on its Web site: www.angda.state.ak.us. These applications are meant to meet AGIA's in-state gas use requirements and to be attached to mainline pipe applications.

The state's "completeness review period" is planned to run from Nov. 30 to Dec. 21, although the length of that review "is dependent upon the number, quality and complexity of applications received," the state said on the AGIA Web site, and could take longer than three weeks.

The administration's goal is to select an applicant and get a proposal to the Legislature for approval early next year so that the selected project can begin field work in the summer of 2008.

-KRISTEN NELSON

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LAND & LEASING

MMS contracts for Bristol Bay study

By KRISTEN NELSON Petroleum News

he U.S. Department of the Interior's Minerals Management Service said Nov. 27 it has contracted with Rutgers University, with the assistance of the University of Alaska

Fairbanks, to modify an ice-ocean circulation model for Alaska's Bristol Bay. "Understanding the circulation within

Bristol Bay will be important for us as we evaluate a possible oil and gas lease sale in the offshore waters of the North Aleutian basin," MMS Alaska Regional Director John Goll said in a statement.

The contract calls for adapting an existing ice-ocean circulation model of the Bering Sea and Gulf of Alaska to the specific oceanographic conditions within Alaska's Bristol Bay. MMS said Rutgers will use the regional ocean modeling system which has "a significant peerreviewed record of use in the Gulf of Alaska and Bering Sea."

The modeling study began this fall and will continue for two years.

MMS Alaska spokeswoman Robin Cacv told Petroleum News the study's timeframe was from September 2007 through September 2009 at a cost of \$278,000.

Study objectives

The study's main objectives are to:

· Modify the existing model to increase its predictive skill in Bristol Bay;

· Compare model predictions to field observations using oceanographic data within Bristol Bay and surrounding waters;

· Provide model results to MMS as a 1986-2006 hind-cast simulation including wind, ice and surface water speed and direction and extent of ice cover; and

• Document the study results through a model manual, final report and publication in a peer-reviewed journal.

An oil and gas lease sale in the North Aleutian basin is proposed as part of the MMS 2007-12 five-year program. The agency said it scheduled the North Aleutian basin sale for 2011, late in the program, "to allow sufficient time to supplement existing environmental data for environmental analyses."

MMS said it does not expect exploratory drilling and related operations in the North Aleutian basin to begin until 2012 or later.

EXPLORATION & PRODUCTION More action cookin' in southeastern Saskatchewan's Bakken light oil play

The sizzling Bakken light oil play in southeastern Saskatchewan — a spillover from the Williston basin in North Dakota and Montana - got another strong

endorsement from Petrobank Energy and Resources.

The acquisition-minded Canadian junior E&P company is betting most of a C\$334 million takeover offer on Bakken, rated as Western Canada's hottest light oil prospect in more than 50 years, with 5 billion barrels of original oil in place, of which about 16 percent is thought to be recoverable at a drilling density of eight wells per section.

Bakken is rated as Western Canada's hottest light oil prospect in more than 50 years, with 5 billion barrels of original oil in place, of which about 16 percent is thought to be recoverable at a drilling density of eight wells per section.

In a cash, shares and debt offer for Peerless Energy, Petrobank makes no secret of its hopes for Bakken, which is capable of yielding sweet, light 41 degree API gravity oil and liquids-rich solution gas.

So long as the transaction gets court, regulatory and shareholder approval, anticipated over the next two months, Petrobank will boost its production from Bakken to 7,900 barrels of oil per day, or about 55 percent of its total output from Western

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Petrobank is also operator of the Whitesands oil sands project, which is testing a new extraction technology to exploit reserves of 3.6 billion barrels, which it hopes eventually to turn into a 100,000 bpd facility.

Viewing Bakken as its "primary conventional Canadian focus area in 2008 and for years to come," Petrobank said. Peerless' facilities and infrastructure will also allow it to recover natural gas and liquids production from the area.

With the Peerless assets, Petrobank will have a drilling inventory at Bakken of 600 (565 net) well locations based on a well density of four wells per section. It plans to drill more than 110 Bakken wells in 2008, operating seven rigs.





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NATURAL GAS Scenario 'alarming ... downright scary'

Kenai Peninsula Borough mayor tells RDC conference attendees Alaska needs energy plan; closing LNG plant not the solution

By KRISTEN NELSON Petroleum News

ohn Williams, mayor of the Kenai Peninsula Borough, says shutting down the liquefied natural gas facility in Nikiski is only a short-term solution to the natural gas supply situation in Southcentral Alaska.

Some reports indicate there won't be enough natural gas to meet demands after 2015, he said Nov. 14 at the Resource Development Council's annual conference in Anchorage.

"That scenario is alarming - it's downright scary to many of the residents of Southcentral Alaska," he said, noting that the lights and heat in the hotel hosting the conference come from natural gas.

But is shutting down industrial export facilities in Nikiski the solution? Only in the short run, Williams said, "but this will only delay the problem and severely impact the economy of the Kenai Peninsula as well as the rest of the State of Alaska."

Shutting down industrial users "is short sighted and reactionary," he said. "Besides, these large industrial facilities help to pay the freight on all of our gas." Williams said he's no tariff expert, "but it seems to me that if big ratepayers go away, I think our gas bills will actually increase. ..."

Agrium announced closure of its nitrogen fertilizer plant at Nikiski in October. "While many knew this day would come, it didn't make the announcement any easier," he said. In December Agrium will be terminating more than 100 employees in addition to those it let go when production was downsized.

The blow is "devastating ... for families of those who worked there," and in addition to jobs at Agrium "there will be many more indirect jobs lost as well," Williams said. The closure will have a major impact on the Kenai Peninsula's economy, he said.

"Is there a light at the end of the tunnel?" Williams asked. "I think so - hopefully it isn't a train."

Agrium is continuing to evaluate the economics of switching to coal gasification, and if they make that decision it would require enormous capital investment and would produce "a construction boom unequaled in Kenai Peninsula history.'

But that will only happen if the project "pencils out" for Agrium and its partners, Williams said.

when an attempt is made to bring them back online. Sometimes it's hard to get gas wells started again, he said: "Sometimes they never start again." "So the problem

is screaming for a Kenai Peninsula solution." Williams Borough Mayor said closing the LNG John Williams

plant solves nothing, "it only delays the inevitable" and "more than likely it will drive up our energy costs."

More drilling needed

Until Southcentral can get gas from the North Slope, "we need to start punching exploratory wells in the Cook Inlet throughout the entire basin." Williams said he'd love nothing more than to see a jackup rig brought to Cook Inlet. The U.S. Department of Energy estimated in a 2004 report that between 13 trillion and 17 trillion cubic feet of natural gas are undiscovered in the Cook Inlet basin.

To develop that undiscovered gas, DOE said it would take \$5 billion, and those were 2004 dollars, Williams said.

What will it take to move gas from undiscovered to reserves?

We need an energy policy, Williams said. The State of Alaska does not have an energy policy and "we can't wait for them to develop one," he said.

Cook Inlet is not getting the attention it deserves "to encourage its natural gas exploration," he said: What is needed is more drilling in the Cook Inlet basin, incentives for deep drilling and incentives to update platforms.

Why drill without buyer?

Cook Inlet has already lost one major natural gas user and another one is on the block at the Department of Energy, he said.

The State of Alaska is opposed to extending the export license, Williams said. It calls its position "conditional support," but he said he believes the conditions the state is requiring are fatal to the whole application and has been working to get the state's position changed, but has been unsuccessful.

Williams said he's been working that issue for the past six months with the governor, the commissioners and high-level administrators, "all to no avail." The latest word, he said, is "they're working on it."

He said he hopes the governor has a

plant is about to close, he asked.

"Why should anybody drill those exploratory wells without a major market for new gas?"

Tri-borough commission

What is the way forward?

In November of 2005 the mayors of the Kenai Peninsula Borough, the Matanuska-Susitna Borough and the Municipality of Anchorage formed the tri-borough commission. The three mayors have worked together on many issues that affect more than 60 percent of Alaska's population, Williams said, and the current focus is on the energy issue, working on a Southcentral energy policy.

Such a policy could theoretically be applied statewide and needs to include conservation, efficiency and renewable energy development. Williams also called for the establishment of a school of energy at the University of Alaska "to focus on

Who's going to drill exploratory wells now that Agrium is closed and the LNG plant is about to close? "Why should anybody drill those exploratory wells without a major market for new gas?" -Kenai Peninsula Borough Mayor John Williams

development of Alaska energy as well as energy research."

This is not an original idea he said, it comes from the University of Wyoming.

"I think this is long overdue for our state," he said. Industry could help fund the school as was done in Wyoming. Williams called it a new idea for Alaska and said it hasn't been fleshed out yet, but that he's asked members of the energy task force set up by the tri-borough commission to look at it further.



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FAIRBANKS ALASKA AREA PLUMBERS AND PIPEFITTERS JOINT APPRENTICESHIP TRAINING COMMITTEE WILL BE ACCEPTING APPLICATIONS FOR APPRENTICE PLUMBERS AND PIPEFITTERS FROM NOV. 19, 2007 TO DEC. 4, 2007. APPLICANTS MUST APPLY IN PERSON AT: 1978 BURGESS AVENUE, FAIRBANKS, ALASKA. OFFICE HOURS: 8 AM TO 12 PM, 1 PM TO 5 PM, MON-FRI, TELEPHONE: (907) 456-5989.

REQUIREMENTS UPON MAKING APPLICATION:

- A. YEARS OF AGE: A MINIMUM OF 18.
- **B. PROVIDE THE FOLLOWING DOCUMENTS:**
 - 1. BIRTH CERTIFICATE.
 - 2. HIGH SCHOOL DIPLOMA & TRANSCRIPT OR G.E.D.
 - CERTIFICATE AND REPORT OF TEST RESULTS.

3. MILITARY TRANSFER OR DISCHARGE FORM DD-214, IF APPLICABLE. C. DRUG FREE



LNG export license up

The ConocoPhillips-Marathon liquefied natural gas plant has applied for a twoyear export license extension, from 2009 to 2011.

If the extension isn't granted, the Kenai Peninsula will have lost two of its four major industrial facilities, leaving only the Tesoro refinery and BP's gas-to-liquids facility.

"What is the nexus of the Agrium announcement and the upcoming LNG announcement? Natural gas," Williams said.

In 2007 the Alaska Division of Oil and Gas report showed natural gas reserves in the Cook Inlet basin of 1.68 trillion cubic feet, probably an eight to nine year supply at current demand, excluding Agrium; a 14-year supply backing out LNG.

"I believe that number is high because some of the supply wells for the LNG plant would be shut in and may not deliver"

plan in place if the LNG plant shuts down because that plant fills the peak need on cold winter days "so that we didn't go into rolling brownouts right here in this community."

Who's going to drill exploratory wells now that Agrium is closed and the LNG APPLICANTS WILL BE REQUIRED TO APPEAR FOR INTERVIEW WHEN SCHEDULED.

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FINANCE & ECONOMY

Flurry of junior oil sands financings

Alberta's planned royalty increases haven't put crimp on oil sands developments by juniors, three do deals worth combined C\$1.2B

By GARY PARK

For Petroleum News

f the Alberta government's planned royalty increases are supposed to put a crimp on oil sands developments, somebody has forgotten to get word to the juniors.

In the space of three days, two companies with projects under way in Alberta - Connacher Oil and Gas and OPTI Canada - announced financing deals worth a combined C\$1.2 billion.

Connacher, 100 percent owner of the Great Divide project, sold US\$600 million in senior secured notes to institutional investors and negotiated a new revolving credit facility of C\$150 million and US\$50 million with a syndicate of banks and financial institutions.

The proceeds will be used to pay off certain debts and provide funding for its 10,000-barrel-per-day Algar project, its second step in building a network of oil sands operations towards its objective of 50,000 bpd within the next five to seven years.

The Great Divide property, covering about 100,000 acres, is designed to recover 83 million barrels of bitumen over 25 years.

The initial phase is scheduled to attain target production levels of 10,000 bpd by the third quarter of 2008 and the second phase is expected to deliver diluted bitumen to United States and Canadian markets in 2009.

Connacher Chief Executive Officer Richard Gusella said the financing deal will allow the company to finance all of its new projects and planned 2008 growth, as well as complete the C\$326 million Algar project, without needing additional capital. The Great Divide commissioning was achieved this year at a cost of C\$290 million, only C\$30 million over budget.

By taking a modular approach to construction, and assembling large portions of its plants offsite, Connacher believes it can take its place among larger companies in the oil sands.

OPTI locks up deal

OPTI, a 50-50 partner with Nexen in the Long Lake project, locked up a C\$412.2 million bought-deal financing with a syndicate of 12 underwriters, with TD Securities as lead manager.

It includes 18.5 million common shares at C\$19 per unit and 2.4 million flow-through common shares at C\$24.70 per unit.

OPTI said about C\$60 million will be utilized for its 2008 delineation and exploration program on existing leases, C\$150 million will go to second-phase engineering and first-phase capital costs and C\$202 million will be spent on general corporate purposes, including working capital.

In July, OPTI announced the placement of US\$750 million debt financing. In addition, Oilsands Quest announced a C\$71 million financing, with the bulk going to reservoir testing and other aspects of its Axe Lake discovery in Saskatchewan, which could be that province's first commercial oil sands operation.

FINANCE & ECONOMY

Canada readies foreign takeover rules

By GARY PARK For Petroleum News

bu Dhabi's national energy company, better-known as TAQA, may have crossed the line ahead of whatever hurdles the Canadian government may erect in the path of Canadian takeovers by foreign stateowned firms.

Investment Canada, the federal agency that regulates foreign investment, has given the go-ahead for TAQA's C\$5 billion purchase of PrimeWest Energy Trust and its US\$540 million acquisition of Pioneer Natural Resources' Canadian assets.

TAQA said Industry Minister Jim Prentice has determined that each transaction carries a "net benefit to Canada," without specifying those benefits other than saying it expects to achieve up to C\$700 million in operational efficiencies and capital savings over the next three years.

Meanwhile, Prentice told reporters he

will issue new takeover guidelines before the end of the fall Parliamentary session on Dec. 21.

He has said previously that stateowned companies can pose problems for the Canadian economy because they can have noncommercial objectives or poor transparency.

Prentice said two months ago that although the government does not intend to create major new hurdles for foreign investors despite concerns about "hollowing out" of key economic sectors, Ottawa is considering an explicit "national security test" to guard against foreign companies gaining control of sensitive defenseand security-related Canadian firms.

Concern over Chinese incursion

Faced with growing concern in Canada about the gradual incursion by Chinese state-owned companies into the natural resource sector, the government of Prime Minister Stephen Harper has been promising to introduce a new screening mechaInvestment Canada. the federal agency that regulates foreign investment, has given the goahead for TAQA's C\$5 billion purchase of PrimeWest Energy Trust and its US\$540 million acquisition of Pioneer Natural Resources' Canadian assets.

nism that focuses on companies that don't operate according to market rules or have transparent governance.

At the same time, Prentice insisted Canada is not and will not become "protectionist ... to protect Canadian industry from the full rigors of global competition."

The Canadian Council of Chief Executives, following a survey of Canada's 150 largest companies, said hurdles should be put in place to prevent undesirable foreign entities from snatching up Canadian companies, especially in the oil patch.

Council head Tom d'Aquino said business leaders favor an amber light, not a red light.

"When state-owned companies are involved, a more rigorous test should apply" but only in the rarest cases, he said.

While 80 percent of the CEOs surveyed favored new rules on state-controlled corporations, they called for relaxed competition laws to make room for more mergers so that Canadian corporations can grow and become more competitive globally. Canadian Chamber of Commerce President Perrin Beatty, in a letter to Prentice, urged Ottawa to tread carefully before imposing new rules. "Intervention should be limited and should not discriminate against, or impede, market-driven foreign investment," he said. The chamber is concerned about any steps that might cut off a vital source of capital or any "national security" review of future takeovers that could "lengthen the approval time frame for legitimate foreign investments." Beatty noted that more than 20 stateowned enterprises have already invested in Canada and "provided net benefits to our economy." •

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PIPELINES & DOWNSTREAM

Conoco: ULSD facility won't be built

State of Alaska's tax changes blamed; Revenue Commissioner Pat Galvin says facility wouldn't have qualified under 2006 PPT

By KRISTEN NELSON Petroleum News

proposed upgrade to a North Slope topping plant to produce the ultralow-sulfur diesel required to meet federal government standards of no more than 15 parts per million of sulfur has been canceled in the wake of production tax changes passed by the Alaska Legislature Nov. 16.

ConocoPhillips Alaska had proposed upgrading its Kuparuk topping plant — one of two such facilities that produce diesel on the North Slope — to produce sufficient ULSD to meet the needs of North Slope operators.



PAT GALVIN

BP Exploration (Alaska), which operates the other North Slope topping plant, and ConocoPhillips signed an agreement with the State of Alaska in mid-2005 for the transition to ULSD on the North Slope. The companies agreed to transition to ULSD in 2008, two years ahead of the deadline mandated by the Environmental Protection Agency under an exemption EPA granted for rural Alaska, areas off the road and ferry system.

ConocoPhillips Alaska spokeswoman Natalie Knox Lowman told Petroleum News Nov. 27 that the topping plant upgrade was put on hold over the summer "pending the outcome of the special session" of the Alaska Legislature, called by Gov. Sarah Palin to consider changes to the Petroleum Profits Tax the state put in place in 2006.

PPT, a tax on net profits, allows capital and operating deductions. Under the governor's proposed changes to PPT, Alaska's Clear and Equitable Share, or ACES, the topping plant upgrade would not qualify as a capital deduction.

That provision was part of the bill which passed the Legislature Nov. 16.

Department had been queried

Commissioner of Revenue Pat Galvin told the House Finance Committee during ACES hearings Nov. 7 that the department had been asked by a taxpayer about deduction of costs for the topping plant upgrade.

He said the department viewed this as a deduction for "construction of a manufacturing plant" for fuel and addressed the issue of whether the plant costs should be deductible, or just the cost of the fuel itself. Galvin said the department "determined that no, it's not an appropriate lease expenditure because ... the construction of the plant isn't itself directly related to production. It's just directly related to a fuel source that's going to be used." Because the administration was coming to the Legislature with proposed oil tax changes, rather than just putting the decision in regulations the department included it in the bill, "so that we don't end up in a situation where the regulations are challenged and we end up in a long-term conflict" over the issue, he said. Galvin said if the state allowed deductions for the topping plant upgrade, it would be picking up almost 50 percent of the cost. "You're basically in competition with other manufacturers in the state," he said. He also said that if the topping plant credit had been allowed, state credits for facilities not directly related to oil and gas production might "begin to creep out to all

supporting activities that go into that type of operation."

By disallowing credits for the topping plant upgrade, Galvin said, the state discourages that behavior.

Cancelled in late November

Lowman said ConocoPhillips cancelled the project the week of Nov. 19.

"The project construction no longer makes economic sense under new rules passed with the recent oil tax bill," she said.

The project wasn't cancelled in advance of ACES passage because the company didn't know for sure whether or not it was deductible; prior to the passage of ACES, Revenue wasn't allowed to give taxpayers upfront information on how its tax decisions were likely to go.

ConocoPhillips is required to use ULSD on the North Slope by 2010, Lowman said, and does not yet have supply agreements in place for ULSD. She also said the company

"Fuel distribution companies are very clever and competitive," and while one distribution system was discussed in the Legislature, "I'm sure there are people thinking about others right now." -Kip Knudson, Tesoro Alaska manager, external affairs

does not know whether there will be enough ULSD available in Alaska to meet needs on the North Slope.

Operators and contractors on the North Slope and businesses in Deadhorse — and any others needing diesel supplies --- "will now have to contract for their own supplies of ULSD."

Lowman said ConocoPhillips does not know how many truckloads of ULSD will be required to supply the North Slope. "We do know that the amount of traffic will be substantially increased on the Haul Road on a daily basis," she said.

Tesoro state's only ULSD producer

Tesoro Alaska began producing ULSD at its Nikiski refinery this summer, dedicating a \$63 million distillate desulfurization unit which made the company the sole Alaska manufacturer of ULSD.

The distillate desulfurization unit has a "nameplate production capacity of 10,000 barrels per day," Tesoro said in a statement. It is designed to manufacture diesel with less than 5 parts per million of sulfur.

As for supplying North Slope ULSD needs, "People in my compare feel fairly confident that there's not going to be a supply shortage and certainly not in the near term," Kip Knudson, Tesoro Alaska manager, external affairs, told Petroleum News Nov. 29.

see ULSD FACILITY page 8





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Pioneer testing second horizon at Cosmo

By KRISTEN NELSON Petroleum News

ioneer Natural Resources is testing rates from a second horizon at its Cook Inlet Cosmopolitan prospect, the company's president and chief operating officer, Tim Dove, said Nov. 28.

Dove, in remarks to the FBR Capital Markets Investor Conference, said the company is drilling a two- to two-and-ahalf-mile extended

reach horizontal well. "And this is actually re-entering an existing wellbore and testing another horizon in this resource that has not been tested," he said.

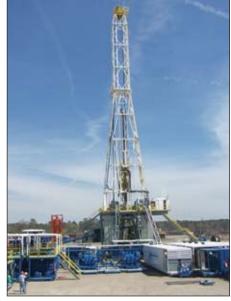


Pioneer Natural Tim Dove, Pioneer Natural Resources Resources Alaska President Ken

Sheffield said in mid-November that the company was "wrapping up drilling operations" on the sidetrack Hansen 1A lL and hoped to have it "flow-tested by year end" (see story in Nov. 25 edition of Petroleum News).

The Cosmopolitan resource has been pegged at 30 million to 50 million barrels. and Pioneer has 100 percent of the working interest.

Dove said Pioneer has good information on rate from the first horizon "because it's already been tested."



Pioneer is using Rowan 68 to drill Hansen 1A IL

The discovery well, the Starichkof State No. 1, was drilled by Pennzoil in 1967. The 12,112-foot vertical well was drilled from a jack-up and the company reported encountering the top of the Hemlock formation at 6,745 feet. Former Cosmopolitan operator ConocoPhillips drilled the Hansen 1 and 1A wells, a longreach well and sidetrack, from the same onshore pad Pioneer is using.

Dove said in mid-2005 that the 2003 Hansen well and sidetrack "tested at a stabilized rate of 600 to 800 barrels a day over different intervals that lasted for three to four months."

Second horizon the goal

The current well, the Hansen 1A 1L, targeted the Lower Tyonek sand-prone interval found in the Starichkof well, according to the third plan of exploration approved for Cosmopolitan by the Alaska Division of Oil and Gas in 2006.

"The whole objective here is to test this second horizon for its rate," Dove said.

The purpose of the rate test is to "determine whether we can go essentially directly to a development of this project."

With an oil refinery about 60 miles away, the Tesoro refinery at Nikiski, "we've got a ready market for oil."

Pioneer expects to know something by the end of the year on the test results.

"So you should be paying attention to this — and it could be a potential new Alaska development for us," Dove said.

Ready to drill at Oooguruk

At Oooguruk, the company's development off the North Slope near Kuparuk, Dove said the company is ready to begin drilling in December. "All the other facilities have been put in place over the last couple of years.'

The first wells to be drilled will be injection and disposal wells, with the first producing wells to be drilled in the first half of 2008, he said.

Pioneer expects first sales of oil from Oooguruk in mid-year 2008.

Drilling will be ramped up through 2010 — as will production rates, Dove said. Peak production of 15,000 to 20,000

At Oooguruk, the company's development off the North Slope near Kuparuk, Dove said the company is ready to begin drilling in December. "All the other facilities have been put in place over the last couple of years."

barrels per day is expected in 2010 from the estimated 70-90 million barrels of oil. Pioneer has a 70 percent working interest at Oooguruk; its partner is Eni.

Dove said Pioneer thinks "there are other opportunities in the area that we can also reach from this island. ...'

"So this will be a major growth vehicle for us, too, as we ramp up the production from this facility."

The company has spent hundreds of millions at Oooguruk but hasn't yet been able to book reserves because of Securities and Exchange Commission guidelines, but expects Oooguruk to contribute "substantially, without a lot more capital" going into the project since capital costs remaining are for drilling.

With Oooguruk and other projects coming online, the company's cash flow position should improve he said, although "obviously we haven't seen the other shoe drop in terms of what's going to happen with costs if we really are in a 95-dollaroil world on a sustained basis, because costs today, you'd say, are probably more oriented toward the 70-dollar plateau we seem to have reached earlier in 2007." •

continued from page 7 ULSD FACILITY

Knudson said he didn't know what the total requirement would be for North Slope ULSD use, but said Tesoro is "fairly certain supply will not be an issue."

Tesoro has some flexibility, he said. While its nameplate capacity is 10,000 bpd, the company has multiple options to produce ULSD incremental barrels with existing units as well as with additional investment.

Others could also produce ULSD.

Tesoro made its ULSD investment without tax credits, he said, and other companies have that option. There are also a lot of companies in the Pacific Northwest making ultra low sulfur diesel: "any refiner could make that investment tomorrow," he said.

Tesoro supplies its retail stores, branded

dealers and jet fuel to the airport. Most of its other business is with wholesalers, Knudson said, so Tesoro doesn't know where that fuel ends up. As for North Slope supply, companies there could be signing contracts with all manner of companies, he said. "Our primary business is manufacturing."

Tesoro has a products pipeline from Nikiski to Anchorage - that is its only "true transportation business," Knudson said. Fuel is distributed from hubs at Nikiski and the Port of Anchorage to both trucks and barges. The transportation route discussed in the Legislature was for ULSD to go to Anchorage via Tesoro's product pipeline, to Fairbanks by railcar and to the North Slope by truck.

Knudsen said "fuel distribution companies are very clever and competitive," and while one distribution system was discussed in the Legislature, "I'm sure there are people thinking about others right now." •

NATURAL GAS Canada gas exports defy forecasts

Canadian natural gas shipments to the United States remain doggedly above 2006 levels, despite persistent forecasts of a decline.

For the first eight months of 2007, exports were 2.48 trillion cubic feet, up 130 billion cubic feet from the same period last year, with August posting a 6.6 percent gain to 336.4 bcf, the National Energy Board reported.

Total revenues edged up about C\$450 million to C\$19.22 billion, although the average export price slipped to C\$7.19 per gigajoule from C\$7.40.

However, the weakened state of the gas market was evident in August, with revenues down 9.7 percent from a year earlier at C\$2.12 billion and average prices off 15 percent at C\$5.84 per gigajoule.

In contrast to Canadian exports, the U.S. Energy Information Administration reported that worldwide liquefied natural gas imports to the U.S. slumped in September to 41.7 bcf from 87.5 bcf in August, although the EIA still expects total LNG shipments to rise by 39 percent this year and a further 24 percent in 2008.

The EIA in March forecast a drop of about 2 percent or 180 bcf of pipeline imports from Canada this year.



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UTILITIES **Electric storm brewing in railbelt**

Aging Alaska power stations and infrastructure, combined with growing demand, tight gas supply behind urgency for change

By ALAN BAILEY Petroleum News

"perfect storm" of technical and economic issues seems to be heading straight towards the Alaska Railbelt electrical power grid. And, with reliable and reasonably priced electrical energy underpinning almost everything that happens in the region, running for cover isn't an option.

Aging power plants that need replacement, concerns about the future of Cook Inlet gas supplies, uncertainty regarding the relative merits of future energy sources, the existence of a weakly interconnected legacy electrical grid and a growing electricity demand are all converging as a web of issues that will require concerted action by all involved.

The Railbelt grid extends more than 500 miles from Seldovia in the southern Kenai Peninsula to Delta Junction in the north. Three major electricity demand centers, the Kenai Peninsula, the Anchorage/Matanuska-Susitna valleys region and the Fairbanks/central Interior region, are connected to each other by single transmission interties.

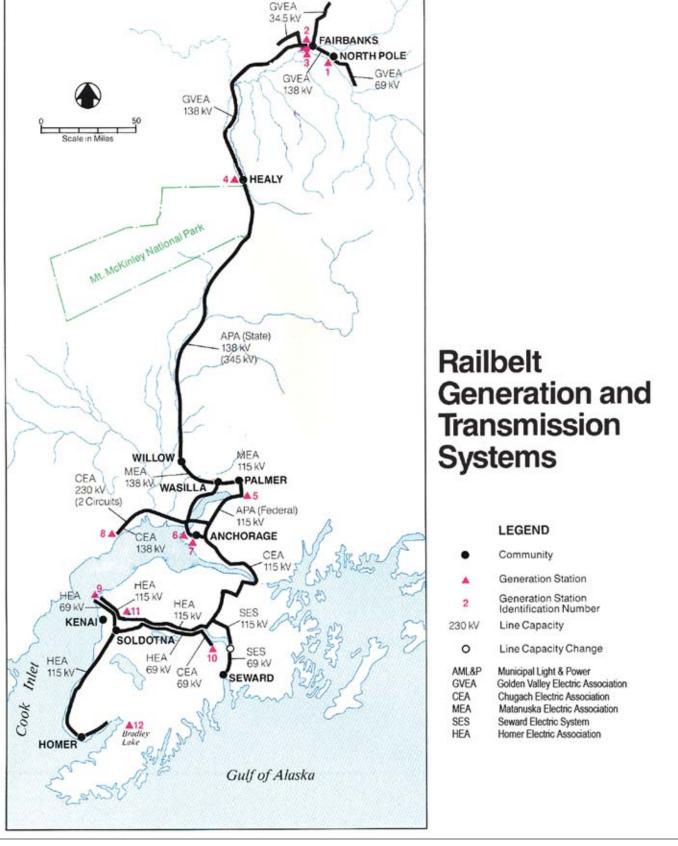
The Alaska Energy Authority wants to assess whether the formation of a Railbelt Electrical Grid Authority that would manage and dispatch power across the complete grid would provide an appropriate unified avenue for solving the grid's problems. The authority has commissioned a study into this question and into the question of what options are available for coordinating the operation of the grid. Six independent utilities currently operate the grid.

A technical conference in Anchorage on Nov. 26 and 27 that kicked off the AEA study acted as a public forum for the discussion of issues and potential solutions.

Aging infrastructure

The grid suffers from an aging infrastructure that has evolved over many decades. Power plants originally built about 30 years ago, following the development of natural gas in the Cook Inlet region, require upgrade or replacement. The old electrical generation technology is relatively inefficient in its use of valuable natural gas.

At the same time growing demand for electricity across the Railbelt is driving a need for more power generation in the region.



alaska energy authority

The Alaska Railbelt electricity grid. Long, single transmission interties connect major demand centers on the Kenai area, in the Anchorage/Palmer/Wasilla area and in the Fairbanks area.

Golden Valley Electric Association, told the AEA technical conference.

"Building two 100-megawatt units is more expensive than building one 200megawatt unit," Dale said. "Maybe if we get together we can build some large plants and enjoy the economy of scale we all need (new) units at exactly the same time."

limits on the amount of power that can be shared across the entire grid. Moreover the vulnerability of the long, single transmission lines through rugged terrain

between the major demand areas brings the risk of a major power outage, were one area to totally depend on obtaining

Potential economies of scale would suggest a significant benefit if the six Railbelt utilities were to pool their resources to build new power generation capacity, Henri Dale, power systems manager for Fairbanks-based utility

But the relatively low transmission capacity of the interties poses significant



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continued from page 1 LETTER

investment that are found in few countries in the world; and

• Continues to make Alaska an attractive and profitable place to do business.

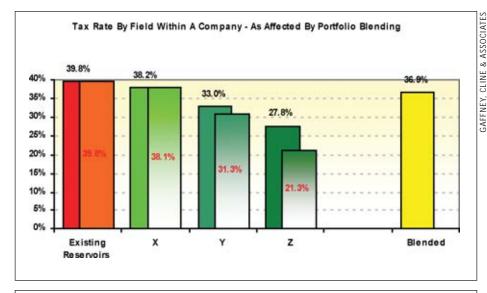
While testimony from the oil companies argued that tax increases could only hurt profitability and investment, they declined in testimony either to produce numeric examples to support their assertions, or demonstrate where GCA's analysis is flawed.

Alaska's production tax is a tax on a company's net cash flow in any taxable period. As such, it taxes a base that represents a company's profits after deduction not only of royalty, property tax and operating expenses arising from existing production, but also after deduction of the capital expenditure that a company chooses to make in respect of future production and exploration.

Further, development capital attracts an investment credit (not just an uplift of the spending in calculating taxable income, but a direct reduction in the tax itself) of 20 percent of the expenditure made, and exploration capital a credit of either 30 percent or 40 percent of the expenditure.

Such a structure is of itself attractive to both incumbents and new entrants, with the latter being able to monetize in the following year both the investment credits and the negative cash flows either by selling them to another taxpayer or to the State.

The tax rate is a function of the net cash flow in each taxable period divided by the production in that period. Until that net cash flow per barrel exceeds US\$30, the tax rate is 25 percent. Thereafter it increases by 0.4 percent per dollar per barrel until that margin reaches US\$92.50



Petroleum News editor's note

The adjacent letter is in response to Petroleum News' characterization of Gaffney, Cline and Associates' testimony in the lead of an article that appeared in the Nov. 18 edition of Petroleum News. The story, "Alaska gets poor marks," was about how oil and gas companies view Alaska for investments per Wood Mackenzie and Cambridge Energy Research Associates.

The authors of this letter, Robert George and Rich Ruggiero, analyzed possible Alaska production tax changes for Gov. Sarah Palin. It was the Palin administration that proposed ACES — i.e. Alaska's clear and equitable share.

Changes to Alaska's production tax, including a 2.5 percent hike in the base rate to 25 percent, passed the Alaska Legislature on Nov. 16.

(representing an oil price of about \$115 based on current production costs) and then by 0.1 percent per dollar until the rate reaches 50 percent — a feature known as "progressivity" or "the slope."

It is important to note that higher rates are only payable when a company's Alaska operations are returning to the corporate treasury, after deducting operating expenses, future development capital and exploration expenditure, more than US\$30 per barrel.

Such a situation can only occur when a company has extremely profitable

operations.

At current oil prices (in the US\$90s per barrel) profitability before taking into account capital expenditure is around US\$70 per barrel.

Different profitability taxed differently

There is a further aspect to the progressivity component of the production tax. As noted above, the tax rate is a function of the net cash flow per barrel of production in the tax period. During testimony, GCA showed a series of slides illustrating how this structure can allow fields of different profitability to co-exist within a single tax system and effectively be taxed at different rates according to their own profitability. In the example (the full presentation with associated assumptions is available on the Alaska Legislature Web site) the four pairs of bars labeled Existing Reservoirs, X Y and Z represent a company's existing production and further investments each of decreasing operating profitability. The leftmost bar in each pair represents the tax rate that would be applicable to that component of production if it were the only asset in a company's portfolio, and the rightmost bar the effective tax rate when combined in a single company portfolio.

As each component is added to the company's portfolio it reduces the average operating profitability (cash flow contribution) per barrel, thus reducing the tax rate not only on the new investment itself,

but also on all other production. The effect of this is the same as continuing to tax production on existing reservoirs according to their prevailing profitability, while lowering the effective tax rate on the lower profitability components of the portfolio.

In the example used, the tax rate applicable to the example company's entire portfolio would be 36.9 percent. However, this would be the same as taxing the existing higher-profitability production at 39.8 percent, investment X at 38.1 percent, investment Y at 31.3 percent and investment Z at 21.3 percent. Note also that the rate applicable to investment Z is actually less than the "floor" rate of 25 percent.

The exact rates applicable will of course vary from company to company, and the mix of assets/profitability in their portfolio. This effect only occurs while progressivity applies.

Capital expenditures lowers rate

The impact of capital expenditure further lowers the tax rate. As noted, the tax rate is based on cash flow per barrel, not profit per barrel. A company producing 5 million barrels in a taxable period at an operating profit (operating cash flow) margin of US\$70 per barrel would be subject to a production tax rate of 41 percent (25 percent on the first US\$30 per barrel, and a progressivity increment of 0.4 percent on each of the next US\$40 per barrel of profit). If that same company then invested \$50 million in development and/or exploration expenditures in that period, it would lower the cash flow margin, which is also the taxable income, to US\$ 60 per barrel. This would reduce the tax rate from 41 percent to 37 percent on the entire 5 million barrels, saving \$32.5 million in tax, or 65 percent of the capital to be invested. In addition, a tax credit of 20 percent would apply (more if any of the expenditure is exploratory), saving the company 85 percent of its capital investments, before any State and Federal income tax benefits.

Even a new entrant, with no existing production, will benefit from 55 percent to 65 percent production tax and investment credit tax breaks on exploration, and 45 percent on development capital.

Taking all these points together, GCA continues to believe that the petroleum tax structure is not only conducive to continuing investments, but provides significant incentives to undertake that activity.

Sincerely, Robert George and Rich Ruggiero Senior consultants

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• LAND & LEASING

Alaska Peninsula, Foothills sales set

February areawide bids to be opened at state office building downtown; Alaska Peninsula best interest finding supplemented

By KRISTEN NELSON Petroleum News

he Alaska Department of Natural Resources Division of Oil and Gas has issued sale notices for its annual Alaska Peninsula and North Slope Foothills areawide lease sales.

Bids will be opened Feb. 27, the division said Nov. 21.

This is only the state's third Alaska Peninsula areawide sale, and no drilling has yet occurred in that area.

But for the first time in many years companies will be drilling in the other sales area, the Brooks Range Foothills.

With three companies planning to drill in the Foothills this winter — Chevron at White Hills on the east side near the Dalton Highway and Anadarko Petroleum and Renaissance Umiat adjacent to the National Petroleum Reserve-Alaska in the west — companies are now drilling where, in the recent past, they've only put money into acreage and field work. (See most recent winter drilling story in Nov. 18 issue of Petroleum News.)

And a note to those who attend bid openings: Don't go to the Loussac Library.

The state has changed the venue for these lease sales. The division said bids will be opened 9 a.m. in suite 240 of the Atwood Building, 550 W. 7th Ave. in downtown Anchorage.

Peninsula BIF supplemented

In a Nov. 21 decision of substantial new information for the Alaska Peninsula areawide sale, DNR Commissioner Tom Irwin said the U.S. Fish and Wildlife Service submitted "new information or information that builds upon information" the agency submitted previously about the population in the sale area of the northern sea otter, which has been listed as threatened under the Endangered Species Act since the best interest finding for the Alaska Peninsula sale area was issued in July 2005. The Fish and Wildlife Service also provided information on the Steller's eider, which is listed as threatened, the Kittlitz's murrelet, which has since been listed as an ESA candidate species, as well as on 32 "birds of conservation concern." Of the 32 species which Fish and Wildlife listed for both sale areas, DNR said 27 breed in the Alaska Peninsula areawide sale area and three occur in, but do not breed in the area.

The state held its first Foothills areawide sale in 2001, selling 170 tracts for \$9.8 million.

DNR said it determined that "substantial new information has become available that justifies a supplement" to the most recent best interest finding for the Alaska Peninsula area. "The supplement will change one mitigation measure by shortening the period when exploration, development and major maintenance is allowed by six days; include the substantial new information that justifies the shortened period; and add the consultation with USFWS" in addition to the consultation with the Office of Habitat Management and Permitting already required for the director of the Division of Oil and Gas to approve an exception to that period.

Three lessee advisories are also changed, two by adding consultation with the Fish and Wildlife Service, the third by adding an additional explanation of the lessee's responsibility under the Environmental Protection Act and adding the northern sea otter to the existing table of endangered and threatened species in the finding.

Two sales in peninsula

Alaska Peninsula areawide sales began in 2005 with a sale that brought in \$1.1 million for 37 tracts. The second sale, held in 2007, brought in only \$38,779 for a single tract.

The tracts leased in the first two sales are grouped together in the area east of Nelson Lagoon, surrounding Herendeen Bay and Port Moller near the southern end of the sale area, which stretches from Nushagak Peninsula, around the northeastern end of Bristol Bay, down the edge of the Alaska Peninsula to Moffett Point.

There was no competition between the two bidders in the 2005 sale: Shell Offshore Inc. bid on 33 tracts for a total of \$842,415; Hewitt Mineral Corp. took four tracts for \$306,838.

Hewitt was the only bidder in the second sale.

Wide range in Foothills' sales

The state held its first Foothills areawide sale in 2001, selling 170 tracts for \$9.8 million. Since then, the annual sales have drawn mixed levels of interest: 46 tracts were sold in 2002 for \$2.9 million; one tract in 2003 for \$36,576; five tracts in 2004 for \$106,305; 12 tracts in 2005 for \$320,000; and 45 tracts in 2006 for \$1.27 million.

There were no bids in the 2007 Foothills areawide sale.

Big bidders in the first sale were Burlington Resources (which has since dropped its Foothills leases); Anadarko Petroleum; EnCana; Chevron; Petro-Canada (Alaska); and Union Oil Company of California (now owned by Chevron).

Petro-Canada was the big bidder in the 2002 sale, followed by Anadarko and Union. Anadarko was the dominant bidder in the 2006 sale.

Minimum \$5 per acre in both sales

There are 1,047 tracts in the Alaska Peninsula Areawide sale, including onshore and offshore acreage from the Nushagak Peninsula in the north down the north side of the Alaska Peninsula to just north of Cold Bay.

There are 1,347 tracts in the North Slope Foothills Areawide sale. The sale area is between the Arctic National Wildlife Refuge and the National Petroleum Reserve-Alaska. The sale's northern boundary is the Umiat Meridian baseline; the southern boundary is the Gates of the Arctic National Park and Preserve.

Tracts in both sales range from 1,280 to 5,760 acres.

Both sales have a minimum bid of \$5

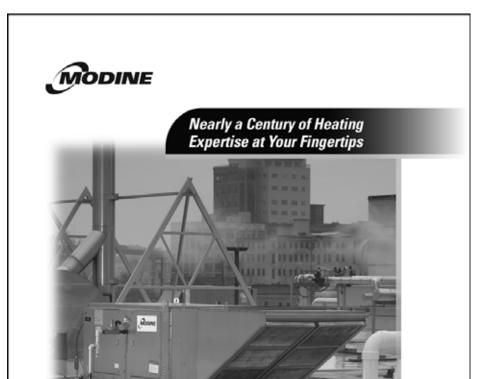
Both sales have a minimum bid of \$5 per acre, a fixed royalty rate of 12.5 percent and an initial primary term of 10 years.

per acre, a fixed royalty rate of 12.5 percent and an initial primary term of 10 years.

The division said the DNR commissioner has issued a decision of no substantial new information for the North Slope Foothills sale and a decision of substantial new information and supplement to the Alaska Peninsula areawide best interest finding. The sale documents are posted on the division's Web site www.dog.dnr.state.ak.us/oil. ●



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Business Spotlight



Anne L. Southam, Environmental Scientist, Project Manager

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Anne Southam earned a Master's of Science degree in environmental science from the University of North Texas in Denton. She joined URS Anchorage in 2002 with a water quality background by training and several years' experience with NEPA compliance and cumulative effects assessment. Anne enjoys long runs with her husband James, a 2006 Winter Olympian, along with cycling, triathlons and cross-country skiing. -PAULA EASLEY



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continued from page 9 **STORM**

power from generation in another area.

"We have to do our planning to take care of each region individually because that line can be down at any given time, for a period of hours or days or even longer," Dale said.

"Dealing with transmission in Alaska is extremely challenging," said Lee Thibert of Chugach Electric Association. "... We've had avalanches that have taken down transmission lines and when you lose a transmission line you lose access to that generation. ... The key message here is you need alternative routes."

In fact, some people argue for a more distributed style of electrical generation, with relatively small scale power plants supplying into the grid fairly close to where the power will be consumed. That type of arrangement can reduce transmission costs and power losses, while spreading the risk of a power generation outage.

Which energy source?

But any discussion of new power generation raises the issue of what energy sources to use, especially since building a new power plant requires major capital investment recouped over long time periods. Although the electricity utilities engage in integrated resource planning, there is no state or regional energy policy that could provide the framework for the appropriate energy mix to use for both heating and electricity generation.

Current projections of gas production from oil and gas fields around the Cook Inlet indicate that gas supplies will fall short of gas and electricity utility demand in 2015. Gas producers are optimistic about finding and developing new gas resources and there are proposals for building a pipeline to ship North Slope gas into Southcentral Alaska. But optimism doesn't necessarily translate to new gas discoveries and at present there is no guarantee that a gas line will be built into Southcentral.

The state's massive coal resources present an obvious alternative to natural gas for electricity generation but face an uphill struggle against environmental concerns. Proponents of coal say that modern clean coal technologies can all but eliminate the emission of pollutants. Carbon dioxide sequestration or some equivalent technology might address carbon dioxide emissions.

Hydropower

The state enjoys significant potential hydropower resources that, if harnessed,

"The true cost of having six atodds management companies operating the system is truly unknown," said attorney Robin Brena, who characterized the Railbelt electricity utilities as "dueling fiefdoms."

could provide a major component of electricity base load at a relatively constant cost over very long time periods. Possibilities include a 300-megawatt power plant at Lake Chakachamna on the west side of Cook Inlet or a 1,500megawatt hydro scheme in the upper Susitna River.

Kate Lamal, vice president of power supply for Golden Valley Electric Association, said that a recent study showed that hydropower looked second only to energy conservation as a longterm solution for addressing the energy issues of the Interior Alaska power grid, with gasification of coal or biomass as a medium term solution.

"We would like to look at renewable, sustainable and alternative energy to meet our electrical, transportation and home heating needs," Lamal said.

In addition to hydropower, there are several possibilities for wind farms in the Railbelt, including a proposed farm on Fire Island next to Anchorage. A geothermal plant, perhaps next to the Mount Spurr volcano on the west side of Cook Inlet, is a possibility. And a company is planning to test a tidal energy system in the Knik Arm next to Anchorage.

And just to complicate the energy situation, a massive freight train called "global warming and carbon emissions" is on the tracks and getting ready to leave the station at the Capitol in Washington, D.C. — a federal carbon tax or cap-andtrade system would have a major impact on the economics of any power plant that emits carbon dioxide.

Managing the grid

There is considerable controversy regarding the question of how to manage and operate the Railbelt grid.

One key question, for example, is whether to decouple electrical transmission from electricity generation, so that power generation entities can compete to supply power on a level transmissiongrid playing field. Following U.S. deregulation of the power industry in the 1980s, regional power transmission entities formed in some parts of the country. But there are question marks regarding whether the scale of the Alaska Railbelt electricity market is large enough to make this type of arrangement workable. And should the current utilities con-

tinue to exist in their current form? Although the utilities work cooperatively on the day-to-day operation of the grid, each utility's planning objectives are driven by a priority to satisfy the needs of its own ratepayers. Those priorities may not be in the best interests of the grid as a whole — a major decision on power generation made by one utility impacts the economics of decisions made by the other utilities.

"The system operates on one premise: save yourself first," said Tuckerman Babcock, assistant general manager of Matanuska Electric Association.

"The true cost of having six at-odds management companies operating the system is truly unknown," said attorney Robin Brena, who characterized the Railbelt electricity utilities as "dueling fiefdoms."

Additionally, the capital cost of a major new power plant may be beyond the capability of any individual utility.

What's next?

So how will people resolve all of this? The AEA Railbelt Electrical Grid Authority study is scheduled for completion in May and will provide insights into how to operate the grid. Meantime, attendees of the Anchorage AEA technical conference agreed to spawn some expert working groups to address some of the key issues. New discussions between the electricity utilities also appear to be in the offing.

Two utilities, Chugach Electric Association and Municipal Light and Power, have already been assessing a possible merger. And in August Matanuska Electric Association filed a petition with RCA, asking the commission to consider developing regulations to force unitization of the grid.

administrations the The of

Municipality of Anchorage, Matanuska-Susitna Borough and the Kenai Peninsula Borough have jointly embarked on the development of an energy policy for Southcentral Alaska.

Political and regulatory action will likely figure into any solution. In addition to the possibility of a politically driven energy policy, the high capital cost of upgrading the electrical infrastructure may need some form of government assistance. One interesting question, for example, is whether the state should provide seed money for the massive cost of making the transmission infrastructure more resilient and more capable of supporting flexible power supply options.

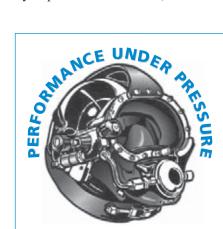
Should the utilities or the state government or both make decisions regarding power generation and the structure of the Railbelt grid, asked retired Alaska state representative Norman Rokeberg.

"Politicians are not engineers and they're not financial analysts," Rokeberg said. "However, if the project is so large ... it's my experience that they'll come to the Legislature for funding. ... Politicians should not have to make those decisions but ... you can't remove politics from this whole issue."

Another question relates to the role of the Regulatory Commission of Alaska. Does the commission have a role in enforcing the way in which the electrical grid is constructed or operated, for example?

Whatever happens, the Alaska Railbelt needs to deal with the impending storm in its electrical power systems sooner rather than later. The State of Alaska enjoys an abundance of energy sources. But harnessing those resources in a practical, economic and dependable manner seems something of a challenge.





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continued from page 1 ARCTIC GAS

thinly veiled message that it is ready, willing and able to build, own and run the Mackenzie pipeline.

For now, TransCanada's North Central Corridor project involves a new pipeline from northwest Alberta and possibly northeast British Columbia, one of Western Canada's

hottest gas regions, to an underutilized leg of a system run by its NOVA Gas subsidiary Transmission along Alberta's eastern edge.

However, it is positioned as part of the company's Alberta pipeline network that extends almost to the Alberta-Northwest Territories border, giving it the option of tapping TransCanada Chief into Mackenzie gas and possibly gas from the North Slope if a pipeline from Alaska enters Alberta.

TransCanada Chief Executive Officer Hal Kvisle said the project is the "most cost-effective facility to accommodate evolving gas supply and market dynamics both within and outside Alberta."

Expansion of Alberta system

is designed to expand It TransCanada's integrated Alberta system, providing the capacity needed to deal with increasing gas supplies in northwest Alberta, declining supply in northeast Alberta, growing intra-Alberta markets resulting largely from increased oil sands development and reduced delivery capability to interconnecting pipelines at the Alberta-Saskatchewan Pending approvals, construction of the 180-mile, 42-inch diameter North Central Corridor pipeline could start in spring 2009 and be completed a year later

border.

All TransCanada will say for now is that the North Central Corridor pipeline will not need new supplies of Mackenzie



Executive Officer Hal Kvisle

gas, which could come on stream about 2014 at 800 million to 1.2 billion cubic feet per day.

But, regardless of emerging new technologies, the oil sands will rely heavily on gas to fuel its extraction and processing operations if output is to grow from 1.2 million bpd to 2.9 million bpd or more by 2015.

Over that period, gas consumption by the sector is forecast to more than double to 2.4 bcf per day at a time when Western Canadian gas is likely to decline by an even greater amount, making the development of Arctic gas even more critical.

Dan Woynilowicz, a senior policy analyst at the Pembina Institute, an Alberta-based environmental think tank, told the Financial Post the project shows "there isn't much of a market expectation that the oil sands can move away from natural gas," despite what the institute views as better uses for gas to offset coal-fired electricity generation.

Pending approvals, construction of the 180-mile, 42-inch diameter North Central Corridor pipeline could start in spring 2009 and be completed a year later.

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EXPLORATION & PRODUCTION

Oil sands, in-situ propel Canada's reserves

Oil sands mining and in-situ projects were the driving force behind a 33 percent rise in Canada's petroleum reserves in 2006, raising established crude oil and equivalent reserves to 19 billion barrels, according to the Canadian Association of Petroleum Producers.

Oil sands reserves climbed by 5.4 billion barrels to 13.6 billion barrels, but conventional crude slipped 266 million barrels to 4.94 billion barrels, while pentanes plus were up fractionally at 448 million barrels.

Conventional crude in the Western Canada Sedimentary basin posted a 5 percent decline to 2.96 billion barrels and the East Coast lost 111 million barrels from production, ending 2008 at 1.61 billion barrels.

Oil sands mining reserves gained 45 percent to 8.9 billion barrels following the booking of reserves from Canadian Natural Resources' Horizon project and in-situ reserves rocketed 90 percent to 4.7 billion barrels because of new and expanded projects.

CAPP confines its annual reserve numbers to oil sands projects that are either developed or where substantial investments have been made, leaving it far behind the Alberta Energy and Utilities Board estimate of 173 billion barrels.

The only real surprise in the numbers came from the natural gas sector, where additions to reserves replaced 104 percent of production, lifting Canada's total reserves to 58.2 trillion cubic feet, although Alberta recorded a decline of 790 billion cubic feet to 40.15 tcf.

British Columbia cemented its place as the most successful gas region, pushing its total up by 703 bcf to 13.05 tcf and Saskatchewan added a net 256 bcf to 3.5 tcf.

The Northwest Territories and Yukon gas reserves were down 36 bcf to 363 bcf, while the NWT crude reserves declined 6 million barrels to 30 million barrels.

CAPP estimated Canada's natural gas liquids reserves, including ethane, propane and butane, rose 5 percent to 800 million barrels. Sulfur recovered at gas plants decreased by 12 percent to 48 million long tons, but sulfur recovered at oil plants was up 17 percent to 44 million long tons.

-GARY PARK

BP pleads guilty to Clean Water violation

The Alaska subsidiary of oil giant BP pleaded guilty Nov. 29 to a federal environmental crime for failing to prevent a crude spill in America's largest oil field.

BP Exploration Alaska Inc. pleaded guilty to one misdemeanor violation of the Clean Water Act for a 200,000-gallon spill at the Prudhoe Bay field in March 2006.

The company had agreed in October to a sentence of \$20 million in fines related to the spill, the largest ever on the North Slope.

The settlement was one of several struck between the oil and gas giant and federal investigators.

BP agreed to pay another \$353 million in fines and restitution over the manipulation of energy markets in the Midwest and a refinery explosion that killed 15 people in Texas.

For years, the company denied allegations that a culture of cost-cutting was hurting the quality of maintenance on the network of steel pipes at the 30-year old Alaska field.

But after the spill in March, federal prosecutors said millions of company documents and interviews with scores of North Slope employees told a different story.

They discovered a "failure to allocate sufficient resources to ensure safe and environmentally protective operation of the pipelines that leaked," according to court documents.

Prosecutors estimate BP saved \$9 million by choosing not to regularly clean and inspect two of its pipelines over the course of several years. The estimated savings represented less than half of 1 percent of BP's adjusted net profit of \$22 billion in 2006.

Both of those pipelines sprung leaks in 2006 and prompted BP to halve production at Prudhoe Bay to 200,000 gallons a day for several weeks.

BP manages Prudhoe Bay on behalf of its production partners Exxon Mobil Corp., ConocoPhillips and Chevron. The company has said it is investing heavily in upgrading its North Slope operations.

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continued from page 1 STATOILHYDRO

the Shtokman mega gas field in the Russian Barents Sea is in the presanction phase.

The scope of each of these huge projects includes a long value chain extending from subsea well completions through to an appropriate transportation system for shipping product to market, Hvalbye said.

And the field designs are breaking new ground in terms of subsea production technology. The fields use subsea templates that can operate independently of water depth. The templates could connect to either an offshore platform or an onshore facility, Hvalbye said.

Ormen Lange

The Ormen Lange field lies on the Atlantic margin 90 miles offshore, in difficult terrain on the site of a submarine slide that occurred about 8,000 years ago. Subsea templates in a water depth of about 3,000 feet tie wells into a pipeline to an onshore plant. There are no offshore platforms. (This field has been operated by StatoilHydro, but as of Dec. 1, Shell will be the operator. See sidebar with this story.)

From the onshore plant a long subsea export gas pipeline crosses the North Sea from Norway to Easington on the east coast of England. From Easington the Ormen Lange gas flows into the UK gas grid. An offshore pipeline connection in the North Sea would also enable gas to be delivered into markets in continental Europe.

The subsea template design facilitates a phased field development, Hvalbye said. And StatoilHydro is testing a subsea compressor system for future maintenance of reservoir pressure as the field depletes.

Seabed preparation included excavating pipeline trenches through the rugged seabed, with the pipeline to shore having to negotiate a 30-degree slope. The onshore facility separates condensate and prepares sales gas. Gas production is 780 billion cubic feet per year, Hvalbye said.

"It is the largest industrial project ever done in Norway," Hvalbye said. "The investment is approximately US\$10 billion. ... It's a 14 tcf reserve project."

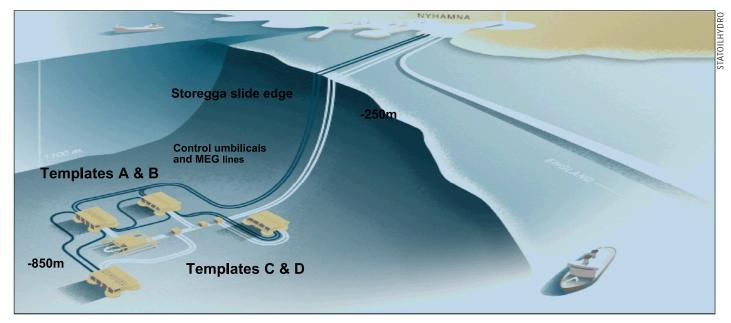
The subsea pipeline that ships the sales gas to the United Kingdom was a major project in itself.

"It's a million tons of steel in that pipeline," Hvalbye said. "... It was a massive logistical challenge to do this, putting it all together." Ten thousand sections of 42-inch and 48-inch pipeline were required, he said.

The entire Ormen Lange project, in

SNØHVI Subsea development Initially no installations on the surface

- No toxic discharges to the sea
- The subsea production system in the Snøhvit field in the Norwegian Barents Sea.



The Ormen Lange field uses subsea completions on an ancient submarine slide on the Atlantic margin off Norway's west coast.

which StatoilHydro partnered with Shell, Petoro, Dong Energy and ExxonMobil, took 10 years to complete.

Snøhvit

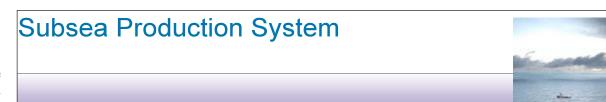
ASKELADD

Development of the US\$7.5 billion StatoilHydro-operated Snohvit field in the Barents Sea north of the Arctic Circle was also a major technical achievement.

see STATOILHYDRO page 16







ALBATROSS

New Barents Sea drilling program under way

According to a Nov. 25 Financial Times report, StatoilHydro plans to drill around the area of the Snohvit development in the Barents Sea over about the next 18 months. The company wants to find out if there is sufficient gas in the area to justify building a second gas line to the Snohvit LNG plant, the Financial Times said.

StatoilHydro is also partnering with oil major ENI in the appraisal of the ENI-operated Goliat oil field in the Barents Sea about 30 miles southeast of Snohvit.

-ALAN BAILEY

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Shell new operator at Ormen Lange

StatoilHydro announced Nov. 28 that Shell will be the operator of the Ormen Lange gas field offshore the west coast of Norway starting Dec. 1.

The Norwegian Ministry of Petroleum and

Energy had designated StatoilHydro as operator for the development of the field. But now that the

field is in operation, Shell is becoming operator, StatoilHydro said. Norwegian gas pipeline company Gassco operates the gas export line that connects the onshore Ormen Lange production facility to the UK gas grid at Easington on the English east coast.

StatoilHydro owns a 28.91 percent interest in the Ormen Lange field. Shell has a 17.04 percent interest; Petoro has a 36.48 percent interest; Dong E & P has a 10.34 percent interest; and ExxonMobil has a 7.23 percent interest.

—ALAN BAILEY

continued from page 1 BOOK CLUB

Spittler is looking for industry experts to participate in the book club's Author's Resource Center, which will be online within the book club Web site (www.pnabookclub.com) by the end of December.

Participants essentially volunteer to be contacted by e-mail if writers have questions about the oil and gas industry while working on a book.

One section of the Author's Resource Center will list organizations, including contacts in government agencies, energy companies and oil and gas associations. The other section will list contacts by general subject, such as exploration, production, pipelines and transportation, refining and retail; and more specific topics such as Arctic offshore, deepwater Gulf of Mexico, oil and gas prices, Barents Sea, Cook Inlet, seismic, pipeline construction, etc.

Spittler is in charge of putting the resource center together. She can be reached by e-mail at editor@pnabookclub.com and

by telephone at (907) 770-3506.

Spittler said that three out of the four books members receive each year will be fiction.

Why fiction?

The book club's Web site answers that question this way: "Starting with Bambi, think of the wonderful impact Disney has had on the way people view and treat animals. ... Fiction entertains, educates and molds public opinion."

The club lists its favorite example: "Clive Cussler and his son know very little about seismic which is evident in their ... thriller, 'Treasure of Khan.' To enhance the plot they used an 'evil' seismic wave system that not only produced perfect images of geological strata (dream on), but also was able to induce 7.3 Richter earthquakes!"

Not all books chosen will contain inaccuracies.

"If we find a book that contains largely accurate information about the energy industry, we'll choose it for the book club. Hopefully, over time, there will be more and more of those." \bullet

continued from page 15 **STATOILHYDRO**

The field has reserves of about 8 trillion cubic feet of natural gas.

"It was the first export facility for LNG in Norway and Europe," Hvalbye said. "It was the first project in the Barents Sea region."

Snøhvit has faced the dual issues of implementing new technologies and shipping products to new markets — Snohvit gas is shipped as liquefied natural gas to Spain and the United States.

A subsea production system in water depths of 800 to 900 feet connects with a pipeline that carries gas from the field about 100 miles to an onshore LNG plant. As at Ormen Lange, there are no offshore structures at the water surface — mobile, floating drilling rigs drilled the wells.

Development challenges included the long distance to shore and laying the pipeline on a seabed scarred by ice. Construction in the Arctic required barging in pre-fabricated modules and dealing with issues such as freezing sea spray. Future challenges will include the need for compression facilities to maintain production as the field depletes, Hvalbye said.

The LNG plant for Snohvit sits on an island just outside the town of Hammerfest on the north coast of Norway. The plant exports both LNG and liquefied petroleum gas or LPG. The plant can also extract carbon dioxide from the field products, for reinjection into field reservoirs, Hvalbye said.

Shtokman

The Shtokman gas field in the Russian Barents Sea is also situated in a remote offshore Arctic environment.

Shtokman involves the additional challenge of working in a different business culture — it took several years to negotiate involvement in the project, Hvalbye said.

"Shtokman is again a large, large gas accumulation," Hvalbye said.

Water depth is about 900 feet and, with gas reserves of about 100 tcf, the field is about seven times the size of Ormen Lange. StatoilHydro and Total are partnering with Gazprom, the main field owner, in developing the field.

"We are working with them on the first phase of this one and there will be two products, LNG and piped gas, to Europe," Hvalbye said.

But, as at Snøhvit, field development will not be easy in the remote Arctic environment — developing fields like these involves dealing with different types of ice, working in extreme weather in remote locations, coping with limited support and difficult logistics, and also having to deal with strict environmental conditions, Hvalbye said.

"We all know that field developments in the Arctic are challenging," he said. \bullet

Editor's note: In mid-2007, prior to the merger of Statoil and Norsk Hydro, Norsk Hydro USA retained former Alaska Division of Oil and Gas Director Ken Boyd as a consultant in Alaska. Jim Meek, manager of business development for the Houston-based affiliate said Boyd would be the company's "man on the ground" in Alaska, attending local meetings and events and assisting the mega-major in its "evaluation" of the state as a place to make oil and gas investments. Boyd continues to represent the merged company.



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