Petroleum news

page 5 Q&A: Kelly cautious on changing tax credits, ending TransCan deal

Vol. 20, No. 38 • www.PetroleumNews.com A weekly oil & gas newspaper based in Anchorage, Alaska Week of September 20, 2015 • $2.50

This week's Mining News

NORTH OF 60 MINING news

page 15 Tangen discerns glimmer of hope for ANILCA in surprising quarter

www.MiningNewsNorth.com The weekly mining newspaper for Alaska and Canada's North Week of September 20, 2015

NORTHERN NEIGHBORS

Compiled by Shane Lasley

Pretium secures cash to develop Brucejack

Pretium Resources Inc. Sept. 16 said it has secured a US$540 million construction financing package with the Orion Mine Finance Group and Blackstone Tactical Opportunities. The financing, which provides for immediate access to US$340 million at closing, will fund a substantial portion of the costs to develop an underground mine at Pretium's Brucejack gold project in Northwest British Columbia. "The Orion and Blackstone deal has successfully met our objectives to fund the construction of an underground mine at Brucejack under terms that are competitive (and) flexible, and that protect Brucejack's upside for our shareholders," said Pretium CEO Robert Quartermain. "Having immediate access to US$340 million enables us to keep to our construction schedule." The financing is comprised of a US$350 million credit facility at fixed interest rate of 7.5 percent; a US$150 million prepayment under a callable stream agreement that involves an estimated 7.067 million ounces of refined gold and 26.297 million oz of refined silver and a private placement of Pretium common shares for US$40 million.

Sable pipe could extend Ekati Mine to 2033

Dominion Diamond Corp. Sept. 10 released the results of a preliminary economic assessment for the Sable kimberlite pipe deposit located within the core zone of the Ekati diamond property in Northwest Territories, in which the company holds an 88.9 percent interest. The PEA envisions the recovery of 9 million carats of diamonds from 12.1 million tons of kimberlite over 10 years. This production, along with Jay, would supply ore to the existing Ekati process plant at its full capacity until 2033. The PEA identified a number of synergies with developing the Sable pipe concurrently with Jay that includes the sharing of haul trucks and other equipment during development and operations. Combining Sable with Jay would also provide increased mine planning and processing flexibility. The Sable pipe is located beneath Sable Lake, 17 kilometers (11 miles) north-northwest of the existing Ekati mine infrastructure. The Sable project will require construction of an access road, site infrastructure and a sedimentation pond allowing Sable Lake to be dewatered ahead of the start of pre-stripping operations. Dominion Diamonds said Sable would provide an additional high-value ore source for the Ekati mine, allowing for optimal mine sequencing and operational flexibility to maximize the value of the Ekati operation. The company's timetable for the development of Sable is based on the estimated start of construction in the first half of 2016 and processing of kimberlite by 2019.

Smaller Back River gold operation feasible

Sabina Gold & Silver Corp. Sept. 14 reported positive results for an initial project feasibility study that investigates starting with a 3,000-metric-ton-per-day operation at its Back River gold project in Nunavut. At a gold price of US$1,150 per ounce, this study indicates Back River could generate a post-tax internal rate of return of 24.2 percent and net present value (five percent discount) of C$480.3 million with a pay back of 2.9 years. At an average head grade of 6.3 grams per metric ton gold, the study anticipates the 3,000 tpd operation would average 198,100 ounces of gold in annual production over an 11.8-year mine life at a cost of US$534 per oz. Initial capital for the project is estimated at C$415 million with sustaining capital of C$185 million. Earlier this year, Sabina published a feasibility study that envisions a 6,000-metric-ton-per-day mill producing on average 346,000 ounces of gold annually over a 10-year mine life. Sabina President and CEO Bruce McLeod said, "The 3,000 tpd FS is the most compelling opportunity for Sabina in this current market environment." An environmental assess-

see NORTHERN NEIGHBORS page 14

ENVIRONMENT

Setting the standard

Teck continues to be recognized for its commitment to sustainable mining

By SHANE LASLEY

Mining News

While tough market conditions are forcing mining companies to tighten their belts, Teck Resources Ltd. does not see maintaining responsible and environmentally sound operations as an area in which it can afford to trim its budget.

That commitment has propelled the diversified miner onto the Dow Jones Sustainability World Index for six years running, ranking it among the top 10 percent of the 2,500 largest companies in the S&P Global Broad Market Index.

"We know that the success of our business is dependent on our ability to develop resources in a way that is responsible and sustainable for communities and the environment," Teck Resources President and CEO Don Lindsay said. "That is why we continue to integrate social, economic and environmental performance into every decision we make, even during current challenging market conditions."

DON LINDSAY

REGGIE JOULE

RobecoSAM, a sustainability investing investment specialist hired by Dow Jones to compile the index, gave Teck high marks in sustaining biodiversity, asset closure management, finding and keeping talented employees, and operational eco-efficiency.

This recognition reflects many of the accomplishments that Teck outlined in its 2014 Sustainability Report. Achievements highlighted in the report, published in June, include:

The strengthening of an endangered herd of 24 caribou in northeastern British Columbia due to the birth of nine calves through a maternal penning program supported by Teck;

A 170,000-metric-ton reduction in greenhouse gas emissions at Teck operations as a result of programs implemented since 2011;

The recycling of 38,000 metric tons of waste at Teck operations;

A 16 percent increase in the number of women in operational and technical roles; and

An approval from the Government of British Columbia for Teck's Elk Valley Water Quality Plan, which featured collaboration with indigenous peoples, local communities, environmental organizations and governments.

"As we have seen in the past year, Teck's sustainability achievements, large and small, are an important part of our business performance," said Marcia Smith, the company's senior vice president, sustainability and external affairs.

Dow Jones and RobecoSAM are not the only firms recognizing Teck's commitment to sustainability.

Earlier this year, Corporate Knights Inc., a Canadian media group focused on sustainable development, ranked Teck among the "Global 100 Most Sustainable Corporations" for a third consecutive year.

Teck Resources Ltd. and NANA Regional Corp. have maintained a balance between developing the rich mineral resources at Red Dog and protecting the foods that have sustained the Iñupiat people in Northwest Alaska for millennia.

Sustainalytics, a global sustainability research and analysis firm, also put Teck on its list of the "Top 50 Socially Responsible Corporations in Canada."

Balance at Red Dog

While such recognition from prestigious global organizations such Dow Jones shines a spotlight on Teck's sustainability achievements, it is the observations of those most affected by the company's mining operations that give these efforts the most credibility.

Northwest Arctic Borough Mayor Reggie Joule told international delegates attending the Conference on Global Leadership in the Arctic (GLACIER conference) in Anchorage, that the Red Dog Mine in Northwest Alaska is a prime example of sustainable development.

"We have the Red Dog Mine, where we have worked to ensure the subsistence renewable resources are not sacrificed as we develop these non-renewable resources," the Iñupiat leader said during an opening speech.

Situated roughly 100 miles north of the Arctic Circle, Red Dog is among the largest zinc mines in the world.

In 1982, Cominco (now Teck) and Iñupiat-owned NANA Regional Corp. signed a landmark agreement that directs how the mine is operated and ensures sustainable benefits for the region and its people.

A quarter century since the 1989 startup of operations at Red Dog, the mine continues to be an economic engine for this remote Arctic region and serves as a positive example of indigenous people and mining companies working together.

"The Red Dog partnership has set the standard for how resource development can create economic prosperity and opportunity while at the same time supporting tradition, culture and heritage," Teck CEO Lindsay said during a 25th anniversary celebration at Red Dog.

While the Iñupiat are enjoying the economic benefits of being 30 percent owners of one of the world's top zinc producers, they measure the success of the partnership by the ability to hunt and gather the foods that have sustained them in Northwest Alaska for millennia.

"We have learned with diligence and oversight that you can balance resource development and still have the animals and the fish and the plants flourish," said Joule.

Teck Resources' strategy propells company onto the Dow Jones Sustainability World Index for six years running. Page 13

HEA signs gas deal with Furie

Homer Electric Association has signed a natural gas sale and purchase agreement with Furie Operating Alaska.

HEA said Sept. 16 that its generation and transmission subsidiary, Alaska Electric and Energy Cooperative, will receive natural gas from Furie beginning April 1, 2016. The contract terminates Dec. 31, 2018, and includes two one-year options which can extend the term through Dec. 31, 2020.

HEA said the gas will be used to fuel its plants in Nikiski and

see **GAS DEAL** page 26

Aurora plans Hanna-area wells

Aurora Exploration Inc. is permitting two natural gas exploration wells in the Susitna Flats State Game Refuge at the northern end of the west side of Cook Inlet.

The two proposed wells would be located on a group of leases surrounded by the Lewis River, Stump Lake, Ivan River, Pretty Creek and Otter units and has previously been known as the Hanna prospect. Aurora recently acquired the leases from Paul Craig.

see **AURORA WELLS** page 21

AOGCC looks at Milne Pt changes

The Alaska Oil and Gas Conservation Commission is considering requiring changes in how wells are constructed at the Milne Point field. Conservation Order 390, issued in 1997 at the request of BP Exploration (Alaska) Inc., exempted Milne Point wells — BP was then the Milne Point operation — from a requirement in the commission's regulations that "producing wells capable of unassisted flow must be completed with downhole production equipment consisting of suitable tubing and a packer that effec-

see **MILNE POINT** page 26

EXPLORATION & PRODUCTION

An exciting time

Quarles talks of ExxonMobil's commitment to both Point Thomson, AKLNG

By ALAN BAILEY

Petroleum News

ALAN BAILEY

CORY QUARLES

Commenting that Point Thomson, when it goes into production, will be the first field on Alaska's North Slope to be operated by ExxonMobil, Cory Quarles, ExxonMobil Alaska production manager, told a Sept. 10 meeting of the Alaska Support Industry Alliance that this is an exciting time in the state for his company. The Point Thomson development is at an advanced stage.

ExxonMobil is also a partner in the Alaska LNG project, or AKLNG, a project to export natural gas from the North Slope through an LNG facility on Cook Inlet. Quarles said that, with ongoing negotiations over the project in progress, there was little he could say about the project at present. A deal over the project depends on many factors, including regulatory certainty, fiscal stability, commercial terms and commodity prices, he said.

"But even with all of that, I can say that we are the closest that we've ever been," Quarles said. "And that's good news, because it gives us the potential to be able to work with all of you to create more jobs for Alaskans."

Gas cycling initially

With the Point Thomson field's massive reservoir

see **QUARLES SPEECH** page 27

EXPLORATION & PRODUCTION

New Deep Creek pad

Hilcorp's program includes one-to-two gas exploration wells, new drilling pad

By ERIC LIDJI

For Petroleum News

Hilcorp Alaska LLC is permitting a new drilling pad at the Deep Creek unit to support a two-well natural gas exploration program at an undeveloped corner of the onshore unit.

The program involves building a 300-foot by 400-foot Happy Valley Middle pad and a gravel access road connecting the pad to an existing logging road and Tim Avenue. The company plans to use Saxon Rig 169 for drilling and completion activities at the pad.

Under a timeline included with the application, Hilcorp would construct the pad later this year and

> *If the exploration program is successful, Hilcorp would permit a larger development program.*

drill and test the first well during the coming winter. Depending on the results of the first well, Hilcorp might drill a second well this coming spring. If the exploration program is successful, Hilcorp would permit a larger development program.

The Alaska Department of Natural Resources is taking comments through Oct. 10.

see **DEEP CREEK PAD** page 27

GOVERNMENT

Breakthrough or breakdown?

BC government tries to strike reconciliation deal with First Nations leaders

By GARY PARK

For Petroleum News

With Premier Christy Clark at the helm, the British Columbia government entered a two-day summit on Sept. 9 with about 500 First Nations leaders hoping to bridge the chasm on future economic, social and legal relations.

Many of the aboriginal representatives embarked on the talks in a bloody-minded mood, threatening to resume court battles and establish camps to block resource development unless there was clear evidence of improvement.

And they weren't prepared to buy into the claims of Aboriginal Relations and Reconciliation Minister John Rustad, who opened the two-day gathering by describing advances over the past

> *However, the majority of First Nations have refused to participate in the process, noting that the agreements to date cover only 5 percent of the land claimed.*

decade as "remarkable."

"You're seeing our government's response to the First Nations every day, in all the things we do" in our negotiations and our discussions and the way we try to build our relationships," he said.

The First Nations had only to point to the dismal results of attempts to secure treaty agreements.

Of British Columbia's 203 distinct First Nations (representing about 200,000 people), only two

see **BC SUMMIT** page 20

contents

Petroleum News | North America's source for oil and gas news

Alaska - Mackenzie Rig Report

The Alaska - Mackenzie Rig Report as of September 17, 2015. Active drilling companies only listed.

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

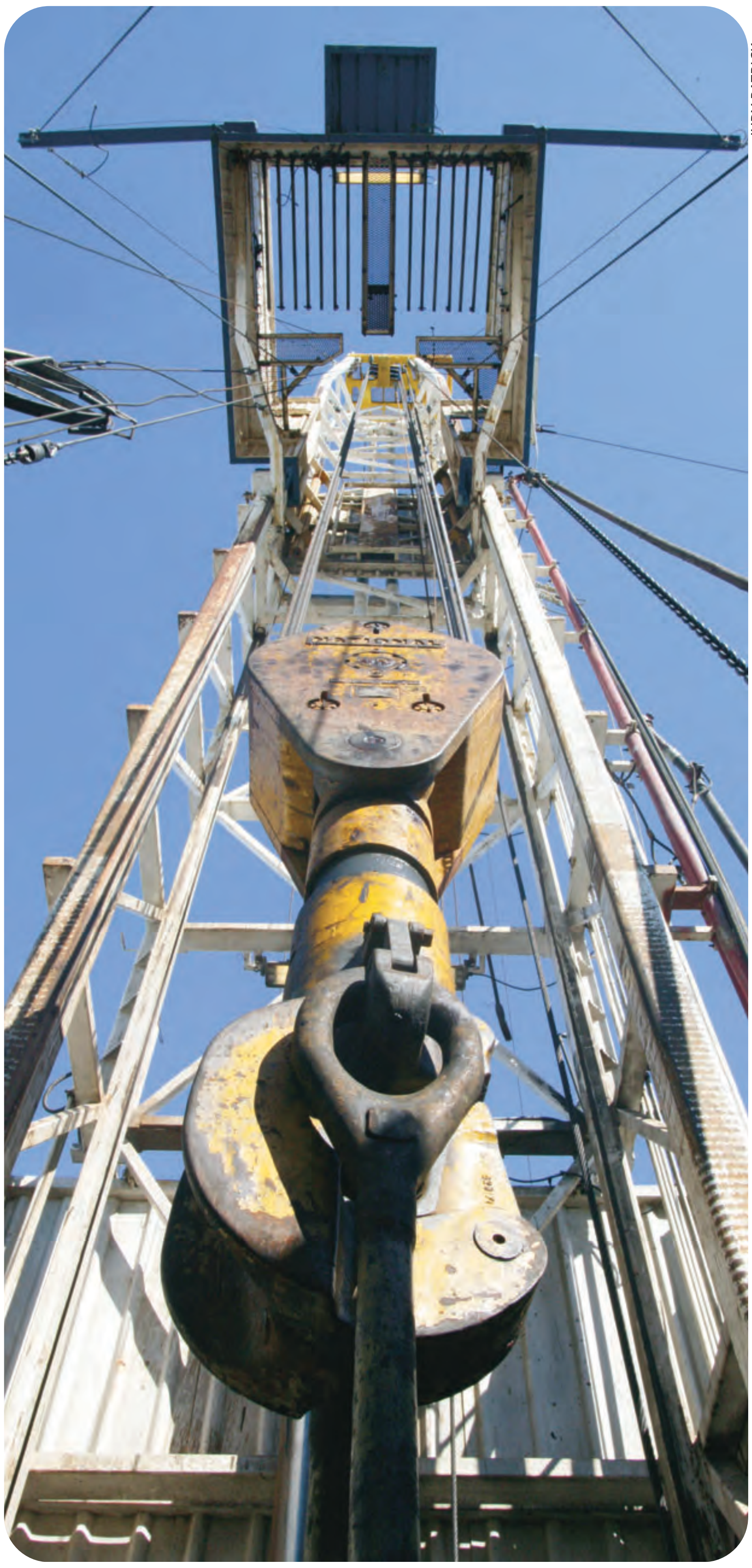
This rig report was prepared by Marti Reeve

Alaska Rig Status

Rig Owner/Rig Type	Rig No.	Rig Location/Activity	Operator or Status
		North Slope - Onshore	
Doyon Drilling			
Dreco 1250 UE	14 (SCR/TD)	Prudhoe Bay PBU 14-26	BP
Dreco 1000 UE	16 (SCR/TD)	Prudhoe Bay PBU J-03	BP
Dreco D2000 Uebd	19 (SCR/TD)	Nanuq CD5-315	ConocoPhillips
AC Mobile	25	Kuparuk 1C-152	ConocoPhillips
OIME 2000	141 (SCR/TD)	Kuparuk 2S-10	ConocoPhillips
TSM 7000	Arctic Fox #1	Stacked	
Kuukpik Drilling	5	Mobilizing to Franklin Bluffs Pad	Accumulate Energy
Nabors Alaska Drilling			
AC Coil Hybrid	CDR-2	Kuparuk 2F-18	ConocoPhillips
Dreco 1000 UE	2-ES (SCR-TD)	Nabors yards completing demobilization procedures	
Mid-Continental U36A	3-S	Prudhoe Bay	Available
Oilwell 700 E	4-ES (SCR)	Prudhoe Bay	Available
Dreco 1000 UE	7-ES (SCR/TD)	Kuparuk	ConocoPhillips
Dreco 1000 UE	9-ES (SCR/TD)	Kuparuk	ConocoPhillips
Oilwell 2000 Hercules	14-E (SCR)	Prudhoe Bay	Available
Oilwell 2000 Hercules	16-E (SCR/TD)	Mustang location, Under contract to Brooks Range Petroleum	Brooks Range Petroleum
Emsco Electro-hoist-2	18-E (SCR)	Prudhoe Bay	Stacked
Emsco Electro-hoist Varco TDS3	22-E (SCR/TD)	Prudhoe Bay	Stacked
Emsco Electro-hoist Canrig 1050E	27-E (SCR-TD)	Deadhorse, under contract to ExxonMobil for 2015	
Emsco Electro-hoist	28-E (SCR)	Prudhoe Bay	Stacked
Oilwell 2000	33-E	Prudhoe Bay	Available
Academy AC Electric CANRIG	99AC (AC-TD)	Nabors yards completing demobilization procedures	
OIME 2000	245-E (SCR-ACTD)	Oliktok Point	ENI
Academy AC electric CANRIG	105AC (AC-TD)	Nabors yards completing demobilization procedures	
Academy AC electric Heli-Rig	106-E (AC-TD)	Deadhorse Nabors yard	Available
Nordic Calista Services			
Superior 700 UE	1 (SCR/CTD)	Prudhoe Bay Drill Site Y-21	BP
Superior 700 UE	2 (SCR/CTD)	Prudhoe Bay Well Drill Site 18-07	BP
Ideco 900	3 (SCR/TD)	Milne Point MP-L Pad, Well 46	Hilcorp
Parker Drilling Arctic Operating Inc.			
NOV ADS-10SD	272	Prudhoe Bay DS 18	BP
NOV ADS-10SD	273	Prudhoe Bay DSW-59	BP
		North Slope - Offshore	
BP			
Top Drive, supersized	Liberty rig	Inactive	BP
Doyon Drilling			
Sky top Brewster NE-12	15 (SCR/TD)	Spy Island SP28-NW3	ENI
Nabors Alaska Drilling			
OIME 1000	19AC (AC-TD)	Oooguruk ODSN-02	Caelus Alaska
		Cook Inlet Basin – Onshore	
Miller Energy Resources			
Mesa 1000	Rig 37	Mobilized to North Fork to begin drilling this winter	Miller Energy Resources
All American Oilfield LLC			
IDECO H-37	AAO 111	In All American Oilfield's yard in Kenai, Alaska	Available
Aurora Well Services			
Franks 300 Srs. Explorer III	AWS 1	Sterling, Stacked out at D&D yard	Available
Nabors Alaska Drilling			
Continental Emsco E3000	273E	Kenai	Available
Franks	26	Kenai	Stacked
IDECO 2100 E	429E (SCR)	Kenai	Stacked
Saxon			
TSM-850	147	Ninilchik Unit, Bartolowits pad drilling Frances #1	Hilcorp Alaska
TSM-850	169	Swanson River	Hilcorp Alaska
		Cook Inlet Basin – Offshore	
XTO Energy			
National 110	C (TD)	Idle	XTO
Spartan Drilling			
Baker Marine ILC-Skidoff, jack-up		Spartan 151 Upper Cook Inlet KLU#1	Furie
Cook Inlet Energy			
National 1320	35	Osprey Platform RU-1, workover	Cook Inlet Energy

Mackenzie Rig Status

Rig Owner/Rig Type	Rig No.	Rig Location/Activity	Operator or Status
		Canadian Beaufort Sea	
SDC Drilling Inc.			
SSDC CANMAR Island Rig #2	SDC	Set down at Roland Bay	Available
		Central Mackenzie Valley	
Akita			
TSM-7000	37	Racked in Norman Well, NT	Available



JUDY PATRICK

Baker Hughes North America rotary rig counts*

	Sept. 11	Sept. 4	Year Ago
US	848	864	1,931
Canada	185	187	405
Gulf	29	31	62

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

*Issued by Baker Hughes since 1944

NATURAL GAS

British Columbia to run LNG ports

Delegation includes 4 facilities proposed for Prince Rupert area; feds say provincial regulation would save money, resources, time

By GARY PARK

For Petroleum News

Under proposed Canadian government regulations, British Columbia's energy regulator will be the lead authority over any LNG export facilities and ports on the province's Pacific coast even if they are built on federally owned port lands, under proposed federal regulations.

The objective is to pass control to the B.C. Oil and Gas Commission which will expedite approvals and consolidate management of the facilities. Initially the change would apply to four planned terminals in the Prince Rupert port area, including the C$11.4 billion facility for the Pacific NorthWest project operated by Malaysia's Petronas.

The government of Prime Minister Stephen Harper said that because it has no regulatory system comparable to the OGC using the provincial regulatory system would save money, resources and time.

"These regulations will ensure that the LNG projects are built and operated in a safe manner, protecting the environment and Canadians," Transport Canada said in introducing the regulations.

Port of Prince Rupert

Under the proposed laws, the OGC would oversee construction, operation, maintenance and enforcement of the LNG facility at the Port of Prince Rupert.

The OGC said in a written statement that it has been building the capacity and expertise in the past two years to "effectively" review and regulate major LNG projects, including staff training, traveling to see operating LNG facilities, restructuring positions and hiring new staff.

OGC Commissioner Paul Jeakins said offices have been opened in three northern communities in preparation for a potential expansion of the natural gas industry to provide feedstock for LNG.

He said all companies operating in British Columbia must meet all environmental standards and al applicable legislation and regulations.

The OGC said it will also work in cooperation with Canada's National Energy Board, the B.C. Ministry of Environment and the B.C. Safety Authority.

Concern over transparency

But environmental groups fear the transfer of power will reduce transparency and accountability and deny the OGC the ability to investigate incidents at federal ports.

They also doubted the OGC would have the authority to ensure the safety of the LNG industry.

In addition, the critics said the OGC has an internal conflict of interest because of its responsibility to steward the growth and development of the natural gas sector — a position they said contributed to the BP Horizon disaster in the Gulf of Mexico, forcing the U.S. government to divide the Minerals Management Services into three agencies, including a separate safety and environmental enforcement branch.

On another maritime issue in Canada, the opposition Liberal Party said that if it is elected in the Oct. 19 Canadian election it will impose a moratorium on oil tanker traffic along the northern coast of British Columbia.

The move would effectively scuttle any crude pipelines in the area, including Enbridge's controversial Northern Gateway project that Liberal leader Justin Trudeau opposes.

The pledge would place Dixon Entrance, Hecate Strait and Queen Charlotte Sound off limits to tankers as part of the Liberal commitment to protect ecologically sensitive areas.

Trudeau has also said he would reinstate C$40 million that the Harper government has cut from the ocean science and monitoring program at the Department of Fisheries and Oceans. ●

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GOVERNMENT

Kelly: Cautions on changing tax credits

Fairbanks Republican urges caution when pursuing change on tax credits and severing deal with pipeline partner TransCanada

By STEVE QUINN
For Petroleum News

Sen. Pete Kelly steadfastly defended funding the tax credits during the prolonged and extended budget debates that pushed the Legislature into a pair of special sessions this year.

That hasn't changed for the Fairbanks Republican who is in his second stint as the Senate Finance Committee co-chairman.

With the debate over rewriting the tax credit program, Kelly says he wants to be careful North Slope producers aren't punished and that any changes aren't misplaced.

Kelly discussed with Petroleum News his thoughts on tax credits, the status of the state's efforts to advance a natural gas pipeline project and on Interior communities are inching closer to a stable supply of natural gas to heat their homes.

Petroleum News: As Finance co-chair you'll be tasked with helping review the prospects of change to the state's tax credit system. What are your feelings on that?

Kelly: Well, my thoughts are we reduced the amount of tax credits that we paid the big producers in SB 21 back in 2013. I think people who criticize the tax credits forget that we actually reduced the amount of tax credits that they pay. And that the tax credit spike the last year has been more related to the Cook Inlet tax credits and some residuals to the old ACES system.

So I am reluctant to go through a wholesale fix of the tax credits because mostly they are politicized. I don't believe there is any amount of tax credits that might be on the books that some legislator might not criticize. So I just don't take it as seriously because it isn't what it's portrayed to be because the tax credit spike that we saw wasn't associated with the producers.

At least those were the opinion pieces that went out from the governor and some of the more left-wing legislators, and what we found out was that it wasn't the big producers who were getting the tax credits. It was the Cook Inlet producers.

So there has been a lot of disingenuous rhetoric about the tax credits. It's important that we keep the production going on the North Slope and I don't want to mess with that.

Given that the increased tax credits aren't even coming from the producers on the North Slope, it doesn't make sense now to go after their credits. It's just hard for me to take the tax credit rhetoric seriously because it's rhetoric. It's a bait-and-switch thing.

First "it's oh my gosh, we've got all these tax credits that we are paying out, let's go after the producers. What do you mean the producers aren't the ones who are getting these tax credits? Well that doesn't matter we've got to go after tax credits." The issue is if and when we go after the tax credits, we will be going after the Cook Inlet tax credits because those are the ones that spiked. Do we want to start messing with the supply of gas in Anchorage? That's essentially what it comes down to: the beneficiaries of the tax credits are the producers in Cook Inlet who are producing the gas in Cook Inlet for Anchorage.


SEN. PETE KELLY

Petroleum News: So the discussion is inevitable in the coming session. As co-chair of Finance, what do you do to temper the discussion?

Kelly: We will deal with the truth. And, keep in mind I'm not the one who does the bills so it's not going to be my call what bills we have in front of us. That is for Sen. MacKinnon to decide.

But my approach, I guess, is going to be we'll talk about the truth. We are going to get rid of some of this nonsense rhetoric. If the tax credits are too high, then we'll have that discussion, but we are not going to use the tax credits going on in Cook Inlet to beat up on the producers on the North Slope.

Petroleum News: What kind of questions do you see having for the administration since obviously a bill would come administration?

Kelly: I hope that by the time a bill gets to us that they would have weeded through some of the mistakes they made early on last year. I don't know if you remember the opinion piece that the governor put out before session. He has fallen into that same trap by making it sound like it was the Big 3 producers on the North Slope who were causing this spike in tax credits and off he ran with that rhetoric, but he had to walk that back later. That didn't stop Bill Wielechowski from pounding on the Big 3 producers over those tax credits. By the time a bill reaches us, if it's coming from the administration, I don't want to see the political nonsense in there where people are trying to make points by beating up the North Slope producers when these credits are not really about the North Slope tax credits.

Petroleum News: Are there any particular analyses that you would like to see whether it's looking at the North Slope or Cook Inlet as you folks often do?

Q AND A

Kelly: I look forward to seeing what's happened to the production curve on the North Slope since the institution of SB 21. Actually, SB 21 did flatten the curve out. There are credits involved and they exist after we reduced the credits for North Slope producers. They are credits that are associated with actual production of a barrel of oil.

Then I want to know what the numbers are in Cook Inlet and what is the impact on burner tip gas prices for Anchorage residents if we start adjusting the credits. So I want to know what the end result is on the consumer if we start reducing tax credits.

I don't know all the ins and outs of this but I know when the governor took that reduction of $200 million in payments that was a pointless move. By law we have to pay those credits anyway. So what you do is reduce them in one budget then you come back next year in a supplemental (budget) so we'll see a supplemental that is somewhere in the neighborhood of $200 million to pay back the budget that we reduced.

There was absolutely no benefit to the state by doing that. However there were some pretty significant consequences for some of the small producers when their financiers said we don't trust Alaska's financial environment anymore and you the producers are going to have pay higher interest rates. There were consequences on what they did but they had nothing to do with the budget.

They did impact companies trying to produce, but they didn't impact the budget one bit. I think what is going to happen is we will see a supplemental that reinstates the money they reduced. We will have to pay that money because it's a statutory payment and we will ultimately not reduce the payment a penny.

Now, I don't know this for sure. I haven't talked to anyone with the Revenue department. I think this is what they are going to have to do. I don't see any way around it.

Petroleum News: I know you've said any bill comes under the purview of Sen. MacKinnon. LB&A comes under the leadership of another lawmaker (Rep. Mike Hawker), but just the same you are

see **KELLY Q&A** page 25

● NATURAL GAS

Legislators get quarterly LNG update

All parties concerned by slow progress on commercial negotiations; work on technical side progressing as expected; 48-line an issue

Governor talks LNG in Japan

Gov. Bill Walker discussed his upcoming trip to Japan Sept. 11.

He said he'd been invited to speak at a major LNG conference in Japan, the 4th LNG Producer-Consumer Conference. This is, he said, the first time a governor of Alaska has been invited to speak.

He said he would also be meeting with many companies he'd met with in the past, including Tokyo Electric Power Co. and Tokyo Gas.

Meetings began Sept. 14, the governor's office said in a press release, and included the governor, Department of Natural Resources Deputy Commissioner Marty Rutherford and Gas Team General Manager Audie Setters. The Sept. 14 meetings included the presidents of Itochu Corp., a trade company; Japan Oil, Gas and Metals National Corp., a government agency providing financing for Japanese companies interested in natural gas exploration; Tokyo Electric, Japan's largest power company; and Tokyo Gas, which serves more than 11 million customers.

The governor said Sept. 11 that he would also be meeting with ConocoPhillips while in Tokyo.

He said all the companies come to the conference and it's more efficient to meet with them while they're in Tokyo than traveling to meet with them.

A second day of meetings, Sept. 15, included discussions of Alaska's LNG potential with the chief executive of Marubeni Corp.

The governor also met with the governor of Kyoto Prefecture and signed a memorandum of understanding to formalize Alaska's relationship with Kyoto.

Walker, Rutherford and Setters presented briefings on Alaska's LNG potential during the Alaska Oil and Gas Opportunity Seminar, organized by Resources Energy Inc.

Walker said it was very exciting for him to reacquaint himself with companies he's worked with in the past. The governor was associated for many years with the Alaska Gasline Port Authority, a previous attempt driven by Valdez and Fairbanks to take North Slope natural gas to the Far East as LNG.

The purpose of the trip, he said, was to reestablish ourselves, to make sure the market understands that Alaska is becoming involved in a way it hasn't been in the past. The state has been in the observer's seat on LNG, he said, and is now moving more into the driver's seat.

—KRISTEN NELSON

By KRISTEN NELSON
Petroleum News

Progress is being made on the technical side of the Alaska LNG project, but legislators, the administration and producer partners in the project all noted the slow progress of negotiations for commercial terms at a Sept. 9 quarterly project update to the Senate and House Resources committees. And representatives of producers in the sponsor group — BP, ConocoPhillips and ExxonMobil — continued to express concerns over fiscal terms for the project and the state's intentions on ownership of the midstream portion of the project.

Legislators did, however, get a pretty positive report on progress on the technical side of the project from Steve Butt, AKLNG project manager. He told legislators that technical work was going well. Modules are being assembled at Point Thomson which along with Prudhoe Bay will provide natural gas for the project, he said, and the project has done extensive work with the Prudhoe Bay operator, an advantage the integrated project has over previous pipeline-only projects.

The pipeline route has been finalized, Butt said, with some more work to do on some sizing issues.

And $243 million has been spent through July on pre-FEED, front-end engineering and design, he said.

The initial design for the LNG plant and marine terminal was 72 percent complete through the end of July, Butt said, with initial design for the pipeline 78 complete initial design for the gas treatment plant 86 percent complete.

Size of the line

The project is working with the federal pipeline regulator, the Pipeline and Hazardous Materials Safety Administration, to confirm the pipeline design basis and special permit conditions.

A 42-inch pipeline was selected, and is in the testing phase, based on the known and discovered natural gas at Point Thomson and Prudhoe Bay, and the system size which makes sense to monetize known gas over a 25-year period, Butt said.

But Gov. Bill Walker has requested that the project look at a 48-inch line, and testing is needed for the 48-inch line to make sure it would work, Butt said. He discussed a comparison of the two pipe sizes which indicated that the 42-inch line would have the lower capital cost of the two, but the 48-inch line would have a lower operating cost. While the 42-inch line would have more construction risk than typical pipelines in the U.S. because the pipe is 22 percent heavier than other North American gas pipelines, the 48-inch line would have more construction risk than the 42-inch line and would be 59 percent heavier than typical pipelines in the U.S.

There would also, Butt said, be concerns about the Cook Inlet crossing because of the additional weight of the 48-inch line. He said the project team is a lot less confident in the ability to lay a 48-inch line across Cook Inlet because of the challenge of high tidal movement and mud and areas close to shore where you can't get a lay barge in.

The cost issue

Butt said the project team has recommended spending a few tens of millions in the existing budget for an apples-to-apples comparison of the 42-inch and 48-inch lines, to test the 48-inch pipe to the same level as the 42-inch, but said there has been no decision yet.

There is a pending motion to take money out of the budget to study a 48-inch line, and ExxonMobil has agreed,

see **LNG UPDATE** page 7

continued from page 6

LNG UPDATE

but other parties have two weeks to make that election. Under the joint venture agreement all parties have to agree to allocate the money, he said, and a change in the project from a 42-inch line to a 48-inch line requires agreement by all parties, Butt said.

The 48-inch pipe had to be ordered for testing and it will take months for the pipe to be made up. He said the pipe should arrive in early 2016 and then testing will begin.

Butt also said the 48-inch pipe is harder to build and said the project has not been able to find a mill in the U.S. which can do 48-inch pipe. There are other 48-inch pipes, he said, including the trans-Alaska oil pipeline, but other 48-inch lines in the U.S. don't have the pipe thickness required for the gas pipeline, just the diameter. He said operating pressure and length are the issues and in Alaska where the ground moves the line has to be built under strain-based conditions. He said there is a 52-inch line in Turkey, but it is thinner and weighs less than the proposed 42-inch pipe for the Alaska project.

Cost by stage

Butt reviewed the stages of the project: concept selection; optimization (pre-FEED); define (FEED); and execution.

Each stage, he said, is about reducing risk and uncertainty as you increase spending. Illustrating the increase in spending, Butt said costs are some $35 million a year in concept; $35 million a month in pre-FEED; $35 million a week in FEED; and $35 million a day in the construction phase.

Asked what the project needs from the state, Butt said the project needs some clarity on what role the state will play and how it wants to be represented in the midstream and how the state plans to fund additional activities.

The initial design for the LNG plant and marine terminal was 72 percent complete through the end of July, Butt said, with initial design for the pipeline 78 complete initial design for the gas treatment plant 86 percent complete.

Commercial issues

The commercial side of the project, the sponsor group, was represented by Dan Fauske, president of the Alaska Gasline Development Corp.; Bill McMahon, senior commercial advisor, ExxonMobil; Lee Vincent, director of major projects development, TransCanada; Dave Van Tuyl, regional manager for BP in Alaska; and Darren Meznarich, ConocoPhillips Alaska project integration manager for Alaska LNG.

Fauske said in introductory remarks that the state team believes the AKLNG technical team is doing well progressing design, engineering and permitting for the project, but said the state team is concerned about lack of progress on key commercial and fiscal issues. He said it appears not all parties are equally motivated to get the project built and said slow progress on some key agreements won't allow completion in time for a special session of the Legislature this fall. Those key agreements include gas balancing negotiations which Fauske said are at a virtual standstill; governance and operating agreements which are not on schedule for a legislative review this year; lack of a fiscal or tax stability agreement; and lack of provisions for withdrawal by a party which would allow the project to proceed without interruption. The withdrawal provision is something Gov. Bill Walker wants included.

Fauske said the state team doesn't intend to bring an incomplete package to the Legislature, but there are policy decisions and interim funding which may need to be resolved in a special session.

The state buyout proposal

Asked about the governor's plan for a buyout, TransCanada's Lee told legislators the precedent agreement the state and TransCanada entered into in 2014 allows either party to terminate the agreement, and said that at the governor's request TransCanada has been working with the administration on a process to allow the state to terminate the agreement and assume TransCanada's interest.

Marty Rutherford, deputy commissioner of the Department of Natural Resources, told legislators that the total projected amount the state would be responsible to reimburse TransCanada through pre-FEED is estimated to be $108 million, including some $77 million TransCanada has paid in cash calls on the state's behalf, some $18 million in TransCanada costs for pre-FEED, some $6 million in concept selection costs prior to pre-FEED and $8 million in carrying costs.

Rigdon Boykin, the state's lead negotiator for AKLNG, and formerly bond counsel to the Alaska Gasline Port Authority, said TransCanada financing has been important, but over the long term that financing would probably be more expensive than any financing the state might be able to get from another source. He said that as the project moves forward, people will be more willing to take the risk of lending.

Rigdon Boykin

Rutherford said the governor asked her to step down as AKLNG lead about two months ago, and Boykin then became intimately involved in AKLNG negotiations.

Boykin previously worked with the Alaska Gasline Port Authority, formed in October 1999 by a vote of the residents of the Fairbanks' North Star Borough, the North Slope Borough and the City of Valdez. Walker was general counsel for the port authority and Boykin was advising the authority as bond counsel as early as the end of 1999.

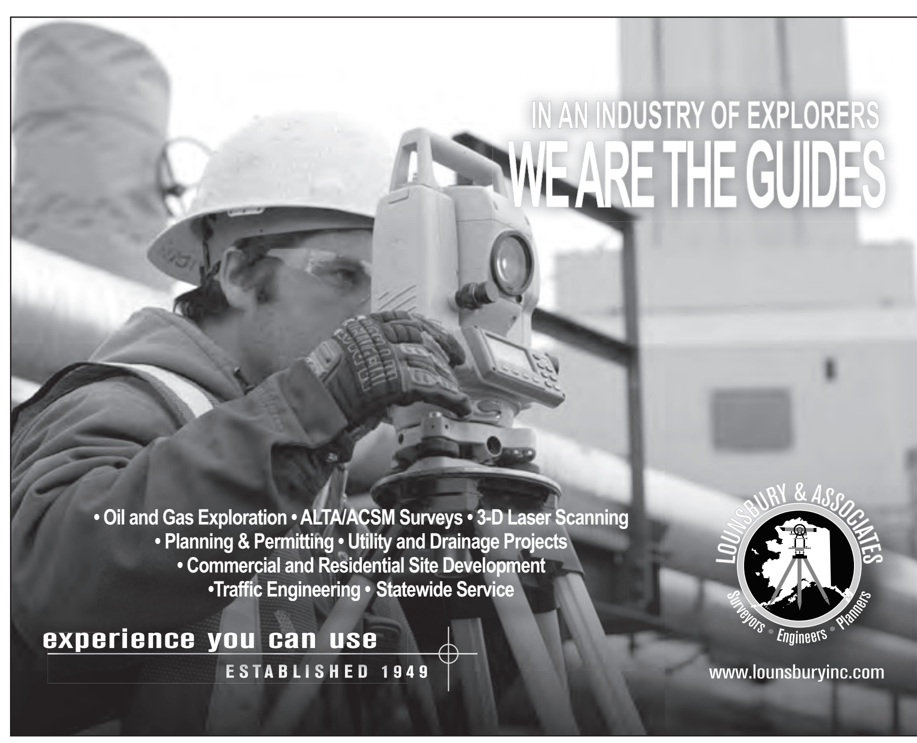
Boykin said the state had pushed for joint venture marketing, and told legislators the state felt joint venture marketing would make a difference in aligning all the parties. But ExxonMobil decided for business reasons that they could not participate, so the state is trying to formulate individual joint venture marketing with the producers. He said joint venture marketing would help with gas balancing and lifting issues.

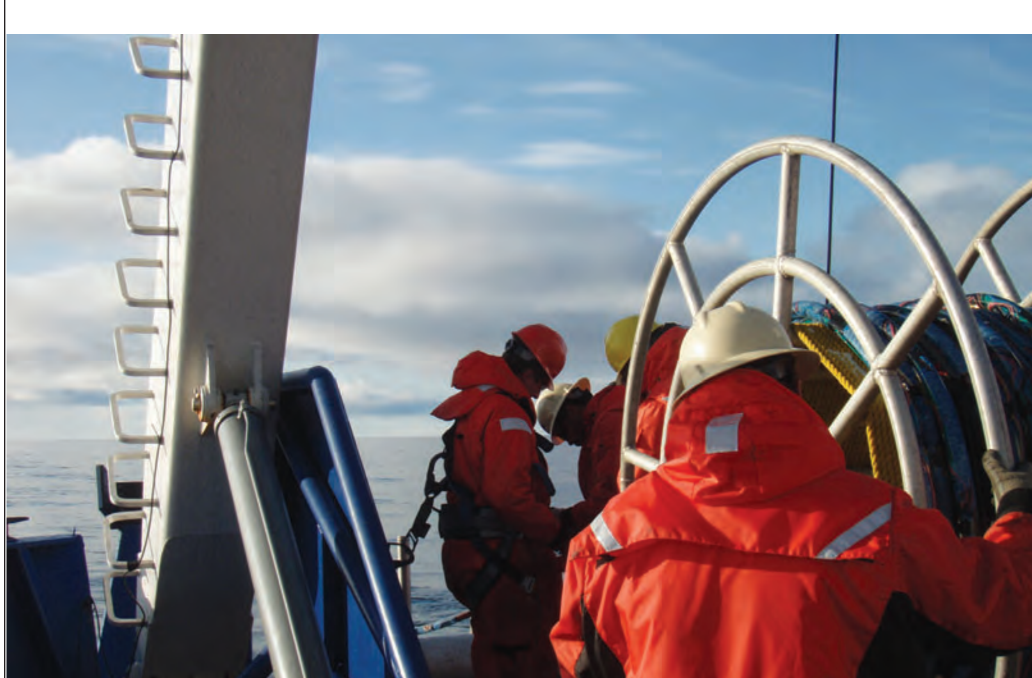
Boykin said ConocoPhillips was aligned with the state on joint venture marketing, but after pushing the issue with ExxonMobil for some four months and getting nowhere the state decided it had to accept ExxonMobil at its word that it was an extremely important issue for them.

Speed bumps expected

BP's Van Tuyl told legislators that it shouldn't be a surprise that negotiations are difficult because each party has its own needs and concerns. If there were no speed bumps, he said, it would indicate the parties weren't driving down the road. He said AKLNG is "critical to BP in Alaska" as well as to Alaskans, and said BP is committed to working out remain-

see LNG UPDATE page 8





continued from page 7

LNG UPDATE

ing issues as quickly and as fairly as possible.

Van Tuyl said progress was being made, and noted there were many very complicated agreements to be reached. It can be painfully slow and laborious, he said, and has involved long nights and long weekends. It's frustrating, but it's also a sign of progress, Van Tuyl said.

Disappointed in slowness

ConocoPhillips' Meznarich said ConocoPhillips was working hard to complete technical work and commercial and fiscal agreements, and said gas supply agreements are the most important from Conoco's perspective. Certainty of gas delivery from Prudhoe and Point Thomson is necessary for marketing and financing, he said, but a fiscal package is also crucial to assure a solid commercial agreement.

On the governor's desire for withdrawal terms, Meznarich said Conoco understands that the governor wants the project to move forward even if a partner drops out, and said Conoco has indicated it would make its gas available, but said the company's primary focus is on being an equity partner in the project.

Fiscal terms, financing

McMahon said ExxonMobil is a strong advocate for AKLNG. There are two key requirements for a FEED decision, he said, an agreement on acceptable fiscal contract terms, predictable and durable, and completion of pre-FEED work. He said ExxonMobil encourages action from the state and said the company supports a constitutional amendment allowing fiscal certainty, and supports getting that amendment on the ballot in November 2016. If we don't make that window, McMahon said, November 2018 would be the earliest the amendment could be up for a vote.

He said commercial agreements won't be completed for a special session, but said there are things the state can do, including property tax and approving financing.

Asked about challenges to the project, McMahon said the challenges are about cost and supply, and said all parties need to work together for the lowest cost of supply so the project can compete, and said there needs to be work on both big ways and little ways to lower capital and operating costs.

Key commercial agreements where progress has been made include tentative agreement on flow-related property tax after startup and on impact payments during construction, McMahon said.

The list of "remaining challenges" was much longer, including establishing the role of the state as a project participant; timely completion of key commercial and fiscal contracts; royalty decisions — lease modifications and royalty-in-king election by the state; legislation for property taxes; and legislation to authorize a public vote on a constitutional amendment providing durable and predictable fiscal terms. ●

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● LAND & LEASING

Taking a pass on land in Canada

By GARY PARK
For Petroleum News

Alberta, Saskatchewan and British Columbia — the producing hub of Canada's oil and natural gas industry — reaped mid-boggling riches in the first decade of the 21st century from their auctions of exploration rights.

Year after year they each fattened their treasuries with returns of C$1 billion from the disposal of land prospects, with Alberta setting a high-water mark of C$3.5 billion in 2011.

That was then. Today the sales have slumped to their worst level in more than two decades, entering September with Alberta posting a total of C$205.8 million, British Columbia at C$8.5 million (including a paltry C$366,543 from its latest bidding round) and Saskatchewan at C$35.7 million.

No sector seems able to stir interest among upstream companies — not the Alberta oil sands, the Saskatchewan Bakken or the shale deposits of northern British Columbia and Alberta.

Winston Gaskin, president of Stand Lard Co., which acts for companies seeking land rights, said the business is the worst he has seen in the 21 years he has been in the business.

But he conceded that in times of such depressed commodity prices "exploration budgets are the first things that get cut."

Alberta has led the downward slide as it heads for its poorest auction returns since 1992 when it sold C$149 million in land rights, but only four years after its Duvernay shale formation helped yield C$3.5 billion.

Winston Gaskin, president of Stand Lard Co., which acts for companies seeking land rights, said the business is the worst he has seen in the 21 years he has been in the business.

With its oil sands prospects generating vigorous competition among domestic and offshore companies, the province reached its peak of C$4.24 billion in 2008 and C$5.01 billion in 2009.

Now, with its total for the year off 38 percent from the same period of 2014, Alberta, regardless of its untapped potential, is scratching for skimpy returns, collecting C$11.6 million on Aug. 19, when average per-hectare prices bottomed out at C$333, and C$19.4 million on Sept. 2, averaging C$1,057 per hectare.

In British Columbia, where pessimism is building over the need for gas supplies to support an uncertain LNG industry, only six parcels were sold at the Aug. 12 auction.

The latest bidding disposed of only 2,497 hectares at an average price of C$147 per hectare.

Saskatchewan's August sale of petroleum and natural gas rights raised C$3 million for the provincial government, selling 9,804 hectares at an average price of C$306, with most of the focus on the southwestern region, leaving only two more sales for 2015. ●

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● FINANCE & ECONOMY

EIA: Volatility of crude oil price up

Energy Information Administration says Brent averaged $47 per barrel in August, down $10 from July; US production down 140,000 bpd

By KRISTEN NELSON
Petroleum News

Brent crude oil averaged $47 per barrel in August, down $10 per barrel from July, the U.S. Energy Information Administration said Sept. 9 in its Short-Term Energy Outlook.

"This third consecutive monthly decrease in prices likely reflects concerns about lower economic growth in emerging markets, expectations of higher oil exports from Iran, and continuing growth in global inventories," the agency said.

Price volatility increased significantly in August, with four consecutive trading days — from Aug. 27 to Sept. 1 — when Brent had daily changes of more than 5 percent, EIA said, the longest stretch of such volatility since December 2008.

The agency said its Brent price forecasts for this year and next of $54 per barrel in 2015 and $59 in 2016, are unchanged from last month.


ADAM SIEMINSKI

EIA said continuing increases in global crude inventories "have put significant downward pressure on prices," with inventories up an estimated 2.4 million barrels per day the first eight months of the year, compared to an average build of 600,000 bpd in the same period in 2014. The agency said it expects inventory builds to moderate in the coming months, but to remain high compared with previous years.

West Texas Intermediate is forecast to average $5 per barrel below the Brent price. The WTI spot price averaged $43 per barrel in August, down $8 from July.

U.S. crude oil inventories remain elevated compared to historic levels, with the inventories at Cushing, Oklahoma, while 4.9 million barrels lower than the record high of 62.2 million barrels on April 17, still some 37 million barrels higher than at the same time last year.

US production down

"U.S. monthly crude oil production is expected to decline through the middle of next year in response to low oil prices," EIA Administrator Adam Sieminski said in a statement. "Output then begins rising in late 2016 as oil prices are forecast to move higher," he said.

U.S. crude oil production averaged 8.7 million bpd last year and is expected to average 9.2 million bpd this year and then drop to 8.8 million bpd in 2016. EIA said the forecast numbers are some 100,000 bpd lower for both 2015 and 2016 than in its August forecast, and said that "reflects downward revisions to U.S. oil production estimates for the first half of 2015."

EIA has begun to survey reported monthly crude oil production, with its data representing more than 90 percent of U.S. production. Based on that data, EIA revised monthly national production estimates from January through May downward by 40,000 bpd to 130,000 bpd, with the largest revisions including decreases of production in Texas and increases in the federal Gulf of Mexico.

EIA estimates that U.S. crude oil production in June was 9.3 million bpd, down 100,000 bpd from the revised May figure.

Based on its revised data EIA said U.S. production averaged 9.4 million bpd in the first half of the year, up 200,000 bpd from the average in the fourth quarter of 2014, despite a decline of almost 60 percent in the U.S. oil-directed rig count since October 2014.

Production is expected to decline through August 2016, when it is forecast to average 8.6 million bpd, and to begin rising in late 2016, returning to an average of 9 million bpd in the fourth quarter of 2016.

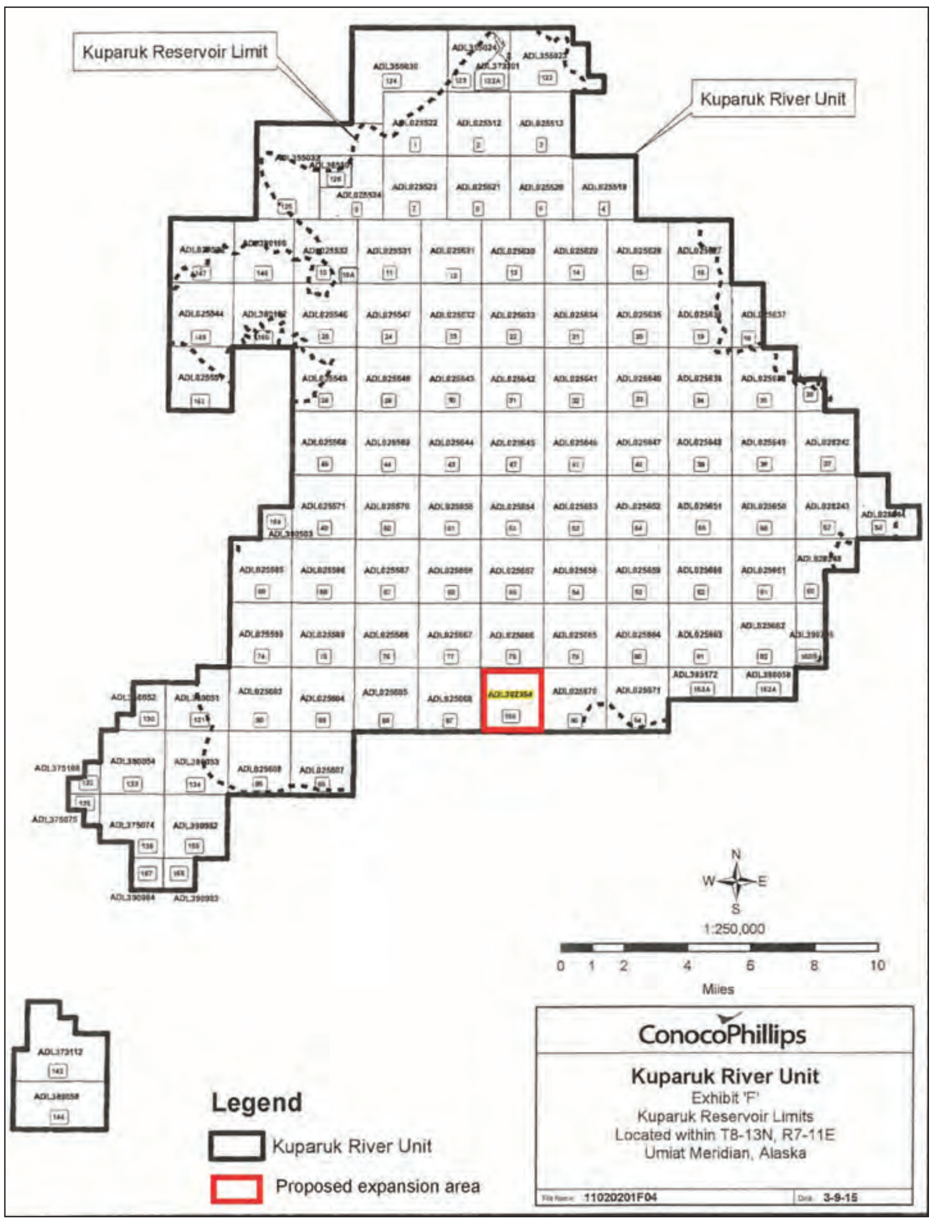
Twelve projects are scheduled to come online in the Gulf of Mexico this year and next, pushing up production from an average of 1.4 million bpd in the fourth quarter of 2014 to more than 1.6 million bpd in the fourth quarter 2016.

Cash flow, capital reductions

EIA said expected crude oil production declines from May through mid-2016 "are largely attributable to unattractive economic returns in some areas of both emerging and mature onshore oil production regions, as well as seasonal factors such as anticipated hurricane-related production disruptions in the Gulf of Mexico."

2015 cash flow and capital spending reductions have moved investment away from marginal exploration and research drilling. Focus instead is on core areas of major tight oil plays, with reduced investment leading to the lowest oil-directed drilling rig count in nearly five years and well completion rates significantly behind

see **EIA OUTLOOK** page 11



● LAND & LEASING

State approves Kuparuk expansion

By ERIC LIDJI
For Petroleum News

The state has agreed to expand the Kuparuk River unit.

The expansion adds lease ADL 392364 into the unit boundaries, expanding the total size of the North Slope unit by some 2,560 acres. Earlier this year, operator ConocoPhillips Alaska Inc. asked the state to expand the unit and two participating areas within the unit to better incorporate several recent discoveries and developments. The applications to expand the participating areas are still pending with the Alaska Division of Oil and Gas.

One of those pending applications is intricately bound with the recently approved unit expansion. It would add portions of 11 tracts (including ADL 392364) covering some 11,900 acres to the Kuparuk participating area in the vicinity of drill sites 2F and 2G.

The current unit expansion would better incorporate four wells — 2E-01, 2F-21, 2F-22, and 2G-17L1 — currently producing from the Kuparuk River formation on a tract basis.

ConocoPhillips drilled the horizontal 2G-17L1 lateral in 2013 using coil tubing drilling on ADL 392364, just south of the unit boundaries. The well targeted the historically under-performing Kuparuk C sand and initially produced more than 2,900 barrels per day before settling to a sustained rate of 700 to 800 barrels per day. Given the success of the well, the company drilled the offsetting 2F-22 horizontal well at the western edge of the lease in late 2014 and initially produced more than 2,000 bpd before settling to some 1,100 bpd, also from the Kuparuk C. The company drilled the 2E-01 and 2F-21 horizontal wells earlier this year into the lowermost Kuparuk A sand. The former came online at nearly 1,000 bpd and is now producing some 300 bpd. The latter is an offsetting injection well that is currently being "pre-produced" at a rate of some 100 to 200 bpd.

With more than 2,000 barrels per day currently being sent to the Kuparuk River unit facilities from those four wells, the state believes the requested expansion is justified. ●

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continued from page 10

EIA OUTLOOK

2014.

Oil prices in the second quarter of 2015 were high enough for continued development drilling in the core areas of the Bakken, Eagle Ford, Niobrara and Permian basins.

EIA said WTI prices below $60 "are anticipated to slow the rate of recovery in onshore drilling and well completion totals, despite continued increases in rig and well productivity and falling drilling and completion costs."

Projected production is the Gulf of Mexico increases, but Alaska oil production falls, the agency said, with these areas less sensitive to short-term price movements and reflecting anticipated growth from new projects and declines in legacy fields. ●

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● GOVERNMENT

Jewell cites backlog of well inspections

Interior secretary says BLM lacks resources to inspect high-risk oil, gas wells on federal lands; fee called for to fund inspectors

By MATTHEW DALY
Associated Press

The U.S. Bureau of Land Management lacks sufficient resources to inspect high-risk oil and gas wells on federal land as a drilling boom continues in Wyoming, Colorado and other states, Interior Secretary Sally Jewell said Sept. 15.

The Obama administration has proposed a fee on oil and gas drillers that would allow the land management agency to hire more than 60 inspectors, but the proposal has not gained traction in Congress.

BLM faces a "major backlog of inspections" as it tries to keep pace with a drilling boom that has sharply increased U.S. oil and gas production in recent years, Jewell said.

"We do not have the resources necessary to do the job," Jewell said at a breakfast sponsored by the Christian Science Monitor. The inspectors are needed to protect the environment and prevent potential health hazards caused by leaking wells, she said.

ALAN BAILEY

SALLY JEWELL

The Associated Press reported last year that 40 percent of new wells on federal and Indian land with a higher pollution risk were not inspected from 2009 to 2012.

Asked if the situation had improved since then, Jewell said no, adding: "We are under-resourced."

While the proposed fee has stalled in Congress, Jewell said it remains the agency's best option to whittle its inspections backlog.

The Associated Press reported last year that 40 percent of new wells on federal and Indian land with a higher pollution risk were not inspected from 2009 to 2012.

"It makes no sense not to match supply and demand," she said, adding that if the drilling boom slows or fizzles, the need to charge a fee would go away.

Flaring also an issue

Jewell also lamented a practice in which energy companies "flare" or burn off vast supplies of natural gas as they drill for oil. A report by the Government Accountability Office said 40 percent of the gas being burned or vented could be captured economically and sold.

BLM has not completed new guidelines on flaring, but Jewell said a proposed rule could be released for public comment later this year. But even without new federal rules, Jewell urged energy companies to rethink their practice of flaring natural gas in the pursuit of higher-priced oil.

"It's crazy to vent natural gas into the atmosphere when natural gas is a fuel that can produce electricity at a much lower carbon footprint than other (energy) sources like coal," Jewell said.

New rules challenged

On a related topic, Jewell said she is confident that new rules for oil and gas drilling on federal lands nationwide will be upheld, despite a court challenge by four states and two industry groups. BLM has delayed implementing the rules until a federal judge in Wyoming decides on the case.

Jewell said the rules "are based on common sense and science," although she acknowledged some changes may be required.

The rules, announced in March, would require oil and gas developers to report the chemicals they pump underground during hydraulic fracturing. The drilling procedure, also known as fracking, involves pumping huge volumes of water mixed with fine sand and chemicals underground to crack open deposits and boost flows of oil and gas.

The federal rules also would require pressure testing of newly installed wells.

The petroleum industry argues the rules would be costly to oil and gas developers. Officials in Wyoming, Colorado, Utah and North Dakota claim the rules would damage their economies by causing energy companies to move off federal lands to regions where oil and gas reserves can be exploited from private land, where the federal government has less oversight. Two industry groups, the Western Energy Alliance and Independent Petroleum Association of America, joined the lawsuit.

Six environmental groups have sided with the Obama administration, saying the government needs strong rules for oil and gas drilling to protect water, wildlife and other resources on federal land.

Greater sage grouse

Jewell also said she is optimistic the administration can avoid a proposal to list the greater sage grouse as endangered, even while working to protect the bird's habitat and stave off further declines in grouse populations.

Jewell said she has "stayed completely at arm's length" as the Fish and Wildlife Service decides what to do. The agency is part of the Interior Department.

The bird's fate has become a potential political liability for Democrats heading into the 2016 election. Federal protections could prompt limits on energy drilling, grazing and other activities across the grouse's range in 11 Western states.

Republicans have seized on the issue as evidence of wildlife protection laws run amok and say it underscores an urgent need to scale back the federal Endangered Species Act.

But Jewell said the act is working as intended, citing efforts by a variety of Western states and interest groups to collaborate on measures to protect the sage grouse while allowing energy development and grazing. ●

NORTH OF 60 MINING news

page 15 Tangen discerns glimmer of hope for ANILCA in surprising quarter

www.MiningNewsNorth.com *The weekly mining newspaper for Alaska and Canada's North* Week of September 20, 2015

NORTHERN NEIGHBORS

Compiled by Shane Lasley

Pretium secures cash to develop Brucejack

Pretium Resources Inc. Sept. 16 said it has secured a US$540 million construction financing package with the Orion Mine Finance Group and Blackstone Tactical Opportunities. The financing, which provides for immediate access to US$340 million at closing, will fund a substantial portion of the costs to develop an underground mine at Pretium's Brucejack gold project in Northwest British Columbia. "The Orion and Blackstone deal has successfully met our objectives to fund the construction of an underground mine at Brucejack under terms that are competitive (and) flexible, and that protect Brucejack's upside for our shareholders," said Pretium CEO Robert Quartermain. "Having immediate access to US$340 million enables us to keep to our construction schedule." The financing is comprised of a US$350 million credit facility at fixed interest rate of 7.5 percent; a US$150 million prepayment under a callable stream agreement that involves an estimated 7.067 million ounces of refined gold and 26.297 million oz of refined silver and a private placement of Pretium common shares for US$40 million.

Sable pipe could extend Ekati Mine to 2033

Dominion Diamond Corp. Sept. 10 released the results of a preliminary economic assessment for the Sable kimberlite pipe deposit located within the core zone of the Ekati diamond property in Northwest Territories, in which the company holds an 88.9 percent interest. The PEA envisions the recovery of 9 million carats of diamonds from 12.1 million tons of kimberlite over 10 years. This production, along with Jay, would supply ore to the existing Ekati process plant at its full capacity until 2033. The PEA identified a number of synergies with developing the Sable pipe concurrently with Jay that includes the sharing of haul trucks and other equipment during development and operations. Combining Sable with Jay would also provide increased mine planning and processing flexibility. The Sable pipe is located beneath Sable Lake, 17 kilometers (11 miles) north-northwest of the existing Ekati mine infrastructure. The Sable project will require construction of an access road, site infrastructure and a sedimentation pond allowing Sable Lake to be dewatered ahead of the start of pre-stripping operations. Dominion Diamonds said Sable would provide an additional high-value ore source for the Ekati mine, allowing for optimal mine sequencing and operational flexibility to maximize the value of the Ekati operation. The company's timetable for the development of Sable is based on the estimated start of construction in the first half of 2016 and processing of kimberlite by 2019.

Smaller Back River gold operation feasible

Sabina Gold & Silver Corp. Sept. 14 reported positive results for an initial project feasibility study that investigates starting with a 3,000-metric-ton-per-day operation at its Back River gold project in Nunavut. At a gold price of US$1,150 per ounce, this study indicates Back River could generate a post-tax internal rate of return of 24.2 percent and net present value (five percent discount) of C$480.3 million with a pay back of 2.9 years. At an average head grade of 6.3 grams per metric ton gold, the study anticipates the 3,000 tpd operation would average 198,100 ounces of gold in annual production over an 11.8-year mine life at a cost of US$534 per oz. Initial capital for the project is estimated at C$415 million with sustaining capital of C$185 million. Earlier this year, Sabina published a feasibility study that envisions a 6,000-metric-ton-per-day mill producing on average 346,000 ounces of gold annually over a 10-year mine life. Sabina President and CEO Bruce McLeod said, "The 3,000 tpd FS is the most compelling opportunity for Sabina in this current market environment." An environmental assess-

see NORTHERN NEIGHBORS *page 14*

ENVIRONMENT

Setting the standard

Teck continues to be recognized for its commitment to sustainable mining

By SHANE LASLEY

Mining News

While tough market conditions are forcing mining companies to tighten their belts, Teck Resources Ltd. does not see maintaining responsible and environmentally sound operations as an area in which it can afford to trim its budget.

That commitment has propelled the diversified miner onto the Dow Jones Sustainability World Index for six years running, ranking it among the top 10 percent of the 2,500 largest companies in the S&P Global Broad Market Index.

SHANE LASLEY

DON LINDSAY

REGGIE JOULE

"We know that the success of our business is dependent on our ability to develop resources in a way that is responsible and sustainable for communities and the environment," Teck Resources President and CEO Don Lindsay said. "That is why we continue to integrate social, economic and environmental performance into every decision we make, even during current challenging market conditions."

RobecoSAM, a sustainability investing investment specialist hired by Dow Jones to compile the index, gave Teck high marks in sustaining biodiversity, asset closure management, finding and keeping talented employees, and operational eco-efficiency.

This recognition reflects many of the accomplishments that Teck outlined in its 2014 Sustainability Report. Achievements highlighted in the report, published in June, include:

The strengthening of an endangered herd of 24 caribou in northeastern British Columbia due to the birth of nine calves through a maternal penning program supported by Teck;

A 170,000-metric-ton reduction in greenhouse gas emissions at Teck operations as a result of programs implemented since 2011;

The recycling of 38,000 metric tons of waste at Teck operations;

A 16 percent increase in the number of women in operational and technical roles; and

An approval from the Government of British Columbia for Teck's Elk Valley Water Quality Plan, which featured collaboration with indigenous peoples, local communities, environmental organizations and governments.

"As we have seen in the past year, Teck's sustainability achievements, large and small, are an important part of our business performance," said Marcia Smith, the company's senior vice president, sustainability and external affairs.

Dow Jones and RobecoSAM are not the only firms recognizing Teck's commitment to sustainability.

Earlier this year, Corporate Knights Inc., a Canadian media group focused on sustainable development, ranked Teck among the "Global 100 Most Sustainable Corporations" for a third consecutive year.

SHANE LASLEY

Teck Resources Ltd. and NANA Regional Corp. have maintained a balance between developing the rich mineral resources at Red Dog and protecting the foods that have sustained the Iñupiat people in Northwest Alaska for millennia.

Sustainalytics, a global sustainability research and analysis firm, also put Teck on its list of the "Top 50 Socially Responsible Corporations in Canada."

Balance at Red Dog

While such recognition from prestigious global organizations such Dow Jones shines a spotlight on Teck's sustainability achievements, it is the observations of those most affected by the company's mining operations that give these efforts the most credibility.

Northwest Arctic Borough Mayor Reggie Joule told international delegates attending the Conference on Global Leadership in the Arctic (GLACIER conference) in Anchorage, that the Red Dog Mine in Northwest Alaska is a prime example of sustainable development.

"We have the Red Dog Mine, where we have worked to ensure the subsistence renewable resources are not sacrificed as we develop these non-renewable resources," the Iñupiat leader said during an opening speech.

Situated roughly 100 miles north of the Arctic Circle, Red Dog is among the largest zinc mines in the world.

In 1982, Cominco (now Teck) and Iñupiat-owned NANA Regional Corp. signed a landmark agreement that directs how the mine is operated and ensures sustainable benefits for the region and its people.

A quarter century since the 1989 startup of operations at Red Dog, the mine continues to be an economic engine for this remote Arctic region and serves as a positive example of indigenous people and mining companies working together.

"The Red Dog partnership has set the standard for how resource development can create economic prosperity and opportunity while at the same time supporting tradition, culture and heritage," Teck CEO Lindsay said during a 25th anniversary celebration at Red Dog.

While the Iñupiat are enjoying the economic benefits of being 30 percent owners of one of the world's top zinc producers, they measure the success of the partnership by the ability to hunt and gather the foods that have sustained them in Northwest Alaska for millennia.

"We have learned with diligence and oversight that you can balance resource development and still have the animals and the fish and the plants flourish," said Joule. ●

continued from page 13

NORTHERN NEIGHBORS

ment for the Back River project is roughly 75 percent through the process. Sabina plans to submit its Final Environmental Impact Statement to the Nunavut Impact Review Board in November.

More high-grade targets found at Spectrum

Skeena Resources Ltd. Sept. 14 reported high-grade rock sampling results and the advancement of several prospecting discoveries and geochemical anomalies to drill target status on the Spectrum gold project in Northwest British Columbia. Nine targets have been newly identified or improved by the prospecting work. Drilling was recently completed on two of these prospects and assays are pending. Several others will be tested by drilling before the end of this season. "We keep finding more high-grade prospects that should allow us more chances to discover and drill off shallow high-grade resources. That is how we are going to build ounces," said Skeena President Walter Coles. One of the prospects drilled is at the 33 zone, situated south of the Central zone. A two-meter chip sample from the 33 zone yielded 20.7 grams per metric ton gold, 24 g/t silver and 0.5 percent copper. Road Zone, which is located 125 meters east of the Central zone within Anomaly A, is the other prospect drilled. Four of ten 2015 prospecting samples yielded gold values greater than 3 g/t, with one chip sample returning one meter grading 11.8 g/t gold, 14.4 g/t silver, 0.11 percent lead and 4.71 percent zinc. Drilling is also planned for two other targets within Anomaly A – Boundary North and Boundary South – and the 300 Colour zone, a strong soil geochemical anomaly located about 400 meters west of the Central zone. Another four targets – West Gossan, HC, East Gully and JO – require additional sampling and mapping prior to refine drill targets.

Drilling continues to expand Klaza resource

Rockhaven Resources Ltd. Sept. 15 provided results from 10 additional holes drilled its Klaza gold-silver property in Yukon Territory. This batch of results is from drilling at the Central Klaza Zone and sub-parallel vein structures that are developed in the immediate hanging wall and footwall of the zone. Rockhaven said the majority of these subsidiary structures are outside of the current mineral resource model. Highlights include: 9.46 grams per metric ton gold, 84.9 g/t silver, 1.83 percent lead and 2.68 percent zinc over 6.09 meters, and 11.29 g/t gold, 120 g/t silver, 1.15 percent lead and 7.93 percent zinc over 1.04 meters of hole 270; 7.01 g/t gold, 492 g/t silver, 5.3 percent lead and 5.32 percent zinc over 1.18 meters of hole 241; 8.05 g/t gold, 272 g/t silver, 4.72 percent lead and 1.53 percent zinc over 1.39 meters of hole 243; and 5.51 g/t gold, 141 g/t silver, 5.34 percent lead and 1.55 percent zinc over 2.95 meters of hole 265. "Drilling around the existing mineral resource at the Central Klaza Zone was one of the major focus of this year's exploration program," stated Matt Turner, CEO of Rockhaven. "These intercepts better define the geological model in this part of the deposit and should expand the area of the mineral resource." This year's 56-hole drill program at Klaza focused on expanding the current mineral resource and providing key geotechnical and environmental data to further advance the project.

Evidence of porphyry emerging at Hopper

Strategic Metals Ltd. Sept. 15 reported additional results from a nine-hole, 3,227-meter drill program at its Hopper gold-copper project in southwestern Yukon Territory. In August, the company reported results from the first two holes that included 12.15 grams per metric ton gold and 0.95 percent copper over 2.65 meters of hole 15-01. Highlights from the remaining seven holes include: 0.17 percent copper over 162.5 meters of hole 15-05; 2.4 g/t gold and 1.03 percent copper over 4.48 meters of hole 15-04; and 43.6 g/t gold over one meter of hole 15-08. "Results from the 2015 program have significantly expanded the area of known skarn mineralization and provide evidence of a porphyry center coring this very large hydrothermal system," said Strategic CEO Doug Eaton. "A sizeable area of mineralization southwest of the main pluton is now ready for systematic grid drilling and many soil geochemical and geophysical anomalies elsewhere on the property offer excellent potential for additional discoveries."

Golden Predator wakes Sleeping Giant

Golden Predator Mining Corp. Sept. 14 reported the completion of a tightly spaced rotary air blast drill program confirming gold mineralization in advance of bulk sampling from the Sleeping Giant Vein at the 3 Aces Project in eastern Yukon Territory. Highlights from the near-surface mineralization encountered include 9.73 ounces per metric ton gold in hole 3ARAB15-11; 6.84 oz/t gold in hole 3ARAB15-05; and 4.64 oz/t gold in hole 3ARAB15-13. A total of 13 holes totaling 45.73 meters were drilled in preparation for bulk sampling from the Sleeping Giant vein. Drill samples were collected down-hole at 0.76-meter intervals on an irregular grid covering an area of roughly 15.2 by 6.1 meters with hole depths ranging from 1.98 to 4.12 meters. The holes, collared in the outcropping vein exposed from earlier trench and road work, were designed to collect a large volume sample, varying from 17.6 to 63.8 pounds, and were capped for use in blasting of the planned bulk sample. After evaluation of the drilling results, Golden Predator has refined its plan for the bulk sample at the Sleeping Giant zone where it now expects to initially extract roughly 500 metric tons of high-grade vein material to be shipped off-site for processing.

Group Ten lands third Yukon PGM project

Group Ten Metals Inc., formerly Duncastle Gold Corp., Sept. 14 said it has signed an agreement to earn full ownership of the Spy platinum group metal-nickel-copper property in southwestern Yukon Territory. The 1,250-hecatre Spy property is located roughly 40 kilometers (25 miles) southeast of the company's Catalyst project that adjoins Wellgreen Platinum's Wellgreen PGE-Cu-Ni Project. Group Ten has the option to earn a 100 percent interest in Spy by issuing 1.05 million shares over three years. The vendors retain a three percent net smelter return royalty with a buy-down to one percent for C$1.5 million before the start of production. Group Ten Metals now holds three projects – Spy, Ultra and Catalyst – in the Kluane Ultramafic Belt of south-

see **NORTHERN NEIGHBORS** *page 15*

● OPINION

My heart echoes the beating of the drums

Obamacare may be a godsend to Alaskans because SCOTUS has held that it is the intent of the law (like "No More"?) that counts

By J. P. TANGEN

Special to Mining News

"Do you hear the people sing?
Singing a song of angry men?
It is the music of a people who will not be slaves again!
When the beating of your heart echoes the beating of the drums
There is a life about to start when tomorrow comes!"
—The People's Song, Les Misérables

Perhaps it is premature to foster hope for revolution; however, it has long been my view that, in the wonderful world of political "science" (as if there is a science to politics), left and right are not a lineal array. Instead, it is but a circle in which ultimately the extreme ends actually connect. There are certain things upon which many of us can agree. For instance the Administrative Procedures Act, especially as interpreted by the U. S. Supreme Court in "Chevron v. NRDC", has become a behemoth of bureaucracy under which the agencies of the United States are essentially the arbiters of their own mandate – ultimately fiefdoms of arbitrary action over which neither the Congress nor the courts have any say.

The Internal Revenue Code is but a shopworn example of inconsistency and injustice.

Moving closer to home, the Federal Land Planning and Management Act of 1974, has universally demonstrated that, in the war between "planning" and "management," planning has triumphed; and the BLM no longer manages the public domain. Of course, the Environmental Protection Agency, under the auspices of the Clean Air Act and the Clean Water Act, has elected to become the principal zoning office for the nation: witness its proposed definition of "waters of the United States" which attempts to reach to the mountaintops, or perhaps the clouds, to ensure that anything that is wet, ever has been wet or ever will be wet is duly regulated.

Mining & the law

J.P. TANGEN

The author, J.P. Tangen has been practicing mining law in Alaska since 1975. He can be reached at jpt@jptangen.com or visit his Web site at www.jptangen.com. His opinions do not necessarily reflect those of the publishers of Mining News and Petroleum News.

Congressional acts that try to push back are blocked before implementation, or interpreted by the administrating agency to mean something new and different, or vitiated by the courts out of deference. Where a judge musters the courage to point in a different direction, there is a reviewing court to set the miscreant straight.

No better example of this travesty is the zig-zag pattern of resource development in Alaska. Alaska statehood, in no small part, occurred because, although our population was small, our resources were unbounded. Fish, timber, coal, copper, gold and oil were and are profuse. The Kennecott Copper mine did not diminish the Copper River salmon run; the trans-Alaska pipeline did not scare the caribou away; the timber harvest in Southeast Alaska did not render the spotted owl extinct - quite the contrary.

Nonetheless, when the Great Compromise – the Alaska National Interest Lands Conservation Act - was adopted and turned over to the U. S. Department of the Interior and the U. S. Forest Service to administer, the spirit and express intent of the law was sublimated. Access to inholdings was consistently constrained by the National Park Service with the willing acquiescence of the federal courts. Public health and safety were put at risk by decisions of the U. S. Fish and Wildlife Service. Areas of Critical Environmental Concern were manufactured out of whole cloth for vast regions. The whole concept of "No More", which was central to the "Compromise" has been vitiated and is at risk of being totally scuttled.

More recently, however, in "King v. Burwell," Roberts has outdone himself. In 21 pages of rhetorical machination, his "vorpal blade" has clear-cut a path through 230 years of judicial interpretation, to conclude that the "words" of a statute don't matter nearly as much as the intent of the lawmakers. Since, according to Roberts, Congress could not have meant what it said, despite Chevron and a dozen other canons of judicial interpretation, deference to the language of the law is not required. What we must now do is read the enactment as a whole to divine what Congress sought to accomplish. **—J. P. Tangen, columnist**

Yet, out of a surprising quarter, there is a glimmer of hope. In the earliest stages of the incumbent administration, Congress, behind closed doors and in total disregard of the legislative process, forced through the so-called "Affordable Care Act." Without going into the merits and demerits of this monstrosity, its enactment and implementation are truly a tribute to the tenacity of America's left-leaners. Despite its ridiculous language, this statute has made it to the U.S. Supreme Court twice so far, and twice the High Court, led by Chief Justice John Roberts, has moved heaven and earth to find it "constitutional."

In the first instance, the court ruled that the provisions which compelled sanctions against those who felt that buying health insurance they neither wanted nor needed was not a penalty but a "tax." Accordingly, compliance was mandatory. That decision is obviously aberrant in innumerable ways. (If it's a tax, how come it didn't originate in the House of Representatives where appropriation bills are constitutionally required to be initiated?) Nonetheless, a challenge to that interpretation has yet to float to the surface.

More recently, however, in "King v. Burwell," Roberts has outdone himself. In 21 pages of rhetorical machination, his "vorpal blade" has clear-cut a path through 230 years of judicial interpretation, to conclude that the "words" of a statute don't matter nearly as much as the intent of the lawmakers. Since, according to Roberts, Congress could not have meant what it said, despite Chevron and a dozen other canons of judicial interpretation, deference to the language of the law is not required. What we must now do is read the enactment as a whole to divine what Congress sought to accomplish. When I went to law school, one of the professors was fond of quoting Supreme Court Justice Oliver Wendell Holmes Jr., who said (among many other insightful things) "[a] word is not a crystal, transparent and unchanged; it is the skin of a living thought and may vary greatly in color and content according to the circumstances and time in which it is used."

Perhaps I am reading too much into the King decision, but the beating of my heart echoes the beating of the drums of revolution. ●

continued from page 14

NORTHERN NEIGHBORS

western Yukon.

Centerra options Northwest BC gold property

Colorado Resources Ltd. Sept. 14 reported that Centerra Gold Inc. has entered into an option agreement to earn an interest in Colorado's Heart Peaks gold project, which is located roughly 45 kilometers (28 miles) northeast of the historical Golden Bear Mine in northwestern British Columbia. Under the terms of the agreement, Centerra can earn a 70 percent interest by funding C$8 million of exploration expenditures at Heart Peaks before the end of 2019. Colorado will be the project manager on the project for at least two years and will receive a management fee. Once Centerra earns its 70 percent interest, a joint venture will be formed for the HP Project between Colorado and Centerra. Colorado says the Heart Peaks property covers large felsic volcanic centers and shares many geological similarities with young volcanic centers in Nevada and globally, which host multimillion-ounce low sulfidation epithermal gold deposits. Surface grab samples with up to 126 grams per metric ton gold indicate the potential to find high-grade mineralization at shallow to moderate depths. In addition, historical drill intercepts of up to 0.51 g/t gold over 115 meters suggests that the hydrothermal system found there is robust enough to generate broad zones of bulk tonnage style gold mineralization. Previous work by Colorado includes detailed geological mapping, soil and rock sampling, alteration and Terraspec mapping along with induced polarization geophysics. A field program of soil geochemical and geophysical surveys to cover open ended targets along with detailed mapping in preparation for finalizing proposed drill sites is scheduled for this fall.

Dolly Varden working to secure C$2M loan

Dolly Varden Silver Corp. Sept. 20 said it has entered into an indicative non-binding term sheet for a senior secured loan with two significant shareholders, Hecla Canada Ltd. and Robert L. Gipson. The loan will provide Dolly Varden C$1.5 million to be used for exploration of the Dolly Varden silver project in northwestern British Columbia and working capital purposes. An additional C$500,000 may be made available to the company at the lenders' discretion. The loan, which is repayable after one year, will bear interest at a rate of five percent per annum and will be secured by promissory notes and first ranking security over all of the company's assets. In connection with the loan, Dolly Varden will issue 1.25 million warrants to each lender. Each warrant will entitle the holder to acquire one common share of Dolly Varden at a price of C30 cents, for a period of five years from the date of issuance. The loan is anticipated to occur by Sept. 30, subject to conditions and requisite approvals. ●

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Shell Alaska's Pioneer on the move

Shell Alaska's Polar Pioneer departing Seattle, Wash., June 2015. Photo credit Judy Patrick.

Shell Alaska's Polar Pioneer in Dutch Harbor, July 2015. Photo credit Judy Patrick.

Pioneer in Chukchi Sea, August 2015. Photo credit Mark Fink.

Polar Pioneer arrives to Seattle, Wash. Headed to Chukchi Sea, May 2015. Photo credit Ron Wurzer.

welcome

Mr. Quarles, welcome to Alaska!

Congratulations on a successful sealift from Korea to Point Thomson

Cory Quarles, a native of Houston, Texas, and an ExxonMobil employee since 1998, is the new Alaska production manager for ExxonMobil Production Co., having succeeded Karen Hagedorn, who has taken an assignment in the United Kingdom. ExxonMobil's sealift of the processing modules for Point Thomson arrived at the North Slope field on Sept. 8 after traveling by barge over a 4,000 miles from Korea. Field operator ExxonMobil says production startup is expected in 2016.

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Volant Products Inc.
Weston Solutions, Inc.

ENVIRONMENT & SAFETY

Arctic sea ice reaches 4th lowest minimum

The National Snow and Ice Data Center says Arctic sea ice reached its likely minimum extent for 2015 on Sept. 11. That minimum ice extent was the fourth lowest in the satellite record, NSIDC said, but noted this is a preliminary announcement and changing winds or late-season melt could reduce the Arctic ice extent, which happened in 2005 and 2010.

The 1.7 million square miles of sea ice recorded Sept. 11 appears to be the lowest extent of the year, NSIDC said, with sea ice extent now beginning to climb through autumn and winter due to the setting sun and falling temperatures.

The average minimum extent, 1981 through 2010, averaged Sept. 15. 2012 saw the lowest extent, 2007 the second lowest and 2011 the third lowest, with the nine lowest extents of the satellite era occurring in the last nine years, NSIDC said.

—PETROLEUM NEWS

NATURAL GAS

Walker fills vacancy on AGDC board

JOEY MERRICK

Alaska Gov. Bill Walker has named A.J. "Joey" Merrick II of Eagle River to fill a vacancy on the board of the Alaska Gasline Development Corp. and reappointed Dave Cruz of Palmer.

"Joey's experience in the construction and pipeline industries, combined with his statewide business experience, will make him an outstanding addition to AGDC's governing body," Walker said in a statement.

Merrick jointed Laborers' Local 341 in 1989 as a laborer apprentice and has since served as a general foreman, business agent and president, and is now the union's secretary treasurer. He has more than 15 years of experience as a foreman in construction specific to Alaska's pipeline industry, the governor's office said.

Cruz, reappointed to the board, is president of Cruz Cos., which specializes in oil field services, heavy civil construction, remote camp construction, tug and barge operations, and a variety of other construction support activities.

"Dave Cruz brings a wealth of knowledge and experience from the construction industry," Walker said. "His work on the North Slope and first-hand knowledge of cold weather construction are essential to moving a gasline project forward in Alaska."

The seven-member AGDC board oversees the state's efforts to develop a liquefied natural gas project.

There are five public members and two commissioners: John Burns of Fairbanks, Cruz, Rick Halford of Dillingham, Merrick, Hugh Short of Girdwood, Department of Labor and Workforce Development Commissioner Heidi Drygas and Department of Commerce, Community and Economic Development Commissioner Chris Hladick.

—PETROLEUM NEWS

BOOKS OF INTEREST

Bieber releases 'Moon over the Midnight Sun'

Author Craig Bieber, former M-I Swaco Alaska manager and prior Petroleum Club of Anchorage president, has released his third book,

"Moon over the Midnight Sun" continues the story of the influential Saylor family in Alaska by bringing in Nick and Beth's younger sibling, Chris Saylor, as the protagonist. It also allowed the author to put some emphasis on the industry he was involved in for more than 30 years in the state.

In typical Saylor fashion Chris parlays his drive, his work ethic, his intelligence and his common sense into a success story in Alaska's oil industry.

From the rig floor on a Shublik drilling rig to the board room, Chris rises to become a vice president and part owner of a mid-level and privately owned oil company.

Along the way the committed bachelor is surprisingly overwhelmed by a lovely, down-to-earth woman.

It is the first of several surprises impacting his life.

He is mentored by oil company CEO Burton Marts

And befriended by roughneck Rusty Ferraree, both of whom will influence the man he will become.

Throughout the story Mart's beautiful, middle-aged wife Jane is interwoven with a cast of bizarre characters who will dramatically change many people's lives. When Chris reaches a comfortable place as a key player in the growth of the oil company he works for, he is surprised by an unexpected development. An amazing technology few people have heard of, and the vindictive agenda of the owner of the company that owns it, enters the story and Chris becomes the unlikely leader of the effort to stop it.

"Moon over the Midnight Sun" continues the story of the influential Saylor family in Alaska by bringing in Nick and Beth's younger sibling, Chris Saylor, as the protagonist.

Through it all several members of an Alaska Native village corporation sit quietly in the background waiting for the raven.

You can order the book through Amazon or Barnes and Noble.

To learn more email Bieber at clbakaz@msn.com.

—PETROLEUM NEWS

ENVIRONMENT & SAFETY

Fish survival hurt by low oil exposure

Federal scientists find embryonic herring, salmon have misshapen hearts linked to even very low levels of crude oil exposure

By DAN JOLING
Associated Press

Federal scientists have determined that extremely low levels of crude oil spilled by the Exxon Valdez caused heart problems in embryonic fish, a conclusion that could shape how damage is assessed in other major spills.

In a study published Sept. 8 in the online journal Scientific Reports, researchers from the National Oceanic and Atmospheric Administration found that embryonic herring and salmon exposed to low levels of crude oil developed misshapen hearts.

"Metabolically, they're different," said John Incardona, a research toxicologist at the Northwest Fisheries Science Center in Seattle. "They can't grow as well. They can't swim as fast."

The defects and subsequent vulnerability may explain why the herring population crashed several years after the spill in Alaska's Prince William Sound and has not recovered, scientists said.

The 986-foot Exxon Valdez struck a charted Bligh Reef at 12:04 a.m. March 24, 1989, spilling 11 million gallons of crude oil. At the time, it was the largest spill in U.S. history. Oil extensively fouled shoreline spawning habitat of herring and pink salmon, the two most important commercial fish species in Prince William Sound.

Herring population collapse

Fish larvae sampled close to high concentrations of oil were found with abnormalities. Little was known in the early 1990s, however, about effects of low-level crude oil exposure on fish in early life stages, according to the study.

Pink salmon declined but recovered. The herring population collapsed three to four years after the Exxon Valdez ran aground and the role of the spill, NOAA Fisheries scientists acknowledged, remains controversial.

The silvery fish is a key species because it is eaten by salmon, seabirds and marine mammals from otters to whales. Four years after the spill, the estimated herring population based on modeling shrunk from 120 metric tons to less than 30 metric tons.

For the study, the scientists temporarily exposed herring and salmon embryos to low levels of Alaska North Slope crude oil before placing them back into clean water. The threshold for harm in herring was remarkably low, Incardona said.

"Herring in particular, they are really, really very sensitive," in part because their eggs and yolk sacs are so much smaller.

'Failure to thrive'

After exposure, scientists transferred fish embryos to clean water, let them grow for seven to eight months and tested them in swim tunnels.

Scientists used swimming speed as a measure of cardiorespiratory fitness. Fish exposed to the highest levels of oil swam slowest, likely making them easier targets for predators. He compared the damaged herring to infant children born with heart defects.

"The child doesn't grow well. It's called 'failure to thrive,'" a condition that can be corrected by a heart surgeon.

"That doesn't happen with fish," he said.

1989 water samples

According to water samples collected in Prince William Sound during the 1989 herring spawning season, 98 percent of the samples had oil concentrations above the level that caused heart development problems among herring in the study. Juvenile salmon with heart defects, swimming more slowly and not pumping blood as efficiently as an unharmed fish, would be more vulnerable to predators and disease. It's not much of a leap, he said, to conclude that more juvenile mortality would have an effect on how many herring survive to be spawning adults.

The findings should contribute to more accurate assessments of other spills, such as the Deepwater Horizon disaster, which replaced the Exxon Valdez spill as the largest in U.S. history.

"And not just other spills," Incardona said. "For us down here in Puget Sound, one of our big concerns is just urbanization, and the little, tiny oil spills that happen every day as non-point source pollution. Certainly for both — large spills and everyday chronic pollution from fossil fuel use — are potentially producing the same kinds of effects."

Alan Jeffers, media relations manager for Exxon Mobil Corp., said the company had no comment on the study. ●

continued from page 1

BC SUMMIT

have ratified treaties, three are in the ratification process and five are negotiating final agreements, while 17 have preliminary deals to share economic benefits.

However, the majority of First Nations have refused to participate in the process, noting that the agreements to date cover only 5 percent of the land claimed.

New fracking alliance

Reflecting the mood, 10 First Nations have formed a new alliance to voice their concerns about the environmental impact of hydraulic fracturing to establish the gas needed to underpin an LNG export business.

In a three-page statement to Clark, they said what is needed is "a more civil, legally consistent and logical approach to major project development."

Grand Chief Stewart Phillip, president of the Union of B.C. Indian Chiefs, said the underlying message from the aboriginal leaders "is that if we don't make any

see **BC SUMMIT** *page 23*

continued from page 1

AURORA WELLS

Under a program described to state officials, Aurora would drill the Theodore River No. 2 well sometime this fall on ADL 391618, using a temporary drilling pad accessed from the existing Beluga highway, and would subsequently use a one-mile snow trail and a second temporary pad to drill the Chedatna Lakes No. 1 well this winter on ADL 391878.

The Alaska Department of Natural Resources is taking comments through Oct. 10.

Patience

If Aurora successfully completes the program, the Alaska-based independent will succeed where it and many other companies have failed over the past three decades.

Union Oil Company of California abandoned an exploration program at Hanna in the 1980s in light of falling commodity process. Craig first acquired the leases in 1993 through the independent Trading Bay Energy Corp. but found it difficult to raise money for Alaska exploration after Stewart Petroleum Co. filed for bankruptcy protection in 1996. Forcenergy Inc. acquired the leases in 1997 but filed for bankruptcy in 1999.

Craig acquired the leases a second time through a 2001 lease sale but once again found it difficult to organize an exploration program. A proposed deal with U.S. Petroleum Corp. fell apart in 2002 and a farmout with Pelican Hill Oil and Gas Inc. fell apart in 2005.

Aurora acquired the prospect later that year but suspended all drilling operations in late 2006 while it resolved its ongoing litigation with Enstar Natural Gas Co. In early 2009, Aurora arranged a partnership and even received an Alaska Oil and Gas Conservation Commission drilling permit for a Hanna No. 1 exploration well. This time, the delays were regulatory. The Alaska Department of Fish and Game refused to allow the company to build a drilling pad through a marshy section of the Susitna Flats Game Refuge.

The leases expired again. Craig acquired the prospect for the third time in a 2010 lease sale. Escopeta Oil & Gas Co. expressed an interest in exploring the prospect, believing it could sidestep the regulatory problems by drilling in winter. This time, Craig attached performance requirements to the leases. After two years, Escopeta had missed its deadline. In March 2013, Escopeta transferred the leases to an affiliated independent called Galena Energy Corp., which also missed the deadline. In May 2013, Galena Energy transferred the prospect to Craig. The four leases currently expire Feb. 28, 2018.

Return to exploration

The utility Aurora Power Resources Inc. created Aurora Gas in 2000 as an exploration and production arm and the company spent its first decade enthusiastically acquiring and developing properties passed over or abandoned by larger companies through the years.

After finding success reviving old fields, Aurora assumed its first exploration venture in 2004 when it and partner Forest Oil Co. formed the Three Mile Creek unit. Even though the region had previously hosted some exploration activity, including the Superior Oil Co. Three-Mile Creek State No. 1 well in the summer of 1967 and the nearby Phillips Petroleum North Tyonek State No. 1 well the summer of 1973, Aurora President Scott Pfoff told Petroleum News at the time that its Three Mile Creek well would "be much closer to what I would call a wildcat well than a simple developmental reentry."

The exploration activity launched a successful development program at Three Mile Creek and gave Aurora the confidence to pursue other exploration opportunities, but various efforts to arrange other programs ultimately came to naught. Earlier this summer, though, Aurora began permitting a wide-ranging exploration venture covering six prospects: Chickalusion, Three Mile Creek Deep, Congahbuna Lake and Nicolai Footwall on the west side of Cook Inlet and Forest Lake and West Eagle on the Kenai Peninsula.

—ERIC LIDJI

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LAND & LEASING

Jointly owned tracts split into 640-acres

The Alaska Department of Natural Resources, Division of Oil and Gas, has changed the size of some tracts in the Beaufort Sea and North Slope areawide sales, the division said Sept. 14, with new data now available for 170 oil and gas lease sale tracts.

Some 54 previously offered LSTs were affected, with the 170 new LSTs created from those 54 tracts.

The division said the tracts, in an area jointly owned by the state and the Arctic Slope Regional Corp. along the Colville River, were previously offered as four sections, up to 2,560 acres. The new LSTs have a maximum of one section, 640 acres.

The division said new lease sale tract numbers have been assigned. LST spatial data are available for download at http://dog.dnr.alaska.gov/GIS/GISDataFiles.htm. Case file and land abstracts for individual LSTs are available at http://dnr.alaska.gov/projects/las/.

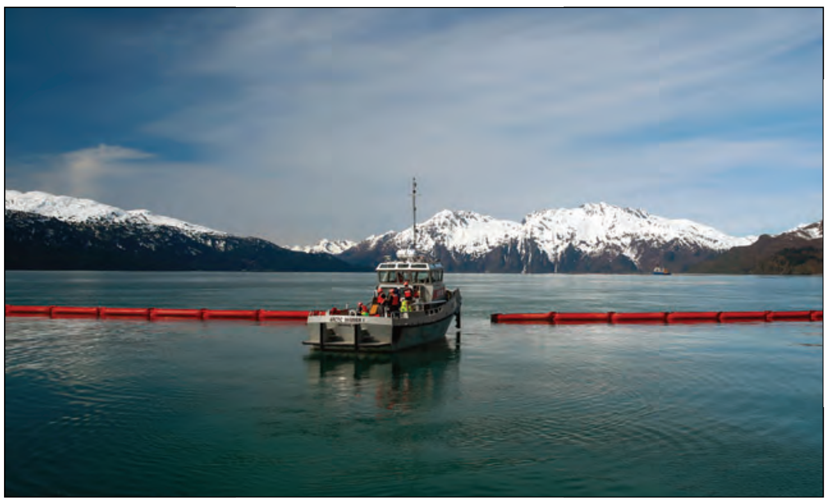
More information is available from the division's Asset Management Section, formerly the Leasing Section, at 907-269-8757 or email dog.leasing@alaska.gov.

The division said the notice, complete details and tract maps for the fall 2015 competitive oil and gas sales will be issued at a later date.

—PETROLEUM NEWS

Shell, Alaska 2015

Preparing for Chukchi: Oil spill response training



The vessel is Shell Alaska's Nanuq; boom deployment was part of the exercise. Photos courtesy of Shell; photographer Judy Patrick. Taken May 2015.

LNG sector sent reeling

Surrounded by relentless, gloomy forecasts about rising capital costs, mired commodity prices and evaporating global markets, British Columbia's LNG sector and its associated natural gas industry has been dealt what could be it most damaging setback yet.

The province's Environmental Appeal Board, appointed by the government while operating as an independent agency, effectively overturned a temporary license — the first issued in British Columbia — to draw water from a shallow lake that a vital to underpin the use of hydraulic fracturing by Nexen to supply gas to LNG operators.

In a 120-page report, the board concluded the science behind the license was based on "serious technical flaws," while the British Columbia government did properly consult with the affected Fort Nelson First Nation.

Although Nexen will be able to use water it already has in storage, it has been banned from drawing 2.5 million liters of water a year (enough to fill about 1,000 Olympic-sized swimming pools) from a small lake about 55 miles northeast of Fort Nelson.

The government's department of Forests, Lands and Natural Resource Operations said it is reviewing the decision before deciding whether to seek a British Columbia Supreme Court judicial review.

"Government takes its duty to consult (with First Nations) seriously and remains committed to working closely with local First Nations throughout the province on resource development," the department said in a statement.

The province's Environmental Appeal Board, appointed by the government while operating as an independent agency, effectively overturned a temporary license — the first issued in British Columbia — to draw water from a shallow lake that a vital to underpin the use of hydraulic fracturing by Nexen to supply gas to LNG operators.

Nexen, wholly owned by the state-owned China National Offshore Oil Corp., also said it needs time to determine its next step while examining its options to secure water rights elsewhere in the area.

"Responsible water management is a priority across all our operations," the company said. "Specifically in northeast British Columbia we've emphasized the development and implementation of new processes and technologies to reduce our water use and our impact and protect water sources," it said.

In addition, a Nexen spokeswoman said the company has "significantly slowed the pace of exploration and development in the region due to depressed commodity prices. Therefore this decision does not have any immediate impacts on our operations."

Fort Nelson First Nation Chief Liz Logan said the board decision is "going to set a precedent that British Columbia now needs to pay attention to and needs to start looking at critical environmental values throughout all of (the aboriginal) territories."

She said those issuing permits "need to have the proper science, they need to have facts ... and the experts they can rely on. They just can't arbitrarily make a decision because of an industry request."

What troubled the First Nation was internal department correspondence that showed the provincial government intended to issue a water license regardless of promised meetings with the Fort Nelson community.

The decision said the board found "this conduct was inconsistent" with the government's overall objective of reconciliation with First Nations.

It also concluded the province's view that water withdrawals would "have no significant impacts on the environment, including fish, riparian wildlife and their habitat, was based on incorrect, inadequate and mistaken information and modelling results."

Logan said Fort Nelson is not against economic development provided the First Nation culture and traditional way of life was protected.

She noted that First Nations in British Columbia had approved 150 referrals for various natural gas developments last year.

—GARY PARK

continued from page 20

BC SUMMIT

progress within the space of the next year ... all (of the work at the summit) will fall through and it will be back to the courts and pretty much back to the barricades."

More reversals than successes

In this charged environment, the government and the oil and gas industry have experienced more reversals than successes in seeking First Nations support for the discovery, development and transportation of natural gas to LNG terminals and the pipelines to carry oil sands bitumen to tanker ports on the British Columbia coast.

The environmental damage attributed to oil and gas companies has seen the Fort Nelson First Nation, in the heart of British Columbia's shale gas riches, and the alliance of communities from the Pacific Coast to the Alberta border, present an ultimatum to the Clark government.

But, somewhat against all the odds, the two sides ended the summit by approving a document that the government is proclaiming as a road map to new relations, setting a deadline of the next year to make actual progress.

'Unique' view sought

Clark said she wants First Nations to apply their "unique" view of reconciliation during the ongoing talks.

"I want to make sure that document comes alive," she said. "Reconciliation means a shared vision of the future."

Phillip said the road ahead may be bumpy, but all sides are willing to help build a path.

"Reconciliation doesn't happen in a ballroom in a hotel in Vancouver (where the summit took place), but you can set a framework for what happens in the communities."

Phillip noted that Clark said a year ago that the two sides "were at a fork in the road. I think we're still there."

"We're hopeful that this time all of the parties acknowledge the gravity of the situation and within the next several months show significant progress," he said. ●

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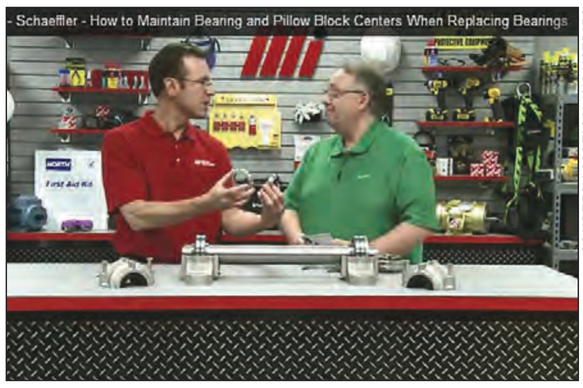
Petroleum news

Oil Patch Bits

Schaeffler centers in on bearing replacement in video



COURTESY MOTION INDUSTRIES

Motion Industries, a leading distributor of industrial maintenance, repair and operation replacement parts, is pleased to announce the release of another MiHow2 video. The goal of the video series is to provide instruction to viewers to help them with their practical applications.

The video shows how to avoid jamming the bearing at one end when replacing bearings in a pillow block housing. "How to Maintain Bearing and Pillow Block Centers When Replacing Bearings" was filmed with the help of Schaeffler, a key Motion Industries supplier. The video can now be viewed on the new MiHow2.com under the MiHow2 heading.

"Equipment efficiency starts with proper installation of parts," said Randy Breaux, Motion Industries' senior vice president, southern U.S. operations, corporate marketing and strategic planning. "Proper bearing installation also cuts down on frustration levels as well."

Each MiHow2 video is filmed in a workshop or appropriate off-site setting and features Motion Industries' energetic and knowledgeable host, Tom Clark.

The series is also available for viewing via Facebook and YouTube. Additional MiHow2 and Tom's Toolbox videos are scheduled to be posted in coming weeks. For more information visit www.motionindustries.com.

Y-Tech Services Inc. awarded DLM contract

Y-Tech Services Inc., a subsidiary of Yulista Holding LLC, has been awarded the MH-60T rotary wing aircraft depot level maintenance support services contract for the United States Coast Guard. Y-Tech Services will support the USCG Aviation Logistics Center Medium Range Recovery product line and other support divisions such as the ALC's industrial operations division by providing a full range of DLM services including, Aircraft disassembly and component repair and support. The MH-60T mission includes search and rescue, combat support, law enforcement, international ice patrol, marine environmental protection, and marine resource conservation. Y-Tech Services will perform DLM for approximately 14 aircraft annually ensuring continued mission performance.

Y-Tech is fulfilling the U.S. Coast Guard's continuing requirement for aircraft maintenance at the USCG ALC in Elizabeth City, North Carolina.

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 March.

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

All of the companies listed above advertise on a regular basis with Petroleum News

continued from page 5

KELLY Q&A

an alternate on LB&A. So would you like to see LB&A get involved by hiring consultants, as it often does, to review the tax credit system?

Kelly: I don't mind LB&A hiring consultants, but I don't want to see a bill going to LB&A because Resources and Finance have been the appropriate committees in this case. So if LB&A wants to get consultants that's fine, but I don't want to see a bill going to LB&A.

Petroleum News: Looking ahead to the fall, there are the prospects of a special session and that could include discussions over buying out TransCanada as a partner in pipeline project. I know you weren't in office for the vote, but you've been here since. What are your thoughts on the prospects of a buyout that could cost more than $100 million?

Kelly: The TransCanada thing survived SB 138, which I was involved in. My thoughts are we included TransCanada in SB 138 because we thought it was a good idea. It was a good idea because they are going to put a whole bunch of money forward to help us get into that deal and they are going to pay for some of the payment calls. Currently the financial situation we are in, because we have such huge deficits, so I'm more inclined to keep TransCanada in because they are willing to pay. I don't see us getting $104 million.

So (Walker consultant Rigdon) Boykin comes up here and he wants to completely re-write this whole deal of SB 138 when it comes to TransCanada and TransCanada is in there for good reasons and frankly he hasn't given good reasons to take them out yet, so I'll be listening very intently to what Mr. Boykin says.

I've already heard a little bit of what he's says and frankly he hasn't convinced me that TransCanada needs to go, particularly when we can't afford it. You can get into that discussion in a period of time when you don't have $4 billion deficits. But we do. If we want to have a gas line, it looks like we are going to need a partner to make some of those cash calls and to help us with the investment.

So Boykin has got a long way to go with me. Other than he has sat down and said this is a ridiculous deal and we need to get these guys out because it's a ridiculous deal. OK, I've got you, Boykin, it's a ridiculous deal. Point is you need to put a little more meat on that analysis, particularly for $100,000 a month.

I am unconvinced.

Petroleum News: Exxon's CEO Rex Tillerson noted with this project Alaska is its own worst enemy changing directions drastically from one administration to the next. Are we looking at too many changes right now?

Kelly: I don't know. There are 60 people in the Legislature and 40 of them have to be convinced. I don't know what the future is. I think the Legislature will try to make the environment as stable as possible as we go into the FEED portion of this investment. By kicking TransCanada out it would look completely unstable. Many of us voted for SB 138 because of the reduced cash the state was going to have to commit to this partnership. So if the state comes in and says we want to kick this partner out, you're rolling the dice and you don't know what's going to come up again. When we went through SB 138, we had a very deliberative process. We came up with the conclusion we have now and that included TransCanada. I guess I would agree with what you just said, that it would be too big a change right now.

Petroleum News: Also possibly up for discussion would be a constitutional amendment that would enable the state to lock in taxes for several decades for the project. Is that a good idea, taking a proposal like that to the voters?

Kelly: I'm going to have to wade through on that process to see whether I approve or not. I don't know enough about the pros and cons about this process. A deal this big you have to have some fairly quantifiable fiscal terms. I don't know if a constitutional amendment is the way to go about that, so I'll have to listen to the debate.

Petroleum News: OK, a little closer to home in Fairbanks and the Interior. What's your view on how the gas into Fairbanks project is going particularly with HB 104 being passed this past session?

Kelly: I think they had to regroup a bit and come up with a slightly different plan. I'm glad they did. I think it needed to happen. If they had just continued to go forward with the proposals in SB 23, the original bill, it would just go and go and go, and it wouldn't work out. I'm glad they retooled and decided to hit the reset button. They are hitting some of the timelines so I'm encouraged by what I'm seeing.

Petroleum News: I keep hearing the infrastructure is slowly coming online in places like Fairbanks and the North Pole. Do you gain a sense that people are getting hope that heating prices will come down?

Kelly: Yes, I guess we've had that hope before. But if today everybody had their burners switched on and the pipelines going into their home, I think the cost of oil is actually lower than what we anticipate gas being. With the price of oil going up and down, up and down, it's difficult to know whether it's a good deal or not. What we need is a community that has reliable, somewhat inexpensive source of heat for their homes. That will add a little bit of competition into this market. Going into the future we'll have just better prices overall. I don't know you can say oh boy we will have $15 at the burner tip in the future. If oil price stays down, oil is going to be cheaper. We just need to have a reliable source of energy and we need to have a stable source of energy, and gas will definitely help with that. I think people are getting hopeful because they are paying a lot less this fall when they fill up their oil tank.

Petroleum News: did you ever think you would hear yourself saying that: oil is cheaper?

Kelly: No I didn't. That could change tomorrow. That's the thing. We've got 36 trillion cubic feet of gas on the North Slope and there's a bunch in Cook Inlet. We've got a bunch everywhere. That means it's stable and somewhat under our control and we can somewhat control the prices a little bit. Or keep a downward pressure on it based on how we structure these deals. So that's a good thing. If we are all attached to oil, there are going to be continued crises of

see KELLY Q&A page 28

continued from page 1

GAS DEAL

Soldotna.

The utility is currently purchasing natural gas from Hilcorp under terms of a contract which expires March 31, 2016. HEA said it contacted known Cook Inlet natural gas producers to secure supplies beyond that date, and negotiated with those that expressed an interest and the ability to provide natural gas under the terms of a utility based natural gas supply contract.

The agreement with Furie is the culmination of that effort, HEA said.

Gas costs will be lower

The agreement calls for the purchase of between 4 billion and 6.2 billion cubic feet of natural gas annually beginning March 31.

HEA said its gas costs in 2016 and 2017 will be lower than what it is currently paying.

"This contract will provide one of the Cook Inlet independent producers with a market for its gas, allowing them to move forward with significant investment in Cook Inlet offshore gas infrastructure," HEA General Manager Brad Janorschke said in a statement.

He said the contract is the result of the state's efforts to incentivize offshore Cook Inlet exploration and development.

HEA said its gas costs in 2016 and 2017 will be lower than what it is currently paying.

"The excess capacity that will result from this development and the pricing within this contract may lead to more competitive gas pricing within the Cook Inlet market," Janorschke said.

Platform installed

Furie finished construction and installation of a new offshore platform, 16 miles of subsea pipeline and a natural gas processing facility in Nikiski this summer, and is currently connecting the Kitchen Lights unit discovery well within the platform caisson to the production equipment.

Furie has indicated they plan to have some production online by November.

"When we began drilling in 2011, the Cook Inlet was in the midst of a potential energy crisis," Furie Senior Vice President Bruce Webb said in a statement. "It seems fitting that our first natural gas deliveries will be to HEA who supplies electricity to the community where our onshore production facility is located," Webb said.

Regulatory Commission of Alaska approval is required for the gas sale and purchase agreement to become effective.

—PETROLEUM NEWS

continued from page 1

MILNE POINT

tively isolate the tubing-casing annulus from fluids being produced, unless the commission specifically approve production through the annulus to increase flow rate without jeopardizing ultimate recovery from the well."

The issue the commission is considering is whether a packer should be required in wells with electric submersible pumps.

CO 390 found that Milne Point wells producing from the Kuparuk, Schrader Bluff and Sag River through Milne Point production facilities were on artificial lift, 13 on gas lift and 79 on ESPs.

The commission concluded, in the 1997 order, that since packers installed in conjunction with ESPs "may cause premature failures, increase operational risk, reduce production efficiency and potentially reduce ultimate recovery," that completing ESP wells at the field without packers was appropriate.

In May of this year, however, the commission proposed cancelling CO 390.

In response Hilcorp Alaska, the current Milne Point field operator, requested a hearing on the matter.

Revisions, not cancellation

On July 27 Hilcorp requested that rather than cancelling CO 390, the commission revise it, providing that Milne Point wells with ESPs and which were constructed with both production casing and surface casing, could be completed without an ESP packer assembly.

Hilcorp told the commission there were 119 ESP wells at Milne Point, 84 active producers and seven active water source wells. Of the 119, 116 ESP wells, 97.5 percent, were completed without packers under the waiver granted by CO 390.

Guy Schwartz, commission senior staff engineer, said at the Sept. 10 hearing that Milne Point is the only field with a packer exemption. With some 119 wells with ESP, the 60 percent of those wells in the Kuparuk formation and monobore wells were the biggest concern. Schrader Bluff, he said, has relatively low pressure.

He also said CO 390 seems outdated and makes some assumptions that may not be true today. In addition, Schwartz said, there is a need to be consistent across the state.

Reduction of ultimate recovery

Hilcorp attorney Marc Bond, introducing Hilcorp's presentation, said ESPs at Milne Point have an average life of 2.7 years. Use of a packer increases well complexity and will shorten ESP life, he said, while well work with packers increases risk and reduces ultimate recovery.

Keith Elliott, Hilcorp senior reservoir engineer, showed the commission an economic analysis plotting economic limit vs. ESP life. He said Hilcorp works hard to increase ESP life because it is expensive to replace ESPs. Based on an average run life of 2.7 years, the economic limit — the point at which if a well breaks Hilcorp won't fix it — is 95 barrels per day.

Asked by AOGCC Chair Cathy Foerster what oil price was used in the model, Elliott said $50 per barrel.

He said the concern with packers is that they may degrade the run life of ESPs, increasing cost and decreasing economic life. If ESP life degrades to 1.7 years and workover costs increase 33 percent that would drop the economic limit to 145 bpd, which could drop field recovery efficiency by 1 percent.

Elliott said if the economic limit increases to 145 bpd, then 43 wells may not be repaired when they break and the production rate at the field would drop by 3,537 bpd. The graphic Elliott used said 30 of the 43 wells that produce less than 145 bpd use ESPs; their total production rate is 2,701 bpd.

Current production is 19,500 bpd from all wells, Hilcorp said, and the Kuparuk formation at Milne Point has produced less than 25 percent of reserves of 900 million barrels.

The flowing issue

The commission's regulation targets "producing wells capable of unassisted flow" and both Foerster and Commissioner Dan Seamount asked if wells could flow on their own.

Mark O'Malley, Hilcorp's Milne Point field superintend, said wells wouldn't flow into a flowline on their own. He said if lines were opened to tanks he suspected there might be a short residual flow.

O'Malley reviewed the need of annular operations to keep wells flowing, maximize ESP run life and ultimate recovery.

Paul Chan, Hilcorp's Milne Point operations manager, said Conoco, the field's first operator, had extensive problems with ESPs in wells, and said packers impact ability to do well work safely and efficiently.

Seamount asked if other fields had the same problem and Chan said typically not.

Foerster said other North Slope operators — she cited Eni, Caelus and ConocoPhillips — have similar operations but do not have the exemption from packers provided to Milne Point in CO 390. They all use packers, she said, and told Hilcorp that it was important for the commission to understand what makes Hilcorp operations different. Foerster said the hearing record would be left open for an answer from Hilcorp on why its wells need to be operated differently.

—KRISTEN NELSON

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continued from page 1

DEEP CREEK PAD

Reserves suspected

The program hopes to confirm a long-held suspicion about untapped reserves at the field.

Standard Oil Company of California discovered the field in 1958 with the Deep Creek Unit No. 1 well, but never developed the discovery. Union Oil Company of California returned to the field in the early 2000s. The state and Cook Inlet Region Inc. approved the formation of the Deep Creek unit in late 2001 and approved the formation of the Happy Valley participating area in November 2004. The total unit covers some 20,000 acres but the participating area extends over a small portion at the northern end of the unit.

After acquiring seismic information over the area and drilling exploration wells, Unocal announced a discovery in November 2003, brought the unit online in 2004 at 3 million to 4 million cubic feet per day and drilled some 13 wells by 2009. The discovery justified extending the Kenai Kachemak Pipeline and until the development of the North Fork unit, the Deep Creek unit was the southernmost point of the regional natural gas system.

After 2009, investment waned. In its eighth plan of development for the unit, from December 2010, Unocal offered no plans for further exploration activities, but said it was looking to farm out exploration acreage at the southern end of the unit. At the time, then Division of Oil and Gas Director Bill Barron required the ninth plan of development to include an exploration program in the area outside the Happy Valley participating area.

The requirement was an attempt to prompt exploration at the southern end of the unit, where the state believed there might be undiscovered accumulations. In a decision about the unit from 2004, the division noted: "Unocal's interpretation of the data also indicates a potential accumulation south of the Happy Valley reservoir that Unocal refers to as the Middle Happy Valley Prospect." A 2007 report from Netherland, Sewell & Associates estimated probable reserves of 22 billion cubic feet for the entire unit area, which also suggested the possibility of additional undiscovered reserves in the southern reaches.

The program hopes to confirm a long-held suspicion about untapped reserves at the field.

By the time Hilcorp acquired the unit, the state had grown tired of waiting for exploration activity in the southern end and was threatening to contract the unit to remove those leases. Instead, the state extended the eighth plan of development to give Hilcorp time to make new plans. The extension gave the company until February 2013 or six months after closing, whichever came first, to file a new plan with exploration commitments.

Ultimately, Hilcorp made good on its promise to explore outside the existing participating area. The initial exploration activity, though, occurred just beyond the participating area boundaries, rather than in the far southern reaches of the unit. In a plan of development filed in March 2014, the company anticipated drilling a "Middle Happy Valley No. 1 well" in 2015 to target the Sterling, Beluga and Tyonek formations. In a plan of development filed in March 2015 reiterated its commitment to the program. ●

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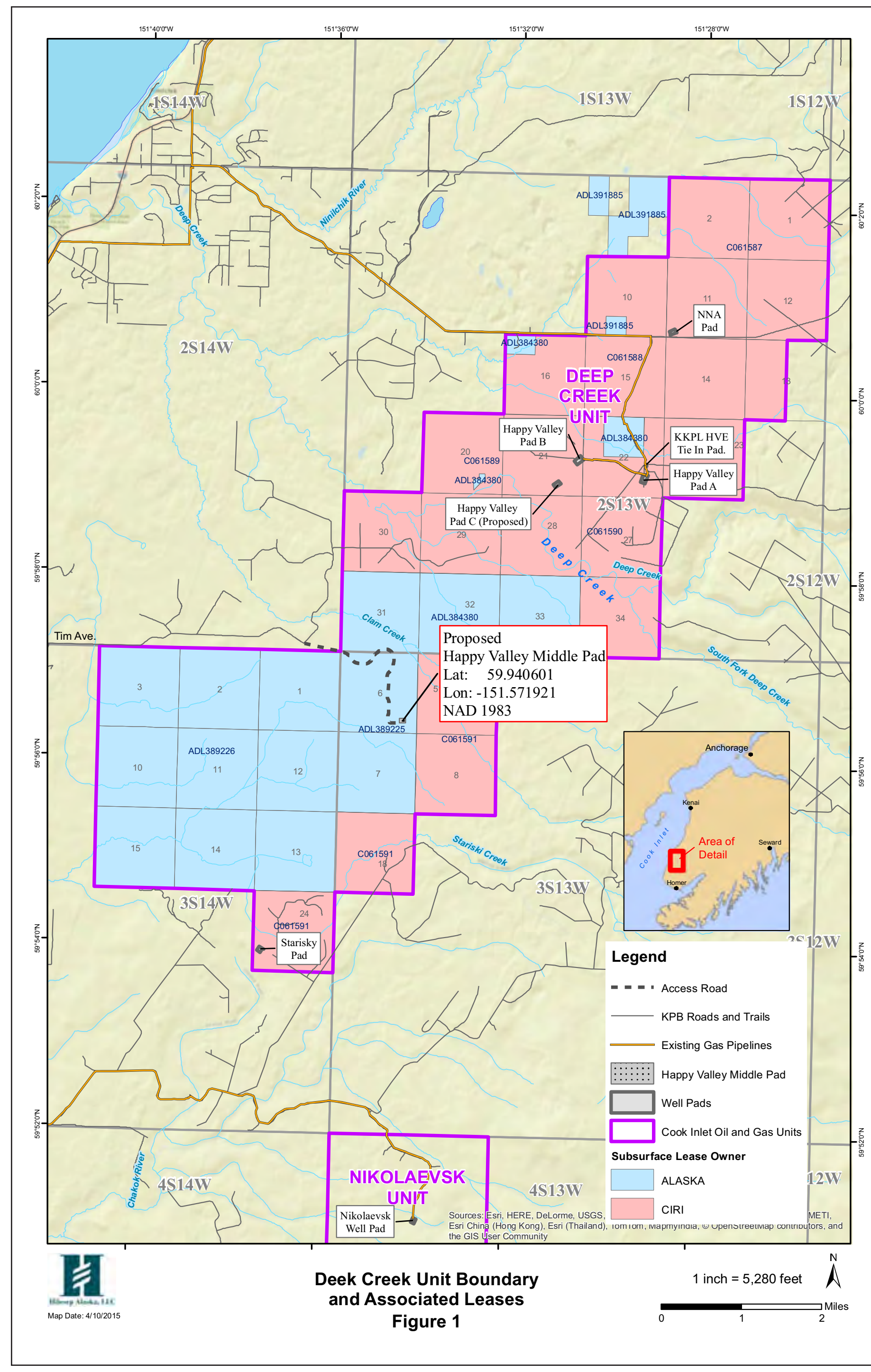

Deek Creek Unit Boundary and Associated Leases
Figure 1

continued from page 1

QUARLES SPEECH

holding about 8 trillion cubic feet of natural gas, ExxonMobil is developing the field in two phases, Quarles said. The first phase is a $4 billion project to recycle 200 million cubic feet of gas per day through the reservoir and hence produce 10,000 barrels per day of gas condensate, he said. The condensate will be separated from the gas in surface facilities, with the condensate delivered into a pipeline for export to the trans-Alaska oil pipeline, while the gas is compressed for re-injection into the reservoir.

At Point Thomson this apparently simple process is very challenging because of the exceptionally high reservoir pressure of more than 10,000 pounds per square inch, Quarles said. The field design had to accommodate a gas/condensate separator pressure higher than anywhere else in ExxonMobil's global portfolio, with the gas injection pressure also being the highest in that portfolio, he said. The huge production modules for the field have just been delivered to the North Slope, and commissioning and hookup of these facilities is underway. The largest of the modules is about half the size of a football field, Quarles said.

"I'm glad to say that we are on track to be under budget and also on schedule for startup in early 2016. That's a significant accomplishment that we all were a part of," he said addressing an audience largely from Alaska oil industry service companies.

Flawless execution needed

Quarles said that Point Thomson is located in an extremely remote area, with no support infrastructure, about 60 miles east of Prudhoe Bay. Developing the field requires flawless project execution, "doing

see QUARLES SPEECH *page 28*

continued from page 27

QUARLES SPEECH

the right work, the right way, at the right time, in order to get the right results," he said. But that does not necessarily make ExxonMobil the easiest company to work with, he conceded.

"Easy is not one of our core values," he said. "Safety is. The environment is. Developing people is. And every day we try to do better than our best."

Quarles said that ExxonMobil conducts meticulous planning prior to commencing work on the ground and takes great care over the companies that it works with.

"Since the beginning of the Point Thomson project we've had 99 Alaska companies involved in the project," he said, adding that 80 percent of the workers had come from Alaska.

The world of the oil industry is one where safety leadership and emergency preparedness are necessities rather than choices, and where it is necessary to always be prepared for the worst case scenario, Quarles said. He said that he joined ExxonMobil several years after the Exxon Valdez oil spill disaster in Prince William Sound.

"I was told that it was a turning point for Alaska and I was also told that it was a turning point for ExxonMobil," Quarles said.

The tragedy of Exxon Valdez had caused ExxonMobil to develop its operations integrity management system, a system designed to make sure that the company's operations protect people and the environment, making sure that people working on company projects and operations remain safe, he said.

"My biggest fear is having to go to the house of a colleague and go to their family and tell them their loved one is not coming home," Quarles said.

Citing an incident in the North Sea, where people working for ExxonMobil had assisted personnel from another company during an emergency resulting from a severe storm, Quarles said that his company takes a very hands-on and caring approach to the training of both its employees and its contractors.

"We foster a safety culture where everyone who steps foot on Point Thomson and sets foot on that site, they recognize that Point Thomson is a place where nobody gets hurt," Quarles said.

With Point Thomson holding about a quarter of the proven natural gas resources on the North Slope, Quarles characterized the field as a pillar supporting the AKLNG project. ExxonMobil has previously said that if the AKLNG project comes to fruition, a second phase of the Point Thomson project will involve the offtake of gas from the field. But the AKLNG project is "a massive, massive project," with a price tag in the range of $45 billion to $65 billion, Quarles said.

"That's the largest investment of its kind in U.S. history," he said.

All of the parties involved in the project are doing their due diligence, to make sure that they can make this project work both for Alaskans and for company shareholders, Quarles said.

"Similar to Point Thomson, the success of Alaska LNG depends on all of us working together," he said.

Quarles asked the people in the Alliance audience for their support in moving projects forward.

"Alaska's future is full of potential and the initial phase for the Point Thomson project is just an example and a precursor for what's to come," Quarles said. "I want you to walk away from here with confidence that ExxonMobil is here for the long term and we have the global experience to make Point Thomson a role model for oil and gas operations in Alaska." ●

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continued from page 25

KELLY Q&A

spikes, which happen overnight.

With the elasticity of demand, coming down takes a long time. We've had serious downward pressure on oil prices since last year. I've noticed we've had about a 2 cent per gallon drop for our price of gasoline at the pump. I'm mixing metaphors a bit here, but it shows you how trends happen. We got up overnight, but now we are down to $3.39 a gallon while the rest of the country is $2 a gallon. We were $3.47. It came all the way down to $3.45 after about nine months. Now we are about $3.39 so now it's moving downward.

The point is, do people have hope? Yeah, they do, maybe for a more stable environment. We have some air quality issues here in the Interior, so there are a lot of reasons for us to go to gas, but it's hard to get as excited as before when heating oil, which used to be about $3.30 a gallon is now about $3.50 a gallon.

Petroleum News: I know this isn't your specialty necessarily, though the research is done in your backyard, Alaska will be on the forefront of Arctic issues for the next year and a half, particularly with the president having just visited. What are your thoughts about the state being able to strike a balance in addressing climate change and embarking on economic development?

Kelly: Security and economic development are the top two things on my list. Most of what I've heard on climate change is nonsense and I don't want us spending any large resources or misdirecting our efforts on climate change when it's about military security. We need to have ports up there and some runways.

We need to have an established military presence up there as the rest of the world is literally trying to take over the Arctic. If you look at what the Chinese and the Russians are doing. We need to respond to that.

Second of all, there are economic opportunities. I support the icebreakers and those types of things. I support the ports so we can have cleanup responses that can happen on a timely basis. We have almost none of those resources now to respond to an oil spill.

When I say oil spill, I don't necessarily mean an American oil spill. Let's say some Russian tanker has an accident up there and that oil comes over to our shores. We didn't do anything to cause it and we don't have the infrastructure to do that now.

So I'm a big believer in establishing security and economic development, and as I say when I talk about security, I don't just mean military security. We have to defend ourselves from the environmental excesses that some of the other countries engage in, and we don't have the infrastructure for that yet. ●

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