



page 5 Stedman says Alaska tax regime unstable, opposed both ACES, SB 21

This week's Mining News



The weekly mining newspaper for Alaska and Canada's North
Week of April 17, 2016

NORTHERN NEIGHBORS

Independent board approves KSM tailings facility, water dam designs

Subsidiary Gold April 11 reported that an independent geological review board has completed its first review of the KSM project's tailings management facility and water storage dam and concluded the designs are appropriate. The board, an eight-member panel chaired by a former industry leader, is expected to issue its final report in May. The board's findings are a significant step toward the project's completion, which is expected to start in 2017. The board's findings are a significant step toward the project's completion, which is expected to start in 2017.



Alaska is different

Supreme Court opinion resonates with Alaska miners at Fairbanks symposium

While not the official theme of the Alaska International Mining Symposium, the notion that Alaska is different was an undercurrent that permeated every facet of the Alaska Miners' Association's spring meeting. The symposium, held in Fairbanks, Alaska, was a gathering of industry professionals and policymakers. The symposium, held in Fairbanks, Alaska, was a gathering of industry professionals and policymakers. The symposium, held in Fairbanks, Alaska, was a gathering of industry professionals and policymakers.

TerraX drills another potentially large gold target at Yellowknife

TerraX Minerals Inc. April 13 released results from nine holes drilled at the Sun Otto gold target on the Walsh Lake property in the Northwest Territories. The zone had not previously been targeted by TerraX, but had been drilled by other companies in the 1980s and 1990s. TerraX said the holes drilled at Sun Otto Highlighted from this drilling include: 49.7 meters of 1.00 g/t gold in hole TW1, 16.411; 38.7 meters of 1.31 g/t gold in hole TW2, 16.412; and 48.55 meters of 1.03 g/t gold in hole TW3, 16.412. These were the northernmost mineralizations in the Sun Otto West Zone. TerraX said it does not know of any historical drilling for at least 500 meters to the north of holes TW1, TW2 and TW3. Overall, the Sun Otto drilling results indicate a large mineralizing system that TerraX believes has the potential to host large high grade zones along a gold trend that has been identified.

EXPLORATION & PRODUCTION

Caelus making cuts

Company suspending drilling and laying off 25 percent of Alaska workforce

By ALAN BAILEY
Petroleum News

Caelus Energy Alaska is suspending drilling operations in its Oooguruk oil field and laying off 25 percent of its Alaska workforce, the company has announced. In an April 8 letter to Gov. Bill Walker, copied to members of the Alaska Legislature, James Musselman, Caelus Energy president and CEO, said that the cutbacks result from "the prolonged depression in oil prices and uncertainty in Alaska's oil tax system." While, under current oil prices, the level of government take on the Oooguruk field leaves Caelus with nothing, the state government is proposing to try to take an even larger piece, Musselman wrote.

In addition to the recent oil price crash

"At today's (oil) prices I have no profits, so my take is zero. So I think the government take could be described as 100 percent." —Pat Foley, Caelus Energy Alaska

Musselman was referring to proposed changes to the tax rules and to the system of tax credits that apply to state oil and gas production taxes. The governor has introduced bills for the changes and the Legislature has been debating and modifying the bills, as a possible way to help address the state budget deficit.

During an April 9 hearing by the Senate
see CAELUS CUTS page 20

EXPLORATION & PRODUCTION

BP planning IPA cuts

Prudhoe Bay operator expects IPA drilling activities to be half of 2015 levels

By ERIC LIDJI
For Petroleum News

BP Exploration (Alaska) Inc. is planning to cut a major portion of its Prudhoe Bay development drilling activities nearly in half this year, as a response to lower oil prices.

The operator of the largest oil field in Alaska expects to drill approximately 31 wells or side-tracks at the Initial Participating Areas this year, compared to 60 in 2015.

Those reductions will almost certainly have a corresponding decline in production. The company is forecasting a 10 to 30 percent decline in crude oil and condensate production and a 2.6 to 24 per-

This year, the company is forecasting crude oil and condensate production in the range of 137,000-176,000 bpd — a 10 to 30 percent decline.

cent decline in natural gas liquids production over the coming year.

The forecasts only cover a segment — albeit a sizable segment — of Prudhoe Bay activities. The Initial Participating Areas, or IPA, is the largest of the three administrative regions at the unit and the first to report plans each year. BP usually files a

see IPA DRILLING page 19

FINANCE & ECONOMY

Oil tax bills in play

House struggles with HB 247 changes; Senate Finance moves ahead with SB 130

By KRISTEN NELSON
Petroleum News

Both House and Senate committee substitutes for the governor's oil tax credit legislation were in play when this issue of Petroleum News went to press April 14, with this Legislature slated to end April 17.

After being amended on the House floor April 12 and 13, House Bill 247 was returned to House Rules.

Senate Resources moved a CS for Senate Bill 130 April 12 and Senate Finance began hearings April 13.

The House Finance CS for HB 247 was amended prior to leaving committee to remove adding a production tax for Cook Inlet oil.

Difficulties the House is having in moving the bill reflects issues in committees, with House Resources reaching more consensus than House Finance based

The governor's bill also makes a change in confidentiality requirements, allowing a report on how much an individual company gets in cash credits; that provision is eliminated in all the committee versions.

on recommendations when those bills passed out of committee.

The Finance CS was adopted on the House floor April 9 and the bill continued to show on the calendar, but was not heard until April 12, when numerous amendments were taken up in an evening session.

see OIL TAX BILLS page 18

Recent Supreme Court opinion in Sturgeon case resonates with Alaska miners at Fairbanks symposium. See Mining News, page 9.

Great Bear adopting new approach, seeking conventional oil targets

Over the past couple of years it has become evident that Great Bear Petroleum Operating, the company that entered the Alaska oil scene in 2010 seeking shale oil plays on the North Slope, has changed its exploration strategy to a more conventional approach. And, during a Senate Resources Committee hearing on April 9, Pat Galvin, the company's chief commercial officer and general counsel, described the evolution in his company's exploration thinking.

Great Bear has assembled a net acreage of some 500,000 acres in state oil and gas leases to the south of the Prudhoe Bay and Kuparuk oil fields. Galvin said that the company has now acquired 500 square miles of 3-D seismic data in its acreage and is currently acquiring another 450 square miles of

see GREAT BEAR page 15

BlueCrest plans offshore drilling, files modified plan of operations

BlueCrest Energy has applied to Alaska's Division of Oil and Gas for approval of a modification to its operations plan for the Cosmopolitan oil and gas field. The change to the plan would allow BlueCrest to drill an additional offshore delineation well in the field using a jack-up drilling rig, probably the Spartan 151 rig that is currently parked in the port of Seward.

One more well

BlueCrest's current plan of operations for the field allows the drilling of three oil and gas exploration wells in the field, one of which has already been drilled. The modified plan would allow a total of four offshore wells to be completed. Buccaneer Energy Ltd, the previous field operator, drilled the one completed off-

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Alaska - Mackenzie Rig Report

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

Alaska Rig Status

North Slope - Onshore

Doyon Drilling			
Dreco 1250 UE	14 (SCR/TD)	Milne Point K-44	Hilcorp Alaska LLC
Dreco 1000 UE	16 (SCR/TD)	Standby	BP
Dreco D2000 Uebd	19 (SCR/TD)	Alpine CD5-02	ConocoPhillips
AC Mobile	25	Kuparuk 2S-11	ConocoPhillips
OIME 2000	141 (SCR/TD)	Alpine CD5-21	ConocoPhillips
	142	Alpine CD2-53	ConocoPhillips
TSM 7000	Arctic Fox #1	Tight Hold	Caelus

Hilcorp Alaska LLC	Rig No.1	Milne Point	Hilcorp Alaska LLC
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Kuukpik Drilling	5	Demobilizing from Placer #3	
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Nabors Alaska Drilling			
AC Coil Hybrid	CDR-2	Kuparuk 2F-18	ConocoPhillips
Dreco 1000 UE	2-ES (SCR-TD)	Deadhorse	Available
Mid-Continental U36A	3-S	Deadhorse	Available
Oilwell 700 E	4-ES (SCR)	Deadhorse	Available
Dreco 1000 UE	7-ES (SCR/TD)	Kuparuk	ConocoPhillips
Dreco 1000 UE	9-ES (SCR/TD)	Deadhorse	Available
Oilwell 2000 Hercules	14-E (SCR)	Deadhorse	Available
Oilwell 2000 Hercules	16-E (SCR/TD)	Mustang location	Available
Oilwell 2000 Canrig 1050E	27-E (SCR-TD)	Deadhorse	Available
Oilwell 2000	33-E	Deadhorse	Available
Academy AC Electric CANRIG	99AC (AC-TD)	Deadhorse	Available
OIME 2000	245-E (SCR-ACTD)	Oliktok Point	ENI
Academy AC electric CANRIG	105AC (AC-TD)	Deadhorse	Available
Academy AC electric Heli-Rig	106AC (AC-TD)	Deadhorse	Available

Nordic Calista Services			
Superior 700 UE	1 (SCR/CTD)	Prudhoe Bay, Standby	BP
Superior 700 UE	2 (SCR/CTD)	Prudhoe Bay Drill Site S, Well 112	BP
Ideco 900	3 (SCR/TD)		Available

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)	Stacked	

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	Stacked out west side of Cook Inlet	Available

Saxon			
TSM-850	147	Stacked	Hilcorp Alaska LLC
TSM-850	169	Stacked	Hilcorp Alaska LLC

Cook Inlet Basin – Offshore

Hilcorp Alaska LLC (Kuukpik Drilling, management contract)			
National 110	C (TD)	Platform C, Stacked	Hilcorp Alaska LLC
	Rig 51	Steelhead Platform, Stacked	Hilcorp Alaska LLC
	Rig 51	Monopod Platform, Drilling	Hilcorp Alaska LLC

Spartan Drilling			
Baker Marine ILC-Skidoff, jack-up		Spartan 151 Upper Cook Inlet KLU#1	Furie

Cook Inlet Energy			
National 1320	35	Osprey Platform, Suspended	Cook Inlet Energy

Mackenzie Rig Status

Canadian Beaufort Sea

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

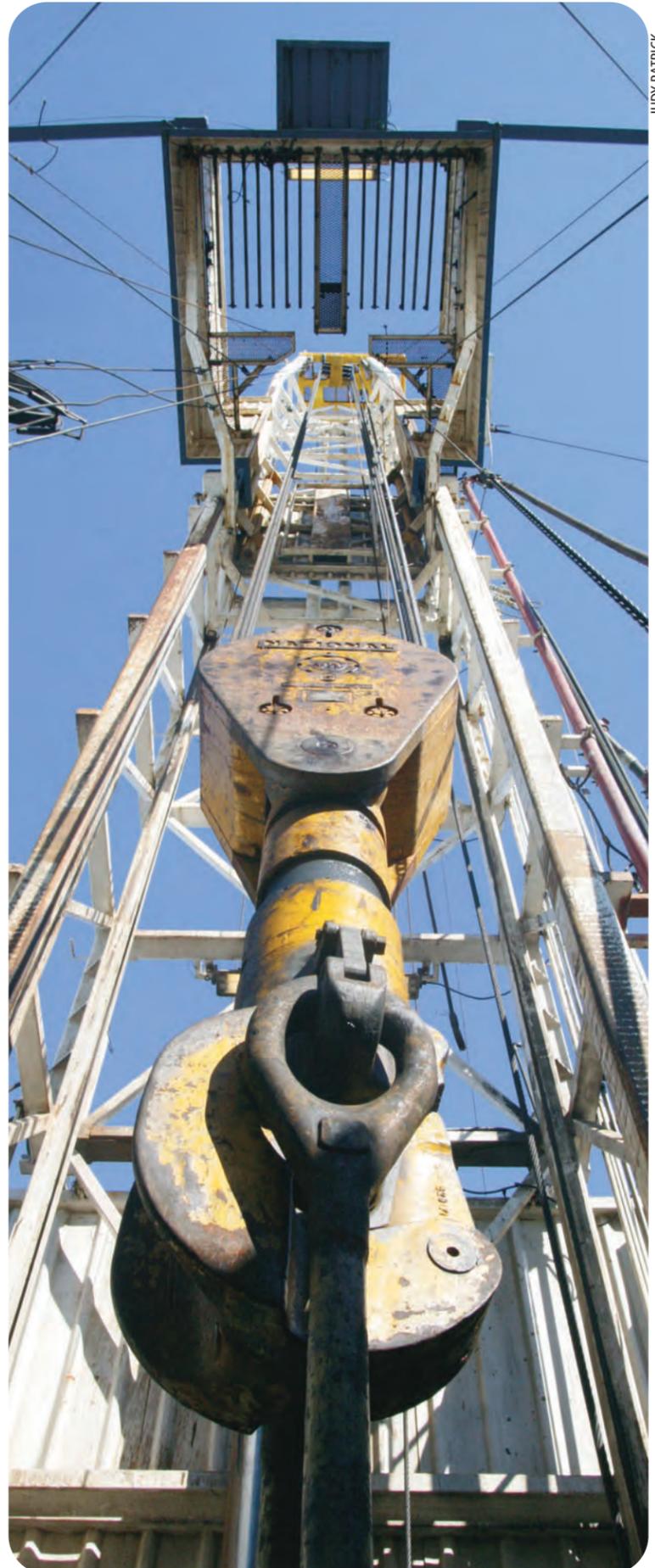
Central Mackenzie Valley

Akita			
TSM-7000	37	Racked in Norman Well, NT	Available

The Alaska - Mackenzie Rig Report as of April 13, 2016.
Active drilling companies only listed.

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

This rig report was prepared by Marti Reeve



JUDY PATRICK

Baker Hughes North America rotary rig counts*

	April 8	April 1	Year Ago
United States	443	450	988
Canada	41	49	99
Gulf of Mexico	24	24	31

Highest/Lowest

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

*Issued by Baker Hughes since 1944

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FINANCE & ECONOMY

US crude production continues to drop

EIA says US averaged 9 million bpd in March, down 90,000 bpd from February; Brent average at \$38 per barrel up month over month

By **KRISTEN NELSON**
Petroleum News

U.S. crude oil production is expected to average 8.6 million barrels per day this year, down from 9.4 million bpd in 2015, the U.S. Energy Information Administration said in its April Short-Term Energy Outlook, released April 12. Production is expected to drop further to 8 million bpd in 2017.

The agency said it estimates total U.S. crude oil production is down 700,000 bpd since April 2015, averaging 9 million bpd in March, a drop of 90,000 bpd from February, with the entire decline from Lower 48 onshore production.

“U.S. crude production is expected to drop an additional 100,000 barrels per day more than previously forecast for both this year and in 2017, as output declines further from 2015’s level, which was the highest since the early 1970s,” EIA Administrator Adam Sieminski said in a statement.

“While U.S. onshore oil production is forecast to decline, oil output in the Gulf of Mexico is on track to increase,” he said.

Price driven

West Texas Intermediate crude oil is projected to remain below \$40 per barrel through the first half of 2017, EIA said, resulting in a production decline in most U.S. onshore oil production regions.

“The expectation of reduced cash flows in 2016 and 2017 has prompted many companies to scale back investment programs, deferring major new undertakings until a sustained price recovery occurs,” the agency said, with expected higher interest rates and tighter lending conditions likely to limit availability of credit to many smaller producers, “giving



ADAM SIEMINSKI

rise to distressed asset sales and consolidation of acreage holdings by more financially sound firms.”

With lower onshore investment, the count of oil-directed rigs and well completions is expected to drop both this year and next, EIA said.

The agency said that “despite continued increases in rig and well productivity and falling drilling and completion costs” projected oil prices are expected to limit onshore drilling and well completions.

Modest increase late in 2017

EIA said U.S. crude oil production is expected to decline from 9.1 million bpd in the first quarter of 2016 to an average of 7.9 million bpd in the third quarter of 2017, which would be 1.8 million bpd below the April 2015 level which was the highest monthly production since 1971.

“Production is expected to begin increasing modestly in the fourth quarter of 2017, reflecting productivity improvements, lower breakeven costs, and anticipated oil price increases,” the agency said.

Crude oil production through the end of 2017 is expected to rise in the Gulf of

Mexico and fall in Alaska. These areas, EIA said, are less sensitive than Lower 48 onshore production to short-term price movements.

In the Gulf of Mexico projects that began production in 2014-15 or will begin this year will increase production from some 1.5 million bpd last year to 1.9 million bpd in the fourth quarter 2017.

In Alaska, production is in decline at legacy fields and is also expected to decrease in response to BP’s recent reduction of rigs on the North Slope, while two projects brought online recently by ConocoPhillips — CD5 in the National Petroleum Reserve-Alaska and a new drill site in the Kuparuk River unit — could, EIA said, “moderate production declines in the region.”

Brent up in March

EIA said the Brent crude oil spot prices increased by \$6 per barrel in March to a monthly average of \$38 per barrel, with declines in the U.S. rig count and some improvements in global economic indicators contributing. At the end

see **CRUDE OUTPUT** page 6

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EXPLORATION & PRODUCTION

AOGCC OKs Hilcorp gas pool expansion

The Alaska Oil and Gas Conservation Commission has approved an expansion of the areal and vertical extents of the Happy Valley Beluga/Tyonek gas pool at Hilcorp Alaska’s Deep Creek unit on the Kenai Peninsula.

The commission said in its April 11 order that the Alaska Department of Natural Resources and Cook Inlet Region Inc. are the landowners and jointly manage the unit.

Union Oil Company of California, the previous Deep Creek operator, drilled the discovery well in 2003 and, having determined the accumulation was commercial, constructed a 15-mile pipeline and installed gas production facilities at the Happy Valley A pad. Regular production began in 2004. Between 2007 and 2008 Unocal added the B pad.

Hilcorp became owner and operator at Deep Creek in January 2012 and has drilled four additional wells from the B pad and acquired 3-D seismic.

The Beluga/Tyonek gas pool was previously defined at the interval between measured depths of 2,997 feet and 10,046 feet in the Superior Happy Valley No. 31-22 exploration well.

Hilcorp requested, and the commission agreed, to expand the vertical limit of the pool upward to a measured depth of 2,246 feet in the same well and to modify the affected area of the commission’s pool rules to bring the Happy Valley Beluga/Tyonek gas pool into alignment with the Happy Valley participating area.

The commission said the order expires five years after the April 11 effective date or upon a change in operator.

—KRISTEN NELSON

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GOVERNMENT

Stedman: Alaska tax regime unstable

Sitka Republican who opposed ACES and SB 21 says state continually fails at establishing a tax program that reflects stability

By STEVE QUINN

For Petroleum News

Sen. Bert Stedman says he's not surprised the Legislature is mired in yet another oil tax debate just three years after the Legislature passed SB 21 — the latest wholesale rewrite of a previous regime. While SB 130 and HB 247 are not rewrites, they still have consumed lawmakers and will until the final hours. Stedman, a Sitka Republican in his 13th year in office, says whatever gets accomplished this year still may not resolve any concerns Gov. Bill Walker or some lawmakers may still have. Stedman offered his assessment in a recent interview with Petroleum News.



SEN. BERT STEDMAN

Petroleum News: Why do you suppose the Legislature is back at the table discussing oil tax and tax credits?

Stedman: Because we have an unstable tax policy for one of the largest oil sovereigns on the planet. And we have one of the top 10 fields in North America yet we have an unstable tax structure. Clearly I don't see how you can conclude it any other way. The industry has come in there time and time again and testified to the complexity and the difficulty in understanding, interpreting and communicating with the Legislature. It's far too complex.

The complexity's at such a magnitude that most of the legislators haven't a clue what the outcome is going to be under given price scenarios. You can see that in the building the last several months. The discussion on the floor came up where people were shocked at the minimum floor is not a minimum floor. It's a 4 percent wellhead value and the deductions go from there.

The NOL, the net operating losses, those of us with a business background we learn about it in our younger days and you get some practical education during your working life of the impacts of net operating losses. No business runs a net operating loss by choice that I'm aware of. So having a tax structure the policymakers don't understand is problematic.

That is the root of why we are here today. When we changed tax structures under SB 21, it wasn't stress tested. I have to hand it to the industry, well the majors. All three of them Exxon, BP and ConocoPhillips, especially the tax guys, they stress test stuff. Like with the gas line, they always talk about the low end and how we could make this thing work under difficult price environments. Then when you have a robust price environment that's great.

But we didn't do that with SB 21. It's a basic error on our part, or oversight. Whatever you want to call it — lack of experience maybe. You've got 60 legislators of varying backgrounds. For whatever reason it wasn't done.

I had hoped we would have learned our lesson with PPT (Petroleum Profits Tax). We came back on PPT

when price changed and the expectations didn't materialize. We had projections of price ranges and what was going to happen to the treasury and when that didn't materialize, we came back to the table.

Petroleum News: Would you have hoped the same lesson would have been learned with ACES then because no one modeled it at the extreme high prices that followed and more money than expected on the high end went to the state.

Stedman: ACES (Alaska's Clear and Equitable Share) got high jacked in my opinion. If the progressivity wasn't jacked up as steep as it was in the political heat of the moment, we probably would still have that structure today. The upside was delivered to the state albeit a little too high but that was also to fund the downside exposure the state had. Now we have the downside exposure and no ability to fix it on the upside. That is going to be interesting when the public realizes that if we get into \$90 and \$100 a barrel oil, the first time period after that we will still have no severance tax because we've still got the NOLs to pay off.

Petroleum News: With that in mind, whatever comes out of SB 130 or HB 247, do you think you'll be back here doing this again?

Stedman: Yes. We've got a system that is too complex and yields surprising results. We need to get it stabilized. As a case in point: Why have a 35 percent base tax that can never get paid that the public thinks is the base tax rate? Then you put a per-barrel sliding credit on it, and that drops the rate way down. Why not get rid of both of them and put in a flat rate. The GVR is another example of a shell game. It's gross value reduction. You take the gross value calculation and throw it against the net to annihilate your tax. I think we are getting rid of some of that. If I had my way, you'd get rid of the whole damn thing. We need to get rid of the conceptual misrepresentation of our tax code. We need to clean it up. Even if the net cash flow stayed the same, both the state and the industry would be far better off. If they just sat down and took the net results of the structure today and cleaned it up and made it straightforward, we would be better off. Both sides of the table.

But how do you go home if you are an elected official if oil is \$80 a barrel and you tell them that severance tax is zero or \$85 a barrel or \$90 a barrel. And severance tax collection is zero. Then you have to explain what an NOL, what it is and why there is a 35 percent credit on it. By the time you walk through all of that, they are not going to believe you. By the time you explain it, they are going to think it's more finance trickery.

Petroleum News: Now, you foresaw — but didn't exactly predict — the possibility of some of this happening two or three years ago.

Stedman: I had a bill to try to get the Legislature,

particularly the Senate, to recognize that there is a problem with the floor, that their interpretation of what the floor is isn't how the floor works. I got one hearing on it, which is great but it didn't register. There may have been some political issues, too. Obviously I wasn't a supporter of SB 21 and for good reason. It was because of the demons buried inside of the tax code that are coming out from time to time. The other was one was the NOLs, which I've been working on for a little over a year now.

Petroleum News: So why is it so difficult to find a sweet spot?

Stedman: That's a good question. It's difficult for the state of Alaska. It's a young state, frankly not very sophisticated — virtually third world in a lot of respects. We don't have the ability to have as much of an arm's length transaction as what we would have if we were a federal jurisdiction or a country.

In other words, if you take Alaska being the only state that has subsurface rights and we compare it to countries that have that issue, they would have a little further arm's length transaction with the industry. There are some advantages to complexity. It's not always bad. The advantage of complexity is when you get more cash than the other guy. That's the advantage. The disadvantage is when the other guy figures it out.

Petroleum News: Do you think this being an election year has anything to do with what will come out of this building?

Stedman: Oh yes. It always does. Everybody in the House runs every two years; and half of us every two years. To me it doesn't. I have had my same position for quite some time. My arguments have been grounded in analytics that I can back up, no matter whether I'm meeting someone from (Dan) Seckers from Exxon, (Scott) Jepsen from Conoco or the BP folks.

We actually have good conversations when I sit down with their tax guy. Jepsen's not a tax guys but he knows this inside and out, and backward; he definitely knows the subject matter.

We have real good conversations on policy and what's good and bad, but when you deviate out of that into the support industries, the quality of the conversation goes straight downhill. It's all taxes are bad and no tax is good. It's very difficult to talk about the complexities and the policy. Quite frankly it's too dang complex.

There are a few guys in the industry you can have a reasonable conversation with guys like Dan Seckers from Exxon, we can sit at the table and go round and round. They are very straightforward. They answer it. My job is to know what to ask them. If you don't know what to ask, the right question, you aren't going to get the right answer.

Having a business background and a finance back-

see **STEDMAN Q&A** page 17



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● ENVIRONMENT & SAFETY

Environmental black-eye in Alberta

Agency jointly funded by province, industry to monitor oil sands environmental impact labeled 'failed experiment,' now disbanded

By GARY PARK

For Petroleum News

It took years and cost tens of millions of dollars to produce what was acclaimed as a world-class agency to monitor the environmental impact of Alberta's oil sands.

The end result was supposed to be an end to arguments that the Alberta government was biased in favor of the industry.

Instead, the effort has been labeled as a "failed experiment" ending up on the shredding floor while fingers of blame point in all directions.

What is irreversible is a decision by Environment Minister Shannon Phillips to disband the Alberta Environmental Monitoring, Evaluation and Reporting Agency that was created in 2012 by the defeated Progressive Conservative government.

Under the new system, the province

"It is hard to escape the conclusion that AEMERA is a failed experiment in outsourcing a core responsibility of government to an arm's-length body."
—report author Paul Boothe

will retain AEMERA's independent scientific review panel, which, under the leadership of a chief scientist, will report directly to Phillips' department.

The panel will advise the chief scientist about what to monitor and how often to do so and will report on the findings.

"In the past there have been questions about the credibility and transparency of this work," Phillips said. "Environmental monitoring will now take its place alongside public safety and public health as part of the core business of government."

She said that outsourcing the work had

created duplication and scientific fragmentation and wasted money.

Independent report critical

The announcement came on the heels of an independent report that described AEMERA as needlessly expensive, poorly coordinated and divided by bureaucratic infighting.

"It is hard to escape the conclusion that AEMERA is a failed experiment in outsourcing a core responsibility of government to an arm's-length body," said report author Paul Boothe, a policy and management expert from the University of Western Ontario's School of Business.

In one of the most damning indictments of a government initiative, he said three years and tens of millions of dollars have resulted in an organization "that is still struggling to get established, dysfunctional relationships with its two key partners" and a failure by all to "realize the promise of the plan to bring critically needed, world-class environmental monitoring to Alberta's oil sands."

At stake is Alberta's global campaign to sell a message that it is a world leader in lowering the environmental impact of oil sands development by reducing greenhouse gas emissions.

Joint coordination the plan

The 2012 plan was designed to bring Alberta scientists together with resources from Environment Canada to jointly coordinate a study of the industry's affect on the region's air, land and water.

The resulting agency was funded by C\$50 million from industry and another

The Canadian Association of Petroleum Producers had earlier expressed concerns about the need for more integration, analysis and coherence at AEMERA.

C\$28 million from Alberta.

Boothe's report said the funding agreement expired a year ago and has never been renewed "in part because of AEMERA's unwillingness to accept (Environment Canada) as an equal partner in oil sands monitoring."

He also wrote that costs were higher than expected because "governance and administrative structure duplicate structures that already exist, at lower cost, in the public sector. In addition, costs are higher because AEMERA has chosen private rather than public sector" salaries and benefits.

The Canadian Association of Petroleum Producers had earlier expressed concerns about the need for more integration, analysis and coherence at AEMERA.

Boothe concluded the agency failed because it was based on a false assumption that the public did not trust Alberta's environmental monitoring because it was done by government. Instead, he said, the public trust was lacking because the monitoring was bad.

Taxation issue

Progressive Conservative interim leader Ric McIver accused Phillips of planning to continue collecting a tax of

see **AEMERA DISBANDED** page 8

ENVIRONMENT & SAFETY

Airborne system measures ocean currents

In a project sponsored by the National Energy Technology Laboratory, Fugro and Arete Associates have developed and commercialized a system that enables the monitoring of ocean currents from the air, the U.S. Department of Energy announced on April 11. The system, which enables the measurement of surface current velocities in near real-time from an aircraft over a broad area, could be used as a rapid source of critical information for oceanographic research, and in emergency situations such as offshore oil spills and search and rescue missions, DOE said.

The system, called the Remote Ocean Current Imaging System, or ROCIS, has already seen its first operational use, covering a distance of 78,000 miles, monitoring conditions in the Gulf of Mexico during a period of intense currents. The system can survey ocean currents at 800-foot intervals over a track of 500 to 680 miles in four hours, a task that would otherwise take four surface vessels 24 hours to complete, DOE said.

ROCIS uses digital camera technology, highly accurate positioning systems and advanced image processing algorithms to use wave measurements to determine surface currents. Data are viewed immediately on the aircraft during data collection and then used to produce a "quick look" map when the aircraft lands. Subsequent full processing of the data takes a few hours.

Funding for the development project came from a research program authorized by the Energy Policy Act of 2005 and supported by lease bonuses and royalties paid by industry to produce oil and gas on federal lands, DOE said. The Research Partnership to Secure Energy for America, under contract to NETL, administers the program.

—ALAN BAILEY

continued from page 4

CRUDE OUTPUT

of the month, however, market expectations of ongoing growth of global inventories contributed to falling prices and Brent ended the month below \$37 per barrel.

EIA is forecasting inventory builds to average 1.4 million bpd this year, and

said that would result in oil prices at or near current levels, and forecast to average \$35 per barrel this year.

By 2017, however, with lower forecast inventory builds, Brent is forecast to average \$41, reaching an average of \$46 per barrel by the fourth quarter, EIA said, with the global oil market expected to be "relatively balanced late in 2017," with the potential for significant inventory draws beyond the 2016-17 period.

West Texas Intermediate is forecast to average the same as Brent, EIA said, based on an assumption of competition between the two crudes in the Gulf Coast refinery market as they have similar transportation differentials.

Natural gas

The Henry Hub natural gas spot price averaged \$1.73 per million Btu in March, down 26 cents from February, EIA said, with monthly average costs forecast to remain below \$3 through December. Henry Hub prices are forecast to average \$2.18 per million Btu this year and \$3.02 in 2017.

Marketed U.S. natural gas averaged 79 billion cubic feet per day in January, up nearly 1 percent from December.

EIA is projecting relatively low production growth most of this year, with low natural gas prices and declining rig activity affecting production.

By the end of the year and into 2017, however, the agency said it expects production to grow in response to an increase in price, industrial demand and liquefied natural gas exports. ●

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• EXPLORATION & PRODUCTION

Imperial leading way in Canada's oil upstream

By GARY PARK

For Petroleum News

When Imperial Oil decides to become a trailblazer in Canada's oil upstream, its peers pay close attention.

And pioneering is what the company has in mind for a proposed new 50,000 barrels per day oil sands facility in the Cold Lake region of northeastern Alberta.

It is seeking regulatory permission to turn a pilot operation into a commercial venture, using an adaptation of the steam-assisted gravity drainage technology whose overriding objective is to use less water and energy for the extraction of heavy crude.

The "solvent-assisted" SAGD method is a key element of both Imperial's amendment to an earlier application for a thermal-recovery operation and the application it has filed for its C\$2 billion plant dubbed Midzaghe, an aboriginal word for owl.

Injecting solvents such as butane and propane reduces the need for steam-generated pressure and the need for high

temperatures in SAGD extraction, allowing more oil and gas to flow to the surface while lowering energy consumption.

A spokeswoman for Imperial said the updated Aspen project application, the first 45,000 bpd phase of that proposal, has also modified a plan submitted to the Alberta Energy Regulator in late 2013.

Others also testing techniques

Other leading oil sands players, Suncor Energy and Cenovus Energy, have also been testing solvent-based techniques for years, chasing the same goals of reducing greenhouse gas emissions and costs.

The pressure on the industry is building as the Alberta government prepares to implement new climate change policies, which will start a year from now with a carbon tax of C\$30 per metric ton.

FirstEnergy Capital analyst Michael Dunn said in a research note that Imperial has years of experience using solvents to squeeze more production from its older wells in

Cold Lake which occupy the same lease areas as Midzaghe.

He rated Imperial as the "most experienced user of solvents in the bitumen recovery process."

However, to date no major oil sands producer has taken the step from a pilot project to a full-scale commercial facility that relies on solvents, making Aspen the potential pioneer, followed by Midzaghe.

Imperial, owned almost 70 percent by ExxonMobil, said it could sanction Midzaghe in 2019 if it receives a regulatory green light, with first oil produced in 2022.

Having taken a step-by-step approach to building its Cold Lake complex over the past 30 years, Imperial is now producing about 160,000 bpd at the site.

Imperial has also announced the sale of its 497 Esso-branded gasoline stations across Canada for C\$2.8 billion, prompting analysts to suggest the company is building a "war chest" that could be used to acquire struggling oil sands producers. ●

Contact Gary Park through publisher@petroleumnews.com

• GOVERNMENT

Back to the real world

Alberta, Saskatchewan turn screws on federal government to approve crude export pipelines; Notley won't take 'no' for an answer

By GARY PARK

For Petroleum News

There are clear signs that Canada's two leading oil and gas producing provinces, despite their own vastly different political ideologies, have declared an end to the six-month honeymoon for the Canadian government of Prime Minister Justin Trudeau.

Saskatchewan Premier Brad Wall, whose right-leaning government won a sweeping third majority on April 4, and Alberta's socialist Premier Rachel Notley, whose approval rating has tumbled to 33 percent from 53 percent since she was elected a year ago, have apparently decided to abandon their roles as Mr. and Mrs. Nice Guy.

Wall suddenly finds he is no longer the lone voice among Canada's political leaders making a case for expansion of their oil and natural gas sectors.

Notley, consistently slow to advocate for the oil patch, now says she won't take no for an answer on getting oil sands bitumen to export terminals on Canada's west and east coasts.

Notley: Support runs both ways

In a televised speech she said Alberta "can't continue to support Canada's economy unless Canada supports us. That means one thing: building a modern and carefully regulated pipeline (to a tanker port). I can promise you this: I won't let up. We must get to 'yes' on a pipeline."

Notley forecast that Alberta's revenues from oil and gas royalties will plunge from C\$10 billion two years ago to about C\$1 billion in the upcoming fiscal year.

"It is in everyone's interest to ensure that the energy exports that are permitted under our climate leadership

plan get the best possible world price."

She said the Trudeau government must give Alberta the tools to better manage its economic crisis by allowing its oil to reach new markets.

During her election campaign last year, Notley said she would not lobby for TransCanada's Keystone XL pipeline to Texas or Enbridge's Northern Gateway pipeline to the British Columbia coast, leaving open Energy East and Kinder Morgan's tripling of capacity on its Trans Mountain system to a tanker port in Vancouver.

Brian Jean, the leader of Alberta's Wildrose Party opposition, said Notley's message was too little, too late from a premier who has "let other provinces and governments demonize our industry. Albertans need more than just standing up (to the federal government) when we are obviously being treated blatantly unfairly."

Wall defending province's interests

Wall followed his election triumph by setting his course to make a case for Saskatchewan on the national stage.

"We're not trying to be a thorn in anyone's side, but we're going to defend our interests and advocate for our energy sector," he told reporters.



RACHEL NOTLEY



BRAD WALL

That means Wall will continue fighting for improved employment insurance from the Canadian government, while "making a case that now is not the right time for a tax of any kind on our economy, including a carbon tax."

Without attaching any names to the message, Wall was clearly directing that warning to Trudeau, who is reportedly mulling a national tax of C\$30 per metric ton on carbon.

No support

What he apparently won't get is any support from Trudeau's energy point-man, Natural Resources Minister Jim Carr, despite the prime minister's vague statements of support for building pipelines to export terminals.

Carr ended any questions about where he stands in speaking to a business audience in Calgary.

"It's not a job for me to advocate on behalf of a particular industry," he said. "It's my job ... to advocate on behalf of creating conditions that will allow us to create jobs sustainably within the natural resource sector."

"It's an interesting question about the way our democracy works — that I should be an advocate for a particular sector. That's not the way it works."

"Our role is to be part of a team of ministers who represent the diversity of the country."

"Industry can expect that I understand the power of wealth creation in the private sector."

"Industry can expect that I will always be available to them if they think we're off the rails or if you have a creative idea that maybe we haven't heard yet and to be available, accessible and have an open mind," Carr said. ●

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● ENVIRONMENT & SAFETY

Scientists research Chukchi biodiversity

Fieldwork in 2015 observed and sampled many species while measuring the ocean currents and seawater composition

By **ALAN BAILEY**
Petroleum News

A team of scientists conducting a five-year study into the biodiversity of the Chukchi Sea has reported some of the results of its first field season, conducted during the 2015 open water season. The study, funded by the Bureau of Ocean Energy Management, the National Oceanic and Atmospheric Administration and Shell Exploration and Production Co., is called the Arctic Marine Biodiversity Observing Network, or AMBON, and involves a team of university and government researchers.

According to a report from BOEM, during the 2015 field season the researchers conducted sampling across the entire Chukchi shelf, from north to south across the shelf and from nearshore to more than 150 miles offshore. The

According to a report from BOEM, during the 2015 field season the researchers conducted sampling across the entire Chukchi shelf, from north to south across the shelf and from nearshore to more than 150 miles offshore.

AMBON cruise succeeded in sampling about 80 percent of the species anticipated on the seafloor and about 90 percent of the expected species of bottom living fish. BOEM said that its interest in the research is the acquisition of data that will improve environmental impact assessments, develop better metrics for cumulative impact analysis and achieve a broader perspective of the Chukchi Sea ecosystem.

General findings

The fieldwork conducted in 2015 established that, although northward flowing water along the Alaska coast in association with the Alaska Coastal Current is relatively warm, the salinity is not as low as expected. Water column chlorophyll, a common measure of food availability for marine organisms, proved particularly abundant in the northern and southern sectors of the study area, with chlorophyll in ocean-floor sediments reflecting a similar pattern.

However, the amount of biomass and the diversity of species living on the seafloor did not particularly correlate with the chlorophyll levels, with concentrations of these organisms being much higher in the northern Chukchi Sea than in the southern part of the sea. On the other hand, concentrations of fauna such

as clams and tube worms, which live in rather than on the sediments, appeared to closely follow the pattern of chlorophyll levels.

Walrus closer to shore

Pacific walrus were most common in the northern part of the study region, where the bottom-living invertebrates that provide the animal's prime food source are particularly abundant. However, as the sea ice recedes, the walrus have to haul out and rest on land, rather than on ice floes, thus causing the animals to seek food resources closer to shore, the BOEM report said.

The researchers observed a variety of seabirds, with highest concentrations occurring in the northernmost and southernmost parts of the region. Seabird concentrations were particularly high around Barrow Canyon, an area off the northwestern tip of Alaska, where physical processes tend to concentrate the birds' prey. Some species such as murres are especially abundant in areas with strong currents and high organic productivity, while bottom-feeding birds such as eiders tend to live nearshore.

An observing network

The general objectives of the AMBON study are to demonstrate the observation of the biodiversity of organisms ranging in scale from microbes to whales, to close gaps in the current knowledge of the biodiversity of the Chukchi shelf; to integrate and synthesize the results of past and continuing research on the Arctic continental shelf; to make observed biodiversity data publicly accessible; to demonstrate how a sustainable observing network can be developed; and to link with other international scientific programs across the Arctic. ●

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AEMERA DISBANDED

C\$50 million for which the industry will get nothing in return, a situation he described as "taxation without representation."

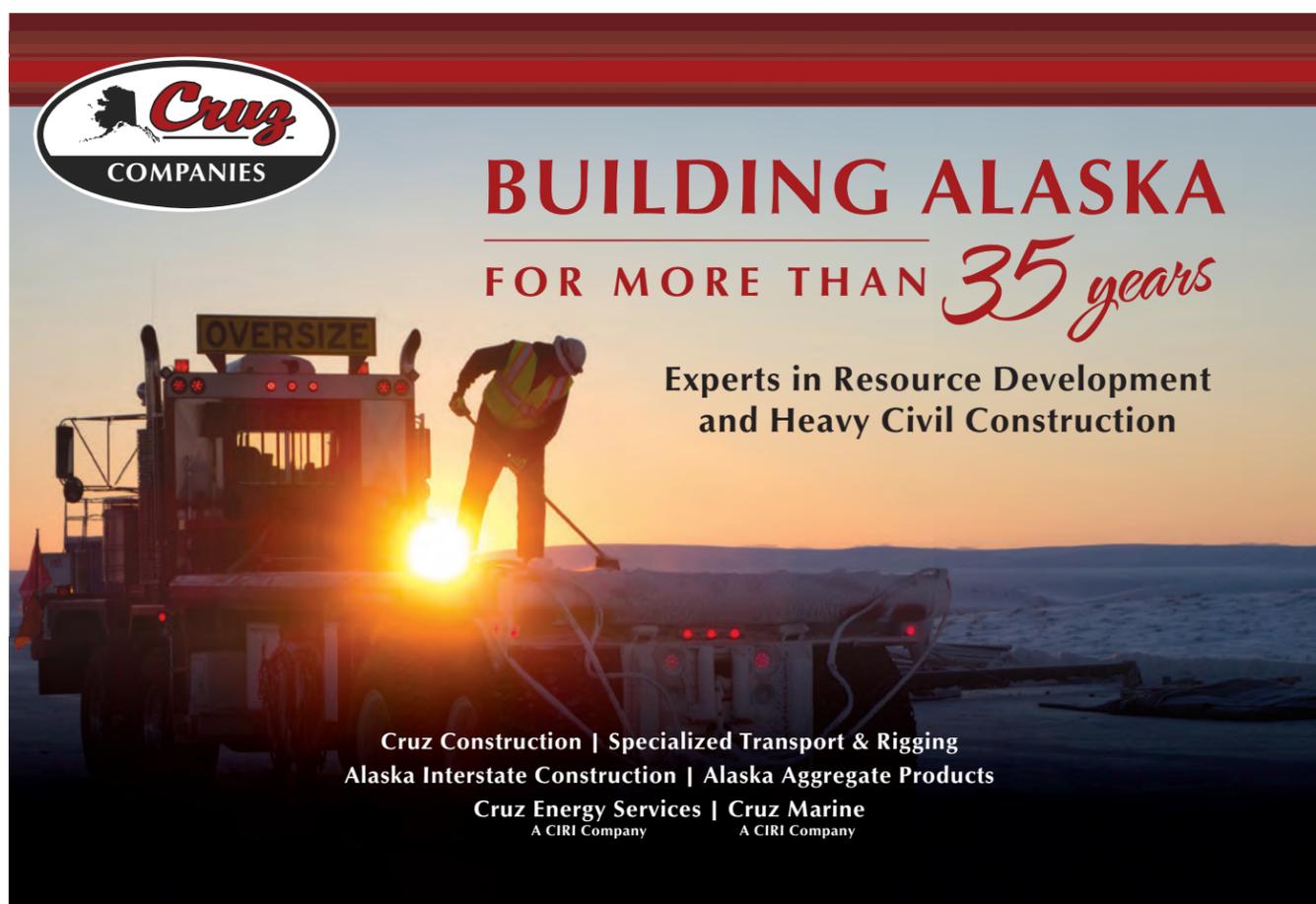
He also accused Phillips of being a persistent critic of the industry, to which she accused him of character assassination and refused to answer any of his questions or challenges.

The need to take some action on the monitoring front gained urgency in 2014 when a federal government review proved that toxic oil sands chemicals were leaching into the Athabasca River, which runs through the major oil sands region and continues through the Northwest Territories to the Arctic Ocean.

Alberta Auditor General Merwan Saher also weighed in with a report that concluded time was wasted in releasing a report by the Alberta and Canadian governments on the monitoring program.

"The report lacked clarity and key information and contained inaccuracies," making it hard to determine what tasks the agency had completed, he said, while flagging weak project management. ●

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NORTHERN NEIGHBORS

Compiled by Shane Lasley



Independent board approves KSM tailings facility, water dam designs

Seabridge Gold April 11 reported that an independent geotechnical review board has completed its first review of the KSM project's tailing management facility and water storage dam and concluded the designs are appropriate. The board, an eight-member panel established early in 2015, has unimpeded access to all technical data necessary to enable them to assess KSM's proposed tailings facility and dam on an ongoing basis, and to ensure these structures meet internationally accepted standards and practices which effectively minimize risks. Andrew Robertson, chairman of the board, said, "We were impressed with the quantity and level of detail and information presented by Seabridge and its technical team on the project's design, and we appreciated the insightful and frank discussions that occurred during our first meeting. We look forward to future meetings as we further develop the board's oversight role in the project." The initial review was developed to answer five questions: are dams and structures located appropriately; are dam sections, materials, construction methods and sequencing appropriate for the site; what are the greatest design, construction and operating risks; are the facilities designed to operate effectively, and are the facilities designed to be safe. The board concluded that it was satisfied with the project's designs and responded favorably to all five questions. Additionally, the board presented a series of recommendations for Seabridge to consider during the engineering and development of the tailings facility and dam. Seabridge Gold Chairman and CEO Rudi Fronk said, "We are pleased that the board, which is a voluntary undertaking on our part, was impressed with the practical and robust solutions that have been selected for tailing and water management at KSM and have concluded that the designs are appropriate for the project. We look forward to the board's continued involvement as they fulfil their important role in providing oversight of the KSM Project." Over the next several weeks, the results of the board's first report will be shared with the Canada, British Columbia and Alaska governments; aboriginal groups; and other stakeholders who participated in the environmental assessment of the project.

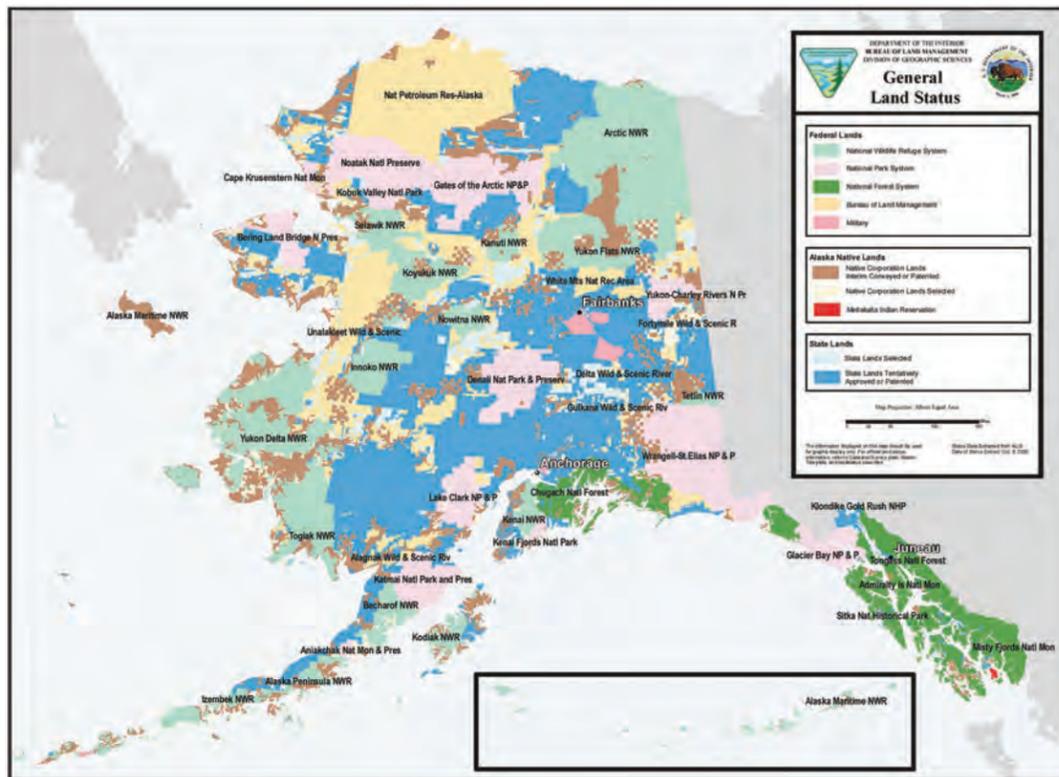


RUDI FRONK

TerraX drills another potentially large gold target at Yellowknife

TerraX Minerals Inc. April 13 released results from nine holes drilled at the Sam Otto gold target on the Walsh Lake property of its Yellowknife City Gold Project in the Northwest Territories. This zone had not previously been tested by TerraX, but had sporadic drilling reported from the 1980s and 1990s. TerraX said the holes drilled at Sam Otto cut wide, pervasive and persistent zones of mineralization. Highlights from this drilling include: 49.7 meters of 1.00 grams per metric ton gold in hole TWL16-011; 30.7 meters of 1.33 g/t gold in hole TWL16-013; and 40.85 meters of 1.03 g/t gold in hole TWL16-012. These were the northernmost holes of the 1,510-meter program and showed the strongest mineralization in the Sam Otto West Zone. TerraX said it does not know of any historical drilling for at least 500 meters of strike north of holes TWL16-012 and 013. Overall the Sam Otto drilling results indicate a large mineralizing system that TerraX believes has the potential to host large high grade zones along a gold trend that has been identified

see NORTHERN NEIGHBORS page 11



REGULATION

Alaska is different

Supreme Court opinion resonates with Alaska miners at Fairbanks symposium

By SHANE LASLEY
Mining News

While not the official theme of the Arctic International Mining Symposium, the notion that Alaska is different was an undertone that permeated every facet of the Alaska Miners Association's spring mining convention in Fairbanks.

Alaska's extraordinary mineral endowment and the unique physical challenges of realizing this potential in a vast and underdeveloped Arctic state are traditional topics for discussion at this biennial gathering in the "Golden Heart City."

This year, however, an exclusive triad of rules meant to carve out areas of Alaska for conservation while at the same time providing the state and its Native peoples large tracts of resource-rich lands and a special set of rules crafted to allow them to sustain themselves off the abundant resources these properties offer was on the minds of many attending the symposium.

It's unanimous

From Sen. Dan Sullivan, R-Alaska, addressing the mining community via a video link from Washington D.C., to placer miners who have all but given up on attempting to mine federal lands in the state, "Alaska is different" was an oft-cited phrase at the AMA 2016 spring convention. This quote was not attributed to a lifelong Alaskan brimming with frontier spirit but to the eight U.S. Supreme Court justices that recently agreed that it is so.

The august panel of America's top judges, representing a broad spectrum of ideologies, came to this unanimous decision while considering "Sturgeon v. Frost," a case that centers on whether state or federal agencies have jurisdiction over a river running through a national preserve.

"All those Alaska-specific provisions reflect the simple truth that Alaska is often the exception, not the rule."
—U.S. Supreme Court Chief Justice
John Roberts

This precedent setting case was initiated by John Sturgeon, an Alaskan who has long used the Nation River to traverse the Yukon-Charley National Preserve in route to his hunting spot.

In 2007, however, Sturgeon parked his hovercraft on a gravel bar of the Nation River to repair a steering cable. During the maintenance stop, U.S. Park Service officers informed him that hovercrafts were not allowed in federal parks or reserves.

"To be frank, they were real jerks," Sturgeon recalls.

The longtime Alaskan felt that according to the Alaska National Interest Lands Conservation Act his hovercraft was parked on navigable waters that belonged to Alaska and should be subject to the laws of the state.

After a failed attempt to work directly with the Park Service, Sturgeon took the federal land manager to court over his right to use Alaska-owned waterways as a highway to his moose hunting area.

While the Supreme Court did not rule definitively on the legality of a hovercraft traveling on an Alaska-owned river through a national park, all eight justices remaining on the panel after the recent death of Justice Antonin Scalia agreed that federal land managers need to recognize that a special set of rules apply to Alaska.

"It is a unanimous decision, and these are rare," Matt Findley, the attorney that argued the case for Sturgeon, informed a crowd gathered at the AMA

see DIFFERENT page 12



NEWS NUGGETS

Compiled by Shane Lasley



SHANE LASLEY

Roughly US\$11 million of exploration has been completed on the Chisna property. This hole, drilled in 2010, tested outcropping copper-gold mineralization at the Grubstake porphyry target at Chisna.

Millrock cuts attractive deal on Chisna copper project

Millrock Resources Inc. April 7 reported that it paid Corvus Gold Inc. US\$25,000 for the mining claims that make up the Chisna copper-gold project in Alaska. Along with 100 percent interest in the project, Millrock purchased an exclusive copy of a proprietary exploration database covering the claims and the surrounding district. The data represents an estimated US\$11 million worth of exploration work that demonstrates the potential for large copper-gold porphyry deposits. The proprietary database also provides information on vein and intrusion-hosted gold deposits; and nickel-platinum group element deposits. Millrock President and CEO Gregory Beischer said, "We are pleased to add this project to our portfolio and look forward to utilizing the information that we've purchased." Corvus will retain a 1 percent net smelter returns royalty on the claims. "The continued expansion of the Corvus royalty portfolio is intended to provide shareholders with exposure to future discoveries with production potential while minimizing dilution and cost risk associated with non-core assets," explained Corvus CEO Jeff Pontius. "Chisna is an exciting gold and copper project in an underexplored, prospective area. Partnering with a quality exploration group with extensive experience in Alaska offers Corvus shareholders potential for future zero cost gold production." The eastern edge of the Chisna project is accessed by a series of trails leading from the paved Tok Cutoff highway. The trailhead is about 2.5 miles west of the village of Slana and 64 miles south of Tok. ●

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OPINION

Miners seek statutory reform of ANILCA

At least half a dozen matters regarding management of Alaska's federal lands are long overdue for congressional attention

By J. P. TANGEN

Special to Mining News

On March 28, 2016, six days after the U. S. Supreme Court rendered its unanimous opinion in the matter of "Sturgeon v. Frost," I offered testimony before the U.S. Senate Energy and Natural Resources Committee on behalf of the Alaska Miners Association. My testimony concerned six specific statutory recommendations for resolving many of the ongoing issues Alaskans are laboring under as the result of wrong-headed interpretations by the four major federal land-managing agencies in Alaska.

The testimony initially picked up on "Sturgeon" because of two factors. First, the opinion was unanimous, meaning that irrespective of suggestions of political factions within the Supreme Court, at least when it comes to Alaska, every single sitting justice on the highest court in the land recognizes that Alaska is different. Alaska is different implicitly when considering its history up to and including the Alaska Statehood Act and the subsequent Alaska Native Claims Settlement Act of 1972 and explicitly different when reading the text of the Alaska National Interest Lands Conservation Act of 1980. And secondly, the U.S. Ninth Circuit Court of Appeals got its knuckles severely rapped with its perversely narrow reading of the applicable law.

The case was remanded for further proceedings in the lower court, and whether that means the Ninth Circuit will revisit its opinion or remand it further to the Alaska federal district court remains to be seen. However, it will be harder for the bureaucracy to find an end-run around the language in "Sturgeon." Hopefully, the district court will take heart from the guidance and begin to decide challenges under ANILCA by recognizing that "[s]tatutory language cannot be construed in a vacuum [and that it] is a fundamental canon of statutory construction that the words of a statute must be read in their context and with a view to their place in the overall statutory scheme" for a change.

In essence, the organic acts of the four major federal land-managing agencies regulating Alaska land must be read through the prism of Alaska statutory trilogy – the Statehood Act, ANCSA and ANILCA.

Interpretation of "Sturgeon" must be guarded, however, because SCOTUS did

Mining & the law

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not address the specific arguments made by the parties. It is reasonably likely that on remand one argument or another will result in more discord. Obviously, a good result would be for the National Park Service to change its wanton ways; but somehow, I suspect that to be unlikely. Mr. Sturgeon spent the best part of three-quarters of a million dollars (largely of his own personal funds), but the United States has the full faith and credit of the United States to bring to bear when it comes to matters such as this.

Beyond the "Sturgeon case, however, there were five other legislative requests in the AMA testimony, including:

1. An ANILCA-specific definition of what constitutes a "withdrawal". There is a definition in the Federal Land Policy and Management Act that simply makes no sense in terms of what constitutes a withdrawal in Alaska. Everyone in Alaska knows what it means to withdraw land from, for instance, mineral entry; yet at least one federal district court has decided that a stilted and incongruous definition borrowed from a different statute should be the guideline.

2. The Alaska Land Use Council should be reconstituted. The Council, consisting of 12 members, half from the federal land-managing agencies and half from the interested state agencies, and co-chaired by the governor of Alaska on the one hand and a representative of the president of the United States on the other, functioned well for a decade. In 1990, it was allowed to sunset despite unanimous recommendations by council members and chairmen that it be continued. This council gave a meaningful voice to Alaskans with regard to the management of "Conservation System Units" created under ANILCA.

3. Numerous public land orders

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TerraX Minerals completed 7,310 meters of drilling during a winter program at Yellowknife that began in February.

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NORTHERN NEIGHBORS

by trenching, mapping, historical drilling and geophysics for at least 1,500 meters of strike length. Following the Sam Otto drilling, TerraX drilled six holes totaling 1,146 meters at Homer Lake, a target on the Northbelt property that is prospective for lead and zinc as well as high grade silver and gold target. The 2016 winter drill program at the Yellowknife City Gold Project was completed on March 30 with 7,310 meters having been drilled.

Agnico continues exploration for gold at Aura's Greyhound

Aura Silver Resources Inc. April 12 said Agnico Eagle Mines Ltd. is planning a third season of exploration on Aura's Greyhound property located some 35 kilometers (22 miles) south of Agnico's Meadowbank gold mine in Nunavut. A ground magnetic resonance survey of the property is currently underway. This detailed survey will cover roughly an area of about 8,000 meters by 3,000 meters that includes a broad area to the east of the all-weather Meadowbank road (running through the claims) which has not been explored extensively in the past but has known mineralized showings and boulders. Mapping and prospecting within the area of the survey will determine the extent and range of surface mineralization as well as outline structural features. A drill program is scheduled to begin in August with the priority target to be located in close proximity to drill hole GHD15-17, which intersected greater than 25 meters of a stockwork zone of quartz-carbonate veining hosted within mafic volcanics in which the bottom 1.5 meters of core returned 6.41 grams per metric ton gold at 137.8 meters vertical depth. The first priority is to deepen hole GHD15-17 in order to determine the extent and depth of this high grade gold mineralization. Two additional holes are also proposed adjacent to either side of GHD15-17. Other holes on a 5,000-meter trajectory to the Dingo zone are also being considered.

Maiden gold resource at Pistol Bay's Vickers Zone, Nunavut

Northquest Ltd. April 8 reported an initial resource estimate for the Vickers Zone of its Pistol Bay gold project in eastern Nunavut. Based on 17,240 meters of drilling in 69 holes, Vickers encompasses 7.79 million metric tons of inferred resource averaging 2.95 grams per metric ton (739,000 ounces) gold. This resource is contained in seven domains within the Vickers Zone. Roughly 75 percent of this inferred resource – 5.62 million metric tons averaging 3.09 g/t (558,000 oz.) gold – is found in Domain 101. A technical report supporting the resource and describing in detail the nature and distribution of 16 other gold occurrences on the Pistol Bay property will be filed on SEDAR in 45 days.

Goldstrike fills coffers for 2016 gold exploration at Plateau, YU

Goldstrike Resources Ltd. April 7 reported the closing of the final tranche of a C\$3.03 million non-brokered private placement. As a result, the company issued 5,470,014 flow-through units at C17 cents each on March 21; 16,167,517 non-flow-through units at C13 cents each on March 24; and 4,461,538 non-flow-through units on April 5. Each flow-through unit included one flow-through common share and one purchase warrant exercisable to purchase one non-flow-through share for C30 cents until March 21, 2018. Each non-flow-through unit included one common share and one warrant exercisable to purchase one share for C25



Goldstrike Resources encountered visible gold in the first hole drilled at the Plateau property in 2015. Targeting the Goldstack zone, this hole cut 17.5 meters averaging 13.25 grams of gold per metric ton.



An array of diamonds from the CH-6 kimberlite pipe at Peregrine Diamonds Ltd.'s Chidliak project, which is located 120 kilometers (75 miles) north of Iqaluit, the capital of Nunavut.

cents until March 24. All warrants are subject to early expiry conditions. Goldstrike paid finders' fees of C\$98,525 to Mezzo Consulting Services S.A. and \$455 to Canaccord Genuity Corp. No finder's warrants were issued. This financing provides Goldstrike with the funds to execute this summer's planned exploration and drilling program on its Plateau gold property in the Yukon Territory, where significant drill results have been obtained in multiple holes. The best such intersection was 13.25 grams per metric ton gold over 17.5 meters in the Goldstack Zone, including 35.88 g/t gold over 5.7 meters.

Impressive results from modest exploration program at Chidliak

Peregrine Diamonds Ltd. April 7 reported that the 2015 exploration program at its Chidliak diamond project in Nunavut has significantly increased the mineral resource for the CH-6 kimberlite pipe. The upper 260 meters of CH-6 now contains 4.64 million metric tons of inferred resource averaging 2.45 carats per metric ton (11.39 million carats) diamonds. This marks a 40 percent increase in tonnage and 33 percent increase in contained diamonds compared to a resource calculated early in 2015. The updated resource includes a newly identified zone estimated to contain 3.15 million carats in 0.76 million metric tons, for an estimated grade of 4.16 carats per metric ton. Additional tonnage classified as a "target for further exploration" of 2.34 to 3.75 million metric tons has also been identified to a depth of 380 meters below surface at CH-6. "When we planned the 2015 resource development program for the CH-6 kimberlite, the challenge was to design a cost effective program that would make a material difference to the Chidliak project," explained Peregrine President and CEO Tom Peregoodoff. "With a simple two-hole program and additional microdiamond sampling of existing

core, we have exceeded the targeted resource expansions we initially envisaged. The 33 percent uplift in the CH-6 diamond resource announced today should have a positive material impact on the outcome of the Preliminary Economic Assessment. Work continues on the maiden inferred mineral resource for the CH-7 kimberlite, and I look forward to its completion in early May and its incorporation into the PEA."

Brixton raises C\$1M; McEwen becomes largest shareholder

Brixton Metals Corp. April 7 reported the closing of the first tranche of a non-brokered private placement financing consisting of 6,233,000 units for C10 cents each and 4 million flow-through shares at C10 cents each for aggregate gross proceeds of C\$1,023,300. Each unit consists of one common share and one transferable purchase warrant exercisable into one common share of the company at a price of C15 cents per share for a period of 36 months from the closing date. Robert McEwen (Evanachan Ltd.) and CMP 2016 Resource Limited Partnership have subscribed for 2.5 million units and 2.5 million flow-through shares, respectively. After the share issuances are completed, Brixton will have 25,589,926 shares outstanding on an undiluted basis. McEwen becomes Brixton's largest shareholder holding 13.7 percent; CMP holds 9.7 percent; Hecla Mining holds 8.8 percent; and management and directors collectively hold 15.8 percent of Brixton shares. The offering shall remain open for a second closing until April 29. The proceeds will be used to fund exploration activities at Brixton's Langis high-grade silver project in Ontario and Thorn gold-silver project in northern British Columbia, as well as for general corporate and administrative expenses. Finders' fees of C\$10,700 in cash, 157,200 in common shares and 439,200 of warrants were paid by the company. ●

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GOLDSTRIKE RESOURCES LTD.

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continued from page 9

DIFFERENT

spring convention.

Alaska triad

The Supreme Court cited a triad of statutes – Alaska Statehood Act, Alaska Native Claims Settlement Act, and ANILCA – that sets aside certain lands for conservation, while granting Alaska and the First Peoples of the state the opportunity to choose lands with the resource potential to provide economic opportunities.

The Statehood Act provided Alaska with the choice of 104 million acres so that the state could develop its resource-rich lands to support its residents spread across a vast area; ANCSA, likewise, provided the state's indigenous people 44 million acres of lands for traditional and commercial use as they see fit; and ANILCA set aside 106 million acres of federal lands in Alaska in conservation units.

Without precedent in the United States, this trilogy of statutes gives Alaska special considerations when it comes to lands both inside and outside of national parks and other conservation units in the state.

While not fully resolving whether Sturgeon is allowed to drive his hovercraft on a state-owned river through a federally-held preserve – the case was remanded back to the 9th Circuit Court for reconsideration – all eight Supreme Court justices agreed that lower court's decision didn't take into account the unique authorities afforded to Alaska under ANILCA.

"All those Alaska-specific provisions reflect the simple truth that Alaska is often the exception, not the rule," Chief Justice John Roberts inked in the court's opinion.

The justices also agreed that the Ninth Circuit Court of Appeals based its ruling against Sturgeon on a narrow and out of context interpretation of the law.

The Supreme Court decision cautioned the Ninth Circuit and other courts that certain words and phrases in a statute should not to be considered "in a vacuum."

Referencing precedent, Chief Justice Roberts wrote, "It is a fundamental canon of statutory construction that the words of a statute must be read in their context and with a view to their place in the overall statutory scheme."

The high court's opinion confirms the idea that federal agencies need to consider the exceptional provisions outlined in the

overall statutory scheme for Alaska – Statehood Act, ANCSA and ANILCA – which could have implications beyond whether a hunter is subject to state or federal regulations while traveling a river through a national park.

Findley said future land use disputes between Alaska and federal regulators will be subject to the opinion penned by Roberts and unanimously supported by his fellow Supreme Court justices.

"This is the Supreme Court telling you: 'Alaska is different; it gets different treatment, and it should be analyzed differently,'" the attorney said.

Broader influence

There is no shortage of state-federal land use disputes in Alaska that will likely be influenced by the high-court decision, many of which have implications on the access and development of Alaska's rich mineral resources.

RS 2477 rights-of-way may be one such dispute that is closely related to the "Sturgeon v. Frost" case.

Under the Mining Law of 1866, states were granted right of way for the construction of highways over public lands on his-

toric roads, streets, trails and other such corridors. The Alaska Legislature has identified more than 600 of these rights-of-way in statute, many of which pass through federal lands, including national parks. In many instances, however, federal agencies have refused to recognize these state-owned corridors until forced to by the court.

For the rights-of-way that have been settled and run through federal lands, the RS 2477 corridor is the dry land equivalent to the Nation River.

The Supreme Court opinion also could weigh on the U.S. Bureau of Land Management's plans to designate 685,000 acres of the historic Fortymile mining district in eastern Alaska as an Areas of Critical Environmental Concern, a move that would put this area in a conservation unit that is off-limits to mining or other development.

The Alaska Miners Association has argued that this conservation set aside is in direct violation of the "no more clause" in ANILCA.

In brief, the "no more clause" promises that the federal government will not withdraw more than 5,000 acres of Alaska lands without an act of Congress.

While the Supreme Court decision on Sturgeon v. Frost does not address this issue, it is a reminder that Alaska has its own set of rules that federal regulators need to consider before issuing traffic violations on state-owned rivers or creating de facto parks in Alaska. ●

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TANGEN

imposed on Alaska lands pursuant to ANCSA Section 17(d)(1) in anticipation of ANILCA are no longer needed and should be statutorily revoked. In 2006, the BLM filed a report with the Senate Energy and Natural Resources Committee recommending the lifting of several of these orders; however, the BLM has never followed through. Clearly, BLM needs statutory mandate.

4. Revised Statute 2477 rights-of-way need to be statutorily recognized. RS 2477 granted rights-of-way across federal lands. RS 2477 was prospectively repealed when FLPMA was enacted; however, existing rights-of-way, including numerous trails in Alaska, were recognized by the State of Alaska and enumerated in the Alaska statutes. That should have been sufficient for the United States to step aside. Instead, the BLM has taken it upon itself to contest every demand for recognition by the State, at great cost to both governments. The request of the Alaskan Miners Association is that the requested rights-of-way be recognized immediately and without qualification.

5. In a similar vein, title to submerged lands in Alaska passed to the State upon statehood, contingent only upon "navigability"; however, the BLM has challenged requests by the State over what constitutes "navigability" in any specific case. These challenges are nonsense and should be barred. We have proposed language that makes it clear that if the body of unfrozen water can support a laden raft, it is navigable for the purposes of the Statehood Act. No further questions need be asked.

Although it is never clear whether or when any statutory recommendation will gain traction, it would appear, in light of the "Sturgeon" case, that now is as good a time as any to advance these legislative requests on behalf of the people of Alaska and our mining industry. ●

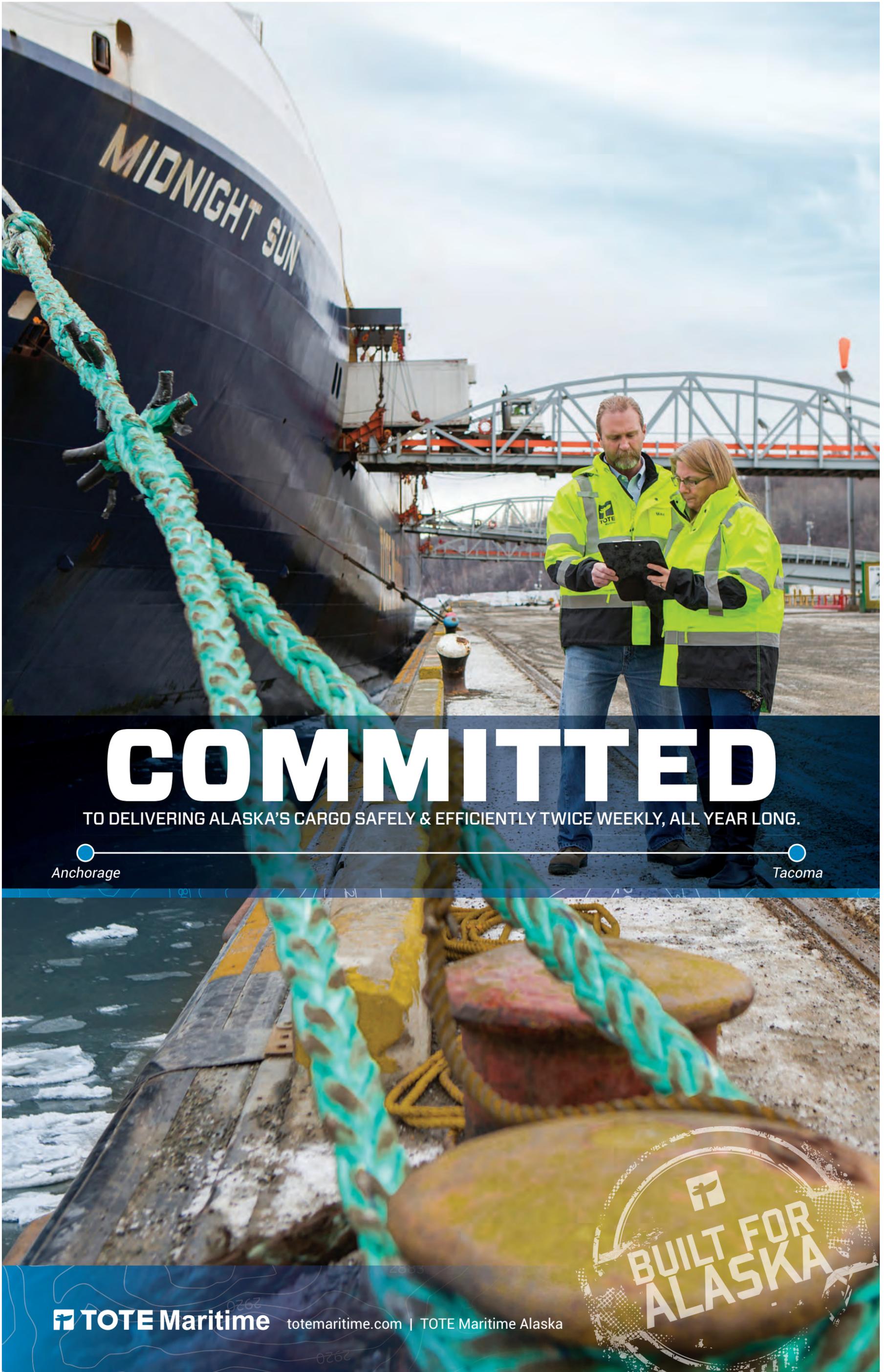
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Alberta facing an 'ugly' quarter

Capital spending and cash flow continue downward spiral; provincial government bracing for its lowest royalty revenues in 42 years

Natural gas takes beating

Long accustomed to living off scraps and facing the worst natural gas prices in 18 years, Canada's gas sector is into full survival mode.

The result is a fight for limited market share among gas producers, with Seven Generations Energy and Tourmaline Oil emerging on top, followed by ARC Resources and Peyton Exploration & Development in a ranking of the top 20 producers by BMO Capital Markets.

The best performers have cash costs "well below current commodity prices," said Greg Dean, who oversees C\$2 billion of investment at CI Financial Corp's Cambridge Global Asset Management. "They are winning a market share game," he said.

Even though high-end producers Canadian Natural Resources, Abu Dhabi's Taqa North and Centrica's Direct Energy have curbed output as spot gas prices have fallen to C88 cents per gigajoule at Alberta's trading hub, the lowest point in 18 years, Western Canada gas output has risen 5 percent from a year ago.

CNR, which remains Canada's largest gas producer, has shut in about 40 million cubic feet per day and is trying to bring down half the costs of its remaining output while considering its options, said Chief Operating Officer Tim McKay.

But, as Canada exits the winter heating season, gas in storage stands at a record 511 billion cubic feet, up 90 percent from a year earlier, Enerdata reports.

Martin King, an analyst with FirstEnergy Capital, said some of the lower tier producers "are on the ropes and will go under or get swallowed up by other companies. There's going to be virtually no drilling this summer, especially for gas."

TD Securities said in a note to investors that companies have "generally prioritized the sale of lower-quality assets, resulting in either limited market interest or reduced transaction metrics.

"Given the continued uncertainty in commodities, elevated debt levels, the emergence of a number of new third-party infrastructure financing companies and the limited appetite for assets currently in the market, we expect to see an acceleration of infrastructure-focused transactions in 2016," the report said.

TD noted that the 17 Canadian gas-weighted companies in its coverage area

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By **GARY PARK**

For Petroleum News

If Canada's petroleum industry and its producing provinces had any questions about the challenge they face in trying to win over the hearts and minds of the public that was taken care of on the day they swallowed a dose of bad-tasting reality.

The Canadian Association of Petroleum Producers forecast that capital spending will continue its headlong plunge this year to C\$31 billion from C\$81 billion in 2014.

"We have never had a two-year pullback of this magnitude," said CAPP President Tim McMillan. "It's affecting oil and natural gas. It's conventional and oil sands. We're seeing the pullback in all sectors."

Also at stake is an industry that has fueled the growth of Canada's economy since the turn of the century.

The Alberta government is expected to forecast its lowest return on royalties in 42 years, pegging C\$1.4 billion for 2016-17.

Investment dealer Peters & Co. said upcoming financial reports are likely to show a 50 percent decline in cash flow for the first quarter from the last three months of 2015.

In addition, oil and natural gas producers are now entering a period when prices are no longer protected by hedging agreements.

"It is going to be ugly," analyst Nick Lupick of AltaCorp Capital told the

McMillan said data compiled by CAPP and Barclays Bank showed that capital investment has dropped further in Canada since 2014 than in any other oil-producing region.

Calgary Herald. "The only companies that are going to have a decent quarter are those with meaningful hedges in place."

He said heavy crude prices were too low in January and February to yield positive operating netbacks for most producers.

Piling on

But the response from the rest of Canada was, at best, a collective shrug and, at worst, a thumbing of the nose.

The Quebec government, which has vigorously campaigned against TransCanada's Energy East pipeline despite the chance to eliminate 700,000 barrels per day of offshore crude imports as feedstock for its refineries, demonstrated its level of empathy.

The province declared that it wants to reduce the province's use of fossil fuels by 40 percent over the next 14 years.

Piling on, University of Alberta energy and environmental economist Andrew Leach argued that an overbuilt pipeline network could be just as bad as an underbuilt one.

He called for more analysis by the industry to prove conclusively that more pipelines would result in significantly higher prices on export markets for Canadian products.

Greatest drop in investment

McMillan said data compiled by CAPP and Barclays Bank showed that capital investment has dropped further in Canada since 2014 than in any other oil-producing region.

CAPP also said a lack of pipeline access impairs Canada's ability to compete with other crude-producing regions, above all the United States, for both the best market prices for crude and natural gas and investment dollars.

That will hamper growth in Canada's energy sector even when oil prices start to recover, McMillan said, adding: "Today, everywhere in the world has pulled back on their capital expansion, but nowhere as fast or as deep as Canada."

But the United States, "our only customer and No. 1 competitor, is certainly not standing still. We as a country need a common effort to have a level playing field in North America."

In addition, CAPP increased its estimate of direct and indirect job losses from the downturn, raising the total to 110,000 from 100,000 in October.

Jackie Forrest, vice president of energy research at ARC Financial, said the decline in upstream activity will also extend into 2016 from 10,400 wells drilled in Western Canada in 2014, to 5,400 last year and 3,500 this year.

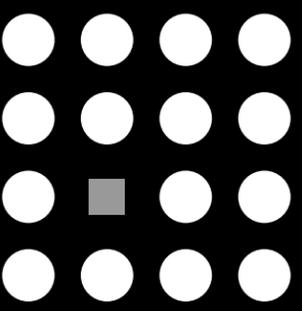
She said that trend will be accompanied by a sharp decline in oil sands activity as mega-projects come closer to completion, even though the reduction in capital spending reflects downward pressure on costs from labor to materials. ●



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GREAT BEAR

3-D data. To date, the company has drilled three wells in its leases.

Shale play uneconomic

After drilling the first two of those wells in 2012, close to the Dalton Highway, south of Prudhoe Bay, to test the shale oil development concept, Great Bear concluded that an immediate shale oil development would be uneconomic, Galvin said.

“What we discovered through the course of that is that the cost structure on the North Slope currently would prohibit the ability to develop a shale play,” Galvin said. “If you took the Lower 48 shale plays and dropped them on the North Slope of Alaska they would still not be economic, given the cost environment we experienced between 2010 and 2014.”

In fact, there is a “Catch 22” situation, in which the needed cost structure cannot arise until there is a level of drilling appropriate to a shale oil development, while, on the other hand, that development cannot occur without the appropriate cost structure. Great Bear has elected to address this conundrum by first going after more conventional oil prospects in its acreage, to lay the starting infrastructure for a potential future shale oil program, Galvin said.

“So, we still believe that a shale play is a potential in the long term on the North Slope, but it will have to be built upon the foundation of a series of conventional plays,” he said.

And, with that in mind, Great Bear has

Great Bear says tax credits underpin financing

During an April 9 Senate Resources Committee meeting, held to garner comments about proposed changes to the state oil production taxes and tax credits, Pat Galvin, Great Bear Petroleum Operating’s chief commercial officer and general counsel, told the committee that exploration tax credits are critical to the acquisition of low-cost financing for exploration activities and that uncertainty or cut-backs in the credit system would undermine investment in the search for North Slope oil resources.

Galvin expressed his company’s worries over current uncertainty relating to the future of the state’s tax credit system. Certainty over the future payment of tax credits is the only means of obtaining loans, as distinct from equity investments, in the risky business of oil exploration, he said. And money from tax credits is plowed back into further exploration, he added. Uncertainty or delays over tax credit payments will increase financing costs and ultimately scare away potential investors. The result would be a slowdown in exploration and less exploration activity, Galvin said.

—ALAN BAILEY

expanded its management team to include people with oil industry operations experience, Galvin said. For example, the company’s new president and CEO, Mike Mason, has enjoyed a long career in the oil industry as a petroleum engineer, while Chief Operating Officer Mark Clement is a leader in the use of hydraulic fracturing techniques and has worldwide drilling experience. The company has also added significant technical expertise to its geoscience and operations teams, Galvin said.

Confidence in success

Great Bear’s extensive 3-D seismic coverage is now enabling the development of a prospect inventory, with an increasing confidence in success, even in the current low oil price environment, Galvin said.

Galvin also commented that, although

his company is now seeking conventional targets, the dividing line between what is thought of as a conventional play and what is thought of as unconventional has been becoming increasingly blurred. New technologies developed for shale oil situations have become useful in developing more conventional oil resources.

“So we see the opportunity to bring unconventional technology, horizontal drilling, hydraulic fracturing, and developing a range of fields that would be considered somewhere between conventional and unconventional,” Galvin said.

Exploration strategy

Great Bear’s exploration strategy envisages oil generation in source rocks to the south of and under the company’s leases, with some oil having migrated north into the currently producing oil

fields; some oil remaining in the source rocks; and some oil becoming caught in conventional hydrocarbon traps within Great Bear’s acreage. The company is using its seismic to identify possible trap locations.

Because of operational difficulties, the company was only able to drill one well, the Alkaid No. 1 well, during the winter of 2015, in pursuit of its new exploration strategy. That well was located 3.5 miles west of the Dalton Highway. The plan, going forward, is to complete the seismic acquisition program this year, develop a priority list of prospects and execute a multi-year, multi-well exploration program, investigating conventional prospects, Galvin said.

And, since starting its business, Great Bear has partnered with two other companies in its North Slope venture. Early in its program, the company came to an agreement with services company Halliburton, whereby Halliburton paid the cost of Great Bear’s first two wells in exchange for a 25 percent interest in a swathe of leases in the more northern part of Great Bear’s acreage, Galvin said. And in 2015 a company called Borealis acquired an 8 to 10 percent interest in most of Great Bear’s leases, to limit Great Bear’s net lease position to a maximum of 500,000 acres. After the Borealis deal was executed, Borealis was bought out by Otto Energy, a publicly traded Australian company.

Galvin said that Great Bear currently operates about 590,000 acres in leases.

—ALAN BAILEY

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BLUECREST

shore well in 2013 in partnership with BlueCrest, using the Endeavour jack-up rig that has since departed the inlet.

BlueCrest has been developing the field as an oil field, using extended reach drilling from an onshore pad on the Kenai Peninsula coast near Anchor Point. But the offshore well drilled in 2013 found a significant natural gas resource at a higher level in the subsurface than the oil. Because the gas is relatively shallow, it can only be developed and produced from offshore.

BlueCrest has envisaged developing the gas resource through the installation one or two offshore gas production platforms but has not yet decided whether to proceed with the gas development concept. It now appears that the company is considering some further evaluation of both the gas and the oil resources in the field, using offshore drilling. The company has previously said that it could start drilling for offshore gas this year.

The proposed new operations plan requests authorization to drill the offshore wells down through the oil bearing rock formations for the delineation of both oil and gas resources. Once the well logging and the oil evaluations have been completed,

the wells would be plugged and abandoned below the lowest gas reservoir.

“The wells may be re-entered for gas production operations under a future development and production authorization,” the proposed operations plan says.

BlueCrest’s gas development concept involves two offshore production platform sites, designated the A site and the B site. The operations plan envisages a jack-up rig drilling the new wells from those two sites. Drilling may start with a single well in 2016, and then follow up with the two other wells in 2017. If drilling is delayed beyond 2016, two wells would be drilled in 2017 and the remaining well in 2018, the operations plan says.

General transportation of personnel and supplies to and from the jack-up would be by helicopters based in Homer or Kenai. Major supplies would be staged in Homer for shipment to the rig by supply vessel.

When in June of last year Alaska’s Division of Oil and Gas approved the formation of a unit for portions of the Cosmopolitan leases the division expressed concern about the need to fully delineate the field and required the submission of a plan, more fully spelling out how the delineation would be performed.

—ALAN BAILEY

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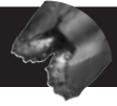
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Paul Gruhn joins aeSolutions as safety consultant

aeSolutions is proud to announce that Paul Gruhn, PE, CFSE, ISA 84 SIS expert has joined their Houston, Texas, office as their global functional safety consultant.

Gruhn is recognized across industry as an ISA Fellow, original member of the ISA S84 committee, author of the ISA book on functional safety, and as the developer and instructor of "safety instrumented systems — design, analysis, and justification" (EC50) and "advanced design and SIL verification" (EC54) ISA training courses. In his new role, Gruhn is developing aeSolutions' global marketing initiatives, instructing functional safety training nationwide, serving as a technical authority on select projects, and managing a content development program; all in effort to continuously improve the process safety performance of industry.



PAUL GRUHN

Granite named a 2016 World's most ethical company

Granite Construction Inc., a diversified heavy civil contractor and construction materials producer, has been recognized by the Ethisphere Institute, a global leader in defining and advancing the standards of ethical business practices, as a 2016 World's Most Ethical Company.

This year marks the 10th anniversary of the Ethisphere and the World's Most Ethical Companies designation, which recognizes those companies who align principle with action, work tirelessly to make trust a part of their corporate DNA, and in doing so, shape future industry standards by introducing tomorrow's best practices today.

"Being named as one of the World's Most Ethical Companies for the seventh year in a row is an honor and testament to our employees who personify our core values," said James H.

Roberts, president and CEO, Granite Construction Inc. "Our employees are committed to honoring and maintaining our founder's high standard of conduct, ensuring that all Granite customers and stakeholders are well-served."

Granite is a seven-time award winner, and is one of only two in the construction and building materials category underscoring their commitment to leading ethical business standards and practices.

Fluor finalizes acquisition of Stork

Fluor Corp. has closed its acquisition of Stork Holding B.V. Fluor announced in early December that the company had agreed to purchase 100 percent of Stork's shares from UK-based private equity firm Arle Capital Partners.

"I welcome our 15,000 new colleagues from Stork and we are excited to have them join the Fluor family," said David Seaton, chairman and CEO of Fluor. "Fluor's most important asset is its people, and we are fortunate to have found in Stork a company that shares the same values, pride and global heritage as we do."

Stork is a global provider of maintenance, modification and asset integrity services associated with large existing industrial facilities in the oil and gas, chemicals, petrochemicals, and power markets. Founded in 1827, Stork has long-term relationships with a diverse range of customers. It has operations in continental Europe, the United Kingdom, the Middle East, Asia-Pacific and the Americas.

Stork's business model is primarily based on ongoing operating budgets that are less impacted by capital spending plans and volatile commodity prices. The addition of Stork's capabilities to the Fluor portfolio will help meet customers' needs throughout the full lifecycle of an operating plant.

Stork, along with Fluor's current Operations & Maintenance organization, will be led by Stork CEO Arnold Steenbakker and reported financially under the Global Services business segment.

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

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STEDMAN Q&A

ground makes it easier. We don't digress into things like would a company run an NOL or net operating loss for some reason. Nobody runs NOLs. You're forced into them and you want to get out of them. We don't talk about that stuff. We might argue about the logistics and the policy of a 35 percent NOL carry forward, which equates to a statutory tax rate versus the effective rate which would be in the low 20s. In other words the 25 percent rate is much more applicable frankly than the 35.

Politically they got 35 delivered. If I were them, I would hang on to 35. From my side of the table I'd like to see it at 25. Those are the kind of conversations. Nobody is going to want to come and want to give up 35 percent NOL if you are the one who is receiving the cash. If you did, they would change you out and put someone else in that chair. It's hundreds of millions. It's not a little number.

Then the fairness issue: One of the things I enjoy in conversations with these tax guys is when we get down to the squareness of the deal so both sides are playing fair with each other: If we are dealing with interest carrying costs, if we're dealing with tax rates, if we're dealing with transparency. We're in business together. It's not like we are enemies. We are more like brothers who argue among themselves.

Petroleum News: Do you feel like the industry at least the majors and maybe some of the Cook Inlet operators are being straight with you?

Stedman: Yes. That doesn't mean I agree with all of their positions. I'll take this one step further. If I have a conceptual challenge, a complexity or something doesn't add up, if I'm getting a different answer, if it seems odd and I don't understand it, I'll go to Revenue and ask them. Or I'll ask one of the major's tax guys. They have never in the 13 years I've been here ever intentionally misled me that I know of, even looking back. You can possibly mislead a guy once in a while, but they will figure it out in the end eventually if they stick around long enough. They might not agree with a position, but the mechanics we often agree on.

You know I think they get a bad rap in the public, particularly the majors. Anything that goes wrong in this state, I swear to God, they blame it on the majors. If it rains almost they blame it on the majors.

It's unfortunate because they don't give me misinformation. I'm more comfortable talking to them instead of the support groups. That's where you get into some problems. A lot of them don't know. They are trying, but a lot of them don't have the ability to give you information. And then you get into the oil industry said this or the oil industry said that when it was an oil industry support group.

You always want to ask the guy who knows. I don't know how to quite deal with that in public. I try to tell people in my communities when that type of subject comes up that it's just hogwash. They have to sign their financial reports and it goes all the way up to the chairman. They aren't going to be creative in their bookwork. If there is a gray area in the deduction, I'd expect them to take it and I'd expect them to argue the other side and it will come out in the audits. That's just standard business.

Petroleum News: Speaking of audits,

the Department of Revenue seems to be getting caught up on the audits. What are your thoughts on that?

Stedman: I think it's a positive. They got behind with PPT and then ACES. We were changing the rules all of the time. We have a competitive disadvantage in the hiring hall with auditors. I'm happy they are getting caught up and I think if they can get down to three years instead of six, we'll be a lot better off. Six years is way too long. This bill we are working on here, one of the complexities we are trying to clear up, that's one of them. We are trying to encourage, with interest costs, quicker audits. So it's not an advantage to one side or the other to run the clock six years.

The other thing on audits some in the public think the audits are going in there to look for skullduggery. That's not the case. They are going in there to look at the gray areas of deductions where it's not clear. Can you deduct it? Can you not deduct it? That's just standard. I mean I'd be shocked if we had an audit report that said one of the majors are cooking the books to screw the state. That's just ridiculous. They are not going to do that. They might take a gray area and argue it and lose the argument. But that's just business. If they worked for me, they would take the gray area all the time.

Petroleum News: On the AKLNG you've received updates throughout the session. What's your 30,000-foot view of what's happening?

Stedman: We need Exxon at the table to build that line. The size and dollars and complexity, I don't think you can ask for a better partner. I personally am more comfortable with the majors at the table and our 25 percent ownership. Now if we go do some other project we'll have to look at it and judge it at the time. That may or may not come true. I'm hoping when the commodity prices turn around a little bit, that project comes back on the table pretty much as structured.

Petroleum News: What concerns to you have at this point?

Stedman: Well, I don't like \$40 oil. I think the burn rate of the state is alarming. Our ability to fix it is challenging. When you start going into the Permanent Fund and you have large credits and NOLs to pay, that's instability on steroids. I don't like it.

Petroleum News: What about AKLNG?

Stedman: I think we should take a look at the property tax structure that was proposed and throw it in the trash can. Too much wealth has gone into too few communities. If you look at the value of the revenue stream, it's heavily weighted toward property tax and in my opinion the property tax should come into the state and the communities affected should apply to an infrastructure fund for help for roads, sewers, schools whatever it is. Then it can be paid out. That concept is left over from the pipeline. If we had to do the pipeline today — TAPS — we would not have the structure we have today. In fact, look at the value coming off the TAPS line. There is \$575 million waiting in property tax. I think \$125 million is what the state gets. It's too heavily weighed.

Petroleum News: There's a school of thought that low commodity prices could also mean low prices for goods and materials to build the line. Do you see something like that playing out for this project?

Stedman: I've asked the question to the majors. They told me they haven't seen it with finished goods. My personal guess is the industry's economic slide is just beginning. We'll go through a wave of consolidations and bankruptcies. A lot of suppliers will get squeezed. Hopefully when a window of opportunity opens up, it's still somewhere at the bottom of that commodity cycle as far as finished goods and they can shave several billion off the project.

Petroleum News: Are you confident there will be some good news this fall toward advancing a gas line project?

Stedman: Structurally, I'd say yes. We are not losing our geographical position on the Pacific Basin. Japan and Korea aren't going to move on the planet. We have a straight shot to feed them energy

guarded by the U.S. Navy. They can't get it from anywhere else like this. I think we are uniquely positioned. We just need the economic window to open again. We need to go to pre-FEED, stop and just like putting your finger on the trigger. When the window opens, pull the trigger.

Energy demand worldwide is going up, not down. I think we are very uniquely positioned. It's not like we've got a greenfield development going. The majors know how to build gas lines and liquefaction plants. I'm pretty confident. I just turned 60. I'd like to see it before I turn 70. I hope I see it before I get Alzheimer's and don't even know what the heck it is. The clock is ticking. ●

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PIPELINES & DOWNSTREAM

Keystone back in business

TransCanada resumed shipments April 10 on its Keystone pipeline from Alberta to refineries in Illinois and Oklahoma after a week-long shutdown to find and fix a leak.

But the episode has left lingering questions, especially one related to the length of time needed to locate the pipeline break.

For now, the 590,000 barrels per day system is back in operation, ending a draw down on crude in storage and interruptions to other pipeline connections in the U.S. Midwest.

The Calgary-based company said the leak involved about 400 barrels, more than the handful it initially estimated.

It had about 100 workers at the site, excavating soil to expose more than 275 feet of pipe.

A spokesman said there had been no significant environmental impact, with the surface oil contained by earth berms and absorbent material, or threat to public safety.

An official with the South Dakota Department of Natural Resources said there had been no impact on aquifers or surface water, while contaminated soil is being removed.

No cause disclosed

TransCanada has yet to disclose the cause of the leak or the cost of cleanup.

Dakota Rural Action, a conservation and family agriculture group, said it was troubled that so much oil spilled before being detected and should give regulators serious doubts about TransCanada's ability to safely operate the six-year-old pipeline.

Separately, TransCanada announced it will spend US\$550 million to build a 250-mile natural gas pipeline in Mexico to supply the state-owned power company with 900 million cubic feet per day.

The new line is expected to be in service in early 2018, building the company's Mexican inventory to six gas line systems.

The new line north of Mexico City will connect to two other TransCanada lines as well as systems operated by other companies.

A TransCanada unit won a bidding contest to develop and operate the pipeline beating out a unit of Sempra which was disqualified for the third time when it failed to meet requirements.

—GARY PARK

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GAS SECTOR

have spent C\$8.3 billion over the past five years to build up pipeline and processing support for their operations, about 27 percent of their total capital outlay.

TS said the money has generally been well spent, dropping corporate operating costs to C97 cents for thousand cubic feet of gas equivalent from C\$1.44 in 2011 and expects the infrastructure build up with see an improvement to C90 cents in 2016-17, with each C\$1 billion spent translating into C7 cents in annual cost savings.

"He who controls his infrastructure controls all aspects of his business," said Jeff Tonken, chief executive officer of Birchcliff Energy, disclosing that his company plans to allocate C\$39 million or 30 percent of its 2016 budget

on gathering pipelines and expansion of a gas plant.

"You can be a low-cost producer and own your infrastructure or you can be a higher-cost producer and go through third-party processing. But you can't be both," he said.

TD said it is difficult to predict how many companies will sell infrastructure over the next five years, given that stock markets don't give gas-weighted companies credit for the assets they own.

It is estimated that current annual capital costs to service debt come from the C\$8.3 billion infrastructure build would range from C\$400 million to C\$800 million.

TD said those investments helped its group of 17 producers grow output to 4.6 billion cubic feet of gas equivalent per day from 2.8 bcf per day over the past five years.

—GARY PARK

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OIL TAX BILLS

No easy answers

Low oil prices are squeezing both the producers, who have told legislators they are running net losses, and the state, which has for decades depended on revenues from the oil and gas industry to fund its operations.

The most recent changes to the state's oil and gas tax system, in Senate Bill 21, were put in place in 2013 before the dramatic drop in oil prices, and were intended to encourage investment in the state.

At current oil prices, however, the state finds itself hard pressed to afford the incentives — in the form of credits and reductions against production taxes — established as part of the state's net tax on oil and

gas production.

In Cook Inlet there is an additional issue because credits put in place to encourage development of natural gas for the state's Southcentral population center also provide credits for oil production and in Cook Inlet crude oil is exempt from production tax, although production does benefit the state through royalties and corporate income tax.

The bills proposed by Gov. Bill Walker would save the state money by walking back some of the credits and increasing revenues by measures such as putting a hard floor on the production tax paid by North Slope producers.

Industry has told legislators in testimony that investment is based on the current credits and tax system, and that hardening the North Slope production tax floor and reducing credits will make the state less attractive for investment.

In an April 12 presentation to Senate

Resources, analytica, the Legislature's consultants, summarized provisions of the committee's CS.

For both old and new oil, the CS continues the ability to reduce taxes below the 4 percent gross floor, as well as continuing the annual basis of tax assessment — both things the administration proposed changing, and which would increase revenues to the state.

Continuing the annual basis of tax assessment reduces the revenue impact as the administration proposal to make the assessment monthly would have netted some \$100 million in additional taxes annually under conditions in 2014.

The Senate Resources CS does remove the impact of the gross value reduction for new oil in calculating net operating loss, and imposes a five-year time limit on GVR, analytica said, with the five-year limit producing a major impact on project value, having the potential to wipe out all value at \$60 oil, where a project's value is marginal. The issue, analytica said, is that most tax liability occurs after the end of major spending. If the limit were 10 years the impact would be much lower, and a 15-year limit would preserve most of the status quo value, analytica said.

The CS reduces all Cook Inlet credits starting Jan. 1, 2017, and sunsets all credits effective Jan. 1, 2018, in conjunction with exempting Cook Inlet from production tax. Cook Inlet production was exempted from the move to a net tax system, an exemption slated to end in 2022.

The consultants said the CS avoids making a regressive system even more regressive, because the floor hardening in the original bill would shift up government take at lower oil prices and in times, such as this year, of high investment and low prices the effective government take under the administration bill would exceed 100 percent.

The refund limits, analytica said, would boost capital needs for companies and lower the internal rate of return for projects, with a strict refundable limit increasing capital needs by as much as 50 percent. If refund limits were applied to projects already under development, there could be major adverse impacts.

If a major new development were to take place on the North Slope, such as that proposed by Armstrong Oil & Gas, the company could easily have net operating losses of more than \$2 billion in the development years, which poses a problem for the state in selecting a per-company limit on annual refunds, analytica said.

Bill comparisons

Senate Resources held several hearings on SB 130 and adopted a CS which moved on to Senate Finance April 13.

The Department of Revenue's Tax Division compared provisions in the differ-

ent proposals as they stood April 13.

While the Senate Resources CS would eliminate Cook Inlet credits beginning in 2018, in conjunction with a zero Cook Inlet production tax, the House Resources and Finance CS kept the credits, reducing them gradually.

The governor's bill does not change the net operating loss for Cook Inlet, but eliminates the qualified capital expenditure and well lease expenditure, dropping average support for developers to 25 percent and average total support for producers to zero.

All versions have kept language in the governor's bill that would eliminate a loophole in the gross value reduction — a benefit for new oil — which allows net operating losses to interact with GVR, allowing NOL credits to approach 100 percent of loss. This has been described by analytica as an unanticipated result of SB 21.

All bills have all kept some version of the repurchase cap, limiting repurchase for a single company to \$25 million a year (governor's bill), \$200 million (Resources CS), \$100 million (Finance CS) and \$85 million (Senate Resource CS).

The North Slope minimum tax floor is 4 percent but can be reduced to zero with the application of credits, something legislators have said was not expected. The governor's bill would harden the floor and increase it to 5 percent. The House Resources CS made no change to the floor; the House Finance CS partially hardened it at 2 percent; the Senate Resources CS makes no change to the floor.

All versions kept the governor's language which prohibits the gross value reduction, a credit for new oil, from artificially increasing the size of an NOL.

GVR oil remains "new" oil forever under current law and the governor's bill make no change. Both House Finance and Senate Resources set a limit of five years for GVR.

Interest on delinquent taxes, which under current law is 3 percent, non compounded, over the federal rate, was increased to 7 percent compounded under the governor's bill, reduced to 3 percent compounded by House Resources, changed to 5 percent compounded for only the first four years and set at 7 percent compounded for the first three years in the Senate Resources CS.

Most of the changes in the governor's bill were effective July 1; all of the committee versions have most changes effective Jan. 1, 2017.

The governor's bill also makes a change in confidentiality requirements, allowing a report on how much an individual company gets in cash credits; that provision is eliminated in all the committee versions. ●

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IPA DRILLING

plan for the Greater Point McIntyre Area in June and a plan for the Western Satellites in September.

Combined, those three areas account for all activity at the Prudhoe Bay unit.

The Initial Participating Areas are plural because the first Prudhoe Bay development program divided the field between its oil rim and an offsetting gas cap. The two regions — the Western Operating Area and Eastern Operating Area — were later united.

Progress halted

The decision to reduce IPA activities this year follows several years of increased activity at the field. But it also follows several months of severe cuts, as oil prices remain low.

Earlier this year, BP announced plans to idle three of the five rigs in its Prudhoe Bay fleet and reduce its workforce by 17 percent (and further reduction from earlier job cuts).

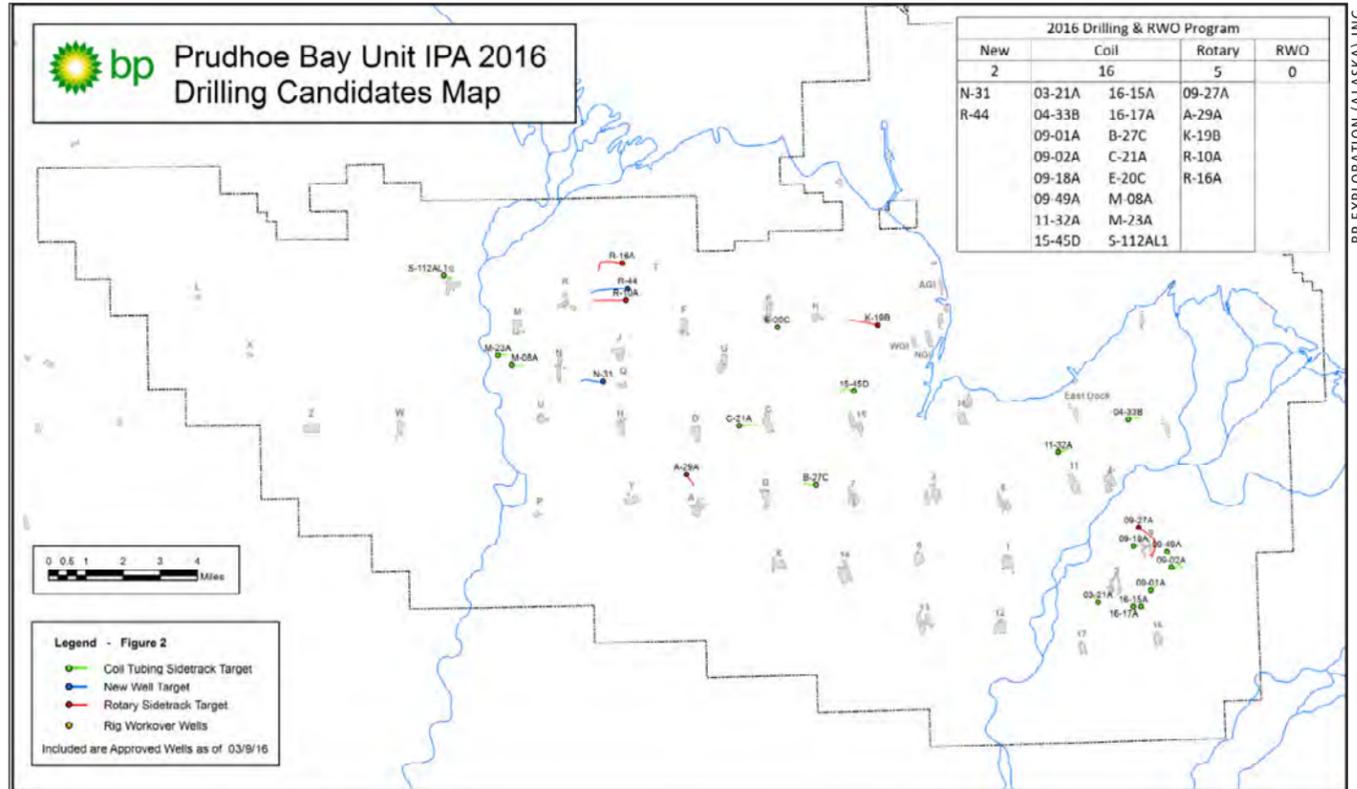
This year, BP expects to reduce drilling activities to 1.6 rig years, down from 3.8 rig years in 2015. (Like “man hours,” rig years measure the total working time of all rigs.)

The company expects to apply those reductions evenly across all activities: eight rotary wells down from 19 in 2015, 24 coiled tubing wells down from 41 in 2015 and, of those, only two new wells this year, down from eight last year. (The rest would be sidetracks.)

The plan calls for even steeper decline in certain well working activities, which involve repairing old wells to improve operations. The company is planning rig workover operations at four wells this year, down from 27 last year, although some of that decline can be attributed to the increasing success of non-rig workover operations at the field.

Those cuts will likely halt recent efforts to mitigate declining production at the field.

While IPA production rates declined for all major commodities in 2015, the



declines were much less severe than the company had predicted last year, in its previous plan.

Between 2014 and 2015, IPA crude oil and condensate production declined 3.5 percent to 196,400 barrels per day, which fell at the high end of the range of 157,000-200,000 bpd that BP had forecast last year. This year, the company is forecasting crude oil and condensate production in the range of 137,000-176,000 bpd — a 10 to 30 percent decline.

Similarly, IPA natural gas liquids production fell 4.7 percent to 38,000 barrels per day, which was also at the high end of a forecasted range of 31,000-39,000 bpd. This year, the company is forecasting a range of 29,000-37,000 bpd — a 2.6 to 24 percent decline.

Because natural gas is either injected

back into the reservoir to improve enhance oil recovery or used for field operations, its rate of production is often stable. The IPA produced 6.902 billion cubic feet per day in 2015, down less than 1 percent from 2014.

Flow Station 2 program

The 2015 drilling program included activities across the geographic span of the unit.

But the program included a cluster of wells into the Sag River formation in the north-central section of the unit, concentrated on the Northwest Fault Block. The cluster included five wells from F-pad, four wells from R-pad, one well from S-pad and an associated well from Drill Site 03. All but one was a sidetrack of an existing well.

The program for this year is also

spread across the unit, with a cluster of eight wells planned for Drill Site 03, Drill Site 09 and Drill Site 16 in the southeast of the unit.

Those wells are part of a larger initiative to improve recovery rates in the area around Flow Station 2 by changing the pattern of wells and waterflooding activities. A three-well program in 2015 using a so-called “pattern rotation” produced 1,700 barrels per day of oil. The company is planning a seven-well expansion of the program this year. Although successful so far, the wells “carry a high degree of risk associated with uncertainty in remaining fluid distribution in an active waterflood,” the company wrote in its plan. ●

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E&P

US rig count drops 7 to 443, an all-time low

The number of rigs exploring for oil and natural gas in the U.S. dropped by seven the week ending April 8 to 443, another all-time low amid depressed energy industry prices.

A year ago, 988 rigs were active.

Houston oilfield services company Baker Hughes Inc. said 354 rigs were drilling for oil and 89 for natural gas.

Among major oil- and gas-producing states, Texas lost seven rigs and North Dakota two. Alaska, California and Kansas each dropped one.

Ohio and Oklahoma gained two rigs apiece, while New Mexico was up one.

Arkansas, Colorado, Louisiana, Pennsylvania, Utah, West Virginia and Wyoming were unchanged.

The U.S. rig count peaked at 4,530 in 1981. The previous low of 488 set in 1999 was eclipsed March 11, and has continued to dip.

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CALEUS CUTS

Resources Committee of Senate Bill 130, the Senate version of the governor's bill, Pat Foley, Caelus Energy Alaska senior vice president, said that drilling cessation at the Oooguruk field, offshore the central North Slope, would involve the suspension of the Nabors 19AC drilling rig. The operation of the rig, which has been in continuous use at Oooguruk since 2008, involves the employment of nearly 300 contractors, Foley said.

"Those jobs will be, at least I hope temporarily, put on the shelf," he said.

Foley commented that, like many other oil companies in the United States today, Caelus is struggling to survive in the face of the fall in the price of oil.

"Our contractors have done a huge amount of assistance to help us drive out waste and reduce their costs wherever they can, but now the only tools that remain to us are a reduction in our capital program and a reduction in our general and administrative expenses, which simply means that we have to cut payroll," Foley said. In reference to the cuts in Caelus' own workforce, Foley reflected on the pain he felt at

the prospect of having to tell hard working, dedicated people, many of whom he considered friends, that within a few days their employment would end.

Foley emphasized that, despite the job cuts, Caelus would continue to maintain its wells and facilities.

"We are going to continue with the same HSE (health, safety and environment) program that we have, but we're going to simply have to find a way to accomplish our objectives with fewer people," Foley said.

Foley also commented that Caelus' Nuna project would remain on hold. Nuna involves the development from an onshore drill pad of a new, relatively shallow oil pool at Oooguruk. Caelus has built the pad for the project but has delayed the installation of the facilities needed for the development.

Smith Bay encouraging

On a more upbeat note, Foley commented that Caelus has completed the two exploration wells that it has been drilling this winter at Smith Bay, 59 miles southeast of Barrow, and has been sufficiently encouraged by the results to want to return to the area to do further drilling next year.

"We've had very exciting and encour-

aging results from those two wells," Foley said. "We are currently trying to plan activities to be back out there again next winter to continue with an appraisal program. I hope someday to get to appear before you to talk about our development plans at Smith Bay."

Foley also said that Caelus anticipates completing its fracking operations in all of its Oooguruk wells over the next month, to stimulate oil production. On April 8 the field produced about 18,000 barrels of oil — the stimulation program should elevate that production rate to more than 20,000 barrels per day, he said. Thereafter, as is usual, production would enter a long-term decline over the course of around 30 years, he said.

\$2 billion investment

Foley said that Pioneer Natural Resources, the original developer of the Oooguruk field, and Caelus, the current field operator, had between them spent about \$2 billion in Alaska. So far the field has produced about 23 million barrels of oil. Over the past year Caelus has executed a capital drilling program of roughly \$300 million and, as a consequence, has earned about \$100 million in transferrable tax credits, Foley said. The company has

employed about 300 Alaskans, he said.

From an exploration perspective, Caelus has acquired about 400,000 acres in leases in the past two years, conducted two substantial 3-D seismic programs and drilled the wells at Smith Bay, Foley said.

But, with no excess of revenue over costs in its Alaska operations at the moment, and with the possibility of tax credit reductions, Caelus has been forced to suspend its drilling operations, he said.

Low oil price

Asked by Sen. Cathy Giessel if the rig suspension and layoffs would occur in the current oil price environment, regardless of what happens to the tax credits, Foley said that the low oil price is the immediate driver for the cutbacks. However, a reduction in the tax credits would increase the amount of capital needed to fund drilling and that, in turn, would drive a need for a higher oil price threshold at which drilling could restart, he said.

Sen. Mia Costello questioned how the investment community is responding to the tax bills that the Legislature is debating.

"In a word, I think they're terrified," Foley said. "The big investment communities, they need favorable fiscal terms; maybe even more important than that, they need stability, they need predictability."

And, asked by Costello about the total government take from the Oooguruk field, Foley said that Caelus pays royalties on oil production and pays property taxes for the field.

"At today's (oil) prices I have no profits, so my take is zero," Foley said. "So I think the government take could be described as 100 percent."

Sen. Bill Wielechowski asked whether, if the Legislature leaves the tax structure as it is, would Caelus stay in Alaska and keep up current work levels. Foley responded that Caelus has no plans to leave the state and will continue to operate the Oooguruk field. But the company needs oil price recovery to make capital investments, with the tax structure determining the price level at which those investments would become economic.

Impact on business value

During his presentation, Foley said that the governor's tax proposals, if implemented in full, would reduce the net present value of Caelus' Alaska business by 83 percent, assuming a discount rate of 10 percent and a 2016 oil price of \$36 to \$37, increasing to \$52 over the next five years. A version of the bill which recently came out of the House would reduce the net present value by nearly 50 percent, he said.

The Nuna development, which Foley characterized as "on the bubble," is the type of project that needs some oil price recovery to go forward, Foley said. At a price level of \$70, a level at which the project would probably progress, under current tax rules Caelus would probably receive about \$250 million in state tax credits. Those credits would be offset by an equivalent amount of money in production tax payments to the state. But an additional \$1.5 billion would come to the state in the form of state royalties and net profit share payments due on the leases, Foley said.

Nuna represents an oil resource of 100 million barrels, with peak production of 20,000 to 25,000 barrels of oil per day, and with employment of nearly 300 contractor personnel during two years of construction, coupled with four or five years of drilling, Foley said. ●

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