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Week of April 9, 2017 • $2.50

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This week's Mining News

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The weekly mining newspaper for Alaska and Canada's North

Week of April 9, 2017

NEWS NUGGETS

Compiled by Shane Lasley

Donlin Gold remains on pace

Novagold Resources Inc. April 3 reported that it ended the first quarter on pace to achieve its 2017 goals at the Donlin Gold project in Southwest Alaska and the Galore Creek copper-gold-silver project in northwestern British Columbia. "With more than US$98 million in our treasury as of Feb. 28, 2017, we are able to concentrate on activities related to permitting Donlin Gold, maintaining strong ties with all of our stakeholders and delivering on our stated objectives," said Novagold President and CEO Gregory Lang. Novagold has five primary goals for 2017: advance Donlin Gold toward a construction decision; enhance the value of Galore Creek; maintain a healthy balance sheet; continue its effective corporate social responsibility program; and evaluate opportunities to monetize the value of Galore Creek.

GREG LANG

The company said the final Environmental Impact Statement for Donlin remains on pace to be filed in early 2018. The mine being considered in the EIS includes a 53,500-metric-ton-per-day mill that is expected to produce an average of 1.1 million ounces of gold annually for 27 years. During its first five years of operation, this annual average will be closer to 1.5 million oz. Novagold and Barrick Gold Corp., equal owners of this world-class gold project, are expected to make a formal decision to develop Donlin sometime prior to the issuance of permits. During a conference call on Novagold's first quarter results, Lang said the company is currently anticipating a final EIS by March and expects that it will take the U.S. Army Corps of Engineers another three or four months to write a record of decision. All other permits needed for construction to begin are also expected to be issued by then, meaning the project could begin development in the second half of next year. Donlin Gold continues to advance permitting for a 312-mile pipeline to transport gas from Cook Inlet to the mine site. The partners are timing pipeline permits to coincide with the expected permits for mine development. At Galore Creek, Novagold said it is continuing to work with its partner Teck Resources on technical studies as well as care and maintenance of the large copper project. When built, Galore Creek is expected to be the largest copper mine in Canada and one of the lowest-cost producers. Novagold hopes to sell its 50 percent interest in Galore Creek and apply the money to funding its share of the development of Donlin. The company, however, told analysts that it is not "a motivated seller" and will wait for the right offer before monetizing this large asset in northern B.C. Novagold ended its first quarter (Feb. 28) with cash and term deposits totaling US$98 million and expects to end the year with approximately US$82 million.

Endurance cuts deal to expand Elephant Mountain gold project

Endurance Gold Corp. April 3 said it has entered into an option to acquire the Trout and Wolverine properties immediately northeast of its Elephant Mountain gold project in Interior Alaska. Trout hosts two known gold targets — Trout and South Fork. The 1,000- by 300-meter Trout target is an intrusive-hosted soil anomaly that has returned soil values of up to 1,880 parts per billion gold. The highest grade rock sample collected at this target assayed at 9.64 grams per metric ton gold. The South Fork target is a 10- to 20-meter wide gold-bearing structural zone that appears to extend for at least 1,000 meters. Rock samples collected by previous

see **NEWS NUGGETS** *page 12*

NOVAGOLD RESOURCES INC.

The 39-million-ounce Donlin Gold project is roughly 260 miles west of Alaska's contiguous road system and about 200 miles from the nearest coast. To develop and operate a mine at this remote site, project owners are planning to build a 312-mile natural gas pipeline, as well as ports and a local road to transport fuel and supplies on the Kuskokwim River.

MINING INFRASTRUCTURE

Critical infrastructure

Alaska makes case for fair share of US$1 trillion infrastructure spending

By SHANE LASLEY

Mining News

Alaska is rich in mineral potential but poor in the critical infrastructure needed to fully realize this potential: that was the message Alaska Division of Geological and Geological Surveys Director Steve Masterman delivered to lawmakers on Capitol Hill.

During a March 30 hearing, Masterman told member of the U.S. Senate Committee on Energy and Natural Resources that Alaska could be the answer to the United States' growing dependence on foreign suppliers for minerals.

"One significant national contribution Alaska's mineral resources could provide is supply security," he told the committee.

Masterman's testimony came in a hearing convened by Sen. Lisa Murkowski, R-Alaska, chair of the energy and natural resources committee.

"We come from a state where we have a great deal of resource to offer but more often than not our opportunity is limited because our infrastructure is limited," Murkowski said.

Making the case for improving access to Alaska's vast resource potential comes at a time when the Trump administration is preparing to present a massive infrastructure bill for Congressional approval.

"To launch our national rebuilding, I will be asking the Congress to approve legislation that produces a $1 trillion investment in the infrastructure of the United States — financed through both public and private capital — creating millions of new jobs," President Donald Trump told lawmakers during his Feb. 28 address to Congress.

Storehouse of mineral wealth

Masterman made the case that Alaska has the potential to be a domestic source of most of the minerals vital to the wellbeing of the United States, including those needed to rebuild the nation's infrastructure.

In its 2017 minerals report, U.S. Geological Survey said the United States is 100 percent import-reliant on 20 different minerals and depends on foreign sources for more than half its supply of another 31.

The DGGS director and head geologist for Alaska told the committee that the 49th State has deposits and prospects containing all of the minerals for which the U.S. is 100 percent import-reliant and about half of the ones the nation is 50 percent dependent.

Among the growing list of minerals for which the U.S. is fully import-reliant are critical and strategic minerals such as rare earth elements, manganese and niobium; and important technology minerals such as graphite and yttrium.

Of the remaining 31 minerals that the U.S. relies on foreign countries for more than 50 percent of its supply, Alaska is a potential source of titanium, germanium, antimony, tin cobalt and chromium, to name a few.

"At a time when domestic infrastructure investment is a national priority, the United States is becoming even more dependent on foreign supplies of minerals rather than producing domestic supplies," Masterman testified.

"Alaska's storehouse of mineral wealth could be key to reversing this trend," he added.

Large state, few roads

The DGGS director indicated that investing a healthy portion of Trump's planned US$1 trillion of infrastructure spending in Alaska would help the nation realize the potential of Alaska's minerals wealth.

"Without a federal partnership for resource infrastructure, Alaskan supplies and Alaskan projects will be at a disadvantage in the international marketplace, and the national trend of increasing reliance on imports of minerals and metals may continue," he said.

Making the point that Alaska is overdue for a major infrastructure program, Masterman pointed out the disparity between the state's massive size and nominal road system.

see **INFRASTRUCTURE** *page 10*

Alaska makes its case for fair a share of US$1 trillion infrastructure spending. Read more in Mining News, page 7.

Settlement finally final: $10M Furie fine for Jones Act violation

Months after agreement was reached, settlement of Furie Operating Alaska LLC's Jones Act violation fine and suits between the company and the U.S. Customs and Border Protection are official. And terms are now public, with Furie agreeing to pay $10 million, rather than the $15 million assessed by Customs and Border Protection in 2011.

The $15 million fine was assessed against Furie predecessor Escopeta Oil Co. after that company brought the Spartan 151 jack-up rig to Cook Inlet to explore the Kitchen Lights prospect.

A statement from the U.S. Department of Justice said the settlement was the largest penalty in Jones Act history. The Jones Act prohibits a foreign vessel from transporting merchandise

see **FURIE SETTLEMENT** *page 16*

Hilcorp shuts down Anna platform, purges line after small oil leak

Hilcorp Alaska has been dealing with a fuel gas leak at its Middle Ground Shoal field in Cook Inlet since early February, has reduced flow from the leaking line and is awaiting safe conditions in the inlet for divers to do an inspection and make repairs.

On April 1 the company shut down crude oil production from the Anna platform in its Granite Point field after personnel on the platform felt an impact and observed a sheen and bubbles near one of the platform legs where an 8-inch crude gathering line is located.

The first situation report from the Alaska Department of Environmental Conservation's Division of Spill Prevention and Response said Hilcorp shut-in the Anna platform and

see **PLATFORM LEAK** *page 14*

EXPLORATION & PRODUCTION

Low price reality

Conoco chief economist reviews market situation, company's approach

By **ALAN BAILEY**

Petroleum News

As the global price of crude oil continues to hover around $50 per barrel and low liquefied natural gas pricing raises questions over the future of a hoped for Alaska LNG project, what is happening in world oil and gas markets, and how will this impact Alaska? On March 29 Marianne Kah, ConocoPhillips chief economist, presented her views on the current situation, explained ConocoPhillips' strategy for dealing with the current price environment and talked about how the price situation may continue to impact Alaska.

MARIANNE KAH

In Alaska ConocoPhillips operates the Kuparuk River and Alpine oil fields, as well as having ownership positions in the Prudhoe Bay and Point Thomson fields. The company has an active exploration and development program in the northeastern National Petroleum Reserve-Alaska.

The shale revolution

Kah's overriding message was that the shale oil and gas revolution in North America has upended the international oil and gas markets. This revolution has driven a need to focus investment and effort on resources with the lowest possible cost of supply. And in that situation,

see **CONOCO ECONOMIST** *page 15*

NATURAL GAS

A deal in the offing?

Documents are being prepared for purchase of Pentex by Interior Gas Utility

By **ALAN BAILEY**

Petroleum News

The Alaska Industrial Development and Export Authority's Interior Energy Project is finalizing purchase and financing agreements for the purchase of Pentex Natural Gas Co. by Interior Gas Utility, Gene Therriault told the AIDEA board on March 30. The documents were to have been completed by the end of March but the work on the documents is a bit behind schedule — during its March 30 meeting the AIDEA board passed a resolution deferring the target completion date for the documents to April 30. IGU is a gas utility in Fairbanks.

But, under the terms of a memorandum of understanding signed between AIDEA and IGU in January, the sale of Pentex to IGU cannot be completed until IGU and the IEP have secured a gas supply for Fairbanks from a Cook Inlet gas pro-

But, under the terms of a memorandum of understanding signed between AIDEA and IGU in January, the sale of Pentex to IGU cannot be completed until IGU and the IEP have secured a gas supply for Fairbanks from a Cook Inlet gas producer at a workable price and volume.

see **PENTEX PURCHASE** *page 16*

EXPLORATION & PRODUCTION

NWT to fight back

McLeod vents feelings on Trudeau's decision to ban Arctic offshore drilling

By **GARY PARK**

For Petroleum News

Bob McLeod made history last year when his legislature re-appointed him as premier of the Northwest Territories — a first in Canada's largest northern jurisdiction.

He earned that vote of approval by acting in a respectful, self-effacing, modest manner, showing a firm resolve to protect and advance the interests of his residents by tapping into known and unproved resources.

BOB MCLEOD

Speaking to the annual Arctic Oil & Gas Symposium in Calgary in late March, McLeod reeled off the resources that could be developed: an estimated 1.2 billion barrels of oil and 16.2 trillion cubic feet of natural gas across 1.3 million square kilometers in the NWT, potential Canola and Blue Fish deposits near Norman Wells of 191 billion barrels, marketable gas resource potential of 77 tcf in the Liard basin and 92 tcf of gas and 7 billion barrels of oil in the Beaufort Sea.

But his patience with the Canadian government shows signs of wearing thin as his resolve grows to play an even larger role in the economic evolution of Canada's three northern territories.

Speaking to the annual symposium, McLeod unburdened himself of years of growing frustration

see **NWT RESOLVE** *page 14*

● GOVERNMENT

AEA closing its Anchorage warehouse

Staff to be relocated to agency's Anchorage office; power plant construction work to be contracted out rather than done in house

By ALAN BAILEY

Petroleum News

Faced with state budgetary constraints, the Alaska Energy Authority is closing its north Anchorage warehouse, the facility that it has been using for the design, assembly and support of small-scale power generation facilities for rural Alaska. In future the agency will offer for competitive bid the design and construction projects, with AEA acting as construction administrator rather than constructor, Michael Lamb, AEA executive director, told the AEA staff in a March 1 memorandum. An alternative contracting arrangement may be considered for management approval in rare situations where an alternative approach may be warranted, the memo said.

The current warehouse staff will be moved to AEA's office in Midtown Anchorage, from where the agency will continue its support services for electrical systems in rural communities. Those services include technical assistance, emergency response following a power failure and a circuit rider program for on-site assistance.

Communities concerned

During an AEA board meeting on March 30, representatives from several rural communities expressed concern that the warehouse closure would degrade the service that AEA provides in assuring the availability of electrical power in communities where the necessary technical expertise may be in short supply or prohibitively expensive.

Lamb told the board that the changes were necessitated by a directive from the state Legislature to phase out the use of state unrestricted general funds by AEA by 2019. Lamb sought to assure the communities that the changes represent a new mode of operation for AEA rather than a diminution of services. In fact AEA is seeking to move to a situation where it has more circuit riders available for rural assistance. And there are legal requirements for rural support that AEA has to comply with.

"Money is tight and we need to comply with the law and what the Legislature says," Lamb commented. "And part of that brings change and I think that brings uncertainty and it makes people scared that they're not going to have the help they need."

Denali Commission

During the meeting AEA officials expressed concern about a provision in the proposed federal budget to pull funding for the Denali Commission, a federal agency that provides utility and infrastructure support in rural Alaska. In a federal funding match with the state, the Denali Commission provides funding support for assistance with rural electrical power and power house projects. Kirk Warren, AEA chief operating officer, told the board that if the budget measure goes into effect, there is the possibility of AEA's rural energy programs becoming defunded, with a complete rework of those programs becoming needed. ●

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● EXPLORATION & PRODUCTION

BP's top Alaska exec speaks out

Janet Weiss talks about Prudhoe's first and next 40 years, what state can do to attract business, stay healthy economically

By KAY CASHMAN

Petroleum News

On March 30, BP Alaska President Janet Weiss answered questions for Petroleum News about BP's first 40 years and its next 40 years in Alaska, as well as questions about the number of rigs currently running in the giant oil field and what state government can do to insure oil production remains stable and the state attracts investment.

JUDY PATRICK

JANET WEISS

The most startling facts: Prudhoe Bay produced 55 percent of all the production in the trans-Alaska oil pipeline and in 2016 output from Prudhoe declined less than 1 percent — but without continued investment Prudhoe production would decline at more than 10 percent per year.

Petroleum News: What does Prudhoe Bay's next 40 years of production look like?

Janet Weiss: Prudhoe Bay remains one of North America's largest oil fields and its production declined less than 1 percent over the past year, averaging 281,800 barrels of oil equivalent each day. The Trans Alaska Pipeline System grew its overall throughput by 2 percent, at 517,868 barrels a day. Prudhoe Bay will continue as an important foundation for Alaska's oil and gas industry well into the future.

Another promising part about the future of Alaska's North Slope is the list of companies operating successfully and the list of companies exploring: Caelus, Hilcorp, ENI, Repsol and Armstrong. The interest of these companies demonstrates that Alaska is open for business. It's important for the future that we keep Alaska open for business.

With more companies operating on the North Slope, the cost structure changes for the better. This change means that more development opportunities become competitive sooner — which leads to more oil down TAPS.

Petroleum News: BP opened its first office in Alaska in 1959. In two years it will celebrate its 60th anniversary in the state. What does the future hold for the company in Alaska?

Janet Weiss: Yes, BP was here at Alaska statehood in 1959. It was that Alaska can-do spirit that made the start of Prudhoe Bay possible 40 years ago, and I'm proud that BP was there on day one. It's a challenging environment today, where hydrocarbons are actually more abundant and therefore low cost oil is the name of the game.

Like other Alaska oil and gas companies BP is challenged to become more competitive in a low oil price environment. The Alaska oil and gas industry cannot wait for oil price to save us; we need to ensure we continue to have options that compete at these lower oil prices.

I believe it takes three things to make this step change: it takes efficiencies; it takes technologies; and it takes Alaska fiscal policies that keep us competitive.

> *"Economics impact our investment decisions and without continued investment, the field production would decline at more than 10 percent per year — not less than 1 percent decline we celebrated for Prudhoe's 40th."*
> **—Janet Weiss, BP**

Across the North Slope, new companies and existing operators are partnering creatively with our suppliers to reduce costs. Developments that used to take $80/bbl oil price may be possible to be developed at $50/bbl oil price — that is a really big deal.

The good news is that another 40-plus years of opportunity and economic strength from the oil and gas industry can happen in Alaska. This seems a tall order when we face such challenging times as a state with such sizeable budget woes.

Petroleum News: In November 2016 you said BP was operating at a $1.5 million per day cash flow deficit in Alaska, even after reducing activity on the North Slope and cutting operating costs. At the same time, I believe you or another BP executive said BP's Alaska production was stable in 2016. Is the company still operating at this cash flow deficit in 2017? What do you expect the deficit, or gain, to be by the end of 2017?

Janet Weiss: We expect to be cash flow positive in 2017. While not offsetting the losses of the last two years, our focus on efficiency is delivering results. Even in the low price environment BP invested $1.8 billion in its Alaska operations ($1.2 billion operating expense, $600 million capital). Of that we spent more than $1 billion with 300 Alaska vendors. Economics impact our investment decisions and without continued investment, the field production would decline at more than 10 percent per year — not less than 1 percent decline we celebrated for Prudhoe's 40th.

Coming: 2017 Explorers

This is a reprint from the upcoming annual Explorers magazine, which contains sections on TAPS 40th anniversary and Prudhoe Bay's 40 years of production. For more information contact Marti Reeve; to be included as an advertiser immediately contact Susan Crane. Both can be reached at 907-522-9469.

Petroleum News: How many drilling rigs are currently working at Prudhoe? Do you expect that number to increase in the next year?

Janet Weiss: In the low price environment we've reduced our activity down to two rigs at Prudhoe Bay and improved our efficiency. We are pursuing well-work which can be done less costly and more efficiently by non-rig equipment such as coil tubing. We're working to continue to improve our efficiencies so that in 2017 at $50/bbl we want to be at least break even in the state of Alaska. That's how BP Alaska continues to compete for investment dollars.

There has been a fundamental shift in our industry — this is not just cycle change in commodity price. Alaska needs to be on the front foot of this change. We cannot wait for oil prices to rise.

Petroleum News: When you were appointed to your current position BP was operating four fields on the North Slope and had about 2,200 employees and more than 6,000 contractors. What are those numbers now in first quarter 2017?

Janet Weiss: Today Prudhoe Bay supports more than 16,000 Alaska direct and indirect jobs. In Alaska BP employs 1,700 employees and 78 percent are Alaska residents: Recruiting, training and hiring Alaskans remains among our top priorities. There are also more than 4,000 contractors doing work for BP in Alaska. In 2016, we spent $1 billion with 300 Alaska vendors.

Q AND A

Petroleum News: How much longer do you expect to be in your position in Alaska? Is it correct to say you have been working for BP since 1986, starting in Alaska? I know you also worked in Wyoming and the Gulf of Mexico for the company. How many total years have you worked in Alaska for BP?

Janet Weiss: I've spent 23 of my 31 years in oil and gas industry here in Alaska. I plan to be here as long as I'm adding value and inspiring our employees to take on the ownership role of a safe and sustainable business in Alaska. At BP safety is the foundation of everything we do, every single day.

My leadership role is about finding

see WEISS Q&A page 12

EXPLORATION & PRODUCTION

Naknek formation findings published

Alaska's Division of Geological and Geophysical Services has published the results of fieldwork and geologic studies conducted by geologists from DGGS and Alaska's Division of Oil and Gas, investigating the upper Jurassic Naknek formation, exposed in the Iniskin Peninsula and Tuxedni Bay area on the west side of the Cook Inlet.

The Naknek has some oil and gas reservoir potential in the sparsely explored Mesozoic sequence of the Cook Inlet basin.

The Naknek has some oil and gas reservoir potential in the sparsely explored Mesozoic sequence of the Cook Inlet basin. Producing oil and gas fields in the basin have reservoirs in the more extensively explored younger and shallower Tertiary sequence. But geologists view the Mesozoic as also having potential for new oil and gas discoveries.

Of particular note in what the state geologists found during their research was evidence of large, ancient submarine canyons in the Naknek. These canyons had become filled with sediment, including much sand. The Naknek was deposited in a marine environment adjacent the uplifted roots of an ancient volcanic arc. Evidence from the nature of the rocks indicates cycles of deepening and shallowing water.

The minerals within the rocks tend to be prone to decomposition to clay materials that can clog pore spaces, thus, when buried, liable to degrade the rocks' permeability and porosity. However, the state geologists think that oil and gas exploration can benefit from the insights that the state research can provide into the depositional systems involved in forming the Naknek and where the best hydrocarbon reservoir quality may be found — knowledge of the systems can provide an understanding the reservoir quality variability and possible oil charge timing.

—ALAN BAILEY

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● FINANCE & ECONOMY

Megadeal shakes up oil sands

Transaction worth C$17.7B to double Cenovus production, also adds natural gas; Conoco freed to pursue Eagle Ford, Permian interests

By GARY PARK
For Petroleum News

The unparalleled shuffle of oil sands assets in Alberta has made another leap forward with a blockbuster sale of ConocoPhillips holdings to its upstream partner Cenovus, fueling the debate over winners and losers.

The C$17.7 billion deal, including C$14.1 billion in cash and the transfer of 208 million Cenovus shares, follows on the heels of the exodus from northern Alberta of other foreign-based companies, led by the Netherland's Royal Dutch Shell, Houston-based Marathon Oil, France's Total and Norway's Statoil.

For Cenovus, the acquisition will give the company "full control of our best-in-class oil sands project," while turning the pure-play company into a significant natural gas producer by creating a "second-growth platform across the prolific Deep Basin (in British Columbia and Alberta)," said Chief Executive Officer Brian Ferguson.

There was also speculation, unconfirmed by Cenovus, that the company would try to raise about C$1.8 billion to help fund the transaction from the sale of conventional assets sales in a spotty market.

Ferguson, without delving into the details, said only that following closure of the deal "our top priority will be to optimize our asset portfolio and capital structure, including repaying the outstanding bridge loans" of C$10.5 billion.

Immediate impact

The immediate impact on Cenovus is to hike its oil sands production to 356,000 barrels per day from its current 178,000 bpd and to raise conventional oil and natural gas to 232,000 barrels of oil equivalent per day from 112,000 boe per day, for an overall gain to 588,000 boe per day from 290,000 boe per day.

Proved plus probable reserves will post a 106 percent increase to 7.76 billion boe from 3.79 billion boe.

As a result, Cenovus will become Canada's largest thermal oil sands producer and the deal will give it a portfolio of more than 3 million net acres in the Deep basin, plus a "large inventory of short-cycle drilling opportunities with high-return potential."

Since 2014, Cenovus has given priority to cost efficiency and innovation, leading to a 30 percent reduction in its per-barrel oil sands operating costs.

The return to 100 percent ownership of its Foster Creek-Christina Lake assets will allow Cenovus to resume construction of its seventh Christina Lake phase, which has design capacity of 50,000 bpd, and also sets the stage for it to proceed with the eighth phase of Foster Creek, adding another 30,000 bpd. It also plans to update the initial phase of its Narrow Lake project, designed for 45,000 bpd.

For 2017, Cenovus intends to invest about C$170 million in the Deep basin, targeting an increase in output of 50,000 boe per day to 170,000 boe per day.

Cenovus investors not ecstatic

Regardless of that glowing outlook, investors were less than ecstatic, driving down Cenovus shares by 13 percent on the day after the blockbuster announcement was made, apparently uncomfortable with the gamble on higher oil prices and the projected increase in the company's net debt to C$13.5 billion.

"Notably, Cenovus goes from exhibiting one of the strongest balance sheets in the peer group to one of the most levered," Raymond James analyst Chris Cox told clients.

Adding to the bad after-taste is Cenovus' plan to raise more than C$3 billion as it sells as many as 215 million shares.

Brian Bagnell, an analyst with Macquarie Capital Markets, said that if Cenovus hopes to achieve a meaningful reduction of its debt and leverage it will need West Texas Intermediate crude prices of well above US$50 per barrel on a sustained basis.

Dennis Fong, an analyst with Canaccord Genuity, estimated the company could see its cash flow per share decline by 5 percent for each US$1 dip in WTI prices.

Even if oil prices to enter a durable recovery phase, Cenovus is expected to lose 15 percent to 20 percent based on contingency payments promised to ConocoPhillips.

Conoco tightens Eagle Ford grip

On the wins-and-losses side for ConocoPhillips, the deal is expected to free the company to pursue quicker-return opportunities as it tightens its long-term grip on the Texas Eagle Ford shale, giving it access to a vast supply of low-cost oil, while claiming an emerging position in the Permian basin of more than 200,000 net acres, the eighth-largest stake in that play.

Although far behind the industry-leading stake of EOG Resources, which has 600,000-plus Eagle Ford acres, ConocoPhillips has moved ahead of its peers in several brackets — accumulating 3,500 drilling locations (compared with EOG's 1,925 premium sites) that are profitable at sub-US$50 oil and an estimated 2.4

see SANDS SHAKEUP page 5

● ENVIRONMENT & SAFETY

Volkswagen settlement funds for Alaska

AEA to manage distribution of $8.1 million for environmental mitigation; federally recognized tribes will also receive funding

By ALAN BAILEY
Petroleum News

In what appears to be an unexpected windfall, Alaska is to receive $8.1 million for environmental mitigation as part of the settlement of Clean Air Act violations by Volkswagen, after the company was caught fraudulently obscuring the level of pollutant emissions from diesel engines in its cars. The Alaska Energy Authority has been tasked as the lead agency in administering the distribution of the funds in the state, Betsy McGregor, AEA environmental manager, told an AEA board meeting on March 30. In addition, $54.5 million from the settlement is being distributed to federally recognized tribes across the United States, McGregor said.

Emissions fraud

In 2009 Volkswagen began installing devices in its diesel cars to mask nitrogen oxide emissions during emissions tests. After U.S. authorities discovered the fraud in 2014, the U.S. government and other parties eventually came to a settlement with the car company. The settlement involved massive payments as compensation for the wrongdoing.

Volkswagen agreed to compensate Volkswagen car owners in the United States, at a total cost of $11.2 billion. In addition, the company agreed to establish a $2 billion, 10-year investment plan for promoting zero emissions vehicle technology and infrastructure, with $800 million of that to be spent in California and the remainder to be spent elsewhere in the U.S. And the company put $2.9 billion into an environmental mitigation trust, in particular to reduce nitrogen oxide emissions into the atmosphere and hence offset emissions from the Volkswagen vehicles at fault. It is funding from the mitigation trust that will be making its way to Alaska for use in the state, McGregor explained.

The allocation of the trust funds to states is based on the number of Volkswagen vehicles in each state. However, Alaska's fund allocation represents a minimum distribution under the terms of the trust, McGregor said.

Certification in April

Court certification of the trust in Alaska is expected in April, after which AEA will develop a state plan for the use of trust funds. That plan needs to be approved by the trust, probably in the fall of this year. AEA will collaborate with the Alaska Department of Environmental Conservation in the administration of the fund, but ADEC does not have granting authority, McGregor explained.

After approval of the state's plan, AEA will invite and select eligible projects to receive funding from the trust. The project selection process will probably start in the fourth quarter of 2017. The funding has to be allocated within 10 years, but with no more than one-third of the funds to be used in the first year and no more than two-thirds in the first two years, McGregor said. There is a reporting requirement on project progress, she said. AEA can use up to 15 percent of the funding to cover administrative costs.

The trust specifies 10 types of project that may be eligible for funding. All of the project types relate to the use of diesel engines, including the mitigation of emissions from buses, various types of vessel and certain types of truck. Part of AEA's administrative role will involve seeking ways of using trust funds to leverage other funding sources, McGregor commented. For example, use of funding in the replacement of old, inefficient diesel engines in rural power plants appears to be a way of using the Volkswagen funds to obtain additional funding for this purpose through an Environmental Protection Agency funding program, she said.

Project funding will probably begin in the spring of 2018, McGregor said ●

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● EXPLORATION & PRODUCTION

ANS up 2% month-over-month, 4% from 2016

Crude output averaged 565,057 bpd in March, up from 553,434 bpd in February, and up from 554,852 bpd in March 2016

By KRISTEN NELSON
Petroleum News

Alaska North Slope crude oil production averaged 565,057 barrels per day in March, up 2.1 percent from an average of 553,434 bpd in February and up 3.9 percent from a March 2016 average of 543,735 bpd.

The largest month-over-month and year-over-year increases were for Endicott, operated by Hilcorp Alaska. Endicott production includes satellite production from Eider, Minke and Sag Delta, as well as volumes from Badami, operated by Glacier Oil & Gas subsidiary Savant, and from the ExxonMobil Production-operated Point Thomson field.

Endicott averaged 16,077 bpd in March, up 51.2 percent from 10,632 bpd in February, and up 92.4 percent from 8,358 bpd in March 2016. The majority of that variability would appear to be from Point Thomson, which came online in April 2016.

Information for March comes from the Alaska Department of Revenue's Tax Division which reports North Slope oil production consolidated by major production centers and provides daily production and monthly averages. More detailed data, including Cook Inlet and individual North Slope fields and pools, is reported by the Alaska Oil and Gas Conservation Commission on a month-delay basis.

AOGCC data for February show Badami averaging 888 bpd, down 2.8 percent from a January average of 913 bpd, while Point Thomson averaged 741 bpd in February, down 90.3 percent from a January average of 7,634 bpd. Daily February volumes from the Tax Division appear to indicate that Point Thomson production was variable over that month, with daily Endicott volumes, which were in the 8,000-bpd range before Point Thomson came online, in the 9,000-11,000 bpd range for most of the month, rising to 19,758 Feb. 28. In March, Tax Division data show Endicott peaked at 20,428 bpd March 13, was above 20,000 on seven days and only dropped below 10,000 bpd twice during the month, indicating Point Thomson was generally producing in the 10,000 bpd range during most of March.

Other North Slope fields

The BP Exploration (Alaska)-operated Prudhoe Bay field, the North Slope's largest, averaged 315,395 bpd in March, down 1 percent from a February average of 318,472 bpd, but up 2.4 percent from a March 2016 average of 307,975 bpd. Prudhoe volumes include satellite production from Aurora, Borealis, Midnight Sun, Orion, Polaris, Sag River, Schrader Bluff and Ugnu, as well as production from the Hilcorp Alaska-operated Milne Point and Northstar fields.

AOGCC data show Milne Point averaged 19,652 bpd in February, up 3.7 percent from a January average of 18,946 bpd, while Northstar averaged 5,553 bpd in February, down 2.6 percent from a January average of 5,700 bpd.

The ConocoPhillips Alaska-operated Kuparuk River field averaged 145,828 bpd in March, up 2.2 percent from a February average of 142,676 bpd, and up 3.1 percent from a March 2016 average of 141,397 bpd.

Kuparuk volumes include satellite production from Meltwater, Tabasco, Tarn and West Sak, as well as production from the Eni-operated Nikaitchuq field and the Caelus Alaska-operated Oooguruk field.

AOGCC data show Nikaitchuq averaged 20,568 bpd in February, up 0.8 percent from a January average of 20,405 bpd, while Oooguruk averaged 14,280 bpd, up 1.3 percent from a January average of 14,098 bpd.

BP-operated Lisburne, part of Greater

see **ANS OUTPUT** page 6

continued from page 4

SANDS SHAKEUP

billion barrels of oil equivalent resource potential.

As strong as ConocoPhillips' Eagle Ford stake is, the company's Permian position could be even stronger at 1 million net acres in the play, trailing Occidental Petroleum at 2.5 million acres and ExxonMobil at 1.75 million acres.

The company's Chairman and Chief Executive Officer Ryan Lance said the transaction is "accretive to our cash margins and lowers the average cost of supply of our portfolio." ●

Contact Gary Park through publisher@petroleumnews.com

● GOVERNMENT

AOGCC hears NordAq on proposed P&A fines

Company discusses work underway to plug and abandon two onshore Cook Inlet exploration wells; agency has proposed large fine

By KRISTEN NELSON
Petroleum News

The Alaska Oil and Gas Conservation Commission held hearings April 4 on proposed enforcement actions against NordAq Energy Inc. for failure to permanently abandon two onshore Cook Inlet exploration wells, Tiger Eye Central No. 1 on the west side and Shadura No. 1 on the Kenai Peninsula. Bob Warthen, senior advisor to NordAq Energy, represented the company at the hearings.

Tiger Eye was drilled on a state oil and gas lease; Shadura was drilled on a Cook Inlet Region Inc. lease.

On Dec. 2 the commission sent NordAq, by certified mail, return receipt requested, notices of proposed enforcement action for the two wells, citing the company for failure to plug and abandon the wells before its leases expired.

The notices gave the company 15 days to respond if it disagreed with the commission's actions, which proposed a penalty of $150,000 for violations at the Tiger Eye well and $621,000 for Shadura. Both penalties were on the same basis: $100,000 for the initial violation and $1,000 per day, with 50 days for Tiger Eye and 521 days for Shadura.

The combined fines total $771,000.

NordAq did not respond within the 15 days.

Warthen told the commissioners at the hearing that he was not ignoring the commission but did not receive the certified letters until the end of the year. He said the NordAq office and another office, also on the second floor of the building where the company has its offices, were burglarized and as a result the building went into lock down. Everything had to go through the first floor tenant, and Warthen said he didn't receive the letters until Dec. 30.

Initial plans for wells

Warthen said NordAq had discussions with Cook Inlet Energy to use the Tiger Eye well as a utility well, but following that company's bankruptcy, the new management, now operating as Glacier Oil & Gas, wasn't interested in using the well.

Commissioner Hollis French asked about utility use of a well and Warthen said the well could have been used to handle produced water from Cook Inlet Energy's West McArthur River field.

It was late November of last year before NordAq was aware that the interest wasn't there, Warthen said. In a January email to the commission he said the sundry for Tiger Eye would be delivered the following week; the sundry application to plug and abandon the Shadura well had already been delivered, he said.

NordAq had tried to interest CIRI in holding onto the Shadura well as a cased well asset, Warthen told the commissioners, but at the end of 2016 CIRI said it wasn't interested in the well and that NordAq should go ahead and plug and abandon it.

NordAq announced a natural gas discovery after drilling the Shadura well in 2011 and permitted an appraisal well but that was never drilled. CIRI told Petroleum News in 2016 that the corporation revoked the Shadura leases because NordAq missed work commitments.

NordAq drilled the Tiger Eye well in 2012. Warthen said it was an oil prospect and there were oil zones but the well failed to produce oil. Gas was tested, but the well produced significant water, he said. The company's

see NORDAQ HEARINGS page 11

continued from page 5

ANS OUTPUT

Prudhoe Bay, averaged 24,479 bpd in March, up 6.6 percent from a February average of 22,966 bpd, but down 1.1 percent from a March 2016 average of 24,758 bpd. Lisburne includes production from Niakuk, Point McIntyre and Raven.

The ConocoPhillips-operated Alpine field averaged 63,278 bpd in March, up 7.8 percent from a February average of 58,688 bpd, and up 3.3 percent from a March 2016 average of 61,247 bpd. Alpine includes satellite production from Fiord, Nanuq and Qannik.

Cook Inlet

AOGCC data show Cook Inlet production averaged 14,042 bpd in February, up 1.3 percent from a January average of 13,862 bpd.

Hilcorp's Beaver Creek field averaged 183 bpd in February, down 3.5 percent from 190 bpd in January.

Granite Point, also operated by Hilcorp, averaged 2,458 bpd in February, up 1.1 percent from a January average of 2,431 bpd.

Hansen, the Cosmopolitan project, operated by BlueCrest, Cook Inlet's newest and smallest oil field, averaged 150 bpd in February, down 2.7 percent from a January average of 154 bpd.

Hilcorp's McArthur River field, Cook Inlet's largest, averaged 3,802 bpd in February, up 2.9 percent from a January average of 3,697 bpd.

Hilcorp's Middle Ground Shoal averaged 1,747 bpd in February, down 0.2 percent from a January average of 1,750 bpd.

Redoubt Shoal, operated by Glacier Oil & Gas, averaged 675 bpd in February, down 15.8 percent from a January average of 801 bpd.

Hilcorp's Swanson River field averaged 1,989 bpd in February, up 8.8 percent from a January average of 1,828 bpd.

Trading Bay, also a Hilcorp field, averaged 1,611 bpd in February, down 4.1 percent from a January average of 1,680 bpd.

Glacier Oil & Gas' West McArthur River field averaged 1,428 bpd in February, up 7.3 percent from a January average of 1,331 bpd.

ANS crude oil production peaked in 1988 at 2.1 million bpd; Cook Inlet crude oil production peaked in 1970 at more than 227,000 bpd. ●

NORTH OF 60 MINING news

page 8 Increased diamond reserves extends Diavik Mine to 2025

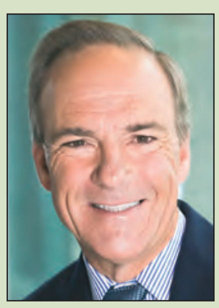
www.MiningNewsNorth.com | *The weekly mining newspaper for Alaska and Canada's North* | Week of April 9, 2017

NEWS NUGGETS

Compiled by Shane Lasley

Donlin Gold remains on pace

Novagold Resources Inc. April 3 reported that it ended the first quarter on pace to achieve its 2017 goals at the Donlin Gold project in Southwest Alaska and the Galore Creek copper-gold-silver project in northwestern British Columbia. "With more than US$98 million in our treasury as of Feb. 28, 2017, we are able to concentrate on activities related to permitting Donlin Gold, maintaining strong ties with all of our stakeholders and delivering on our stated objectives," said Novagold President and CEO Gregory Lang. Novagold has five primary goals for 2017: advance Donlin Gold toward a construction decision; enhance the value of Galore Creek; maintain a healthy balance sheet; continue its effective corporate social responsibility program; and evaluate opportunities to monetize the value of Galore Creek.



GREG LANG

The company said the final Environmental Impact Statement for Donlin remains on pace to be filed in early 2018. The mine being considered in the EIS includes a 53,500-metric-ton-per-day mill that is expected to produce an average of 1.1 million ounces of gold annually for 27 years. During its first five years of operation, this annual average will be closer to 1.5 million oz. Novagold and Barrick Gold Corp., equal owners of this world-class gold project, are expected to make a formal decision to develop Donlin sometime prior to the issuance of permits. During a conference call on Novagold's first quarter results, Lang said the company is currently anticipating a final EIS by March and expects that it will take the U.S. Army Corps of Engineers another three or four months to write a record of decision. All other permits needed for construction to begin are also expected to be issued by then, meaning the project could begin development in the second half of next year. Donlin Gold continues to advance permitting for a 312-mile pipeline to transport gas from Cook Inlet to the mine site. The partners are timing pipeline permits to coincide with the expected permits for mine development. At Galore Creek, Novagold said it is continuing to work with its partner Teck Resources on technical studies as well as care and maintenance of the large copper project. When built, Galore Creek is expected to be the largest copper mine in Canada and one of the lowest-cost producers. Novagold hopes to sell its 50 percent interest in Galore Creek and apply the money to funding its share of the development of Donlin. The company, however, told analysts that it is not "a motivated seller" and will wait for the right offer before monetizing this large asset in northern B.C. Novagold ended its first quarter (Feb. 28) with cash and term deposits totaling US$98 million and expects to end the year with approximately US$82 million.

Endurance cuts deal to expand Elephant Mountain gold project

Endurance Gold Corp. April 3 said it has entered into an option to acquire the Trout and Wolverine properties immediately northeast of its Elephant Mountain gold project in Interior Alaska. Trout hosts two known gold targets — Trout and South Fork. The 1,000- by 300-meter Trout target is an intrusive-hosted soil anomaly that has returned soil values of up to 1,880 parts per billion gold. The highest grade rock sample collected at this target assayed at 9.64 grams per metric ton gold. The South Fork target is a 10- to 20-meter wide gold-bearing structural zone that appears to extend for at least 1,000 meters. Rock samples collected by previous

see **NEWS NUGGETS** *page 10*

NOVAGOLD RESOURCES INC.

The 39-million-ounce Donlin Gold project is roughly 260 miles west of Alaska's contiguous road system and about 200 miles from the nearest coast. To develop and operate a mine at this remote site, project owners are planning to build a 312-mile natural gas pipeline, as well as ports and a local road to transport fuel and supplies on the Kuskokwim River.

MINING INFRASTRUCTURE

Critical infrastructure

Alaska makes case for fair share of US$1 trillion infrastructure spending

By SHANE LASLEY
Mining News

Alaska is rich in mineral potential but poor in the critical infrastructure needed to fully realize this potential: that was the message Alaska Division of Geological and Geological Surveys Director Steve Masterman delivered to lawmakers on Capitol Hill.

During a March 30 hearing, Masterman told member of the U.S. Senate Committee on Energy and Natural Resources that Alaska could be the answer to the United States' growing dependence on foreign suppliers for minerals.

"One significant national contribution Alaska's mineral resources could provide is supply security," he told the committee.

Masterman's testimony came in a hearing convened by Sen. Lisa Murkowski, R-Alaska, chair of the energy and natural resources committee.

"We come from a state where we have a great deal of resource to offer but more often than not our opportunity is limited because our infrastructure is limited," Murkowski said.

Making the case for improving access to Alaska's vast resource potential comes at a time when the Trump administration is preparing to present a massive infrastructure bill for Congressional approval.

"To launch our national rebuilding, I will be asking the Congress to approve legislation that produces a $1 trillion investment in the infrastructure of the United States — financed through both public and private capital — creating millions of new jobs," President Donald Trump told lawmakers during his Feb. 28 address to Congress.

Storehouse of mineral wealth

Masterman made the case that Alaska has the potential to be a domestic source of most of the minerals vital to the wellbeing of the United States, including those needed to rebuild the nation's infrastructure.

In its 2017 minerals report, U.S. Geological Survey said the United States is 100 percent import-reliant on 20 different minerals and depends on foreign sources for more than half its supply of another 31.

The DGGS director and head geologist for Alaska told the committee that the 49th State has deposits and prospects containing all of the minerals for which the U.S. is 100 percent import-reliant and about half of the ones the nation is 50 percent dependent.

Among the growing list of minerals for which the U.S. is fully import-reliant are critical and strategic minerals such as rare earth elements, manganese and niobium; and important technology minerals such as graphite and yttrium.

Of the remaining 31 minerals that the U.S. relies on foreign countries for more than 50 percent of its supply, Alaska is a potential source of titanium, germanium, antimony, tin cobalt and chromium, to name a few.

"At a time when domestic infrastructure investment is a national priority, the United States is becoming even more dependent on foreign supplies of minerals rather than producing domestic supplies," Masterman testified.

"Alaska's storehouse of mineral wealth could be key to reversing this trend," he added.

Large state, few roads

The DGGS director indicated that investing a healthy portion of Trump's planned US$1 trillion of infrastructure spending in Alaska would help the nation realize the potential of Alaska's minerals wealth.

"Without a federal partnership for resource infrastructure, Alaskan supplies and Alaskan projects will be at a disadvantage in the international marketplace, and the national trend of increasing reliance on imports of minerals and metals may continue," he said.

Making the point that Alaska is overdue for a major infrastructure program, Masterman pointed out the disparity between the state's massive size and nominal road system.

see **INFRASTRUCTURE** *page 8*

NORTHERN NEIGHBORS

Compiled by Shane Lasley

DIAVIK DIAMOND MINES

An aerial view of the Diavik diamond mine in Northwest Territories. Since production began in 2003, roughly 105,000 carats of diamonds have been recovered at Diavik, a total that is now expected to increase to more than 150,000 carats through 2025.

Diavik Mine extended

Dominion Diamond Corp. March 31 announced an increase in reserves for the Diavik diamond mine in Northwest Territories that supports two additional years of production, extending the life of this operation to 2025. The new mine plan, along with updated reserves and resources for Diavik are included in an updated technical report for Diavik. The new plan anticipates the mine will recover 46 million carats of diamonds from 2017 through 2025, an increase of 6.3 million carats over the previous technical report published in 2015. Dominion owns a 40 percent stake in Diavik, Rio Tinto plc owns the other 60 percent and is operator of the mine. Total revenue forecasted in the updated mine plan, on a 100 percent basis, is estimated to be roughly C$9 billion and total operating cash flow is anticipated to be around C$3.7 billion between 2017 and 2025. "The updated life of the mine plan for Diavik extends the mine life, increases carat production, and grows future revenues and cash flows, while maintaining operating costs and capital expenditures at levels that are consistent with earlier forecasts," Dominion Chairman Jim Gowans explained. "The focus on cost efficiency improvements and development of the A-21 pipe, which underpins the mine life extension, is consistent with our goal of increasing net asset value per share." The A-21 kimberlite pipe, which is slated to begin production in 2018, is expected to contribute 9.4 million carats of diamonds over roughly five years.

Brucejack energized; gold production next

Pretium Resources Inc. March 31 reported that the transmission line to its Brucejack Mine is energized, a major milestone for this new high-grade gold operation in northwestern British Columbia. Commissioning in now underway and first ore expected to be introduced to the mill in mid-April. Construction of underground infrastructure at Brucejack — including the crusher, conveyor, and transfer towers — is nearing completion and the electrical substation has been energized. The installation of the SAG and ball mills is slated for completion during the first week of April. More than 163,000 metric tons of ore has already

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Petroleum news

North of 60 Mining News is a weekly supplement of the weekly newspaper, Petroleum News.

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INFRASTRUCTURE

"While the state has 17 percent of the nation's land mass and is by far the largest state, we have 0.4 percent of the nation's total lane-miles of road," he explained. "The limited road system has real impacts on the cost of transportation of goods to communities throughout the state, and presents real challenges to the exploration and development of mineral resources."

Large road projects

Roads to Nome and Ambler would begin to rectify the infrastructure disparity and help the U.S. realize the mineral potential of its largest state.

Masterman said finishing a 500-mile road linking Nome on the Seward Peninsula to the state's contiguous road system would be beneficial to both the residents of this western region Alaska and companies seeking to explore and develop mineral projects in this otherwise remote area.

In 2016, Alaska completed the first leg of this road by extending the westernmost reaches of Alaska's road system 20 more miles to Tanana.

"Continuing this road effort west to the Seward Peninsula would expand these demonstrated economic benefits to a larger area; provide a transportation link to a broad geographic region that is currently constrained by remote access, and improve access to mineral-rich areas along the route," Masterman explained.

The Ambler Mining District Industrial Access Road, a proposed 211-mile transportation corridor that would link the metals-rich Ambler Mining District with Alaska's road system, is another infrastructure project the DGGS director brought to the committee's attention.

A partnership between Trilogy Metals Inc., a mineral exploration company, and NANA, an Alaska Native Regional Corporation that represents the Inupiaq people of Northwest Alaska, is exploring the minerals-rich region at the end of the proposed Ambler Road.

Arctic, the most advanced project being explored by Trilogy and NANA, hosts some 1.65 billion pounds of copper, 2.62 billion lb of zinc, 444 million lb of lead, 610,000 ounces of gold and 45.3 million oz of silver in the inferred and indicated resource categories. This deposit will likely be the first mine in the Ambler District.

Bornite, a deposit being advanced by the partners about 16 miles south of Arctic, hosts another roughly 6.4 billion lb of copper, plus significant amounts of cobalt.

Mining infrastructure needs

In addition to large road projects, Masterman said there are a number of advance staged mining projects across the state that would get a boost from infrastructure support.

Donlin Gold, the largest and most advanced of these projects, is also the most remote.

In the final stages of permitting, the Donlin Gold Mine is expected to produce an average of 1.1 million ounces of gold annually over an initial 27-year mine life.

If developed, a mine of this magnitude would provide an enormous boost to the Yukon-Kuskokwim region of Southwest Alaska.

Donlin Gold LLC — equally owned by subsidiaries of Novagold Resources Inc. and Barrick Gold Corp. — anticipates an annual payroll of US$375 million to pay the roughly 3,000 workers during the three- to four-year construction phase. Once in production, the company expects about 800 workers making roughly US$100 million per year.

*"The national interests in infrastructure development in Alaska are significant — increasing domestic supply security of our mineral portfolio, increasing our competitiveness, strengthening America's position in the Arctic, boosting our economies, and potentially reducing the nation's trade imbalance." —**Alaska Division of Geological and Geological Surveys Director Steve Masterman***

The region is also expected to benefit from a 312-mile long, 14-inch diameter pipeline that will deliver natural gas to the mine.

"As an example of the local cost-of-living benefits, this pipeline will also serve as a new energy source for the surrounding villages, reducing their power costs," Masterman said.

The DGGS director also told lawmakers about the Graphite Creek deposit approximately 50 miles north of Nome.

A major ingredient in lithium ion batteries, graphite is a mineral which the U.S. is 100 percent reliant on foreign sources.

Graphite Creek, however, is the largest known deposit of graphite in North America and among the largest in the world.

Graphite One Resources Inc., the company advancing the project, is currently assessing the feasibility of developing a mine at Graphite Creek and a separate manufacturing facility that would produce high-grade coated spherical graphite primarily for lithium-ion electric vehicle batteries.

Masterman said both the mine and processing facility would benefit from infrastructure and financial support.

The Dotson Ridge deposit at Ucore's Bokan Mountain project in Southeast Alaska is an advanced stage project that could provide the U.S. with a domestic supply of heavy rare earth elements, including dysprosium, europium, terbium and yttrium.

The U.S. Department of Energy named these four heavy rare earths among the five most critical and supply-risky materials in the country.

These same REEs are critical ingredients to much of the high-tech U.S. military hardware, making a secure supply of these metals an issue of national importance.

Masterman also listed Palmer and Niblack, two Southeast Alaska deposits rich in copper, zinc, gold and silver, as other advanced mineral exploration projects that could provide jobs and bolster the economies where they are located.

National interests

Closing out his testimony, Masterman made a strong argument that investing heavily in Alaska infrastructure is vital to the security and economic well-being of the U.S. and hits on Trump Administration priorities.

"The national interests in infrastructure development in Alaska are significant — increasing domestic supply security of our mineral portfolio, increasing our competitiveness, strengthening America's position in the Arctic, boosting our economies, and potentially reducing the nation's trade imbalance," he argued. "With solid federal support, we look forward to fulfilling Alaska's role as a storehouse for our nation's resource wealth — and the jobs and cost-of-living benefits utilizing these resources will bring." ●

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Mining Companies

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Located 25 miles northeast of Fairbanks, Fort Knox is the largest gold producing mine in Alaska. During 2016, Fort Knox celebrated two milestone events, the seven-millionth-ounce of gold produced and the 20-year anniversary of commercial operations.

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NEWS NUGGETS

companies along the ridgeline that hosts this structure have returned up to 11.98 g/t gold. Endurance said further soil sampling, rock sampling and possible trenching is required to delimit the target areas and prioritize drill targets. The Trout and South Fork targets are believed to be sources for the placer gold that has been mined from the south fork of Quail Creek since the early 1900s. The Wolverine property hosts at least two gold targets. Wolverine, a 300- by 300-meter target outlined by anomalous gold in soil and rock samples is the most promising such target. Several less explored targets within the Wolverine property also exist, including a historically reported intrusive-hosted stibnite prospect and a prominent structure, similar to the South Fork target. Further soil sampling, rock sampling and possible trenching is required to define the target areas and prioritize drill targets. Under the terms of the letter agreement with a private vendor, Endurance can earn full ownership of Trout and Wolverine by completing US$200,000 in exploration expenditures and paying the vendor US$180,000 in cash by the end of 2024, as well as issuing the seller 300,000 Endurance shares by the end of 2022.

PacRim pulls plug on Chuitna

PacRim Coal LP March 31 said it has suspended its pursuit of the permits for development of the Chuitna coal mine in Southcentral Alaska. "Following several months of internal review and discussions, the partners in PacRim Coal LP have decided to suspend pursuit of its permitting efforts to invest in other projects," the company posted in a statement. Officials at PacRim declined to comment further on the decision. If developed as planned, Chuitna would have produced at least 300 million tons of ultra-low sulfur, sub-bituminous coal over an initial 12-year mine-life. This coal was planned to be shipped to Asia markets. Chuitna was originally evaluated through an environmental impact statement and nearly permitted in the 1990s, but a coal mine was never developed. With the increased demand and price of steam coal, PacRim put the project back on the regulatory track in 2006. The Alaska Miners Association said it is disappointed that the investment and jobs from developing a mine at Chuitna will not be realized. "For a company to conclude there are better places than Alaska to invest millions of dollars is discouraging at best," said AMA Executive Director Deantha Crockett. "The Chuitna coal mine was projected to exceed an investment of US$600 million in the project's development and operation. The mine would have created up to 500 jobs during construction and 350 full-time, year-round jobs during operation, and exceed US$300 million in revenues to the Alaska Mental Health Trust and millions of dollars to local governments and the State of Alaska. At a time when we're seeing thousands of layoffs and budget deficits in the billions, it is more important than ever to ensure Alaska has policies that encourage investment in our economy." ●

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PRETIUM RESOURCES INC.

At the end of March, Pretium Resources was finishing construction at the Brucejack gold mine project. With power now delivered to site, the company plans to begin processing ore by mid-April.

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NORTHERN NEIGHBORS

been stockpiled. Upon reaching commercial production, the high-grade underground operation at Brucejack is expected to produce 7.27 million ounces of gold over an 18-year mine life, or roughly 404,000 oz of the precious metal annually, according to a feasibility study completed in 2014.

Strikepoint to drill YU gold projects

Strikepoint Gold Inc. March 31 announced plans for at C$2 million of exploration on the Yukon properties it acquired from IDM Mining earlier this year. The total land package includes 22 properties in the Yukon that have been the target of roughly C$25 million of exploration by Ryan Gold Corp. Of these, Strikepoint has selected three — Pluto, Mahtin and Golden-Oly — as ready to be drilled. Strikepoint is planning a 'surgical' exploration program for 2017 that will focus on proving geological concepts identified by the extensive historical exploration work. Pluto, found in the Kluane region, is prospective for a gold-bearing skarn, a unique mineralizing system for the area. Roughly 15,900 soil samples have been collected at Pluto, with one such sample returning 15.43 grams per metric ton gold. Strikepoint believes size-able skarn deposits are responsible for the gold found in soil samples at Pluto and will test this theory with drilling in 2017. Mahtin shares many geological and mineralization similarities with Victoria Gold's Eagle Gold project, which is about 40 kilometers (25 miles) to the northeast. Extensive soil sampling, along with mapping and geophysical surveys, has identified two undrilled intrusion-related gold targets on the property. The company filed a technical report on the Mahtin property in mid-March. Golden-Oly is a large land package in eastern Yukon that has traditionally known for its tungsten and zinc potential. Recent work at Golden-Oly, however, has identified several gold targets. Airborne geophysics flown in 2012 highlighted six individual anomalies that correspond to topographic highs in the field. Soil sampling across these anomalies has further highlighted the anomalous gold-in-soil results, as well as having a geochemical fingerprint — gold, arsenic and bismuth — of intrusion related gold systems. Drilling in 2017 will test one of these anomalies being called the Nuke intrusive. This drilling is designed to enforce the model, which can be used to assess the potential of the other five targets on the property.

Victoria tests targets across Dublin Gulch

Victoria Gold Corp. April 4 announced the start of a C$6.2 million initial phase of 2017 drilling at its Dublin Gulch gold property in the Yukon. Roughly half of this phase 1 program will be focused on the rapid advancement of the Olive-Shamrock deposit, a satellite to the fully permitted and construction ready Eagle Gold Mine project. The work here will include step-out and definition drilling targeting the expansion of known, near-surface, minable tonnage along the mineralized shear zone. Five additional targets along a more than 13-kilometers (eight miles) stretch of the Potato Hills trend that hosts Olive-Shamrock will be drilled this year. These targets are: East Potato Hills, a large intrusion related gold geochemical anomaly that has never been drilled; Nugget, an undrilled Eagle lookalike with exceptional geochemical and trench anomalies; Falcon, an intrusion related gold mineralized target; Rex-Peso, a past-producing high-grade silver zone not fully explored for gold mineralization; and Lynx Dome, another historic high-grade silver producer under-tested for gold mineralization. Victoria said all of these targets, with the exception of Nugget and Falcon, lie within 5,000 meters of the Eagle Gold Mine footprint and are largely road accessible. "Drilling has begun and will continue throughout 2017, with the aim of demonstrating additional, definable resource gold deposits across the highly prospective Dublin Gulch property," explained Victoria Gold President and CEO John McConnell. ●

LAND & LEASING

State requests new info for fall sales

The Alaska Department of Natural Resources' Division of Oil and Gas is requesting any substantial new information for its fall lease sales in the Beaufort Sea, North Slope and North Slope Foothills areawide lease sale areas.

The division said in an April 4 notice that based on the information it receives, it will either issue supplements to existing final best interest findings, or issue decisions of no substantial new information. The most recent final best interest findings were issued for the Beaufort Sea areawide in 2009 and for the North Slope areawide in 2008; supplements to both findings were issued in July 2011.

The most recent North Slope Foothills final best interest finding was issued in 2011; no supplements have been issued.

Substantial new information must be received by 5 p.m. May 12.

The complete notice is available on the division's website: http://dog.dnr.alaska.gov/

—PETROLEUM NEWS

NATURAL GAS

Chugach Electric extends gas agreement

Anchorage based electricity utility Chugach Electric Association has told the Regulatory Commission of Alaska that it has extended a gas supply agreement with Cook Inlet Energy LLC by five years from its previous expiry date of March 31, 2018, to March 31, 2023. The agreement is for non-firm supplies of up to 10,000 mcf per day of gas. Gas pricing under the agreement rises from $6.49 per mcf this year to $7.31 in 2023.

Chugach Electric has firm gas supplies through its part ownership of the Beluga River gas field on the west side of the Cook Inlet, and through supplies contracted from Hilcorp Alaska. The utility has non-firm supply agreements with Cook Inlet Energy and AIX Energy, to furnish any additional gas that the utility may need. The gas fuels gas-fired power plants in Anchorage and at Beluga on the west side of Cook Inlet.

—ALAN BAILEY

PIPELINES & DOWNSTREAM

RCA closes Kenai Beluga Pipeline tariff case

The Regulatory Commission of Alaska has closed a tariff case involving a rate increase for gas transportation in the Kenai Beluga Pipeline, owned and operated by an affiliate company of Hilcorp Alaska. In February the commission approved the rate increase and on March 30 KBPL filed a new tariff reflecting the approved new rate.

The fees charged for gas transportation in the KBPL are particularly important for Cook Inlet gas producers and for gas and power utilities in Southcentral Alaska, because the pipeline system forms a major artery for the shipment of gas around the Cook Inlet region.

In February the commission approved the rate increase and on March 30 KBPL filed a new tariff reflecting the approved new rate.

Originally KBPL proposed a major rate increase from 29.15 cents to 63.98 cents per mcf. The fee is what is termed a postage stamp rate, given that the same fee applies regardless of where the gas enters or leaves the pipeline system.

Following a storm of protests by gas shippers against that original proposed price hike, the various parties involved entered settlement talks. In December those talks resulted in a settlement agreement for a revised new tariff of 37.05 cents. In January the Alaska Attorney General, Regulatory Affairs & Public Advocacy Section, notified the commission of its concurrence with the result of the settlement, thus paving the way for commission approval of the tariff in February.

—ALAN BAILEY

EXPLORATION & PRODUCTION

SAExploration plans Beaufort surveys

SAExploration Inc. in partnership with Kuukpik Corp., the village corporation for the village of Nuiqsut, is planning to conduct three 3-D seismic surveys straddling state and federal waters of the Beaufort Sea during this summer's Arctic open water season. According to a plan of operations filed with the Bureau of Ocean Energy Management the surveys will take place in two areas: Smith Bay, off the National Petroleum Reserve-Alaska, and an area referred to as "Islands 3D," around barrier islands offshore the central North Slope, from east of the Northstar unit to north of the Badami unit, and covering the Liberty unit. The Smith Bay surveying will encompass an area of about 89 square miles, while the Islands 3-D surveying will cover about 593 square miles, the plan of operations says. BOEM has issued a permit for the federal outer continental shelf components of the surveys.

The surveying will involve the use of autonomous recording nodes laid on the seafloor, without the need for ocean floor cabling. A submerged air gun towed by a vessel will provide the sound source for the seismic signals.

SAExploration says that the purpose of the surveying is to replace and augment existing seismic datasets through the use of new seismic technology for the gathering of improved quality, higher resolution seismic data.

The company says that it anticipates the surveying to commence as soon as the region to be surveyed is free of ice, probably in mid July, and will be completed in October. The data acquisition will likely last for about 70 days. The anticipated timeframe accommodates the need to cease operations during subsistence whale hunts and the possibility of unanticipated interruptions in the work.

A Mapmakers Alaska map was used in researching this story.

—ALAN BAILEY

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NORDAQ HEARINGS

intent was to suspend the well and use it as a disposal well. NordAq surrendered the Tiger Eye unit and leases in 2016.

Seasonal operations

Commission Chair Cathy Foerster asked Warthen why the company didn't proceed to plug and abandon Tiger Eye after it heard from the new Cook Inlet Energy management that they were not interested in using the well. Warthen said it was a seasonal venture and it was too late when they heard — there was already snow on the pad.

Foerster asked if any more delays were expected for the work needed to plug and abandon the Tiger Eye well. Warthen said further delays were not expected but said they needed to confirm that eagles weren't occupying old nests or building new nests in the area of the well, which could delay the work to mid-July. If there are no eagles nesting in the area work could begin as soon as snow is off the site and equipment can be barged in, he said.

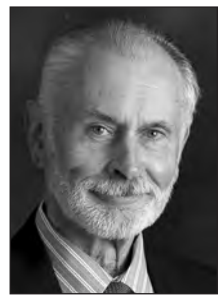
Commissioner Dan Seamount asked what the estimated cost was to plug and abandon the Tiger Eye well. Warthen said in the $400,000 range, and said the company had funds to cover the work.

Shadura was drilled from a CIRI lease in the Kenai National Wildlife Refuge and is also a seasonal operation, with work done from ice or snow roads in the winter. Warthen said the company planned to plug and abandon the Shadura well in the winter and said the cost of that work would be in the $500,000 range because of the added cost of a snow road and also because the well head is a little heavier and requires a heavier crane. ●

Contact Kristen Nelson at knelson@petroleumnews.com

Oil Patch Bits

Colonell named AECOM's engineering senior consultant



JACK COLONELL

AECOM, a premier, fully integrated global infrastructure firm, announced that it has hired Jack Colonell, Ph.D., to serve as senior consultant for coastal and ocean engineering for its Alaska operations, effective immediately. In this role, Colonell brings more than 40 years of global expertise in coastal and offshore environments. Since 1980, he has held multiple leadership roles with AECOM-acquired firms, including Woodward-Clyde Consultants and URS.

"We are thrilled to welcome Jack back to our team; Jack brings with him an extensive knowledge of coastal and marine environments across the globe," said AECOM Alaska Operations Manager Laura Young. "We are extremely fortunate to have somebody of Jack's caliber rejoin us and look forward to working with him again."

Colonell holds B.S., M.S. and Ph.D. degrees in civil engineering, from the University of Colorado, Washington State University and Stanford University, respectively. Prior to his career in consulting, he was professor of marine science at the University of Alaska-Fairbanks and professor of civil and ocean engineering at the University of Massachusetts-Amherst.

Fluor finishes Dow Chemical's facility on schedule

Fluor Corp. announced March 30 that it has safely finished the mechanical construction of the Dow Chemical Co.'s new ethylene production facility in Freeport, Texas, on schedule.

Fluor provided engineering, procurement and construction services on the 1.5 million-ton-per-year light-hydrocarbon cracker, which can use both ethane and propane as feedstock. The ethylene produced by the facility will be used as a building block for many of Dow's industry-leading performance plastics products.

After receiving the contract award in 2013, construction began in 2014, with more than 3,000 Fluor craft employees and subcontractors onsite at peak to deliver the project on schedule. The project also achieved more than 5 million consecutive work hours without a lost-time incident.

In support of craft workforce development, Fluor partnered with area community colleges and high schools to encourage pursuit of construction careers and performed more than 2,300 craft performance assessments and evaluations throughout the project.

In addition to the ethane cracker, Fluor was also responsible for a 750,000 ton-per-year propane dehydrogenation unit, which was completed in 2015. Dow's Freeport, Texas, complex is the largest integrated chemical manufacturing complex in the Western hemisphere.

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

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● NATURAL GAS

Qatar to boost production from gas field

By MAGGIE HYDE

Associated Press

Qatar laid out plans April 3 to boost production from a vast underwater natural gas field by 10 percent, giving the energy-rich Gulf nation potential new revenue as it pursues ambitious infrastructure plans.

Qatar is a small but wealthy member of OPEC that generates most of its income from natural gas rather than crude oil. It exports the gas by chilling it to a form known as liquefied natural gas, or LNG, that can be shipped on tankers to customers around the world.

State-run Qatar Petroleum said a new gas project on the southern portion of the North Field would give the 2022 World Cup host capacity to export some additional 2 billion cubic feet of gas per day.

Current production from the field is around 21 billion cubic feet daily, QP President and CEO Saad Sherida al-Kaabi said.

"Our aspiration is to remain the leader in LNG export, whether it's from Qatar or elsewhere," he told The Associated Press after announcing the project in the Qatari capital, Doha. "We will remain the dominant force in LNG for a very long time."

Al-Kaabi said the planned project follows studies and the drilling of exploratory wells that began in 2005. Work on the project is expected to begin in the coming few months, and could take five to seven years to complete.

Qatar is in the midst of a massive building boom as it prepares to host soccer's biggest tournament in five years' time. Its finance minister told reporters in February that the country is spending nearly half a billion dollars each week preparing for the games.

Qatar shares control of the North Field with Iran, which lies on the other side of the Persian Gulf. The two countries sit on opposing sides of a number of regional conflicts, including the war in Syria, though they maintain diplomatic relations.

Al-Kaabi downplayed the potential for any dispute with Iran over its plans to increase output from the field.

"Iran and Qatar have an excellent political relationship, for us as technicians we have an excellent technical relationship. We have a committee that meets regularly to discuss what both sides are doing," he said.

"So there's a mutual understanding of what is happening," he continued. "They're free to do what they want on their side of the field and we're free to do what we want on our side of the field."

Iran is also looking to boost output from the shared field, which it calls South Pars.

Iranian Oil Minister Bijan Zanganeh said in late March that his country aims to inaugurate several projects valued at $20 billion over the next year.

Qatar's gas industry is dependent on partnerships with major international energy companies, including ConocoPhillips Co. and Total SA. The former head of one of the companies Qatar is closest to, Exxon Mobil Corp., is now the top U.S. diplomat under President Donald Trump.

In the interview with the AP, al-Kaabi heaped praise on U.S. Secretary of State Rex Tillerson, someone he called a "good friend" that Qatar has gotten to know well during his time at the head of ExxonMobil.

"He's an excellent man who stands for ethics, integrity and (is) a great business leader," al-Kaabi said. "I think he will do a great job in his job there because he has always been in cooperation with many leaders around the world to promote his business."

—Associated Press writers Adam Schreck in Dubai, United Arab Emirates, and Amir Vahdat in Tehran, Iran, contributed to this report.

continued from page 3

WEISS Q&A

ways every employee can begin to engage more fully in the Alaska business and so that every employee, not just leadership, can begin to improve the business and to think like owners. It's about having our whole team engaged and improving our bottom line.

Petroleum News: As BP's chief executive in Alaska, what do you consider your greatest accomplishments to date? What more do you want to achieve in your time here?

Janet Weiss: Prudhoe Bay produces 55 percent of all the production in the Trans Alaska Pipeline System. That's a huge responsibility — one I do not take for granted. I'm very humbled and inspired to be in this job at this time. Not just as the first woman in the job, but the first long-time Alaskan to earn this job. It's given me a unique perspective during a very challenging period of low oil prices. I know great challenges bring out the best in Alaskans, and I'm most proud of the way our employees and contractors have taken on this lower for longer oil price environment, working to make the future more sustainable, more enduring.

> *"Prudhoe Bay produces 55 percent of all the production in the Trans Alaska Pipeline System."* ***—Janet Weiss, BP***

Petroleum News: What has BP (in North America) done over the past decade to do away with the "glass ceiling" for the advancement of women in upper management and executive positions?

Janet Weiss: When I joined the oil and gas industry in the mid-80s, it was a challenging time and place. The price of oil was low, companies were consolidating and there were not a lot of women in industry. I had to prove myself. Prove that I had the intellect, prove that I could solve problems, and prove that I belong here.

I've spent 23 of my 31 years in oil and gas industry here in Alaska. During my career, I led the Gulf of Mexico Shelf operations with 150 production platforms; I also ran our western Wyoming gas fields. Sometimes it was an issue to be the only woman on an offshore oil platform, but our leadership has responded to change.

Today we have a lot more women joining industry and more in leadership, and, education has made that possible. At BP we work to attract, motivate, develop and retain the best talent from diverse perspectives — our ability to be competitive and to thrive globally depends on it.

Petroleum News: What can state government do to improve its policies so as not to encourage more production and exploration on the North Slope?

Janet Weiss: Alaska has a choice. Yes, the state is facing a fiscal crisis, but it can still have a healthy and competitive oil and gas industry. There are three key principles that will determine if Alaska's oil and gas industry is the economic engine that continues to drive the state.

• First, the state must encourage (not discourage) more oil down TAPS.

• Next the state needs to keep the new explorers and new operator companies on the North Slope. That means keeping them there with good policy, don't drive the new entrants away.

• Finally the state should not shorten the life of the backbone fields, Prudhoe Bay and Kuparuk. We need Prudhoe Bay and Kuparuk to continue to build upon. A shorter economic life comes from diminishing the competitiveness of the opportunities, or excessively penalizing the base economics of these fields. ●

Contact Kay Cashman at publisher@petroleumnews.com

continued from page 1

PLATFORM LEAK

reduced pressure to the line, which runs between the Anna and Bruce platforms, from 70 psi to 5 psi. DEC said the 8-inch pipeline is some 75 feet below the water surface.

A unified command — the U.S. Coast Guard, DEC and Hilcorp — was established in response to the sheen and said in an April 2 statement that three flyovers were conducted April 1 with several sheens spotted some 3 miles downstream from the platform during the first flyover, but no sheens sighted during two later flyovers.

Since the suspected source of the release was the oil pipeline between the Anna and Bruce platforms, platform crews displaced the oil in the line with seawater.

In addition to USGS and DEC personnel observing the displacement operation from the platform, a vessel from Cook Inlet Spill Prevention and Response was on scene.

The unified command stood down April 3 after a final flyover that morning confirmed no sheen.

The command said Hilcorp had displaced all of the crude oil from the suspected leaking pipeline with filtered seawater and that a diving crew was assembling in the region with appropriate support vessels and the divers would investigate and do repairs as soon as it was safe to do so.

The command said the exact cause of the release is unknown and remains under investigation.

In an April 3 situation report DEC said the 8-inch crude line between the Anna and Bruce platforms had been isolated and the pressure reduced to zero psi, with a pigging operation to displace the crude oil completed the evening of April 2. The crude oil was displaced with 490 barrels of filtered sea water which was pumped behind the pig from the Anna platform.

DEC said the amount of crude oil released was estimated to be less than 10 gallons.

In an April 3 release Hilcorp said all oil had been removed from the line and there was no indication of further release.

"Based on standard calculations for the number and size of the initial oil sheens and the amount of oil recovered from the line, Hilcorp estimates the total volume of this spill to be less than three gallons of oil," the company said.

Hilcorp said the 8-inch line is 1.62 miles in length and was acquired by Hilcorp in January of 2012. The company said an inline inspection of the entire line was conducted last June along with visual inspections of certain exterior portions of the line.

Hilcorp spokeswoman Lori Nelson told Petroleum News in an April 5 email that no specific date had been set yet for divers to inspect the line.

—KRISTEN NELSON

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NWT RESOLVE

with government policies he said have created a "no-win situation" for the NWT in its efforts to develop a strong resource economy.

Five-year ban

The breaking point for the NWT occurred just before Christmas when the government of Prime Minister Justin Trudeau announced a five-year ban on offshore oil and gas permits in the Arctic — a decision McLeod said was made "without any meaningful consultation with Northerners ... expecting that the well-paying jobs the oil and gas industry creates can be replaced by tourism and fishing."

Right now, he suggested that move to close off a significant avenue for potential economic development for oil and gas development "does not do much to instill confidence that the federal government has an economic vision for northerners."

McLeod said that is "particularly concerning given the federal government's focus on reconciliation with indigenous people, as the moratorium has very real and immediate consequences for the Inuvialuit and Gwich'in people of the Beaufort Delta."

Asking if there is "an opportunity, at all, for future growth and development?" he noted that approvals for the Mackenzie Valley natural gas pipeline expire in 2022, while a production shutdown in Norman Wells earlier this year reduces confidence in the industry's future in the NWT.

Future in NWT?

Against that backdrop, McLeod said it is valid to ask whether there is any future for oil and gas in the NWT.

"We are faced with odds that a Vegas gambler might cringe at: low oil and gas prices, North American basin competition, changes to the LNG market, cost pressures, increasing political and regulatory risk, a global shift to renewable energy," and Trudeau's unveiling of a carbon pricing regime, he told the symposium.

What compounds the NWT's concerns is the prospect that President Donald Trump will reverse Barack Obama's ban on drilling in the bulk of U.S.-owned waters in the Arctic Ocean, adding to the NWTs competitive disadvantage.

"I think for a lot of people, (Trudeau) took away hope of ever being able to make a long-term healthy living in the (Canadian) North by suggesting there should be a lifetime moratorium in the Beaufort," McLeod said.

But he was emphatic that his government remains committed to "ensuring future generations will have the opportunities to find well-paying, stable jobs that will allow them to achieve the quality of life they seek and deserve."

McLeod's own hopes are pinned in "safe and responsible drilling in the Beaufort Sea" within 20 years, oil and gas extraction in the Liard basin and development of the Canol and Blue Fish deposits.

And that is regardless of the fact that non-renewable resources represent the foundation for the NWT's success, making up almost 30 percent of its gross domestic product and employing more than 15 percent of its workforce.

Pan-territorial strategy

In January, McLeod met with the premiers of the Yukon and Nunavut to lay the groundwork for a Pan-Territorial Sustainable Development Strategy to ensure northerners "have a strong collective voice in ongoing discussions about the future of the North."

"We are not content to stand aside and let other governments or countries tell us how and when the North can be developed," he declared. "We have a direct stake in creating a strong and sustainable future according to Northern priorities and values."

McLeod said it is essential that the development of an Arctic strategy begins with "the full involvement of the territorial governments and that we remain full partners in developing, approving and implementing Arctic priorities, whether they are an aspect of domestic or foreign policy."

He said that outlook is gaining momentum through significant progress over the past year with the Acho Dene Koe First Nation, the Fort Liard Métis Local and the Canadian and NWT governments towards completing a lands, resources and self-government final agreement.

In addition, he said the NWT is working on improvements to its Oil and Gas Operations Act now that it has legislative control over its resource development as it prepares for the industry's "revitalization" that will start with bringing "renewed interest, focus and accessibility to oil and gas exploration in the Arctic."

McLeod's own hopes are pinned in "safe and responsible drilling in the Beaufort Sea" within 20 years, oil and gas extraction in the Liard basin and development of the Canol and Blue Fish deposits.

In a final pitch to industry leaders at the Arctic symposium, many of them from companies that have shut down operations and exploration plans in the NWT, McLeod said "we are worth the long-term investment and look forward to seeing you back in the North." ●

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CONOCO ECONOMIST

Alaska, while occupying a spot in the oil supply curve where viable oil development remains feasible, the state's industry is in a challenging situation, where any significant cost increase could put the industry at risk.

"I would say that Alaska is in a slightly precarious position," Kah said. "Right now you're not quite at the margin. I would say you're in a reasonably good position, given the status quo business climate."

Kah also expressed optimism about the potential for a state-led Alaska LNG project, given the state's potential to significantly reduce the cost of the project through, in particular, the possibility of a federal tax exemption and the fact that the state would have lower return on equity requirement than a private company.

"I'm actually jazzed about the idea of a state-led LNG project," Kah said. "I realize it has issues. You have ways of reducing the costs so dramatically that it can keep you in the game."

From decline to growth

Reviewing the shale oil and gas revolution, Kah said that as recently as 2005 there was a forecast of a continuing decline in U.S. oil production and a general belief that the United States was running out of low-cost natural gas.

"Many companies, including ours, actually built re-gasification terminals to bring LNG into the U.S.," she said.

But following the widespread development of tight oil and gas resources in North America, U.S. oil production is now moving beyond the previous peak that production had hit in 1970. The country is also moving towards becoming a net exporter of LNG. While tight oil plays in the Permian basin, the Eagle Ford and the Bakken are each larger than the Prudhoe Bay field in Alaska, people continue to find new opportunities, Kah said. And the same is true for gas, she said.

"This is a very large production phenomenon and probably one of the key drivers of the oil (price) downturn," Kah said.

Alaska production stabilized

Despite this huge upsurge in Lower 48 oil production, Alaska production has stabilized and actually increased slightly in 2016. Kah attributed this resilience in part to Senate Bill 21, the bill passed in 2013 that reformed Alaska's oil production tax.

However, the rapid climb in Lower 48 oil production dropped sharply following the crash in the price of oil after the summer of 2014, as global oil supplies surged ahead of demand: The active rig count in the Lower 48 dropped from about 1,600 to around 450 in just a year. Houston, Texas, was particularly hard hit, with many personnel layoffs.

Now, with the oil price moving towards $50 per barrel, the industry is starting to pick up again, with a doubling of the rig count for horizontal drilling and U.S. production expected to reach a new record by the end of 2018. Continuing productivity improvements in the tight oil industry have kept pushing the supply cost for tight oil ever lower. Oil companies have also seen a major deflation in service industry costs.

The two major questions relating to where oil production may go from here are the extent to which the productivity decline from tight oil wells can be stemmed, and the extent to which this productivity improvement will be offset by service cost inflation as the oil industry recovers, Kah said. Production rates from tight oil wells have been continuously improving, while the time taken to drill wells has dropped. That has pushed the cost per barrel of oil down, moving the target cost for beating shale oil economics from a range of $50 to $80 down to a range of $30 to $50 barrels, Kah said.

And technical innovation continues, with, for example, new perforating techniques and technology for using data to determine the optimum spots to drill into. Recent discoveries concerning the need for a higher density of wells to fully access the oil in a tight oil play have enabled ConocoPhillips to up its own tight oil resource estimates by 40 percent, Kah said.

The supply curve

Shale oil appears at several positions on the worldwide oil supply curve, the curve plotting the supply cost for incremental oil production in different worldwide regions. However, a common feature of shale oil is that the incremental volume occupied by the resource on the curve keeps stretching out, thus pushing more expensive oil resources higher up the incremental production table, knocking some of that higher cost resource out of contention for meeting future world oil demand. Alaska is in a slightly precarious position, on the margin for competitiveness but better than oil sands, for example, Kah said.

Kah said that ConocoPhillips has lined up its own resource portfolio on a supply curve and now has a policy of only investing in the lower cost of supply projects. The company plans to continue with this strategy to maintain an immunity against oil price changes, even if oil prices increase.

"We are deciding that we are going to live in a lower cost of supply world, whether or not the world stays in a low price situation," Kah said.

However, ConocoPhillips has not reduced its Alaska spend by much, in part because the state did not see the huge ramp up of production seen in the Lower 48, she commented. On the other hand, the recent disposal of ConocoPhillips oil sands position in Canada provides an example of the company cutting some of its higher supply cost assets.

Increased price volatility

Kah thinks that the relatively short development timeframes for shale oil will cause shale oil to trigger increased oil price volatility, a volatility also heightened by the fact that most oil demand growth is now coming from China, India and other developing countries. The international pricing of oil with an appreciating U.S. dollar may also impact the world oil market. Other uncertainties potentially affecting global economic growth and hence the oil market include the stability of Chinese economic deceleration and the departure of the United Kingdom from the European Union.

Kah said that she does not agree with the theory that the world is about to hit peak oil demand, as a consequence of emerging technologies such as autonomous road vehicles. The widespread use of these technologies still lies quite a few years in the future, and the impact of the technologies on fuel demand is unknown, she suggested.

And the history of the oil price has displayed such volatility and unpredictability in the past that ConocoPhillips has begun to take a view that the complexity of the oil market may prevent the market ever establishing an equilibrium price — rather than trying to predict that equilibrium position, the company now spends more time trying to figure out what the price trajectory may be, Kah said.

Analysts are forecasting oil prices in the range of $50 to $80 in 2020. Proponents of the $50 level argue that continuing innovation in tight oil production will hold prices down, while advocates for a higher price believe that oil from the more expensive end of the supply curve will continue to be needed and will thus set the price.

Kah said that her view lies somewhere between these extremes. It does not appear that between now and 2020 the world will need more oil than can be provided by countries in the Organization of Petroleum Exporting Countries, tight oil, and from development projects that are already underway, she said.

The gas market

From the perspective of natural gas, the relative ease of producing tight gas from shale gas plays has resulted in a huge ramp up of U.S. gas production, with the Marcellus Shale on the eastern side of the country leading the pack when it comes to gas producing regions. The fact that much of the gas lies in privately owned land has contributed to the speed of development, Kah commented.

The major gas price decline that has resulted from the gas glut has caused production to flatten. But, as productivity from gas wells improves, using lessons learned from tight oil production, gas production will probably start rising again, Kah suggested.

Although this abundant gas can act as a clean and relatively inexpensive fuel for power generation, mandates and tax credits for wind power in regions such as Texas have distorted the economics, pushing down the use of gas as a bridge fuel in the transition to a low carbon future, Kah said. The same issue arises in Europe, she said.

As a consequence, the biggest source of demand growth for U.S. gas is the export of LNG from the Gulf Coast, where the construction of LNG plants is relatively cheap. The demand for low-cost gas in petrochemical facilities is also buoyant, Kah said. In addition, the pipeline export of gas to Mexico presents a major opportunity, she said.

With a worldwide oversupply of LNG, much new Gulf Coast LNG capacity will not be used, especially given the fact that the feedstock for these plants is more expensive than in regions that have stranded gas to sell. Australia, for example, has lower fuel prices and is closer to Asian markets than the Gulf of Mexico, Kah said. And as global LNG prices have dropped, the pricing in different regions of the world has converged.

LNG growth potential

However, worldwide LNG demand continues to grow, with the strongest growth expected to come from China and India. Moreover, the abundance of cheap LNG opens markets in smaller countries such as Pakistan and Argentina. Given the inability to store LNG in large quantities, there will not be a world surplus of LNG. Instead, the LNG price will drop to a level where demand moves into balance with supply, Kah said. However, sooner or later the world will need new LNG capacity. And, as demand starts to move ahead of supply once more, European and Japanese prices can be expected to increase relative to prices in other regions, she suggested.

Kah said that an Alaska LNG project could work, given the state's ability to reduce the cost of the project. Bearing in mind the long-term nature of the project, it is possible that the project could come on line at a propitious time in relation to the world LNG market.

"I certainly think it is still on the plate of opportunity for Alaska," Kah said.

In general, for Alaska to remain competitive in the global oil and gas market, the state needs a competitive and stable fiscal policy. Greater access to federal land, with a reliable and timely federal permitting process, is also required, Kah said. ●

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FURIE SETTLEMENT

between U.S. points. Justice said waivers may be obtained in limited circumstances from the secretary of the Department of Homeland Security in the interest of national defense following a determination that no U.S. vessel is available.

U.S. vessels are those built, flagged, crewed and mostly owned by Americans.

The Jones Act was passed in 1920 and its impact on the oil and gas industry was increased in 1953 with passage of the Outer Continental Shelf Lands Act, which extended the Jones Act to U.S. territorial waters, including platforms and other installations bolted to the OCS seafloor.

A "tentative settlement" was reached this summer, but final authorization was needed from the Department of Justice, the parties said in court filings.

Escopeta once had waiver

Escopeta received a waiver of the Jones Act requirements in 2006 for a rig move to Cook Inlet, and tried to persuade Homeland Security officials to either grant a waiver of the Jones Act, or reconfirm the old waiver. But federal officials denied these requests.

The 2006 waiver was for a different jack-up rig, and Department of Homeland Security Secretary Janet Napolitano ultimately decided the waiver was invalid by early 2011. Escopeta moved the rig anyway, without getting a new waiver, but insisted that it wasn't breaking any laws by doing so.

The fine was assessed in October 2011; in the summer of 2012 Furie, successor to Escopeta, sued the Department of Homeland Security over the fine.

Furie's lawyers argued that the Jones Act wasn't violated because the Spartan rig was not "merchandise" within the meaning of the Jones Act, but was a "vessel" merely being relocated to a new drilling site.

There was a mediation effort and settlement discussions began in late 2015.

Settlement reached

A settlement was announced last summer, but details were not available until a review by the Department of Justice was complete.

Early this year the court was told that final approval had been expected last November, but the approval packet seems to have been lost at the department with departures at the department due to the change in administration. When the court asked for a status report and an explanation of the delay, the state of the paperwork was revealed and an expedited review of the settlement was launched.

In February Furie asked for more time to consider the long-delayed settlement, citing the passage of time and the change of administration, and telling the court it wanted "additional time to evaluate the situation and assure that it is entering a valid agreement that will not be subject to collateral attack or criticism from the new administration."

The Department of Justice told the court there was no basis for questioning the validity of the settlement. Justice approved the settlement in early February nearly seven months after Furie and the Department of Homeland Security announced a tentative settlement in August.

The U.S. District Court for the District of Alaska received notice of agreement to the settlement from the parties and in a March 31 order dismissed Furie's remaining claims against the government and the government's counterclaims.

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PENTEX PURCHASE

ducer at a workable price and volume. Therriault told the AIDEA board that IGU has taken a lead in gas supply negotiations but that a supply has not yet been established.

Fairbanks gas supply

The objective of the IEP is to greatly expand natural gas supplies for Fairbanks and the surrounding Interior, to alleviate the high cost of energy in the region and help address problems with poor air quality in the city during the winter.

The current relatively low price of fuel oil in Fairbanks is creating challenges for the project, given that the project economics depend on sufficient Fairbanks residents converting their building heating systems from oil to gas. The IEP has set a goal of a Fairbanks gas price of $15 per thousand cubic feet at the burner tip. The project involves the establishment of a new Cook Inlet gas supply, expanding an existing small liquefied natural gas facility near Point MacKenzie on Cook Inlet, expanding the transportation arrangements for shipping LNG to Fairbanks and building out the gas distribution infrastructure in the city.

In 2015 AIDEA purchased Pentex, the owner of the existing LNG facility, a trucking operation for shipping LNG to Fairbanks, and gas utility Fairbanks Natural Gas. The idea of the purchase was to help move the IEP forward. AIDEA wants to sell Pentex to IGU to enable the formation of a single integrated gas utility in Fairbanks, with that utility also owning and operating the LNG plant and the LNG trucking operation. Proceeds from the sale would go into AIDEA's revolving fund that the agency used for its Pentex purchase.

Project funding for IGU's planned expansion of the Fairbanks gas supply, including all of the various components of the IEP, would come from established IEP funding which consists of a state capital appropriation, AIDEA Sustainable Energy Transmission and Supply, or SETS loans, and AIDEA bonds.

Expanding the LNG supply

Given the plan to expand the existing LNG facility, a number of vendors have expressed interest in carrying out the expansion project, Therriault told the board. And, from the perspective of the trucking arrangements to

The objective of the IEP is to greatly expand natural gas supplies for Fairbanks and the surrounding Interior, to alleviate the high cost of energy in the region and help address problems with poor air quality in the city during the winter.

Fairbanks, FNG is now using a new large-capacity road trailer that had been shipped to Alaska in 2015 for road tests. FNG has ordered three more of these trailers, to achieve economies of scale in its trucking operation. The utility has also been conducting talks with the Alaska Railroad over the possibility of shipping LNG by rail. However, the need to truck LNG between railroad locations and FNG's facilities currently renders the rail option uneconomic.

The IEP will require significantly expanded LNG storage facilities in Fairbanks. There is some urgency in moving ahead with the storage construction, given that the project economics assume the use of a state LNG storage construction tax credit that applies to new storage facilities that go into operation by Jan. 1, 2020. The IEP team is currently assuming that the IGU purchase of Pentex will complete in time for IGU to take on the storage expansion project, Therriault said. In the event of the purchase not completing, the AIDEA board would need to decide on a storage expansion by FNG, he commented.

Encouraging conversions

In the interests of encouraging Fairbanks commercial organizations to convert their premises to gas heating, AIDEA's IEP team has been carefully following the progress of a Property Assessed Clean Energy, or PACE, bill though the state Legislature. The on-electric-bill payment of conversion loans could provide a similar loan arrangement to PACE for Fairbanks residents to help handle conversion costs, Therriault said.

Another possible means of increasing natural gas demand in Fairbanks would be the conversion of the city bus fleet to the use of natural gas as fuel, Therriault commented. A conversion of this type might attract funding support from a funding award for Alaska through a Volkswagen emissions violation settlement trust, he said. ●

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