Petroleum news

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FINANCE & ECONOMY

Hanging in there

Alaska oil producers outline their response to current low crude oil prices

By ALAN BAILEY

Petroleum News

JANET WEISS

The times are tough for Alaska's oil industry as low oil prices continue to erode margins and executives have to make painful decisions about cutbacks in staffing levels and drilling activities. But the current environment also focuses attention on finding ways to cut costs through improved operational efficiencies, Alaska managers of companies operating in Alaska told the Society of Petroleum Engineers Western Regional Meeting on May 24.

BP, the company that operates the giant Prudhoe Bay field on the North Slope, has through improved efficiencies been able to reduce the breakeven oil price for the field by $9 per barrel, a level that allows the operations to be sustainable in the current environment, Janet Weiss, president of BP Exploration (Alaska) Inc., told the meeting.

"It has not been easy," she said.

But oil prices will eventually recover.

"We believe the environment is lower for even longer, but not forever," Weiss said.

BP has been making sure that work which needs to be done is conducted safely but is also done effi-

see LOW PRICES page 19

EXPLORATION & PRODUCTION

Savant evaluates Badami

Under 'new' owner Glacier Oil & Gas, Savant is considering options for unit

By ERIC LIDJI

For Petroleum News

As it adjusts to new ownership, Savant Alaska LLC is undertaking a review of development and exploration opportunities at the Badami unit on the eastern North Slope.

But as has been the case for both the company and the field in recent years, economic conditions could also delay any attempt to pursue those opportunities in the near future.

With low oil prices and the ongoing bankruptcy proceedings of parent company Miller Energy Resources Ltd., Savant was "unable to justify the expense" of hydraulic fracture stimulations on two existing wells and drilling two new wells at the unit over the past year, the company told state officials in a recent plan of development. Those projects had originally been scheduled for late 2014 or early 2015, but were postponed to this past year because the company had been unable to secure equipment and barge it to Badami in time to complete the activities before the end of the open water

Earlier this year, Miller Energy emerged from bankruptcy as Glacier Oil & Gas Corp. and is currently evaluating its operations and prospects on the North Slope and in Cook Inlet.

see BADAMI REVIEW page 18

FINANCE & ECONOMY

China on the prowl

Beijing ready to open Canada free-trade talks but infrastructure progress needed

By GARY PARK

For Petroleum News

There was a time when Chinese state-owned petroleum companies had rounded up C$35 billion in Western Canadian oil sands and shale gas assets which observers believed would lead to another C$20 billion in capital investment to achieve commercial production by 2020.

But that was five years ago, before anyone could have imagined crude oil's downward price spiral, and before the Canadian government intervened, banning the takeover of oil sands operations by foreign state-owned enterprises.

The assumption now that Beijing is looking for an exit strategy could be jumping the gun.

Chen said First Nations' issues have effectively shelved Nexen's plans for its Aurora LNG project at Prince Rupert, which would have consumed 3.11 billion cubic feet per day of British Columbia gas.

Weidong Chen, former chief researcher at CNOOC, which acquired oil and gas producer Nexen in 2009 for US$15.1 billion, pointed the way ahead when he told a Canada-China Forum that Canada has lost credibility as an investment destination because of its inability to build export pipelines and tanker terminals.

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SuperLig-One pilot plant recovers scandium from Bokan Mountain

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The $6 billion question

Are Novagold, Barrick ready to pull the trigger on Donlin Gold development?

Are Novagold, Barrick ready to pull the trigger on Donlin Gold development? Read more in North of 60 Mining News, page 9.

State approves Kitchen Lights plan

Alaska's Division of Oil and Gas has approved Furie Operating Alaska's latest plan of exploration for the Kitchen Lights unit, offshore in Cook Inlet. The division says the benefits of plan approval outweigh any possible adverse impacts, given the mitigation measures that Furie will implement and given other stipulations associated with the approval.

Furie is in the process of continuing the development of its offshore Kitchen Lights gas field in the unit but also wants to

see KITCHEN LIGHTS page 18

Company executives' tax worries

Alaska managers of oil companies operating in the state, when talking to the Society of Petroleum Engineers Western Regional Meeting on May 24 about their responses to current low oil prices, all expressed their concerns about the impact of uncertainty and instability in Alaska's fiscal situation.

The state Legislature is currently debating possible changes to the state's oil tax laws as a means of addressing a state budget shortfall.

see TAX WORRIES page 18

HB 247 conference committee named

Two dramatically different versions of House Bill 247, Gov. Bill Walker's oil tax credit bill, are headed for conference committee in the Alaska Legislature. The version passed by the House was proposed on the floor by Republican Reps. Paul Seaton of Homer and Tammie Wilson of North Pole.

Senate Finance adopted a committee substitute which was substantially different than the House bill.

The House rejected the Senate CS by a vote of 14-24, sim-

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● GOVERNMENT

Chenault: Oil price plunge causing chaos

Republican House Speaker from Nikiski says continued investment considerations must underpin any changes oil tax system in HB 247

By STEVE QUINN
For Petroleum News

House Speaker Mike Chenault has held that post longer than any Alaska lawmaker — by a long shot. He's completing his fourth term as speaker while spending his eighth year on House Resources filling in for longtime colleague and friend Mike Hawker, who is being treated for cancer.

He's been in office during oil tax debates through administrations run by Frank Murkowski, Sarah Palin, Sean Parnell and now Bill Walker.

Chenault, a Nikiski Republican, spoke to Petroleum News about his thoughts on the current state of Alaska's oil tax and tax credit system and why it's so difficult to negotiate any changes.

Petroleum News: You've been around for this debate over and over be it PPT under Murkowski, ACES under Palin, plus HB 110 and SB 21 under Parnell, why do you suppose you're back here working on this again?

Chenault: The world has changed. As long as we don't control the price of oil, we are going to have to change with it. I don't believe anyone ever thought oil would get down to $28 a barrel, where it has been but now it's about up to $50. No one thought when we got our last program that oil would get to $28 and the program before that no one thought it would get to $140 either where we were raking in money hand over fist.

So that's the main reason why we are in the situation we are in, is because we don't control the price of oil, but our budget is based on the price of a barrel of oil, very heavily weighed. I think that's the biggest reason. It's not devious plans to give more money to the oil industry. It has to do with the last tax program that was put in place; no one was thinking what happens at low oil prices other that we instituted a higher tax if it went that low.

Petroleum News: So why has it been so difficult to come to 21 and 11, as the catch phrase goes, and get a bill to the governor?

Chenault: I just think there are probably different philosophies in play. I personally think we need to continue investing in the oil industry to make sure that in five years or 10 years or 15 years that we have as much oil production as we can. I truly feel that if we don't continue to make that investment, then when the price of a barrel of oil does rebound we won't continue to see production increase, either. We'll continue to see it fall and at a rate of 7 percent or more. That doesn't do us any good. There is a balance there, but I don't have the magic ball to tell me what that balance is right now.

Petroleum News: You appointed (Resources co-chair) Dave Talerico, Kurt Olson and Geran Tarr to the HB 247 conference committee. What made you select them?

Chenault: All three have basically heard the bill more than anyone else has. I looked at the possibility of someone on Finance but with all the revenue bills up there and the operating budget out, I didn't to take anyone away from Finance.


MIKE CHENAULT

Petroleum News: You sat on Resources quite awhile this session. Have you learned anything about the dynamics beyond what you've identified with the world market driving changes here?

Chenault: Yeah, it's that there are many facets to our taxes, like Cook Inlet and the many different players in Cook Inlet and how any change in the tax formation, what affect it has on some of them.

Some use QCE credits more and some use NOL credits. They can be both small corporations doing it or a large corporation. Some use the WLE credits more. So there really can't be any one fix, any one tax credit that really addresses the oil industry statewide. You've got Cook Inlet; you've got middle earth and you've got the North Slope.

Each one and each business looks at what's available to them and how do they manipulate that tax system that best fit the needs of their company. Then we try to take care of the big guys; we try to take care of the small producers; we try to take care of the exploration companies; we try to look at wildcatters.

We try to take everyone together and put together a plan that fixes or addresses the needs. You are not going to get it right. If you have one size company doing one type of exploration or one type of production, then you can come up with something that might be durable and that will last for a while. But when you have all the different aspects of the industry, you get some of them right and you don't get some of them right.

Cook Inlet I think we got right. We spent a lot of money in tax credits. But we also doubled oil production in Cook Inlet. While it may not be much, we still doubled it. We got away from the issue of brown outs and the possibility of bringing in LNG. I think it accomplished that. Was it expensive? Yes it was. Can we cut back on those tax credits? Yes we can. But we probably won't see as much investment from the industry as we would have done in this tax regime anyway.

Yes, they were set to sunset and we would have to come back and look at them and see if they are doing what we wanted them to. What is the cost of them? Do we still need it or do we get rid of them or do we need to modify it to make it work better for us.

Q AND A

We see it in the tax bill where we are basically getting rid of the Cook Inlet tax credits. If you talk to the industry, they will tell you "as long as you pay the credits that you owe us, we'll figure out a way to move forward. We may not make the investment as quick as we would with tax credits, but if we have a customer we can sell the product to, we'll figure out a way to get there."

Petroleum News: Speaking of reviewing it, that is one of the provisions in the bill that emerged from House Resources; do you still want to see that happen?

Chenault: I think that it probably should happen. Let's look at it. It doesn't hurt us to look at it. I don't like to cause indecisiveness in industry's business decisions. They will adapt. They have to, but we don't need to be making knee jerk reactions. We need to make well thought out decisions based on the facts that we know them today. Something could change tomorrow. Oil could go up to $150 a barrel tomorrow. We would probably forget about where we are at today. We need to find something that is durable that could stand the test of time and as of yet we haven't found that to be very durable.

Petroleum News: It seems like that's one of the concerns — durability — and the question of whatever the Legislature arrives at, will it be durable or not?

Chenault: I would like to see that, but

see **CHENAULT Q&A** page 17

● GOVERNMENT

Sweeping climate change plan from Ontario

Goal to cut GHG emissions 15% from 1990 levels by 2020, 80% by 2050; electricity, geothermal, to replace natural gas for heating

By GARY PARK
For Petroleum News

Energy, auto and airline industries are stunned by the Ontario government's plan to slash greenhouse gas emissions at a cost of C$7 billion by 2021.

With 13.8 million residents, Ontario accounts for more than one-third of Canada's population, meaning that whatever reforms it implements will have a sweeping impact on those sectors and their ability to meet the targets.

A confidential blueprint, obtained by the Globe and Mail prior to a scheduled release in June, includes an exhaustive list that Premier Kathleen Wynne said will put her province on "the cusp of a once-in-a-lifetime transformation ... of how we look at our planet and the impact we have on it. It will forever change how we live, work, play and move."

Goal is 15% cut

If Ontario goes ahead with the full strategy, aimed cutting greenhouse gas emissions to 15 percent below 1990 levels by 2020, 37 percent by 2030 and 80 percent by 2050 — it will also deliver a body blow to fossil-fuel industries.

Among the objectives is a phase out of natural gas — once touted as the cleanest energy source — for heating by requiring all new homes to be heated with electricity or geothermal power by 2030 and all buildings by 2050, while setting a target for 12 percent of all new vehicle sales, or about 86,000 vehicles, to be electric by 2025.

More than half of the C$7 billion involves grants, rebates and other subsidies to retrofit new buildings.

The largest emissions cuts are projected to achieve the following annual reductions: 3 million metric tons for buildings disconnected from natural gas; 2.5 million metric tons for making industry more energy efficient; 2 million metric tons for a low-carbon fuel standard; 1 million metric tons for a renewable energy content in natural gas; and 400,000 metric tons for switching trucks and buses to LNG and electricity.

Currently natural gas provides 76 percent of the heating source for all of Ontario.

But experts note that an earlier version of the new action plan camouflaged its costs in electricity surcharges which were expected to see Ontarians pay an extra C$170 billion between 2006 and 2032. They are still trying to calculate the hidden costs of the latest initiative.

Reports of sharp disagreement

Although there have been reports of sharp disagreement within the Ontario cabinet over the proposals, Energy Minister Bob Chiarelli said the "debate" within government has ended with "100 percent consensus" on the strategy.

John Yakabuski, energy spokesman for the opposition Progressive Conservative Party, said there is "no possible way you can embark on this plan to basically eliminate all fossil fuel heating" in a province that already has the highest electricity prices in North America.

Andrea Stass, a spokeswoman for Union Gas, one of Ontario's largest utility companies, said the plan is "prescriptive ... it removes the choice of consumers to be able to determine which heat source they are going to use."

Malini Giridhar, vice president of business development at pipeline and utility company Enbridge, said the goal of electrifying building heat would "require a lot of generation, transmission and distribution just to handle what natural gas provides very affordably today."

Vehicle objectives called impossible

Automotive industry executives and analysts issued a flat warning that meeting electric vehicle objectives would be impossible.

One analyst, Dennis DesRosiers, said proposed electric vehicle incentives, including C$14,000 in rebates per vehicle, while eliminating the provincial sales tax on vehicle sales, would not solve the greatest challenge facing electric vehicles.

He said they are unable to travel far enough on a single charge to out-distance vehicles using fossil fuels.

The Canadian airline industry has already started raising objections to the Alberta government's decision to adopt a carbon tax of C$30 per metric ton, arguing that will only add to a growing burden of fees and taxes paid by air carriers and passengers.

Marc-Andre O'Rourke, executive director of the National Airlines Council of Canada, said the patchwork of carbon tax schemes that vary from province to province is not the most effective way to tackle climate change and greenhouse gas reductions.

He said Canada already has one of the highest rates of third-party taxes and fees at a time when airlines are operating on razor-thin profit margins.

Gregg Saretsky, chief executive officer of WestJet, Canada's second largest airline, warned that if other provinces follow Alberta's new carbon tax the cost for passengers would be "potentially big." ●

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CORRECTION

NordAq retains NPR-A acreage

An article in the May 22 issue of Petroleum News, "NordAq sells North Slope acreage," incorrectly stated that NordAq Energy Inc. no longer operates acreage on the North Slope, after a recent sale. In fact, while the company no longer operates state-owned leases, it still operates 12 leases covering some 138,000 acres in the federally managed National Petroleum Reserve-Alaska. Petroleum News regrets the error.

—PETROLEUM NEWS

● PIPELINES & DOWNSTREAM

Trans Mountain fight far from over

Conditional NEB approval to tripling Kinder Morgan crude system, prompting hard line from First Nations, munis, environmentalists

By GARY PARK
For Petroleum News

More than four years after formally stepping into the batters' box with plans to triple capacity of its Trans Mountain crude oil pipeline system, Kinder Morgan has limped to first base.

The question now is whether there is any hope that the company can steal second base, let alone make home base.

Like every other major pipeline originating in the Alberta oil sands it faces an array of opponents to its C$6.8 billion project, with First Nations and Vancouver-area municipalities in the forefront, that say they will resort to litigation to block plans for starting construction in 2017 and coming on line in 2019.

For now, Kinder Morgan has only cleared the first actual hurdle, gaining conditional approval from Canada's National Energy board to build a parallel system to increase Trans Mountain's volumes to 890,000 barrels per day from 300,000 bpd.

Alberta Energy Minister Marg McCuaig-Boyd, a rock-solid supporter of the Trans Mountain expansion and a baseball fan, said "it's not a home run yet, but we're making some progress."

Others point to research by the Angus Reid Institute which shows 60 percent of British Columbians oppose the pipeline, with 40 percent strongly opposed, more than enough to give the Canadian and British Columbia governments reason to stall progress.

NEB conditions

In a 533-page report, the NEB set 157 conditions, 93 of which have been implemented following public hearings, said the NEB's Chief Environment Officer Robert Steedman.

"On the whole, taking into account all of the evidence in the hearing, considering all relevant factors, and given that there are considerable benefits nationally, regionally and locally, the board found that the benefits of the project outweigh the residual burdens," he said.

The conditions require Kinder Morgan to carry C$1.1 billion in liability insurance covering oil spills or tanker accidents, along with a plan to handle a spill at the tanker terminal and a plan to reduce and offset related greenhouse gas emissions.

Kinder Morgan said in a statement that the NEB recommended the project's approval by the cabinet of Prime Minister Justin Trudeau "because it is in the public interest."

The company said it needs more time to review the full list of conditions, which include further consultation with communities along the pipeline right of way and communities affected by marine shipping from Kinder Morgan's Port of Metro Vancouver tanker terminal in Burnaby and a detailed plan for hiring and training aboriginal workers along the route.

Kinder Morgan is also required to conduct and file details of an earthquake analysis before it starts construction.

NEB decision called 'milestone'

Tim McMillan, chief executive officer of the Canadian Association of Petroleum Producers, said the NEB decision is a "milestone for the future of Canada."

"The NEB is sending a clear message to Canada: building the infrastructure to get our resources to market is in the best interest of our country," he said.

Research by FirstEnergy Capital earlier in May underscored the vital need to chase international crude prices by estimating the discount between unrefined heavy Canadian crude and West Texas Intermediate oil at US$14.75 a barrel.

The NEB acknowledged evidence from the City of Vancouver, the City of Burnaby and the Tsleil-Waututh First Nation that a crude spill in the Vancouver board would have adverse effects, but concluded that "a large spill ... is not likely."

Also called a 'disappointment'

However, Vancouver Mayor Gregor Robertson said the NEB's findings are a "profound disappointment," and vowed to continue the fight against Trans Mountain.

"This project is a direct threat to Vancouver's successful economy and environment," he said.

Robertson said Vancouver has a "solid economy that is firmly grounded in our clean and green brand ... and we can't risk an oil spill affecting hundreds of thousands of jobs."

Burnaby Mayor Derek Corrigan said he plans to organize a mass citizens' campaign to send a strong message to Trudeau to stop the project and "continue to fight ... it's not over."

The NEB said the project would deliver several "important benefits" to Canada, notably increasing "access to diverse markets for Canadian oil (and) considerable government revenues."

Cabinet has until December

The federal regulator's recommendations now go to Trudeau's cabinet, which has until December to deal with its first major test — deciding between two factions who show no desire to move towards compromise.

Over the next six months, two new elements of the regulatory process must be completed — a panel named in mid-May by the Trudeau government must present a comprehensive review to the cabinet after consulting with the public and indigenous communities, and the British Columbia government will conduct its own environmental assessment.

Trudeau said he supports getting resources from the Alberta oil sands to international markets, but not without the support of First Nations and environmentalists — a goal widely seen as unattainable if he means gaining unanimity.

The Trudeau government said it aims to restore public trust and confidence in Canada's environmental assessment processes.

"If we're going to attract the investments we need to sustainably develop our energy resources, then we have to better engage Canadians, conduct deeper consultations with indigenous peoples and base decisions in science, facts and

see **TRANS MOUNTAIN** *page 6*

No pipeline-hydro link

British Columbia Premier Christy Clark continues to hold-fast to the conditions her province has set for its approval of crude oil pipelines from Alberta to tanker ports on the Pacific Coast.

And she won't relax those standards even if Alberta agrees to take hydroelectricity from the Site C dam now being built in northeastern British Columbia.

While confirming she is in three-way talks with the Canadian and Alberta governments over hydro sales, Clark was adamant that any power deals will not be connected to approvals of crude pipelines or shipments of natural gas from Alberta to provide feedstock for LNG exports.

She said B.C. can easily sell its excess hydro south of the border in the United States, but she'd prefer to make those sales in Alberta to help Canada meet its international commitments on reducing greenhouse gas emissions.

Clark said B.C. can help cut GHGs in Alberta through hydro transmission as well as in China by exporting LNG to replace coal used to fire power plants.

B.C. Environment Minister Mary Polak said First Nations opposition and concerns about pipelines crossing their territories remain significant.

She said her government will continue to insist on Kinder Morgan and Enbridge meeting its conditions for crude export pipelines: An environmental review; oil and land spill response plans; First Nations consultation; and a fair share of economic benefits for British Columbia.

"We have set the bar high for a reason," Polak said, adding that the Canadian government will have to play a role in strengthening marine oil spill prevention and response.

Clark expressed her growing frustration over the delays in securing LNG approvals from Canada's previous Conservative and current Liberal governments.

"There is something wrong with a system when investors can't get a 'Yes' or a 'No' on environmental certificates and other permitting in something less than 1,100 days," she said' referring to the three years that has elapsed dealing with a bid by Malaysia's Petronas for the Pacific NorthWest LNG project.

However, she did say the new federal government has "really picked up the pace."

—GARY PARK

● FINANCE & ECONOMY

EIA reference case with and without CPP

Energy Information Administration finds growth in electricity from wind, solar, even if EPA's Clean Power Plan rule not promulgated

By KRISTEN NELSON
Petroleum News

The U.S. Energy Information Administration's Annual Energy Outlook 2016 won't be out until July, but in mid-May the agency posted an early release with a summary of the reference case, including the Clean Power Plan and a no-CCP case.

The agency said both of the cases released "show substantially more growth in electricity generation from wind and solar energy than EIA's previous projections," with those capacity additions "particularly robust through the early 2020s, reflecting the extensions of tax credits for those technologies enacted in December and lower estimates of their capital costs than in previous projections."

The Environmental Protection Agency's Clean Power Plan would cut carbon dioxide emissions from power plants.

The EIA's reference case is a business-as-usual trend estimate which "assumes CPP compliance through mass-based standards that establish caps on CO2 emissions from fossil-fired generates covered by the CPP," while the no-CPP case, also a business-as-usual trend estimate, assumes CPP is not implemented.

In the reference case U.S. crude oil production remains below 9.5 million barrels per day through 2025 due to lower oil prices, with production growing to 11.3 million bpd by 2040, "reflecting higher recovery rates driven by technology advances and higher prices."

The reference case incorporates existing laws and policies, but "is not intended to be a most likely prediction of the future," EIA said.

EIA Administrator Adam Sieminski said in a statement that "EIA's approach to addressing the inherent uncertainty surrounding the country's energy future is to develop multiple cases that reflect different sets of internally consistent assumptions about key sources of uncertainty such as future world oil prices, macroeconomic growth, energy resources, technology costs, and policies. The energy sector has always been dynamic and undoubtedly will continue to change in the future. In creating the AEO, EIA has tried to make its projections as objective, reliable and useful as possible."

Key updates

EIA said key updates in its 2016 AEO include incorporation of EPA's final rules for the Clean Power Plan; undated renewable capital costs; latest California zero-emission vehicle sales mandates; extension of the production tax credit for wind and a 30 percent investment tax credit for solar; and lower near-term crude oil prices.

If the Clean Power Plan is implemented, EIA said, coal's share of total electricity generation, which was 50 percent in 2005 and 33 percent last year, would fall to 21 percent in 2030 and 18 percent in 2040.

But with low load growth and generation mix changes electricity related CO2 emissions remain well below the 2005 level even without CPP, EIA said. The change is driven by extension of key renewable tax credits, reduced solar photovoltaic capital costs and low natural gas prices.

A strong growth in wind and solar generation spurred by tax credits is projected to lead to a short-term decline

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TRANS MOUNTAIN

evidence," said Natural Resources Minister Jim Carr.

Review process ridiculed

But opposition parties have dumped ridicule on Trudeau's additional review process, with interim Conservative leader Rona Ambrose asking: "When will the prime minister stop reviewing his reviews and make a decision?"

Kenny Stewart, a Vancouver-region Member of Parliament from the New Democratic Party, said the new panel falls far short of the wholesale revamping of Trans Mountain's environmental assessment that was promised by the Liberal government.

He said the "add-on process (is) little more than a smokescreen and would actually do nothing to fix the NEB review process."

It is not yet clear how far First Nations can advance towards stalling or stopping work on the pipeline expansion, but key communities on the British Columbia coast — notably Tsleil-Waututh, Squamish and Musqueam — are resolutely opposed to the project.

They have the support of aboriginal communities in northwest Washington state, where Trans Mountain already delivers oil sands crude to refineries and tanker ports.

The opponents draw strength from the fate of Enbridge's Northern Gateway proposal to export 525,000 bpd and import 193,000 bpd of condensate through Kitimat in northwestern British Columbia.

That C$7.9 billion projects was approved, along with 209 conditions, by the NEB and Canadian government in 2014, but remains in limbo because of the same concerns that face Trans Mountain, forcing Enbridge to apply recently for a three-year extension on its construction deadline.

Rueben George, who leads the Tsleil-Waututh's opposition to Trans Mountain, said he is confident that a Supreme Court of Canada ruling in 2014 and the Canadian Constitution protecting indigenous rights will give his community "veto power" over the project. ●

Contact Gary Park through publisher@petroleumnews.com

● ENVIRONMENT & SAFETY

DEC has second proposed rules draft out

Initial version met legislative criticism; cover minimum cleanup standards for chemicals in soil, groundwater at contaminated sites

By TIM BRADNER

For Petroleum News

Alaska's Department of Environmental Conservation has issued a second draft of proposed new rules on minimum cleanup standards for chemicals in soil and groundwater at contaminated sites.

The agency plans a workshop on the new regulations with stakeholders on June 8 in Anchorage, according to Kristin Ryan, director of DEC's Division of Spill Prevention and Response.

The workshop will be at the BP Energy Center in midtown Anchorage, and will be from 2:30 p.m. to 4:30 p.m.

KRISTIN RYAN

The second draft follows an initial version of the regulations that met criticism from state legislators in a hearing earlier this year before the Legislature's Administrative Regulation Review Committee.

The revisions, which mostly tightened the standards, were based on new scientific evidence published by the U.S. Environmental Protection Agency, Ryan said.

Tighter standard for PFOS

For one contaminant the latest draft includes standards that are tighter than those proposed last fall, said Sally Schlichting, in DEC's Contaminated Sites Program.

"One compound, PFOS (perfluorooctanic acid) was made more stringent since the first version of the regulations," she said. That was done because the only finalized scientific research available was from a published 1998 U.S. Environmental Protection Agency paper, she said.

The revisions overall are DEC's first major changes of the chemical cleanup standards since 2008. "A lot of new science has been done since 2008 and our regulations have not been kept up to date," she said.

One major factor in the tightened standards is that DEC now considers that children as well as adults would be "receptors" of chemical pollution through exposure to groundwater contamination.

In current rules adults are considered the primary receptors.

In the real world children are as exposed as adults to pollution, Ryan said.

"Children absorb pollution much more quickly than adults," so the minimum standard for chemical contamination must be tighter, she said.

Soil-to-groundwater cleanup levels tighter

The soil-to-groundwater cleanup levels are tighter in 134 of the chemical compounds because those are the levels in soil that can remain without causing the new, more stringent standards in groundwater, Schlichting said.

Ryan acknowledged the complaints over the tighter standards, however. "Lowering the minimum threshold from 10 parts-per-million to 10 parts-per-billion, for example, means you have to dig up a lot more dirt," and spend more money, she said.

In the new soil cleanup standards 134 chemicals would have more stringent standards while 26 would be less stringent. The level for one compound on the list, 1,2-Dibromoethane, is unchanged.

The standards can also vary depending on the location, whether in the Arctic permafrost zone, Interior and Southcentral Alaska, or in Southeast Alaska where there is heavy rain.

For groundwater minimums, 132 of 182 chemicals are being made more stringent and 30 less stringent, according to information published by DEC. Two are unchanged: PCBs and lead. Eighteen chemicals were also added to DEC's list, including methanol. One, Carbazole, was taken off.

Arsenic a special concern

Arsenic contamination, associated with historic gold mining, is a special concern because those contaminated sites are widespread across Alaska. About 200 locations have been identified where arsenic is a concern, Ryan said.

Some critics at the legislative hearing argued that the background levels for natural arsenic and some other chemicals in soils is high in many locations, which makes the measurements of thresholds more complex. Arsenic resulting from human activities would have to be differentiated from arsenic put in place by nature, for example.

In some cases, critics argued, the new cleanup standards are below the natural background level of the chemical in the soil.

Ryan said DEC has no intention of forcing property owners to clean up naturally occurring pollution, however. "We are only concerned with arsenic that is put there by someone," she said. "Also, we will not assume contamination is human-caused unless there is evidence of that," Ryan said.

An example of a complicated situation with arsenic is at Latouche Island in Prince William Sound, the location of a historic gold mine. "About 100 subdivided lots owned mainly for recreation are on old tailings with high levels of arsenic and cadmium," she said.

Previous ownership an issue

However, one of the mining companies previously involved in ownership there is Rio Tinto, a major company.

see **DEC RULES** *page 15*

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EIA RELEASE

in natural gas fired generation between 2015 and 2021, but natural gas generation "then grows significantly under a mass-based CPP implementation," and is projected to grow by more than 67 percent from 2021 through 2040, "when it is by far the largest generation source."

Natural gas, crude projections

EIA's reference case shows natural gas production growing more than 50 percent between 2015 and 2040, with average natural gas prices rising from $2.62 per million British thermal units at Henry Hub in 2015 to $5 per million Btu in the mid-2020s and remaining at around that level through 2040.

"Technology improvements allow natural gas production to rise even as prices stabilize," EIA said, noting that both natural gas prices and production "are slightly lower without the Clean Power Plan."

In the reference case U.S. crude oil production remains below 9.5 million barrels per day through 2025 due to lower oil prices, with production growing to 11.3 million bpd by 2040, "reflecting higher recovery rates driven by technology advances and higher prices." The reference case has a 4 percent rise in petroleum use, including natural gas liquids, from 2015 to 2040, but a 10 percent drop in transportation use mainly due to improved light duty vehicle fuel efficiency. EIA said the reference case does not include proposed Phase 2 standards for heavy-duty trucks or tighter light duty vehicle standards beyond 2025. Those would further reduce projected petroleum use in transportation.

Alternative cases

EIA said there will be alternative resource and oil price cases with different production implications in the full AEO.

The AEO will include a full range of CPP and other alternative cases, the agency said, including:

•Alternative CPP cases, with rate-based implementation; other mass-based implementation options; hybrid case; and extended case;

•High and low oil price;

•High and low macroeconomic growth;

•High and low oil and natural gas resources and technology;

•Industrial technology efficiency, high and low technology innovation;

•Phase 2 heavy-duty truck requirements; and

•Extension of current tax credits, follow-on efficiency standards,

EIA said it would release several "Issues in Focus" discussions of topics beginning in mid-June, with full modeling results posted for each case as it is released. The full AEO is scheduled for release in July. ●

Contact Kristen Nelson at knelson@petroleumnews.com

● ENVIRONMENT & SAFETY

State regulators hammer BLM for violations

AOGCC cites issues in cleanup of two legacy wells in NPR-A, saying federal agency failed to work cooperatively, follow procedures

By ALEX DEMARBAN

Alaska Dispatch News

Alaska oil and gas regulators say a federal agency violated the rules when its contractor failed to properly abandon two wells last winter during the cleanup of a decades-old environmental mess in the National Petroleum Reserve-Alaska.

The missteps occurred as part of the U.S. Bureau of Land Management's $50 million project to clean up old well sites abandoned long ago by the federal government. The government undertook the drilling efforts to explore the hydrocarbon potential of its 23-million acre reserve.

The two wells — the "whistling well" at Iko Bay that once hissed methane and another well surrounded by a lake of naturally seeping oil — have long served as emblems highlighting the pollution.

Alaska politicians have seized on images of the two wells to mock the federal government for setting strict cleanup standards for the oil industry while ignoring some of its own mess in the reserve.

The attention generated by the outcry helped lead to this latest round of cleanups after U.S. Sen. Lisa Murkowski secured federal funding for the effort in the Helium Stewardship Act of 2013.

Work needs to be redone

The agency and its contractor will have to redo the well work next winter — when heavy equipment and other rigs can travel the frozen tundra — because it was improperly done this winter, said Cathy Foerster, chair of the Alaska Oil and Gas Conservation Commission. But the agency wasn't fined because the AOGCC has no authority to penalize the federal government.

Next winter's redo of work at the well surrounded by the oil seep — located at Cape Simpson about 50 miles southeast of Barrow — will mark BLM's third attempt to fix the well.

The BLM is in the process of cleaning up dozens of the 136 oil and gas wells that were drilled by the U.S. Navy and U.S. Geological Survey in the Indiana-sized reserve, starting in the 1940s.

Many of the wells were not properly plugged to prevent leaking before the federal government abandoned them. Debris such as pipes, fuel drums and other building materials were often left on the tundra to rust.

The agency must properly "plug and abandon" many of those wells. BLM officials said the work generally involves inserting a 100-foot-deep plug of cement at the top of the well pipe or casing, and welding on a metal identification plate before the pipe is buried, hopefully forever.

AOGCC says projects mismanaged

In both the mismanaged projects, the wells were not properly plugged, Foerster said. BLM is the project operator and responsible party, she said.

Marsh Creek LLC is the BLM's contractor for the job and oversaw the work, while subcontractor SolstenXP conducted the physical plugging and abandonment, BLM officials said.

Marsh Creek is an Alaska Native corporation owned by Kaktovik Inupiat Corp., the village corporation for Kaktovik, and SolstenXP is an oil field services provider in Anchorage.

Jon Ealy, chief operating officer at Marsh Creek, said the work associated with remediating the two wells and many others as part of the project is challenging.

But he said all the work has been completed perfectly except for the problems at the two wells involving Marsh Creek's subcontractor, SolstenXP.

"We did an excellent job in all but two parts," he said. "We take a lot of pride in our performance up there, and this is not something we're used to and not something we're comfortable with."

An official with SolstenXP referred requests for comment to the BLM.

Redo at two wells

Next winter's redo of work at the well surrounded by the oil seep — located at Cape Simpson about 50 miles southeast of Barrow — will mark BLM's third attempt to fix the well.

The cement plug was also not properly installed at the Simpson Core Test 26 — as the well is called — a decade ago, during an earlier, $99 million round of cleanup work that involved the BLM and the U.S. Army Corps of Engineers.

"They didn't do it right in 2006 and they didn't do it right again in 2016," Foerster said.

The latest problems at that well included a blowout on March 19, said Foerster. The error and a related mistake led to back-to-back violation notices sent by the commission to the BLM, in March and April.

The mistake came shortly after a ceremonial visit to the Cape Simpson and Iko Bay sites by BLM's national director, Neil Kornze.

BLM does not characterize the March 19 event as a blowout. No oil or other pollution from the well leaked into the environment, said Nicole Hayes, the BLM's legacy well project coordinator.

Other wells remediated

Despite the challenges of the project, the agency and Marsh Creek have made important progress at Cape Simpson, successfully remediating 10 of 11 wells, said Hayes.

Surface debris has also been removed from some spots, including rusting barrels that once drew attention to Simpson Core Test 26, and more will be removed next winter.

The March 19 incident occurred because the required well-control equipment, including a blowout preventer stack, had not been installed, the AOGCC said in the first violation notice, sent March 24 and signed by Foerster.

That resulted in the "uncontrolled flow" of wellbore fluids and oil to the surface, the notice said.

"That's a blowout," Foerster said May 19.

According to the procedure approved by the commission, the equipment should have been installed before warm fluid was circulated in the well to clear the frozen fluids inside, Foerster said in the letter.

Approved procedures not followed

The BLM acknowledged that its contractor did not follow approved procedures, according to an April 5 reply letter signed by Bud Cribley, BLM's state director in Alaska.

None of the oily fluids ever left the casing, Hayes said. They rose slowly and, with temperatures at 20 degrees below zero, froze quickly. A small amount of the fluid was captured by workers and put into a bucket before it reached the environment.

Cribley said in his letter that "all fluids were recovered without incident."

Also, Marsh Creek immediately responded by changing on-site supervisory personnel, increasing communication and reviews of each day's tasks, and flying its lead drilling engineer to oversee well work, Cribley said.

The blowout contributed to the second violation notice sent April 4, Foerster said. After the blowout, SolstenXP tried to regain control of the well by pumping cement down it, said Foerster.

"They claimed they had properly plugged it with the cement and they proceeded to cap it, but we said, 'No, you

see LEGACY WELLS page 13

NORTH OF 60 MINING news

page 10 STAX graphite shows high capacity in new battery tests

www.MiningNewsNorth.com *The weekly mining newspaper for Alaska and Canada's North* **Week of May 29, 2016**

NEWS NUGGETS

Compiled by Shane Lasley

COURTESY UCORE

Located at IBC Advanced Technologies' facility in Utah, the SuperLig®-One pilot plant has separated scandium from the suite of rare earth elements discovered at Ucore Rare Metals' Bokan Mountain – Dotson Ridge project in Southeast Alaska.

SuperLig-One pilot plant recovers scandium from Bokan Mountain

Ucore Rare Metals Inc. May 24 reported that a SuperLig®-One rare earth elements separation pilot plant at its Bokan Mountain - Dotson Ridge project in Southeast Alaska has separated nearly pure scandium from other minerals found in the deposit. Scandium is a highly valued REE used in making advanced aluminum alloys. Scandium imparts added strength, increased corrosion resistance, greater heat tolerance, and improved weldability to aluminum alloys. Its electrical and heat-stabilizing qualities also make it desirable for use in the production of solid oxide fuel cells. The separation of scandium marks the second stage of testing of the pilot plant. In the initial stage, the SuperLig-One plant created 99 percent pure REE by separating them from impurity metals in a pregnant leach solution derived from Bokan. In this second stage, more than 99 percent of the scandium was removed from the other REE in the pregnant leach solution; and the purity of the scandium recovered is greater than 99 percent. The purpose of this stage of the process is to completely remove scandium from the solution without removing any of the other REE, preserving the value of the rare earth-bearing solution as it advances to subsequent separation circuits. Ucore said the efficient separation of scandium early in the process distinguishes the molecular separation technology being used in the pilot test from less selective legacy technologies, such as solvent extraction and ion exchange. "Scandium is an increasingly high-profile and extremely high-value technology metal," said Ucore President and CEO Jim McKenzie. "Much like lithium, scandium is considered a clean-technology metal with enormous development potential." In the next stage of testing, the SuperLig®-One plant will separate light REE (lanthanum to neodymium, plus yttrium) from heavy rare earths (samarium to lutetium). In the final stage, heavy rare earths will be separated into individual critical REE. Upon completion of all four stages, the pilot plant is expected to produce terbium and europium that exceed 99 percent purity as well as dysprosium at 99.99 percent purity. The remaining solutions, containing heavy and light REE, will be retained for future separations. After confirmation testing of each stage of operation, the plant will undergo a continuous run of rare earth-bearing solution. SuperLig-One, which was designed and constructed by Utah-based IBC Advanced Technologies Inc., employs the highly-selective MRT process to isolate rare earth elements suspended in a solution. Ucore and IBC plan to jointly develop processes with the capability of separating a host of technology metals.

JIM MCKENZIE

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NOVAGOLD RESOURCES INC.

With 541 million metric tons of measured and indicated resources averaging 2.2 grams per metric ton (39 million ounces) gold, the Donlin Gold deposit in southwestern Alaska is one of the largest undeveloped gold deposits in the world.

DEVELOPMENT

The $6 billion question

Are Novagold, Barrick ready to pull the trigger on Donlin Gold development?

By SHANE LASLEY
Mining News

Novagold Resources Inc. and Barrick Gold Corp. – equal co-owners of the Donlin Gold project – have said they are unwilling to develop the 40-million-ounce gold deposit in a weak gold price environment. So, with Donlin entering the final phase of a five-year permitting process, are the partners ready to build a world-class gold mine in Southwest Alaska?

With gold prices up roughly 16 percent since the start of the year and showing resilience at around US$1,250 per ounce, the partners are sounding more optimistic now than they did this time last year.

In his opening statement at Novagold's annual shareholder meeting held May 13, Thomas Kaplan said he is privileged to "be able to be the chairman of a company that I believe is in the right place, at the right time, with the greatest gold asset on the planet."

THOMAS KAPLAN

While Kaplan has never swayed from his long-term bullish position on gold or the value of Donlin, roughly a year ago the Novagold chairman warned that neither partner is willing to begin construction until "gold prices have resumed their uptrend in earnest."

The Donlin Gold permitting process is not expected to be complete until the end of 2017, providing Novagold and Barrick management with some time to weigh whether market conditions are right to invest the estimated US$6.7 billion needed to develop the mine, an asset projected to produce roughly 30 million ounces of gold over an initial 27-year mine life.

Peak gold?

From a low of US$250/oz. hit in 2000, gold went on a 12-year bull run, reaching new pinnacles each year through 2011. From that historic apex though, gold prices have fallen at a rate of about US$175 per year – averaging US$1,669/oz. in 2012, US$1,411/oz. in 2013, 1,266/oz. in 2014 and 1,166/oz. in 2015.

"I call that leg-one of the bull market; and my belief is that what we are experiencing now is a pullback within that bull market," Kaplan commented on what he believes is a longer term uptrend in the market.

For perspective, the Novagold chairman observed, "If a stock went from $2.50 to $19.00 and pulled back to $10 or $11 on its way beyond $19 and perhaps to $29 or $39, nobody would be surprised."

In 2016, so far, the price of an ounce of gold has averaged US$1,210, surging from US$1,080 in January to a high of US$1,294 in early May.

In a May 23 report, Citi Research hiked its predicted average gold price for the third quarter to US$1,300/oz. The research arm of Citigroup anticipates the precious metal will average US$1,255/oz. this year, which would be the first year-over-year gain since 2011.

Kaplan is reluctant to predict which way gold will go in the short term, but he believes the longer term trend points to gold more than doubling its US$1,900/oz. high.

Kaplan's belief that gold will surge to multiples of its current price is not predicated on some apocalyptic economic or geopolitical scenario. Instead, his bullish outlook is based on market fundamentals.

"I believe that the reason to own gold – shedding, stripping away the emotional aspect of the reasons why people own gold – is just the fact that it is an industry in distress and in turmoil," he explained.

The crux of this turmoil is that miners are depleting their gold reserves faster than they can replace them, which is expected to result in lower production in the coming years.

Novagold is not alone in believing that a scarcity of gold will lead to lower production. In fact, Eugene King, European metals and mining analyst for Goldman Sachs, has predicted that peak gold was reached in 2015.

"The combination of very low concentrations of metals in the Earth's crust, and very few high-quality deposits, means some things are truly scarce," he

see **DONLIN GOLD** *page 12*

NORTHERN NEIGHBORS

Compiled by Shane Lasley

Victoria hits more gold between Olive, Shamrock

Victoria Gold Corp. May 24 published the third set of results from its 2016 drilling at Olive-Shamrock, satellite deposits at the Eagle Gold project in Yukon Territory. The company said the assay results from these 10 holes confirm the continuation of gold mineralization between Olive and Shamrock and validates an exploration model currently testing the near-surface mineralization in the Olive-Shamrock Shear Zone. Highlights from the drilling include 22.4 meters of one gram per metric ton gold in hole DG16-662C; 28.4 meters of one g/t gold in DG16-663C; 22.9 meters of 1.5 g/t gold in DG16-665C; 54.4 meters of 1.3 g/t gold in DG16-669C; and 66.5 meters of 1.1 g/t gold, including 26.5 meters of 2.1 g/t gold in DG16.671C. The strike length of the Olive shear zone tested with the 2016 drilling program is at least 750 meters while the strike length of the Shamrock zone, the target of current drilling, is roughly 250 meters. This roughly 1,000-meter Olive-Shamrock zone remains open to the northeast, at depth and to the north where a number of geophysical and geochemical soil anomalies have yet to be fully tested. "The Olive-Shamrock Zone is shaping up nicely and while still early in the drill program, the continuity of mineralization at grades above 1.0 g/t bodes well for the economics of the zone," said Victoria Gold President and CEO John McConnell. "When one steps back from the task at hand and looks at the coverage of this growing zone, it is an impressive size."

JOHN MCCONNELL

Seabridge raises C$12.04 million for KSM, Iskut

Seabridge Gold Inc. May 19 reported the closing of a C$12.04 million financing that involved the issuance of 500,000 flow-through shares at C$24.08 each. The company will use the money raised to fund the 2016 exploration programs at its KSM copper-gold project and, subject to completion of Seabridge's acquisition of SnipGold Corp., the Iskut gold-copper project in northwestern British Columbia. At KSM, Seabridge plans to complete 10,000 meters of drilling designed to expand the block cave shapes that confine the current resource estimate at Deep Kerr by as much as 800 meters. "Our geological team believes the mineralized zone on the west limb of the deposit projects to the south and that the block cave shapes in our resource are limited by drill data, not geology. Extending the footprint of these block cave shapes should enable us to increase the potential mining rate for Deep Kerr higher grade material, which could result in improved economics for the project," explained Seabridge Chairman and CEO Rudi Fronk. In addition, drilling will target the less-explored eastern limb of the Deep Kerr deposit to test its potential expansion at depth. Exploration drilling in 2015 expanded the inferred resource at Deep Kerr to 1.01 billion metric tons grading 0.53 percent (11.8 billion pounds) copper and 0.35 grams per metric ton (11.3 million ounces) gold. "We also expect to complete our first drill program on the Iskut property this summer assuming we close our proposed acquisition of SnipGold," Fronk added. "At Iskut, our primary target is discovery of high-grade gold similar to what was mined historically."

Ekati expansion project gets NWT approval

Dominion Diamond Corp. May 20 reported that Northwest Territories Minister of Lands Robert McLeod has approved the Jay project at the Ekati diamond mine, subject to the measures described in the Report of Environmental Assessment. "This is an important milestone for Dominion and for the northern economy," said

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Petroleum news

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"Our intent is to offer customized separation solutions across a host of technology metals," McKenzie continued. "These applications include SuperLig products tailored to metals such as REE, platinum group metals, Li (lithium), Co (cobalt), W (tungsten) and many more."

Freegold raises C$7.28M; funds Alaska exploration

Freegold Ventures Ltd. May 20 reported closing a C$7.28 million financing in which it issued 40,461,766 units at C18 cents each. Each unit consists of one Freegold common share and half of a purchase warrant. Each whole warrant entitles the holder to purchase one Freegold share at C25 cents for a period of three years. Freegold also granted Paradigm Capital Inc., the financing agent, an option to arrange for purchasers to acquire up to an additional 15 percent of the units issued pursuant to the offering. This option, which will cover over-allotments and provide for market stabilization, will be exercisable for 30 days. Freegold intends to use the net proceeds of the financing for gold exploration and metallurgical work at its Golden Summit and Shorty Creek projects in Interior Alaska and for general working capital purposes.

GRAPHITE ONE RESOURCES INC.

The Graphite Creek deposit, located just off of Alaska's west coast, contains naturally occurring spheroidal graphite that is showing potential to be used in lithium-ion batteries with minimal processing.

Graphite One's STAX excels in battery anode tests

Graphite One Resources Inc. May 20 reported that uncoated spheroidized (rounded) graphite from its Graphite Creek property, located about 37 miles (60 kilometers) north of Nome, Alaska, demonstrated high performance when tested in CR2016 coin cells, batteries typically used in watches and similar devices. Five coin cells were tested with Graphite Creek material in the anode. Three of the cells demonstrated a first discharge capacity that approached natural graphite's theoretical maximum of 372 ampere hours per kilogram. Discharge capacity is a measure of a battery's energy storage capability once first charged. The first-discharge capacity of the best-performing coin cell, 1203, equaled the theoretical discharge capacity of natural graphite. Coin cells 1207, 1208 and 1209 showed first-discharge capacities ranging from 369.1 to 370.9 ah/kg, or within 1 percent of the theoretical maximum. The lowest performing coin cell, 1211, had a first discharge capacity of 361 ah/kg. Lithium-ion batteries currently have an average discharge capacity of around 360 ah/kg, or about the first discharge capacity of the lowest performing coin cell in the test. The three best-performing cells used milled and spheroidized graphite; cell 1209 used unmilled but spheroidized graphite; and 1211 used naturally occurring spheroid graphite. Tru Group Inc., a technology metals consultant with expertise along the graphite-graphene supply chain, had previously identified Graphite Creek as containing naturally occurring spheroidal, thin, aggregate and expanded types of graphite. These unique and naturally occurring properties have prompted Graphite One to apply for the trademark, STAX, to describe the graphite sourced at Graphite Creek. TRU Group Vice President John Roumeliotis said, "The STAX graphite is performing robustly and in the manner in which we had predicted during TRU's initial investigation of the Graphite Creek deposit. It was anticipated that the morphology observed in the drill core samples would translate into processing and performance gains over conventional flake graphite." In addition to first discharge capacity, the coin cell tests also demonstrated the ability of the STAX graphite to achieve the same or similar discharge capacity in repeated subsequent charging-discharging cycles. This behavior was evident in both the highest-performing and lowest-performing cells. "These results support our material having demonstrated superior first discharge capacity for uncoated graphite, while the continuous cycling test shows the potential for our SPG (spheroidized graphite) to be used in EV (electric vehicle) applications," said Graphite One CEO Anthony Huston. At present, electric vehicle battery manufacturers use more expensive synthetic graphite to offset the lower-performance of natural flake graphite. "Up to this point, EV battery end-users have had to make a choice between systems that deliver high-power (near 100 kW) and high-energy (tens of kW hours between each charge). Based on these new results and observations made when processing STAX graphite, we will focus our development work on determining whether our STAX-derived SPG can deliver both high-energy and high-power performance," Huston said. "By

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NORTHERN NEIGHBORS

Dominion CEO Brendan Bell. Jay, which has the potential to extend the life of Ekati by roughly a decade, is the most significant undeveloped deposit at the noted diamond mine. Dominion said it expects to publish a feasibility study on Jay later this month. And will file applications for the needed water license and land use permit for the project shortly.

IDM prioritizes large Yukon gold portfolio

IDM Mining Ltd. May 18 said an initial review of historical exploration data has identified targets in three priority areas of the 14,500 Yukon Territory mining claims it acquired from Oban Mining in January. Data gathered by Ryan Gold, as well as other historical holders of the claims, includes results from more than 158,000 soil samples, airborne geophysical surveys, reconnaissance mapping and sampling, and more than 10,000 meters of drilling. Review of this data has identified more than a dozen broad soil geochemical anomalies in addition to numerous other areas of interest defined by geophysical and geological criteria. Multiple mineralization styles have been identified, including intrusive-related, skarn, sediment-hosted and orogenic gold systems. Throughout IDM's Yukon portfolio, multiple gold and pathfinder element anomalies were identified without any of the follow-up through drilling and trenching that can elevate an anomaly to a discovery. "The anomalies identified by previous operators are very compelling and warrant drilling to make a discovery," said IDM Mining CEO Robert McLeod. "As VP Exploration at Underworld Resources, my team and I drilled the Golden Saddle discovery, which was a greater than 40 ppb (parts per billion) gold-in-soil anomaly. IDM's Yukon portfolio has multiple, large gold targets that are as attractive as Golden Saddle when it was just a soil anomaly." The highest priority properties identified by IDM include: Pluto, a large land package in southwestern Yukon that hosts multiple gold-in-soil anomalies, including the 1900- by 400-meter east anomaly that averages 234 ppb gold and ranges from trace to 15,342 ppb gold; Mahtin, a property that lies 50 kilometers (30 miles) north of Mayo with intrusive-related gold potential; Golden-Oly, a property in eastern Yukon with widespread gold and arsenic soil anomalies suggestive of an intrusive-related or sediment hosted gold system; and PDM, another eastern Yukon property with similarities to Golden-Oly. Focused on its flagship Red Mountain gold property in British Columbia, IDM is considering options for its Yukon portfolio. The company says the holding costs for the Yukon properties are low so it could leave them on care and maintenance. Other options being considered include exploring them independently; entering joint ventures; spinning them out into a Yukon-focused exploration company; or selling them entirely.

TerraX remains intrigued by Hebert-Brent zone

TerraX Minerals Inc. May 19 reported results from 19 holes drilled at the Hebert-Brent zone on its Yellowknife City Gold Project, which is situated immediately north of the capital of Northwest Territories. Discovered in 2015, Hebert-Brent was channel sampled along exposed zones of mineralization and was subsequently tested with six drill holes, which included one 10.26-meter intercept averaging 3.61 grams per metric ton gold. The zone, which demonstrates sulfide replacement style mineralization with little or no quartz veining, is of particular interest to TerraX due to its size potential. The 19 holes drilled during the winter program, which averaged 41 meters depth, tested the interpreted plunge and strike extensions of the mineralized zones exposed on surface. Six holes drilled to the south of the surface mineralization hit sulfide replacement gold zones over a strike length of 125 meters. Highlights include eight meters of 3.21 g/t gold in hole TCG16-052; 1.85 meters of 15.08 g/t gold in hole TCG16-040; and 7.1 meters of 3.61 g/t gold in hole TCG16-034. Based on this drilling, TerraX believes the main Hebert-Brent zone and the Hebert-Brent South zone have potential along a projected southerly dip. Due to budget and time constraints, however, drilling was terminated before this potential could be tested. No significant gold intercepts were encountered in the 13 other shallow holes drilled at Hebert-Brent this winter. The Hebert-Brent deposit type remains a high priority target for TerraX as larger zones of similar alteration and mineralization have been located to the north, east, and south of Hebert-Brent. These new zones will be comprehensively mapped and sampled during the 2016 field season, beginning in June. ●

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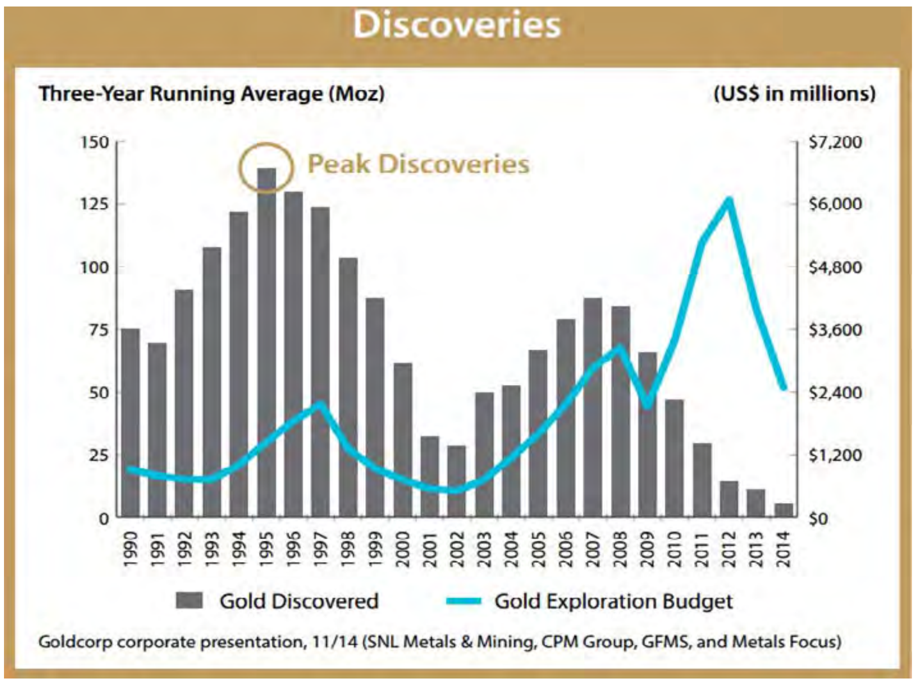
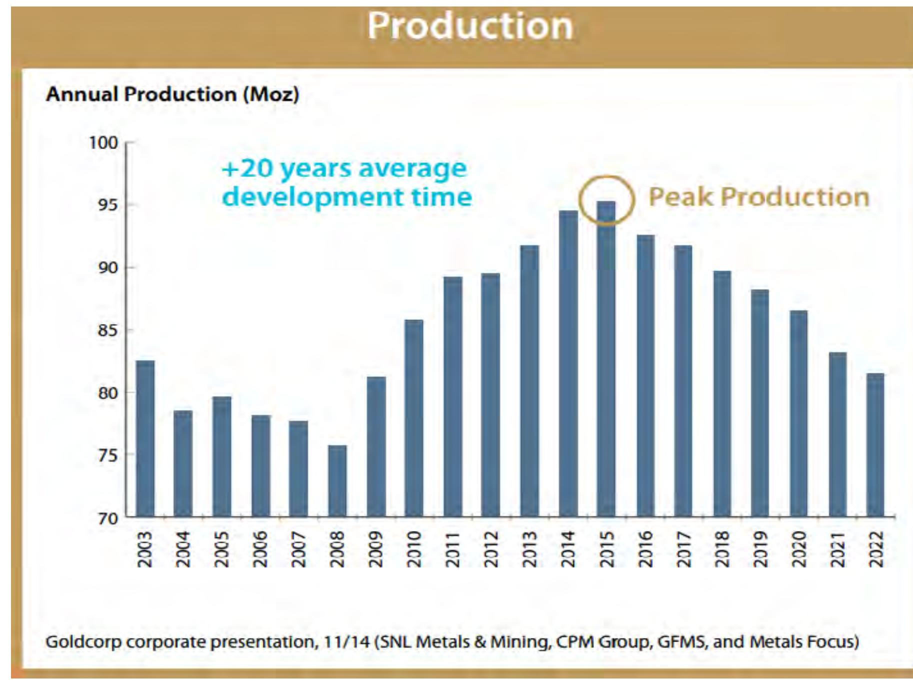
NEWS NUGGETS

displacing the need for synthetic graphite, higher-performance natural graphite produced at lower cost could deliver EV battery cost savings, one of the key factors in making EVs more affordable." The coin cell test results using uncoated spheroidized graphite provide will be compared against coated spheroidized graphite coin cell tests now underway. The graphite used for both tests was extracted from surface historic mine working samples which were first segregated into three lots by visual inspection. Each lot was then analyzed to determine which of the three corresponded to the mineralogy of the higher graphite grading zone (Zone 1) targeted for initial exploitation as identified in a conceptual study prepared by TRU Group. "The graphite concentrate extracted from the surface sample used in this exploratory (research and development) phase conforms to graphite that was similarly extracted and characterized from samples originating from drill core segments that were from Zone 1," said Roumeliotis. Follow-up testing will be conducted on graphite concentrate produced from work currently underway that is validating the mineral processing flowsheet using drill core segments from Zone 1. Graphite One's Graphite Creek deposit has 17.95 million metric tons of indicated resource grading 6.3 percent graphitic carbon and 154.36 million metric tons of inferred resource at 5.7 percent graphitic carbon. The Graphite Creek project is progressing from exploration to evaluation phases. "It is important to note that the economics of the project have not been established at any level of confidence through the completion of a preliminary economic assessment, preliminary feasibility study or feasibility study," cautioned Huston. ●





BY GOLDCORP INC. / COURTESY OF NOVAGOLD RESOURCES INC.

Despite soaring exploration spending, new gold discoveries peaked in 1995 and have been declining steadily over the past decade. This leads many analysts to believe that we have reached peak gold and new supplies of the precious metal are on the decline.

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DONLIN GOLD

explained.

Barrick Gold President Kelvin Dushnisky added, "Falling grades and production levels, a lack of new discoveries, and extended project development timelines are bullish for the medium and long-term gold price outlook."

Kaplan said this supply side restriction is coupled with the fact that the world's central banks are buying more gold than they are selling in a reversal of the three decades of net selling by these institutions since the U.S. dollar decoupled from gold in 1971.

"The companies that mine money can't find it and the central banks that print it can't print enough of it," the Novagold chairman summarized.

"When we look at this, what we see is a perfect storm … the supply of gold falling at the same time as we see people wanting to own something that isn't someone else's liability," he added.

Realizing Donlin

So, will Novagold and Barrick be ready to commit the considerable resources needed to build Donlin when they have permits in hand? Positive talk from both camps seems to indicate a yes.

"The Donlin Gold project has the potential to become a world-class asset for Barrick and for our partner, Novagold. We would like nothing more than to see this potential realized," said Barrick President Dushnisky.

A 2011 feasibility study outlines plans for a mine at Donlin that would average roughly 1.5 million ounces annually during the first five years of operation and 1.1 million oz. annually over a projected 27-year mine-life.

At US$1,200/oz. gold, the base case price used in the feasibility study, this operation is predicted to generate after-tax cash flow averaging US$949.5 million annually for the first five years and US$500.7 million annually over the life of the mine. Under this scenario, the partners would be paid back the roughly US$6.7 billion needed to build the mine in 9.2 years.

At US$2,000 per ounce gold, the mine's after-tax cash flow is anticipated to nearly double to an average of US$1.78 billion annually for the first five years and US$987.2 million annually over the life of the mine – resulting in a payback of initial capital in just 4.4 years.

So anything between today's gold price and the highs foreseen by Kaplan show the potential to be a good investment for both companies and their shareholders.

"At current gold prices, we've got relatively modest, positive, but modest rates of return. In a rising gold price environment, gold could go up twofold and the value of this asset would go up 20-fold," Novagold President and CEO Greg Lang explained.

For now, both companies are considering how they could pony up the more than US$3 billion each will need to build the world-class gold mine.

While this is a big investment for a company the size of Novagold, the company does have a large institutional shareholder base with the wherewithal and understanding to get behind a world-class project like Donlin Gold.

"They understand this asset for what it is. It's one of the largest gold endowments on the planet. It's an un-expiring warrant on an ounce of gold and we've got the management team and the patience to see it through to a construction decision," Lang explained.

The aspiring gold producer, however, is not depending solely on equity to foot the bill.

"For us, Novagold's shares are as precious as the metal itself. When the time is right, we expect to have multiple financing options available, including equity, debt, equipment leases, and third-party owner-operator arrangements. In the meantime, we're working with Barrick to explore ways to reduce the initial cost of building the project," explained Novagold CFO David Ottewell.

Even the world's largest gold producer must ensure its finances are in order before taking on a project as large as Donlin.

"In the interim, given the current stage of the project, it is too soon to speculate on what form project financing might take," said Dushnisky. "What we can say, however, is that we will continue to strengthen our balance sheet and improve our financial flexibility, so that we have the option to pursue opportunities such as the Donlin Gold project in the future." ●

● EXPLORATION & PRODUCTION

State wants more info included in PODs

Prudhoe Bay operator BP calls request for marketing info in POD 'impermissible rulemaking'; says it 'would contravene the PBUA'

By KRISTEN NELSON

Petroleum News

Shortly before retiring early this year, then-Alaska Department of Natural Resources Commissioner Mark Myers told Prudhoe Bay operator BP Exploration (Alaska) that the department wanted information added to the annual update for the field's plan of development.

He said the department "is working proactively to ensure maximum development and monetization of Alaska's energy resources," and to achieve that goal it is important that the department "understand how all hydrocarbons available for offtake" are being used in the unit, sold within the state or "are being prepared and/or marketed for potential future sale."

The department, Myers said, wants information on efforts to market oil and natural gas from the Prudhoe Bay unit, including the names of those with whom the unit operator has current commercial agreements "or with whom the operator intends to have substantive discussions regarding the marketing of unit hydrocarbons including unit gas and heavy/viscous oil resources. The commercial terms under which the unit operator is offering to make resources available for long-term sale, including the estimated volumes to be delivered, the pricing terms, the location at which title to the gas and associated risks of loss will change, and the condition of the gas at the time of delivery."

Myers also said the department wanted information on facility access and sharing — including "each request for facility sharing and access to facilities received and the facility owner's response to each request."

More detail

In an April 11 letter, DNR Division of Oil and Gas Director Corri Feige asked for more detailed information. Feige cited information which BP had provided on major gas sales and said it was "not sufficient" to allow the division to understand how the Prudhoe working interest owners planned to achieve a major gas sale.

Feige said BP had responded, indicating "the WIOs prefer the marketing of gas from the unit be performed by the working interest owners individually. Rather than submitting a plan for joint marketing of gas from the Unit, the Unit Operator may direct each WIO to provide its own separate responses to those issues."

Operator says POD meets requirements

The requests got pushback from BP.

A May response from Scott Digert, manager of reservoir management for BP Exploration (Alaska), writing for BP as the Prudhoe Bay operator, said the POD submitted for the Prudhoe Bay initial participating areas satisfies all of the requirements of the Prudhoe Bay Unit Agreement and POD regulations. He said the division was seeking "extraordinary additional information" on activities to prepare for a major gas sale.

"These new requirements asserted by the Division are contrary to the terms of the PBUA as well as the Division's regulations and the Division's own interpretation of its regulations over many decades," Digert said, and asserted that the POD for the Prudhoe initial participating areas is consistent with contractual terms in the PBUA and POD regulations.

Long-range information not available

Digert also said the Prudhoe operator does not possess the long-range information the state is requesting, and said its long-range discussion reflects the information available to it as operator.

"A requirement for submission of long-range (major gas sales) related information set forth in the Division's Letter, including strategies, timing and activities related to marketing and commercial arrangements, is outside the scope of the POD terms of the PBUA and the POD regulations," he said, adding that the division has never required the operator to submit "such long-range hypothetical plans that extend well beyond the one-year term of the POD or information regarding marketing or commercial arrangements."

He said the description from the division of a new "POD requirement moving forward commencing in 2016 ... is outside the scope of current regulations and constitutes impermissible rulemaking." New regulations, Digert said, require that the division comply with the Alaska Administrative Procedures Act, which requires public notice, supporting material and an opportunity to be heard, along with a prospective effect.

"Even if properly promulgated as a regulation, the new 'POD requirement' asserted in the January Letter, and expanded in the Division's Letter, would contravene the PBUA," Digert said.

And, it is incorrect that the Prudhoe operator would prefer that the WIOs individually market gas from the unit, he said. "What we stated in the letter was that 'marketing of unit production is subject to U.S. antitrust laws and is performed by the WIOs individually,'" Digert said.

As to directing the working interest owners to provide separate responses to the division, which was requested, he said the operator "neither possesses the right, nor the ability, to direct the PBU WIOs to market gas, and certainly cannot 'direct' them to provide gas marketing information to the Division."

see **DEVELOPMENT PLANS** *page 15*

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LEGACY WELLS

have no idea where the cement went,'" said Foerster.

At BLM's direction, SolstenXP returned to Simpson Core Test 26 and could not find any indication of a cement plug down to 57 feet, as deep as the equipment on site could test, Foerster said in the notice.

Crude oil, not cement, was at the top of the well casing when the identification plate was welded on, violating approved procedures that require cement to be atop the well casing, the notice said.

The well was not sealed, said Foerster.

Hayes, with BLM, said the cement was not pumped into the well to regain control of it. Instead, it was pumped into the well as part of the original plan.

But she acknowledged that the cement was nowhere to be found, and that the well was not properly plugged.

She said each of the wells can present unique challenges, in part because they are very old and there are few historical records to provide the agency with information, such as how the drilling was originally done.

"Were not sure what's going on with the cement," she said.

Issues at Iko Bay

Foerster said the commission's approved plans were also not followed at Iko Bay, a well about 15 miles southeast of Barrow, where work was done to repair the whistling well, so-called because of the sound made when it leaked methane, a potent greenhouse gas.

The well was drilled in 1975. This winter, contractors capped the old wellhead with a new wellhead, stopping the methane leak, said Rob Brumbaugh, the lead official for BLM's oil and gas program in Alaska.

But the agency acknowledged in an email that work at that site "deviated from approved procedures," leading to incomplete well plugs. Marsh Creek will be required to fix the problem at its own expense, the agency said.

Brumbaugh said he could not provide specifics about the why work was not properly completed.

Foerster, who has criticized the agency in previous years for being slow to address the cleanup, publicly praised its efforts in February as work was getting underway this winter.

Foerster cites lack of cooperation

But May 19 she said she's not as happy with the agency, because it has not worked as closely with the AOGCC as it should have.

"If they had worked with the AOGCC as cooperatively as they said they would then both wells would be properly plugged," she said.

The AOGCC's violation notices did not include proposed fines, as they often do.

Mike Gieryic, an attorney-adviser in the Interior Department's Office of the Regional Solicitor, said that under Alaska law, the commission "has no legal jurisdiction over federal agencies, including authority to issue fines."

He added: "Under the doctrine of sovereign immunity the federal government cannot be sued for a given cause of action unless Congress authorizes such lawsuits."

Cribley, in his April 5 letter addressing the problems at the Cape Simpson well, said the agency is committed to satisfying AOGCC's concerns. He also said BLM will work more closely with the commission to ensure that the remediation work meets federal cleanup standards. ●

● EXPLORATION & PRODUCTION

Hilcorp Alaska expanding Milne Point pad

Expansion would accommodate as many as five wells at the northern end of the pad, part of a larger development program at field

By ERIC LIDJI

For Petroleum News

Hilcorp Alaska LLC wants to expand an existing drilling pad at the Milne Point unit to support a five-well development program, the company recently told state officials.

The local subsidiary of the Texas-based independent wants to increase the L pad by approximately 1.66 acres to accommodate increased activity at the North Slope unit.

"When the drill rigs are positioned on the well heads, there is not enough space for the entire drill rig, between the well head and the pad edge," the company told the Alaska Department of Natural Resources in a permitting application filed in early May.

Construction work would begin this summer in preparation for drilling activities, which would occur between September 2016 and October 2017, according to the company.

The state is taking comments on the project through June 23.

Broader development program

Hilcorp recently proposed a major development program at Milne Point.

A proposal submitted to state officials earlier this year called for drilling eight new wells at five pads targeting three of the four formations present at the North Slope unit, working over as many as 16 existing wells, constructing a new pad in the western end of the unit and expanding other infrastructure to accommodate increased oil production.

The request to expand L pad appears to come in addition to those earlier plans.

In a plan of development submitted to the state in early May, Hilcorp proposed drilling 10 wells by July 31, 2017: a producer and injector pair at L pad, a producer and injector pair at B pad, two producers and two injectors at J pad, one producer at K pad and one producer at C pad. (Of those, two producers were already completed earlier this year.)

Between August 2015 and February 2016, Hilcorp completed four new development wells at L pad: the L-46 and L-47 producers and the L-48 and L-49 injectors.

Those four wells were drilled at the southeast corner of the pad. The proposed expansion would add approximately 17,000 cubic yards of gravel to the northern end of the pad.

Earlier this year, Hilcorp asked the state to expand the Milne Point B Pad by 5.3 acres to allow for "additional offloading facilities, transport truck lanes and support facilities" for the existing grind and inject facility, which would accommodate increased drilling.

L pad is located in the northern end of the unit. B pad is located in the eastern end.

The plan of development also proposed a Moose Pad Development Project to build a drilling pad and access road on leases ADL 25514 and ADL 25515, at the western edge of the unit. The proposal is "contingent on market conditions," according to Hilcorp. ●

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FINANCE & ECONOMY

BP to market Anchorage headquarters

BP has decided to market its Anchorage office building, selling it and leasing it back from a buyer.

A BP spokesperson said the company has "no plans to move out of the Anchorage building. Marketing the building will be a "real estate transaction" and the company will become tenants rather than owners of the building, which was opened in 1985.

BP said that selling the building and leasing it back "will reduce costs and free up capital, allowing BP to focus on its core business."

The BP Energy Center is not included in the marketing efforts. The BP Energy Center provides meeting rooms, free of charge, to hundreds of Alaska community groups, BP said.

—PETROLEUM NEWS

EXPLORATION & PRODUCTION

BlueCrest applies for Cosmopolitan IHA

BlueCrest Operating Alaska has applied to the U.S. Fish and Wildlife Service for an incidental harassment authorization approving the minor disturbance of sea otters during offshore drilling at the Cosmopolitan field, in the Cook Inlet, off Anchor Point in the southern Kenai Peninsula. BlueCrest wants to use the Spartan 151 jack-up drilling rig to drive wells into shallow gas and oil pools above the main oil reservoir at Cosmopolitan. The company has been developing the main oil resources in the field using extended reach drilling from onshore, but the shallow reservoirs require offshore drilling.

According to BlueCrest's application to Fish and Wildlife, the company wants to use the Spartan rig to drill two directional wells from the same offshore location as that of the Cosmopolitan No. 1 well, drilled by Buccaneer Energy in 2013.

According to BlueCrest's application to Fish and Wildlife, the company wants to use the Spartan rig to drill two directional wells from the same offshore location as that of the Cosmopolitan No. 1 well, drilled by Buccaneer Energy in 2013. BlueCrest also wants to drill a third well from a surface location about one mile southeast of the other wells. The first two wells would test gas layers while the third well "would be drilled into oil formations to collect geological information," BlueCrest's application says.

BlueCrest has indicated recently that, although the company wants to develop shallow gas at Cosmopolitan, the company has not yet decided on whether to proceed with this option. Company President and CEO Benjamin Johnson told the Alaska House Rules Committee on May 11 that the gas project was on hold because of uncertainty over long-term gas demand in the region and over state tax credits. Presumably BlueCrest has applied for the incidental harassment authorization to have the approved document in hand, should the project go ahead.

If development of the gas at Cosmopolitan does proceed, the development would involve the installation of one or more offshore production platforms, BlueCrest has said. The concept behind aligning the surface locations of the two planned gas development wells with the location of Cosmopolitan No. 1 is the future possibility of hooking up these wells for gas production through a single platform, the application says.

—ALAN BAILEY

● EXPLORATION & PRODUCTION

Doyon set to spud; Ahtna awaiting rig

Bigger uncertainty than drilling rig for Ahtna is whether Legislature extends 'middle earth' exploration credits, now set to expire

By TIM BRADNER

For Petroleum News

Doyon Ltd. is set to begin drilling June 1 on its third exploration well in the Nenana basin southwest of Fairbanks. "All rig parts are now on site and are being assembled. Other support equipment is there as well. Our estimated 'spud' date is June 1," said Jim Mery, Doyon's vice president for lands.

While Doyon prepares to drill, Ahtna Inc.'s exploration drilling near Glennallen has been delayed by difficulties in securing a suitable rig for the well, which is to test a shallow natural gas prospect.

This will also be Ahtna's third exploration well in the basin.

Ahtna had planned to use a rig from Cook Inlet that is now being used by Hilcorp Energy, but that has been delayed. "We'll probably be able to get it by July," Ahtna's CEO, Tom Maloney, said in a text message.

However, a bigger uncertainty for Ahtna right now is the outcome of oil and gas tax credit legislation in Juneau, where the Legislature is meeting in special session.

"Tax credits for 'middle earth' are a big deal for us," Maloney said in the text. Ahtna has been depending on a certain set of incentive credits, the "Frontier Basin" credits, aimed at stimulating exploration in middle earth, a nickname for the largely unexplored Interior Alaska sedimentary basins between the North Slope and Cook Inlet, which are due to expire in July.

Doyon is relying on another set of incentives that are likely to remain in law until 2022, although the situation with the legislation in Juneau is very fluid and almost anything could happen, it seems.

The initial prospect for Ahtna is at a depth of 5,000 feet and is likely to be natural gas, Joe Bovee, Ahtna's vice president for lands, said in a previous interview. There will be a ready market for gas in the region, for power generation and space heating, Bovee said.

If enough gas is discovered a pipeline to the Matanuska-Susitna Borough might be possible, to connect with the existing Enstar Natural Gas Co. pipeline system.

For Doyon, this is the third try at finding oil and gas in the Nenana basin, a sedimentary basin that is mostly state-owned but with parts owned by Doyon itself along with the University of Alaska.

Doyon is drilling on state of Alaska leases, however, which were converted from an exploration license issued by the state when the Fairbanks-based Native corporation first began exploring.

Considerable seismic work in the basin has been done by Doyon and the initial area of interest is in a group of prospects a few miles west of the city of Nenana. A permanent road has also been built to the area, which facilitates access and allows drilling to be done in the summer.

When Doyon first began working in the basin the interest was in natural gas because the region was considered to be gas-prone. However, results from the first two wells showed indications of heavier hydrocarbons and the presence of a petroleum-generating system.

Doyon is using the Arctic Fox rig owned and operated by Doyon Drilling, the corporation's drilling subsidiary. The rig was brought down from the Slope after it finished drilling winter exploration wells at Smith Bay for Caelus Energy.

Doyon and Ahtna had both previously had partners in their exploration but the partners pulled out, leaving the two Native corporations proceeding with the exploration with their own funds plus the help of the state tax credits. ●

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EXPLORATION & PRODUCTION

Shell Arctic anchor systems to be removed

In something of a postscript to Shell's now defunct exploration program in the Chukchi and Beaufort seas, the company has commissioned service company Fairweather to retrieve anchor equipment from Shell's offshore sites. Fairweather has applied to the National Marine Fisheries Service for an authorization for the minor disturbance of marine mammals during the anchor retrieval operations.

The three sites involved consist of Sivulliq, in the Beaufort Sea, on the western side of Camden Bay; Burger, in the Chukchi Sea, about 78 miles northwest of the coastal village of Wainwright; and Kakapo in the Chukchi, about 68 miles northwest of the village of Point Lay. Crew changes for the operation may take place in Kotzebue, Wainwright or Prudhoe Bay, the application to the Fisheries Service says.

Fairweather may use a sonar system to obtain accurate images of the anchors and associated gear in preparation for equipment removal. With one or two vessels on site, one vessel will perform each anchor retrieval operation, either using a float rope already attached to the anchor, or using a grappling hook. Depending on the weather conditions and the number of anchors at a site, it should take two to seven days to complete the equipment retrieval operations at a single drilling site, the application says.

—ALAN BAILEY

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DEVELOPMENT PLANS

Trade secret issues

Dave Van Tuyl, BP regional manager, in a separate May letter, also called the requirement for marketing information from working interest owners "impermissible rulemaking" and said "significant antitrust concerns under both federal and state law" are raised by the division's requirement that WIO provide marketing information.

Marketing information, he said "constitutes a trade secret under Alaska law."

Van Tuyl also said the division cannot require marketing information "because there is no duty to market gas beyond the local ANS market. A lessee has no duty to market gas if no market for the gas exists at the well," he said.

He also cited agreements the state is a party to under the Alaska LNG project, and said the requirements for marketing information "violates DNR's obligations under the Gas Availability Agreement" to negotiate in good faith with BP on the availability of natural gas if BP withdraws from AKLNG. He said DNR's effort to gain information through the POD process "is an attempt to gain information no other commercial actor would otherwise be able to obtain in a good faith commercial negotiation to buy and sell gas." ●

Contact Kristen Nelson at knelson@petroleumnews.com

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DEC RULES

Ryan said most large mining companies are cooperative even if the chain of ownership doesn't precisely identify the as the party actually responsible. Often the identity of the party originally causing the pollution is unknown.

Sometimes companies do fight, however. DEC is in an extended dispute with Koch Industries, for example, over contamination of groundwater at the site of the Flint Hills refinery at North Pole, near Fairbanks.

The refinery is closed but pollution from the plant has contaminated local groundwater including water used for drinking.

Flint Hills contends DEC's minimum threshold for cleanup is too tight and also that a previous owner of the refinery, Williams, should shoulder some of the costs as well as the state.

Ryan also said physical removal of contamination need not happen as long as it is contained and a monitoring program can verify that.

Danger to environment

Meanwhile, many contaminants are a danger to the environment as well as humans, said Schlichting.

"Many of these can persist in the environment for a long time, like tributyltin (used in boat paint), DDT and other herbicides/pesticides, copper, and polycyclic aromatic hydrocarbons (PAHs) like benzo(a)pyrene," Schlichting said. "These are harmful to marine life, and avian species."

Other compounds, like mercury PFOS (perflourooctane sulphonic acid) and PFOA (perflourooctanic acid) can bioaccumulate in fish and wildlife. When humans consume these species for food they are exposed to those two compounds, she said.

So far the accumulations in fish and wildlife of these contaminants are coming from other sources, such as atmospheric pollution, Schlichting said. None is linked to contaminated sites.

However, it is possible that if there is leakage from a contaminated site there can be localized bioaccumulation of the chemicals in fish and wildlife, she said.

Ryan said while the contaminated chemical sites are a concern, DEC is actually more worried about contamination from petroleum spills which is widespread, mostly around bulk fuel storage tanks.

Eighty percent of the contaminated sites in Alaska are due to petroleum, Ryan said. However, some of these sites can have chemical contamination as well. ●

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Toxic compounds

Some of the more toxic compounds listed in DEC's contaminated sites cleanup regulations include:

- Benzene
- naphthalene
- trichloroethylene
- Vinyl chloride
- mercury
- cyanide
- lead
- 2,3,7,8 TCDD (Dioxin)
- PFOS, or perfluorooctane sulphonic acid
- PFOA, or perfluorooctanic acid

EXPLORATION & PRODUCTION

ConocoPhillips completes Tinmiaq well

ConocoPhillips Alaska Inc. completed the Tinmiaq No. 6 exploration well in late March, according to a recent well report from the Alaska Oil and Gas Conservation Commission.

The company completed the 4,250-foot vertical well on federal lease AA81080 in the Greater Mooses Tooth unit of the National Petroleum Reserve-Alaska on March 22.

ConocoPhillips planned a two-well exploration program in the western end of Greater Mooses Tooth earlier this year. The Tinmiaq No. 2 well was planned for lease AA 81807.

The company confirmed that it also completed Tinmiaq No. 2 this year.

In an April 2016 project update the company also mentioned a "Hyperion" well in the NPR-A, which the company has said was associated with the CD-5 development.

ConocoPhillips has yet to release any results. "All well results are currently being evaluated," ConocoPhillips spokeswoman Natalie Lowman said in an email.

—ERIC LIDJI

NATURAL GAS

Hopkins resigns from board for Senate run

Luke Hopkins, who was narrowly confirmed to the board of the Alaska Gasline Development Corp. in April, has resigned from that post to run for the state Senate.

In a letter to Gov. Bill Walker, dated May 25, Hopkins said his decision to run was motivated by what he considers a lack of leadership in the Legislature.

He says he remains committed to the corporation's mission and doesn't want to see that further politicized by his campaign. His resignation is effective immediately.

Hopkins is a former mayor of the Fairbanks North Star Borough. The Senate seat he would be vying for is held by Republican Senate Majority Leader John Coghill.

In a statement, Walker thanked Hopkins for bringing his knowledge, experience and passion for a gas line to the board. Walker says he'll start the process of finding a replacement soon

—ASSOCIATED PRESS

PIPELINES & DOWNSTREAM

Another twist in the TAPS rate case

In another twist in a massively complicated trans-Alaska pipeline rate case that began in 2008, pipeline shippers Tesoro and Anadarko have questioned litigation related costs that the pipeline owners want to include in the rates charged for transporting oil through the pipeline.

The case has hinged on the recovery through the pipeline rates of the costs associated with a major pipeline upgrade called "strategic reconfiguration." The upgrade involved installing new electrically powered pumps at the pipeline's pump stations and the implementation of a more automated pipeline control system. In November the Federal Energy Regulatory Commission issued an order, ruling that the strategic reconfiguration project had been imprudent and that the pipeline owners could only recover from the pipeline rates a portion of the project costs. However, the commission did allow the owners to recover from rates reasonable litigation expenses incurred as a result of the rate case. In February the Regulatory Commission of Alaska concurred with the FERC decision, including the ruling over litigation expenses — FERC regulates the interstate transportation of oil on the pipeline, while RCA regulates the shipment of oil to oil purchasers in Alaska.

But on May 16 Tesoro and Anadarko filed a comment with RCA, questioning the manner in which the owners have included their litigation costs in their new intrastate rates.

In compliance with the FERC and RCA orders, the pipeline owners have filed revised rates for the years 2008 to 2010, the years to which the rate case applies. But on May 16 Tesoro and Anadarko filed a comment with RCA, questioning the manner in which the owners have included their litigation costs in their new intrastate rates. The shippers say that allowing the pipeline owners to recover litigation costs associated with an imprudent action contravenes state statutes. The shippers also claim that the revised pipeline intrastate rates filed by ConocoPhillips and ExxonMobil, two of the pipeline owners, incorporate the recovery of litigation costs from both FERC and RCA, based on the rules that the agencies set in their separate orders, with this double collection resulting in a recovery of 188 percent of the costs.

The shippers have asked the RCA to disallow the recovery of all litigation costs. Alternatively, the commission should at least direct the owners to remove from their intrastate rates any litigation costs that have already been included in FERC rate filings, the shippers said.

The state of Alaska has also filed a comment, saying that recovery of litigation costs from pipeline rates in this case is illegal under state law and should be disallowed.

—ALAN BAILEY

Petroleum news

Oil Patch Bits

CONAM Construction receives award from ConocoPhillips

COURTESY CONOCOPHILLIPS

CONAM Construction said it was recently recognized by ConocoPhillips as part of its 2015 Supplier Recognition Award program. Awards were given in the areas of safety, focus on execution and doing business better, with CONAM receiving the "Focus on Execution" award.

As the general contractor responsible for installation of the drill site production facilities, CONAM Construction played a critical role in enabling DS-2S to start up two-and-a-half months ahead of schedule. The company demonstrated adaptability by adjusting their work plans and ensuring the project stayed on the critical path despite facing weather-related delays of critical materials and modules, completing 145,000 hours of work with a total recordable incident rate of 0.0.

Recipient companies were nominated by ConocoPhillips' business unit leadership, with winners chosen by a global cross-functional committee, including senior management. CONAM was nominated by the Alaska business unit.

Dale Kissee, president of CONAM Construction Co. says, "CONAM is honored to be recognized by ConocoPhillips and being presented the Focus on Execution award. The project success can also be attributed to the ConocoPhillips' capital project team members who supported us throughout the project. It was the entire team, working together that delivered the project ahead of schedule without incident."

CONAM Construction Co. is a leading provider of specialized contracting and EPC services delivering heavy industrial infrastructure solutions to the oil and gas, mining and power industries throughout the state of Alaska. The company is an operating unit of Quanta Services (NYSE: PWR).

AECOM in Alaska announces three new appointments

LAURA YOUNG

ELIZABETH BELLA

AECOM, a premier, fully integrated global infrastructure firm, recently announced that it has made several leadership changes within its Alaska operations to enhance the impact of the organization in the region.

Laura Young assumed the role of technical services manager. In this new role, Young will oversee engineering, geographic information system and computer-aided drafting disciplines. Young will also continue to serve as the federal business development lead for Alaska. Young joined AECOM, through legacy Dames & Moore, in 1995.

see **OIL PATCH BITS** *page 18*

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

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

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CHENAULT Q&A

I think the House's version has a task force that would look at Cook Inlet and see what if any changes need to be made, what concerns are out there and how do we keep a positive outlook on investment in Alaska. I think if we send the wrong message, we lose all the little guys. The little guys in fields as old as Cook Inlet, they are the ones who are going to go in and take all the chances where some of the big guys, it's not profitable for them, but it is for the smaller guys. That's the way the oil industry has been for as many years as I've been involved — 40 years — you have the big guys come in when they discover a field, then they develop it. As you start getting into declining production, the smaller guys come in and they take it over. They produce more oil than originally thought. That's the way of oil fields. The same will happen on the North Slope. You'll get enough small guys in there that the big guys will leave and they will go to newer and bigger fields — well, they hope they will.

Petroleum News: Now the House, largely behind the majority leader (Charisse Millett), has spent the last four to six years making a push to have the federal government clean up legacy wells. There was a recent report how the Bureau of Land Management has fallen short recently, as least as AOGCC (Alaska Oil and Gas Conservation Commission) sees it. What are your thoughts on it?

Chenault: I know there is frustration there. I know we as a state are frustrated with the federal government, not only with the lack of cleanup of the legacy wells, but also with the federal implementation of regulations to deal with the industry. We want it done right. Unfortunately, when the federal government drilled all of these wells, they didn't do it right, and they largely ignored the problem. In turn if something even considerably smaller had happened at a current oil company's facility, there would be hell to pay.

We just want those wells cleaned up. There are going to be times when you go in there to plug the well and things don't go as well as you expect them. You may have to go in there a second or third time. I can't fault the contractor. I can't fault the federal government.

But they need to own up to it. They need to say Ms. Foerster (commissioner, Cathy) you're right, we didn't' get this thing plugged like we wanted to and our plan is to go back in there and get this thing fixed. I think just that type of conversation between the federal and state agencies — that makes the problems go away. We currently have folks in the federal government who don't want to spend money on those legacy wells to clean them. It's a high priority of ours. It's a high priority of the state's. It's a high priority of the majority leader. She worked very hard in trying to bring these wells to light.

I promise you, if those wells had been left by an oil company, they would be crucified right now. There would probably be folks in jail and the federal government would step in, pay for whatever cost there was to fix these wells and bill the oil company for it.

Petroleum News: Speaking of AOGCC, you never got a third name brought forth for confirmation to round out the commission. How do you feel about that?

> *"If it's not going to make us money, we shouldn't do it. I guarantee you none of the oil companies will invest in it, either."*
> ***—Speaker Mike Chenault, R-Nikiski***

Chenault: I would love to have a third name. I had conversations with the governor, but I won't say who they were looking at, but I thought they were a good choice. They weren't available yet and I'm hoping that works its way through and the governor puts that person on the board. I think that would be a good person. I didn't think there was anything devious going on so that when we got done, then he would have a year for that person to be in the position because we wouldn't have to confirm whoever it was. In my conversation with the governor about that particular subject, I was comfortable with what they were doing. While I would like to have that third person on there, hopefully that happens pretty soon.

Petroleum News: So is it a matter of getting the right person in there later rather than the wrong person sooner?

Chenault: I believe so. I don't want them to put somebody on there because they felt like they had to have somebody on a certain date. I'd like them to vet someone. I think the person they were looking at, I was very comfortable with who they talked about. If it takes an extra month or two months to find that person, we as a state will be in better shape.

Petroleum News: There is also the matter of no name being brought forth for a Resources Commissioner with Marty Rutherford still in place as interim.

Chenault: Personally I'd like to see Marty Rutherford. I like Marty. We've been at the opposite end of the spectrum during the Murkowski administration and during the Palin administration. Since she's been back, we've had numerous conversations. I think she is very knowledgeable. I know she would like to retire. When you burn the candle at both ends, 24 hours a day, month after month after month, you tend to say, what am I getting out of this? I would be very comfortable with her but it depends on what her plans are. I would love to have her there to steer us through what I hope is a pipeline project. She understands SB 138, she understands AGDC, she understands AKLNG. I can call her, ask a question and I'll get a straight answer.

Petroleum News: A lot of people in this building have been around 8 to 10 years and seem to respect her regardless of whether they agree with her or not. What is it about her that she can command that respect?

Chenault: I think the respect comes from her being truthful with you. You can pretty much take what she says to the bank. In a particular time in history, she will tell you everything she knows that's going on if you ask questions. There are some who will answer it a certain way and you walk out of a meeting wondering what's really going on. My relationship with Marty is I ask a question and she'll give me a straight answer. We don't hide anything from each other. That's how I like it.

Petroleum News: I know you haven't been back home a lot, but are you seeing or hearing anything on the Kenai that has you confident that people want to move forward with AKLNG?

Chenault: Naturally things are different on the Kenai. A lot of land has been bought and a lot of homes have been bought and torn down to keep riff raff from going in. I think people still believe there is a good possibility that project is going to happen. There is concern about it, because they haven't done anything about it, but they are anticipating Alaska moving forward and AKLNG can move Alaska forward.

They are going to reach the pre-FEED stage and re-evaluate their position. Maybe the state will say we don't like where we're at. Maybe Exxon, or BP or Conoco will say is this a project that can move forward.

Petroleum News: Do you have a sense that gas will get monetized?

Chenault: You know we've been monetizing it for years by re-injecting it and bringing more oil up. That's made us a lot more money than if we had taken the gas cap off the Kuparuk field and the Prudhoe Bay field years ago; we would not have produced near the oil we have and we would probably be broke today. But by monetizing the gas with re-injecting it and bringing up more oil, we did the right thing. Now though it's time we can monetize it as far as selling it or using it for Alaskans, the small amount that we would. Yeah, I think it's time that we monetize it. Economics is going to drive the project. We all know it. It doesn't matter how much we hope for or wish for. If it's not going to make us money, we shouldn't do it. I guarantee you none of the oil companies will invest in it, either.

Petroleum News: Also, another recent announcement was BP saying they would be selling their building with the intent of leasing it back. Is this a development that concerns you or is it a natural response to today's climate?

Chenault: I don't know. I think some of it is a natural occurrence. I don't believe ConocoPhillips owns its building. Does it mean BP is looking at leaving, I don't think so. I think they are like us, looking at ways to cut the costs of expenditures to their corporation and that may be a way to do it.

Petroleum News: Now you did get HB 100 through the Legislature, which affords Agrium credits up to 6.5 years in exchange for certain development in bringing operations back on line. It took two years to get through. Was it hard getting a tax credit pushed through when discussions of scaling back credits take place?

Chenault: That was the hard part. People looked at it as tax credits and we can't be paying out more credits with the price of a barrel of oil. The hard part was explaining to people is currently we are receiving zero dollars. We aren't receiving any corporate dollars because they are out of business. They don't get any money until the invest $275 million and use other people's gas. The state won't be paying any credit. I wish there was another word I could use to describe what was happening. When you're in the realm we are in today with low oil prices and you're trying to get rid of tax credits, it was a hard sell. ●

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TAX WORRIES

Janet Weiss, president of BP Exploration (Alaska) Inc., said that new investment in the state will require a stable fiscal regime and that current uncertainty over the tax situation is her biggest worry, despite the current challenges her company faces with low oil prices.

Joe Marushack, president of ConocoPhillips Alaska, commented that oil industry taxes in Alaska, with now the sixth change in the last 11 years, are the most unstable of any he has seen anywhere in the world.

The oil industry tends to be very capital intensive, with capital investment rather than labor costs dominating the accounting books, Marushack said. But the North Slope is a particularly expensive place to operate and, therefore, a challenging investment region, he said. And despite those high costs, to attract investment a company has to achieve a margin that makes the economics work. That margin is directly related to the taxes that a company has to pay, Marushack said

David Wilkins, senior vice president of Hilcorp Alaska, said that his company has many prospects that it could drill but that the fiscal uncertainty is causing the company to take a pause.

"If you want to kill momentum in an industry, just continue to change the fiscal financial structure," Wilkins said.

—ALAN BAILEY

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HB 247

ilar to the 21-16 margin for Seaton-Wilson amendment. House Speaker Mike Chenault appointed House members of a conference committee, all of whom heard the governor's bill and worked on a committee substitute in House Resources: Reps. Dave Talerico, R-Healy (chair), Kurt Olson, R-Soldotna and Geran Tarr, D-Anchorage.

That occurred at the end of the regular session.

The special session gaveled in May 23 and on May 24 the House adopted a resolution suspending legislative rules to allow certain bills on the governor's call for the special session to be carried over from the regular session.

Although the House minority voted for amended version of HB 247 in the regular session, members of the Alaska Independent Democratic Coalition sponsored an amendment to remove HB 247 from the resolution, a move which would have required beginning with a new bill. The amendment failed 13-22 with those opposed reviewing the amount of time the House had already spent on the measure.

The Senate concurred in the resolution and Senate President Kevin Meyer appointed Sens. Cathy Giessel, R-Anchorage (chair), John Coghill, R-North Pole, and Peter Micciche, R-Soldotna, to the conference committee. All serve on Senate Resources, which heard earlier versions of the bill; Micciche also serves on Senate Finance, which heard the House-passed version and prepared the Senate CS.

No conference committee meetings had been announced when this issue of Petroleum News went to press May 26.

—KRISTEN NELSON

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KITCHEN LIGHTS

resume a program of exploration drilling using the Randolf Yost jack-up drilling rig.

The plan entails the drilling of two new development wells at the Kitchen Lights field by the end of October this year. Furie plans two further Kitchen Lights development wells in 2017 and 2018.

In terms of exploration, Furie wants to re-enter and evaluate the KLU No. 4 well at some time between May of this year and the end of October 2017. The company previously drilled KLU No. 4 in the northern block of the unit in 2013 and 2014, but the company now wants to go deeper, to test the lower strata of the Tertiary sequence of the Cook Inlet basin and to penetrate deeper Jurassic rocks of Mesozoic age.

Continuing exploration

Under the plan, the drilling of new exploration wells will continue with the KLU No. 9 and No. 12 wells in 2017. The No. 9 well is in the extreme north of the unit, while the No. 12 well is a mile or so southwest of the KLU No. 4 well. In 2018 Furie wants to drill the Osprey and Deep Jurassic Prospect wells in the Corsair block of the unit. The Osprey well would test a new horizon, drilling from the surface location of the Julius R. platform, the production platform for the Kitchen Lights field. The Deep Jurassic well would test an oil prospect in the upper Jurassic.

According to Furie's approved plan, the company would drill the KLU Nos. 10 and 11 wells in the unit's central block in 2019, with the Nos. 6 and 8 wells in the southwest block to follow in 2020, and the No. 7 well in the same block in 2021.

The Randolf Yost rig is currently on site at the Julius R. platform, preparing to drill Furie's first well for this year.

—ALAN BAILEY

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BADAMI REVIEW

season in the Arctic.

Savant now plans to pursue those projects "as economic conditions warrant." The company is currently undergoing internal evaluations to determine what opportunities exist and plans to review those plans with state officials by the end of September.

Earlier this year, Miller Energy emerged from bankruptcy as Glacier Oil & Gas Corp. and is currently evaluating its operations and prospects on the North Slope and in Cook Inlet.

As part of those efforts, Savant recently began a geologic and geophysical review of the "Badami and Killian sands and associated producing wells," as well as "historical wells and field structure." The company is also reviewing potential targets outside the Badami Sands participating area, including the Killian Sands on the eastern end of the unit.

Exploration stalled

With oil prices currently jeopardizing development activities that promise to improve production rates, any exploration activity is probably unlikely in the near future. But even if oil prices suddenly rise, exploration at the unit is hampered by an ongoing administrative dispute between the company and the Department of Natural Resources.

In preparation for exploration work, Savant asked the state in late 2012 to expand the unit to include seven exploration leases to the east. The state Division of Oil and Gas only agreed to include two of those leases into the unit. The company appealed the matter to the Department of Natural Resources, where it has remained for more than three years.

A few months after appealing, Savant asked the state to suspend work commitments while the matter progressed. A previous plan of exploration required Savant to drill an exploration well through the Canning formation and into the Hue Shale to evaluate the potential of the Killian interval as previously encountered in the East Mikkelsen Bay No. 1 well. According to the Division of Oil and Gas, the appeal "cannot stay the work commitment." According to Savant, the lack of resolution for the appeal and the request for a stay "makes planning difficult for further delineating and developing the field."

Some improvements

Even with those economic and administrative obstacles prevent development and exploration, Savant managed to improve operations at Badami over the past year.

A "minor workover" of the B1-11A and B1-36 wells identified 321 feet of additional zones in need of perforation, which the company performed in November 2015. The work increased production by 369 barrels per day, according to the company.

Although small by North Slope standards, the increase is considerable for the unit.

Badami averaged 992 bpd in October 2015, 879 bpd in November 2015 and 1,206 bpd in December 2015, according to the Alaska Oil and Gas Conservation Commission.

In a potential cost-saving measure, Savant is negotiating with ExxonMobil to partner on small pigging operations on the Badami and Point Thomson pipelines this summer.

ExxonMobil recently brought the neighboring Point Thomson unit online. All production from the eastern unit passes through Badami Oil Sales Pipeline on its way to market, making the two companies natural partners for any pipeline maintenance activities.

Earlier this year, the Department of Natural Resources asked Savant to include a section in the plan of development to discuss marketing and facility access. The state has been making a similar request to all operators, which has created some consternation for producers with stranded natural gas resources. Savant told the state that it is "always interested in entertaining offers to use its spare production capacity at all of its facilities, and is willing to enter into facility sharing agreements as reasonable and appropriate." ●

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OIL PATCH BITS

JOY WAKEFIELD-GONZALEZ

Elizabeth Bella, PhD, was named planning group manager. In this new position, Bella will continue to manage projects and will also serve as strategic and business development lead for the planning group. Bella has 15 years of applied ecology and regulatory experience, and she joined AECOM in 2015.

Joy Wakefield-Gonzalez was named business manager. In this new role, Wakefield-Gonzalez will be responsible for project management improvement, business management and financial planning. Wakefield-Gonzalez joined AECOM, through legacy firm Tryck Nyman Hayes, in 2008.

"We are excited to welcome Laura, Elizabeth and Joy into their new roles. They are very capable and experienced in their fields and will continue to be an asset to our team," stated Joe Hegna, AECOM Alaska operations manager and vice president. "I am looking forward to seeing all they accomplish in their new positions."

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LOW PRICES

ciently, Weiss said. In fact, before the oil price had hit its lowest point, BP had already taken a look at its drilling costs and drilling performance, she said. For example, in late 2014 and early 2015 the company's drilling team found ways of reducing drilling costs at Prudhoe Bay by 20 percent, a cost reduction that can keep rigs running for longer.

In addition, it has been possible to improve revenues as a consequence of improved plant reliability. And BP has slowed the oil production decline at Prudhoe Bay, Weiss said.

However, the company has had to cut back on the Prudhoe Bay drilling program, eliminating drilling that is not viable at the current oil price. The company also had to take the very hard step of letting some great employees go, Weiss said.

New possibilities

But people understand that the oil price will climb back up at some time. And, with improved efficiencies kicking in, opportunities previously viable at oil prices ranging from $40 to $80 per barrel are now viable at lower price levels, Weiss said. At the same time, those efficiencies open the possibility of developing some of the 38 billion barrels of viscous and heavy oil, or the 15 billion barrels of the more challenging light oil, on the North Slope in a world of $50 or $60 oil, she said.

If fiscal stability in Alaska can be achieved, the state's oil industry can be viewed as being in mid life. And, advancing the Alaska LNG project, a project for exporting natural gas from the North Slope, would de-risk exploration on the Slope, Weiss said. The ability to export products from the Slope would lead to more players in the region's industry, more production, more innovation and more oil down the trans-Alaska pipeline, she said.

ConocoPhillips

Joe Marushack, president of ConocoPhillips Alaska, said that, despite a 30 percent drop in revenues as oil prices have plunged, his company still needs to conduct many of the activities, including field maintenance activities, that it had been carrying out when the prices were higher. ConocoPhillips operates the Kuparuk River and Alpine fields. The company has been working with its contractors to figure out how to reduce costs as much as possible, while also recognizing that it is also extremely important that those contractors come through the current downturn, along with ConocoPhillips.


JOE MARUSHACK

"The relationship with the contractors up here is the best I've seen any place in the world," Marushack said. "Our contractors up here get it."

Despite the oil industry downturn, ConocoPhillips is still investing more than $1 billion in Alaska this year, Marushack said. The CD5 drill site came on line last year. Drill site 2S has come online in Kuparuk. The company has announced the GMT-1 development in NPR-A. GMT-2 is still to come and ConocoPhillips drilled three new exploration wells this year. However, the Kuparuk drill site 1H NEWS project is on hold for the time being.

"So, we believe there is a lot of potential in Alaska," Marushack said.

ConocoPhillips has had to make some hard decisions, including a decision to reduce the company's workforce, primarily reducing the number of Alaskans working in the company's office in Anchorage. But, as the company reduces its costs, it is becoming much smarter in how it does things, and has a team focusing on how to reduce costs further, Marushack said. The company is also providing its employees with opportunities to take on different roles, to expand their skills, he said.

ExxonMobil

Reflecting on the recent volatility of oil prices, Cory Quarles, ExxonMobil's Alaska production manager, commented that in a commodity market, such as that of oil, "the low cost supplier wins." As a vertically integrated oil company, ExxonMobil looks across the full oil industry life cycle to maximize its return. ExxonMobil has been seeking ways of sharing best practices between its upstream and downstream businesses and has established a new campus in the Houston area to facilitate this effort, he said. The company must maintain a positive cash flow through the oil price downturn, he said.


JUDY PATRICK
CORY QUARLES

"That vertically integrated model does give us quite a bit of an opportunity to be able to create value throughout the business cycle, especially when prices are low," Quarles said.

Exxon seeks to create the required margins from its assets by maximizing the value of those assets through a series of strategic directions: achieving operational integrity; maximizing the reliability of facilities; lowering the cost structure; business integration; making investments for the long term; and efficient project execution.

For example, in terms of reducing the company's costs, the company has reduced its staffing by nearly 40 percent since the merger between Exxon and Mobil in 1999, despite the fact that the company's asset base has grown during that same time period, Quarles said.

Taken together, the company's various strategies had significantly reduced the company's operating costs, even before the oil price downturn, and are now helping the company weather the current low-price environment, Quarles said. In fact, in the current market, ExxonMobil sees opportunities through mergers and acquisitions, he said. And, when it comes to investment opportunities, the company takes a long term view, looking at a range of oil price possibilities and focusing on the fundamentals of the oil market, he said.

Hilcorp

David Wilkins, senior vice president of Hilcorp Alaska, said that his company had 515 employees at the end of 2015 and does not anticipate cutting any jobs.

"We're going to weather this. Our strategy is we're lean and mean. … We use our contractors to ebb and flow through times like this," Wilkins said.

But, seeing the already small scale of the local service industry as a challenge, Hilcorp recognizes that contractors also need to make money, he said.

And, when it comes to safety and regulatory compliance, "we cut costs and bureaucracy but don't cut corners," he said. However, while Hilcorp will follow the rules and sees safety and environmental excellence as a key to success, it is necessary to find ways of streamlining the current state and federal regulatory climate, he said.

Since entering the Alaska oil industry Hilcorp has doubled oil production in the Cook Inlet. The company now operates four assets in the North Slope region and hopes to see oil production from those fields grow, he said.

Currently the company's Cook Inlet gas production is exceeding the capacity of the local gas market, so that the company is in a holding pattern when it comes to further gas development: There are another 50 to 100 wells that the company could drill, Wilkins said. Excess gas production is currently going into storage. The company's drilling expenditure has dropped in response to the fall in the price of oil, although maintenance activities at the company's fields continue as normal, to maintain safe and effective operations, he said.

And, despite the lean times in the industry, Hilcorp expects to continue to grow. The cost structure of the industry became inflated during the time of high oil prices and now needs to normalize. And new technologies can achieve efficiency gains, he said.

"If we can make money at these prices, we'll be fine no matter what happens," Wilkins said.

On the North Slope there are opportunities to use technology to develop heavy and viscous oil, and to squeeze more light oil from the fields. In Cook Inlet there are opportunities to apply better technologies to the development of laminated gas sands, Wilkins said.

Caelus

Pat Foley, senior vice president for Caelus Energy Alaska, talked about the steps that his company has had to take in response to the oil price situation. Caelus operates the Oooguruk field offshore the central North Slope, this winter drilled two exploration wells at Smith Bay on the Beaufort Sea coast and has conducted seismic surveying in its state leases to the east of Prudhoe Bay. The company has seen very encouraging results at Smith Bay and hopes to drill another well there next winter.

On May 20 Caelus flowed the 25 millionth barrel of oil from the Oooguruk field, Foley said.

Foley said that Apollo Global Management, the company that is investing in Caelus, had, before the drop in the oil price, insisted that Caelus hedge its oil price position. That hedging will see the company through most of next year, he said. But with the low oil price situation the company has had to become thrifty — the company has been obtaining tremendous help from its contractors in weathering the storm, Foley said.

Unfortunately, however, in the current price environment the company has not been able to continue drilling at Oooguruk and has also had to reduce the size of its workforce. And the Nuna project, a new development in the Oooguruk field, is on hold for the time being, in part because of fiscal uncertainty in the state, Foley said. He said that he now knows that his company is going to survive and he is confident that the oil price will come back. The company's projects have 30- to 40-year field lives, Foley said. It is all about positioning for the future. ●

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ON THE PROWL

Now an advisor to CNOOC, he said Canada's advantages in the legal, commercial, political and technology sectors are offset by the inability of governments to approve export facilities.

Chen said First Nations' issues have effectively shelved Nexen's plans for its Aurora LNG project at Prince Rupert, which would have consumed 3.11 billion cubic feet per day of British Columbia gas.

While competition for LNG markets is intensifying from Russia, Australia, the United States and even Iran, Canada is "just going according to its own pace," he said.

Chen said private Chinese investors who are still enthusiastic about North American energy resources are now pouring their cash into the United States, which he said is successfully transforming itself into an energy exporter.

Infrastructure issues

Brian Tuffs, chief executive officer of Sinopec Canada, said it is "to the detriment of Canada that it has been unable to resolve its infrastructure issues to an acceptable level with all stakeholders. There are markets that would gladly accept our resources and yet we are unable to get there."

China sent its vice minister of Financial and Economic Affairs, Han Jun, to Ottawa earlier this year to send a message that if Canada can overcome its energy pipeline impasse Beijing would be open to negotiating its first free-trade deal with any North American country.

The Canada-China Business Council estimates a bilateral trade pact could boost Canadian exports by C$7.7 billion a year by 2030 and create 25,000 Canadian jobs.

Han also said China is in the market for Canadian green technology to help reduce carbon emissions, having already invested US$89.5 billion on clean energy in 2014.

However, he said China will make its own demands, especially the removal of restrictions imposed on oil sands investment, which he said left his government feeling that it was "being discriminated" against.

PetroChina work slows

PetroChina, once tagged to become one of the largest oil sands producers, has now decided to absorb the lessons learned from its MacKay River in-situ project which is expected to deliver its first commercial output later this year, then ramp up to 35,000 barrels per day, on top of the 20,000 bpd it already produces from other projects.

Bob Shepherd, executive vice president of Brion Energy, PetroChina's wholly owned Canadian unit, told the Financial Post that the oil sands do not enjoy a "particular strategic advantage."

"They have got to compete with the other opportunities we have," he said. "We have some lessons to learn before we hit the accelerator on more development."

MacKay River capital costs were higher than expected, with analysts pegging the final price tag at C$2.2 billion, more than double the original estimate.

Shepherd said Brion faced "growing pains" as it transitioned a C$5 billion joint venture to sole ownership.

But he, too, said PetroChina's biggest surprise in Canada has been its inability to build pipelines to the British Columbia coast, which he said offers greater market-access opportunities than TransCanada's proposed Energy East pipeline to the Atlantic coast.

Smattering of deals

Amid that uncertainty, it is easy to conclude that China wants little or nothing to do with further acquisitions, but that's not quite the case.

A smattering of little-noticed deals over the past year shows the Chinese are still on the prowl and could be ready to pounce, especially if desirable mid-size targets are forced into survival mode.

Beijing-based Sinoenergy Pacific has made two Canadian acquisitions — C$170 million for privately held New Star Energy and C$100 million for debt-burdened Long Run Exploration. Other buyers include China Oil and Gas Group and Yanchang Petroleum International.

All of those transactions have carefully sidestepped the need for review by Investment Canada and none has involved the oil sands.

But they do underscore the fact that China's Gross Domestic Product is expected to grow by up to 7 percent this year, while its foreign investment is on track to increase 10 percent to US$130 billion, all pointing to the prospect of more offshore acquisitions.

Bargains unlikely to be ignored

Even if the energy industry is low on that shopping list, bargains are unlikely to be ignored, especially now that asset-rich companies such as Penn West Petroleum and Connacher Oil and Gas attempt to fend off default on their lending agreements.

Connacher, in filing for creditor protection, could even put restrictions on oil sands transactions to the test now that it has court approval to sell oil sands leases and extraction plants that include its 5,900 bpd Great Divide thermal-recovery project.

The company has 87,000 net acres of oil sands leases that represent 40 years of reserves, while its two extraction plants handled 14,500 bpd in 2015.

Penn West, which has warned it may be in default by the end of June unless it can reach an agreement with its lenders, is trying to sell assets to pay down its C$1.8 billion debt after acknowledging concern about its "ability to continue as a going concern."

The company averaged production of 77,000 barrels of oil equivalent per day in the first quarter (with light oil and natural gas liquids accounting for more than half), down 19 percent from a year earlier.

For China watchers, those two companies bear close watching. ●

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