Petroleum news

page 3 Q&A: Wielechowski says tax regime not durable; don't abandon AKLNG

Vol. 22, No. 24 • www.PetroleumNews.com — *A weekly oil & gas newspaper based in Anchorage, Alaska* — Week of June 11, 2017 • $2.50

This week's Mining News

NORTH OF 60 MINING news

page 8 ATAC targets Carlin-type gold with $10M drill program at Rackla, YU

www.MiningNewsNorth.com — *The weekly mining newspaper for Alaska and Canada's North* — Week of June 11, 2017

NEWS NUGGETS

Compiled by Shane Lasley

FULL METAL MINERALS LTD.

CopperBank's Pyramid project on the Alaska Peninsula hosts a porphyry deposit with 1.34 billion pounds of copper, 74.4 million lb of molybdenum and 488,500 ounces of gold, according to a resource calculated in 2013.

CopperBank ready to drill Pyramid

CopperBank Resources Corp. June 5 announced plans to complete at least 1,500 meters of drilling at its Pyramid copper-gold-molybdenum project in Southwest Alaska. The Pyramid project covers 94,830 acres of Aleut Native Corporation lands on the Alaska Peninsula. This property hosts 122 million metric tons of inferred resource averaging 0.41 percent copper, 0.1 grams per metric ton gold and 0.021 percent molybdenum. While completed by a reputable engineering firm in 2013, CopperBank is not treating this historical estimate as current mineral resources. The primary objective of this year's drilling is to expand this resource area at Pyramid in advance of infill drilling planned for 2018. Expansion of high-grade resources around hole PY11-16, which cut 155 meters of 0.71 percent copper, 0.18 grams per metric ton gold and 0.018 percent molybdenum, is the primary target area for this year's drilling. The bottom 34 meters of this hole returned 0.844 percent copper, indicating the depth extension of this deposit. The North zone will also be tested to verify the lateral extensions of known mineralization –particularly around hole 11PY007, which cut 104 meters averaging 0.56 percent copper and 0.13 g/t gold from a depth of six meters. CopperBank hopes this program will provide a better understanding of the distribution and the controls of the mineralization, and verify the continuity of higher grade zones, particularly with overlap between supergene chalcocite mineralization hypogene chalcopyrite mineralization. "This long anticipated drilling program will give our technical team the direction for next steps in the development of the project, and specifically a better view of the higher grade sections of the deposit," said CopperBank Executive Chairman Gianni Kovacevic. "The superior location and ownership structure further demonstrate that Pyramid is one of only a handful of established copper projects that is located on private property in the United States, with the added benefit of being located only four kilometers to all-year ice-free deep tide water."

Endurance explores, expands Interior Alaska gold properties

Endurance Gold Corp. June 5 reported the start of this year's exploration program at its Elephant gold property in Interior Alaska. This work will start with an induced polarization and magnetic ground geophysical survey. The geophysical crew is expected to mobilize to Elephant before the end of June. Endurance will also carry out additional prospecting, trenching, and soil and rock sampling at Elephant, Trout and Wolverine, the three properties that make up the Elephant project. Results from the ground geophysical program will be used to plan a drill program, which the company hopes to carry out this fall. "This survey will provide information required to efficiently plan the drilling

see NEWS NUGGETS page 10

SHANE LASLEY

Core from a 17.3-meter section of a hole drilled into the Main Peak zone in 2012 that averaged 21.8 g/t gold, 7.4 g/t silver and 0.32 percent copper. This year, Peak Gold is seeking similar gold-rich skarn mineralization near the Main Peak deposit.

EXPLORATION

Peak Gold resource

Royal Gold, Contango Ore expand Peak deposits, seek new zones at Tetlin

By SHANE LASLEY

Mining News

Having outlined 1.26 million ounces of gold, 5.11 million oz of silver and 39.6 million pounds of copper in the measured and indicated resource category at the Peak deposits, Royal Gold and Contango Ore are now looking for new zones of similar high-grade gold mineralization at other prospect across the Tetlin gold project near Tok, Alaska.

"Having discovered and now defined a substantial body of ore, our drilling plans for the summer of 2017, which commenced in mid- May, are targeted towards more exploratory prospects in the general area of the Main and North Peak deposits," explained Contango Ore President and CEO Brad Juneau.

This work is being carried out by Peak Gold, a joint venture funded and managed by Royal Gold.

Under a 2015 JV agreement, the Denver-based royalty company can earn a 40 percent interest in Peak Gold by investing US$30 million on exploratory work at Tetlin by October, 2018. Through the end of March, Royal Gold had spent roughly US$20 million on exploration at Tetlin, an investment that has earned it a nearly 25 percent stake in the JV.

Substantial resources

Since Royal Gold joined Contango Ore in exploring Tetlin, the Peak Gold JV has focused its efforts upon expanding and upgrading a resource calculated for Contango Ore following the 2013 drill program.

At the time Peak Gold was formed, Contango Ore had already outlined 6 million metric tons of indicated resources averaging 3.46 grams per metric ton (664,112 oz) gold, 11 g/t silver and 0.25 percent copper in the Main Peak zone. An additional 3.9 million metric tons of inferred resources averaging 2.07 g/t (256,000 oz) gold, 14.28 g/t silver and 0.23 percent copper had been outlined in this deposit.

"The results obtained by Peak Gold through drilling this past year have been outstanding."
—Contango Ore CEO Brad Juneau

The drilling completed by Peak Gold over the past two years has focused on two primary objectives – upgrading and expanding the deposit identified at Main Peak and delineating a deposit at North Peak, a parallel zone about 250 meters to the northeast. Both goals were met.

"The results obtained by Peak Gold through drilling this past year have been outstanding," said Juneau.

Plugging these drill results into a resource calculation published on June 2 has resulted in a nearly twofold expansion of the amount of gold reporting to the higher confidence measured and indicated categories.

According to this updated resource, the Main Peak and North Peak zones now encompass 10.6 million metric tons of measured and indicated resource averaging 3.64 g/t (1.24 million oz) gold, 14.18 g/t (4.83 million oz) silver and 0.16 percent (37.3 million pounds) copper.

The global resource for these two deposits – measured, indicated and inferred – now stands at 15.65 million metric tons averaging 2.98 g/t (1.5 million oz) gold, 14.68 g/t (7.39 million oz) silver and 0.16 percent (55 million lb) copper. This is calculated using a gold-equivalent cut-off grade of 0.5 g/t gold.

"We now have substantial quantities of measured and indicated resources relative to inferred resources, the result of substantially more drilling over the past year defining the known deposits already discovered at Main and North Peak," said the Contango Ore CEO.

Nearby prospects

With the Main and North Peak deposits fairly well outlined, Royal Gold and Contango Ore are

see PEAK GOLD page 8

Royal Gold, Contango Ore expand Peak deposits, seek new zones at Tetlin. Read more in North of 60 Mining News, page 7.

Furie mobilizing rig early July

Furie Operating Alaska anticipates mobilizing the Randolf Yost jack-up rig in Cook inlet at the beginning of July, Bruce Webb, Furie senior vice president, has told Petroleum News. The rig overwintered at Nikiski on the Kenai Peninsula. It requires upgrades to a couple of its systems before deployment, Webb said.

Furie has said that during this year's drilling season in the inlet it plans to first use the Randolf Yost rig to complete the

see **FURIE RIG** *page 14*

Rig demob complete at Icewine

Demobilization of the Arctic Fox drilling rig from the Icewine No. 2 well on Alaska's North Slope is complete, 88 Energy Ltd. said in a June 6 statement. The well reached its target depth of 11,450 in mid-May. The company said the stimulation design for the well has been completed based on a logging program tailored to optimize location of perforations for the stimulation design and an application for stimulation submitted. That work is planned to begin about June 17, 88

see **ICEWINE WELL** *page 14*

BLM may terminate Sterling unit

The federal government is considering whether or not to terminate the Sterling unit.

Given the lack of production at the Cook Inlet unit over the past three years, the U.S. Bureau of Land Management believes it is now time to terminate the legacy gas field.

The federal agency proposed the termination proceedings in a meeting with operator Hilcorp Alaska LLC in mid-December 2016. The process would require the company to

see **STERLING UNIT** *page 14*

GOVERNMENT

Appraisal delayed

Caelus has said it is not going to drill a well in Smith Bay next winter

By ALAN BAILEY

Petroleum News

According to a report by Alaska Public Media, Caelus Energy Alaska spokesman Casey Sullivan has commented that his company no longer plans to drill an appraisal well in its Smith Bay discovery next winter. Sullivan told Alaska Public Media that continuing low oil prices coupled with uncertainty relating to the current debate over state oil production tax policies had driven his company's decision.

At the time of going to press, Caelus had not responded to an inquiry from Petroleum News about the report.

Following the drilling of two exploration wells in state leases in the shallow waters of Smith Bay in early 2016, Caelus announced a massive oil find in the Torok formation, at a depth of 5,000 feet below the bay. The company estimated as much as 6 billion barrels of oil in place, with some 2 billion barrels of this oil recoverable, potentially with initial production rates of about 200,000 barrels per day.

Development would likely involve the drilling of 400 wells from four well pads, Caelus has suggested.

But the Torok rocks have relatively poor reservoir quality. And Caelus, so far, has only assessed the oil resource on the basis of well logging, rock samples obtained from the drilling and the analysis of seismic data. The oil is relatively light but, Caelus has said,

see **APPRAISAL WELL** *page 15*

EXPLORATION & PRODUCTION

Here for the long haul

Wilkins outlines Hilcorp's plans for further drilling and development in Alaska

By ALAN BAILEY

Petroleum News

DAVID WILKINS

With ambitious plans for new development drilling both on the North Slope and in the Cook Inlet basin, Hilcorp Energy sees Alaska as a "great place of opportunity," a place where the company anticipates operating for many years, David Wilkins, senior vice president of Hilcorp Alaska LLC, told the Alaska Oil and Gas Association's annual conference on May 31.

Cook Inlet development

In addition to previously announced major development plans for the North Slope, the company anticipates some new developments in the Cook Inlet basin, potentially squeezing more oil out of the Hemlock and Tyonek formations, as well as drilling deeper into the underdeveloped West Foreland formation, Wilkins said. The company is currently processing its 3-D seismic data from the Middle Ground Shoal field, sees some additional promise in the complex geology of that field and expects to drill some new wells next year, he said.

Wilkins also commented that his company is very enthusiastic about the horizontal drilling

see **HILCORP PLANS** *page 16*

GOVERNMENT

HB 111 compromise offered

Gov. Walker proposes adding ringfencing to Senate version of oil tax credit bill

By KRISTEN NELSON

Petroleum News

GOV. BILL WALKER

House Bill 111, the oil and gas tax credit legislation, was among items on which Alaska Gov. Bill Walker suggested a compromise between the House and Senate June 5.

Compromise elements are centered on the operating and capital budgets, an education head tax, a motor fuels tax and use of the Permanent Fund. HB 111 is part of the House's revenue package, although the governor is proposing the Senate version of the bill, which is more revenue neutral, combined with a ringfencing provision.

The governor said the House would get a status-quo operating budget in the proposed compromise, a broad-based tax structure and the end of cashable oil and gas credits. Ending the cashable credits is an element of both the House and Senate versions of HB 111.

In exchange, the House would have to accept a smaller dividend ($1,000 in the Senate version opposed to $1,250 in the House version).

If it accepted the Senate version of HB 111 (with the addition of ringfencing for carry-forward operating loss credits) the House would have to accept less revenue and progressivity and limited oil and gas reform.

see **HB 111** *page 16*

● EXPLORATION & PRODUCTION

Reservoir potential and a new oil source

Fieldwork near Kamishak Bay reveals intriguing possibilities for oil exploration in Mesozoic rocks of the lower Cook Inlet region

By ALAN BAILEY
Petroleum News

In a talk during the American Association of Petroleum Geologists Pacific Section annual conference on May 23, Marwan Wartes from Alaska's Division of Geological and Geophysical Surveys described the results of some field surveying in the area of the Kamishak Hills, to the south of Kamishak Bay, on the western side of Alaska's lower Cook Inlet. The research, conducted by a team of geologists from DGGS, Alaska's Division of Oil and Gas, and the U.S. Geological Survey, has investigated upper Cretaceous rocks with oil and gas reservoir potential, and has brought to light intriguing evidence for the possibility of a new oil source in the region.

While Alaska's upper Cook Inlet hosts operational oil and gas fields, the lower Cook Inlet to the southwest also has petroleum potential but remains hardly explored. The Tertiary strata that host the reservoirs for the Cook Inlet fields thin considerably in the lower Cook Inlet. But the older Mesozoic rocks of the Cook Inlet basin exist in considerable thickness under the lower inlet and include the Jurassic age Tuxedni group, the rock sequence that sourced the oil found in the upper Cook Inlet fields.

The DGGS team was particularly investigating the Kaguyak formation, a stratigraphic unit of upper Cretaceous age within the Mesozoic succession. The team examined rock outcrops at Swikshak Lagoon, to the south of the Kamishak Hills drainage, where the Kaguyak attains a total thickness of about one kilometer. The team determined that the formation has distinct upper and lower components. The lower component contains abundant fossils and exhibits properties indicating an origin on a shallow marine shelf. The upper component, in contrast, has sandstone layers that would have been deposited on a deeper marine slope or basin floor, Wartes said.

This sudden transition from shallow water to deep water sediment is also observed in rocks of upper Cretaceous age in the Matanuska Valley to the east and on the Alaska Peninsula to the west, suggesting a regional event in which the seafloor sank. The reason for this subsidence is unclear but may be related to the subduction of one of the plates of the Earth's crust beneath the evolving Cook Inlet basin, Wartes commented.

Particularly intriguing were some pieces of rock including some sandstone fragments that the field team found in a creek bed in the Kamishak Hills. These fragments were heavily oil stained. The team was unable to reach any in-situ rocks that might be correlated with the fragments in the creek. However, by mapping the water drainage into the creek, and by examining photographs of rock exposures, the team determined that the fragments probably came from the lower Kaguyak.

An analysis by the USGS of the oil in these rocks showed an origin from a type of plant material that could not be older than the late Cretaceous. Since the youngest known oil source in the region dates from the Jurassic, the Kamishak Hills find seems to indicate the existence of some hitherto unknown oil source. One possibility is that local volcanic heating has generated hydrocarbons in the rocks, Wartes suggested.

The upper part of the Kaguyak in the Kamishak Hills area tends to contain more rock fragments than the lower part and tends to be relatively tight, as well as showing evidence of being baked by a neighboring volcano. The oil stained rocks exhibited reasonable porosity and permeability. And rock samples collected from the COST No. 1 well, offshore in Cook Inlet, indicate that the Kaguyak does contain rock with very good reservoir potential, Wartes said. ●

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ON THE COVER

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● GOVERNMENT

Wielechowski: Tax regime not durable

Anchorage Democrat adds state should not abandon gas line efforts just yet, having already spent hundreds of millions toward permitting

By STEVE QUINN
For Petroleum News

Sen. Bill Wielechowski says Alaska needs a durable oil tax system and it's not likely to happen this year. Still, the Anchorage Democrat, a Senate Resources member, says he's heartened by the news of recent contracts awarded to consultants who may help the state in future reviews. Wielechowski offered his views on the state's tax system and the prospective AKLNG project with Petroleum News.

Petroleum News: Let's start out with Ryan Zinke's visit to Alaska. What do you think that means for Alaska's resource development prospects?

Wielechowski: I think it's great that you have a high-level official from the administration come to Alaska during the opening stages of the administration talking about Alaska resource development. I think that's positive sign.

Petroleum News: Do you have any particular takeaways from his visit?

Wielechowski: It seemed like they are certainly very interested in Alaska continuing and growing its position as an energy provider for the rest of the United States and for the world. I think there is a likelihood you'll see pro development stances and positions related to federal lands in Alaska and federal waters outside of Alaska. I think there is a pretty high likelihood you'll see an opportunity for the opening of ANWR and for offshore development.

Petroleum News: People in this state and Washington have had their share of optimism toward ANWR. Is this optimism realistic?

Wielechowski: I think this is the probably the best chance we've had in a generation for the opening of ANWR. I think with the composition of Congress right now and the president's position on energy development, this is probably the best chance we've had in a generation.


BILL WIELECHOWSKI

Petroleum News: Does it help having Point Thomson operating close to ANWR?

Wielechowski: No doubt. You know how expensive it is to push that development further east or west on the North Slope. Every mile you get in there really helps because it's so expensive in getting that infrastructure in place, getting that pipeline in place, gaining the experience and knowledge of the geology up there. Figuring out how to work in that environment I think is tremendously beneficial.

Petroleum News: What at a minimum would you like to see happen up there these next few years?

Wielechowski: I'd like to see an opportunity for companies to go up there and do some exploration and seismic tests. Obviously you've got to be cognizant of the environment and the caribou and other wildlife up there. I'd like to at least have seismic tests done and see what the geology looks like. I've always been a big advocate of going in from just outside of ANWR and horizontally drilling so I'd definitely like to see seismic testing done to see what it looks like underground.

Petroleum News: What about federal waters?

Wielechowski: You know I think (former) Sen. Begich did a tremendous job working with the Obama administration to open that up. For the first time ever we did have exploration up there. Unfortunately Shell didn't find anything. It's a tremendously expensive environment. It's a risky environment. We saw what happened in the Hilcorp spill in Cook Inlet right outside the most populated city in Alaska. They couldn't stop the gas spillage. That's concerning.

I think whoever is up there is going to have to prove they can do it in an environmentally safe manner. I really hope when they do allow the continued exploration in the offshore waters, they keep strict environmental controls in place. That's a pristine environment that's important to the people up there. If there is any sort of problem, they would probably shut it down forever.

Petroleum News: OK, closer to home. HB 111 is still in play. Why do you think this debate comes up almost yearly in the 10 years you've been in office?

Q AND A

Wielechowski: The fundamental problem is we don't have a durable tax structure at all prices and that is something that needs to be addressed. Clearly the cashable tax credits is a huge problem. When you owe 100s of millions of dollars every year in cashable tax credits and we have multibillion deficits every year, that's a problem. I don't know that there are any other countries in the world that have the cashable tax credit system that we do. I think we are the only one at this point. When you have a tax structure that's as generous as ours, you have to make sure that on the back end, you are getting fairly compensated.

The way we've done our tax structure, we get very little on the back end. In fact, we have gross value reductions where if you have a higher royalty rate, you get an additional gross value reduction. In many countries where they have systems where you get to recoup your costs, the country, the jurisdiction, gets a pretty large amount at the end. Norway, 78 percent; Iran and Iraq, 98 percent. They allow for full cost recovery and even some interest on top of that, but then they get a very large recovery for the state. Whereas we have a situation where we have these cashable tax credits where we are co-investing and providing massive support — 35 percent. We are lucky of we get 4 percent gross tax at the end. That's problematic and I think the people see the challenges with that and I think we've got to address those challenges.

Petroleum News: There's at least one thing out of anyone's control is that companies doing shale exploration are finding even cheaper ways to get it out of the ground. How does Alaska stay competitive with that?

Wielechowski: We had Rich Ruggiero testify in a joint Senate Finance-Resources hearing. And Roger Marks also testified about the costs. What we heard was in Texas, in Eagle Ford, when you factor everything, the total costs Rich Ruggiero estimated was about $20 to $40 to produce a barrel of oil. In Alaska, we heard Roger Marks testify that on the legacy fields it was $22 a barrel and the transportation costs were $9.33, so that's about $31. That puts you square in the middle of Eagle Ford. That's for legacy fields.

The new fields are obviously more expensive. That's where you need to direct your tax policy considerations. That's where you need to direct gross value deductions. That's where you need to direct other forms of incentives. You've got to balance that with the state's budget. You've got to make sure you're getting something in return for that. If as a state, you decided you want to allow companies to carry forward all of their losses, it's not necessarily a bad policy. You just have to make sure you're getting in the end, a fair return. That's the balance point you have to strike. I was encouraged by the testimony on the cost, but the new fields are

see WIELECHOWSKI Q&A page 12

● FINANCE & ECONOMY

Oil & gas makes one third of AK economy

New McDowell report indicates that the industry directly and indirectly creates 104,000 jobs and $6 billion in wages in the state

By ALAN BAILEY

Petroleum News

In 2016 spending by oil companies operating in Alaska created about 104,000 total jobs and $6 billion in wages, both directly and through taxes and royalties paid in the state, Jim Calvin, owner and managing principal with the McDowell Group, told the Alaska Oil and Gas Association's annual conference on May 31. That amounts to about one-third of the entire Alaska economy, Calvin said. Calvin was presenting the results of a new report by his company into the role of the oil and gas industry in the state's economy.

The 2016 figures compare with the 111,000 jobs and $6.4 billion in wages that the McDowell Group had assessed for 2013 in its last report on the same topic. Jobs and wages associated with the oil industry peaked in late 2014 and in 2015, before dropping sharply in response to the plunge in the price of oil. Between 2015 and 2016 Alaska saw a net job loss of about 6,500, about 2 percent of the employment base, Calvin said. But during that time there was an addition of about 1,300 health care jobs and 300 to 400 jobs in the visitor industry. Thus, the gross job loss associated with oil and gas would have been closer to 7,500 to 8,000. And further decline is expected, with the latest data for 2017 showing continuing job losses, Calvin said.

Primary companies

In conducting its analysis the McDowell group started by gathering data about spending in Alaska by what it refers to as the 14 primary companies in the state's oil and gas industry, companies that include the main oil and gas producers and explorers, as well oil refiners and the company that operates the trans-Alaska oil pipeline. A broader definition of the industry also includes the oilfield service companies that these primary companies use. Money flows through the Alaska economy as a consequence of direct employment by the primary companies, as a consequence of money paid by these companies to Alaska businesses for services rendered and as a consequence of taxes and royalties that the primary companies pay to the state and to local governments.

In 2016 the primary companies directly employed about 5,000 people in Alaska, with these people earning a total of about $750 million in wages. The primary companies spent $4.6 billion in obtaining services from around 1,000 Alaska vendors. The total impact of all of this was the creation of a total of 45,575 jobs in the state and $3.1 billion in wages.

Taxes and royalties

But in 2016 the primary companies also paid $1.6 billion in taxes and royalties, and $447 billion in property taxes to local governments. Tax and royalty money may not be spent instantly, with some flowing through multi-year capital projects or being invested in the state's Permanent Fund. However, taking account of this blurring of expenditure over time, the McDowell Group estimated that oil industry taxes and royalties generated 58,300 jobs and $2.9 billion in wages in 2016. State agency operations accounted for 19,500 of these jobs; state programs, including education and Medicare, accounted for 19,600 jobs; capital expenditure accounted for 10,400 jobs; Permanent Fund distributions for 4,200 jobs; and local government activities for 4,600 jobs.

Adding up all of the numbers leads to that estimate of some 104,000 jobs and $6 billion in wages thought to have resulted from the activities of the oil and gas industry in Alaska.

Looked at from another perspective, the 104,000 jobs broke down into 4,275 jobs with the primary companies, 6,095 jobs with oilfield service companies, 35,205 indirect jobs induced by oil industry spending and 58,300 jobs related to oil and gas taxes and royalties.

"The oil and gas industry accounts for more wages than seafood, mining and tourism combined," Calvin said. "All of these primary (oil and gas) companies are at the heart of this giant economic footprint."

Multiplier effects

Economists often talk about the multiplier effect, the manner in which one primary job results in the funneling of money into an economy and thus generating a multiple number of other jobs. In terms of the impact of the oil and gas industry on the Alaska economy, each of the jobs with the primary companies appears to drive nine jobs across the entire economy. The multiplier for the whole industry, taking into account the number of jobs in both the primary companies and the oilfield service companies, is closer to four.

That multiplier of four would be the appropriate factor to use when estimating the potential total impact on Alaska employment of a new project, such as an oil and gas exploration program or a development program on the North Slope, Calvin suggested. That is still double the multiplier that applies to any other industry in Alaska, he commented.

But these multipliers relate to short-term impacts on employment levels. Looking at the longer term, say over 10 to 15 years, the multiplier for total private and public sector jobs relative to jobs in primary oil and gas companies is around 20, Calvin said.

Uneven impact

However, the impact on different regions of the state of employment driven by the oil and gas industry is uneven.

Anchorage, the state's commercial hub, accounted for 28,000 of the jobs and $1.9 billion in wages in 2016. That repre-

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Petroleum News and its supplement, Petroleum Directory, are owned by Petroleum Newspapers of Alaska LLC. The newspaper is published weekly. Several of the individuals listed above work for independent companies that contract services to Petroleum Newspapers of Alaska LLC or are freelance writers.

OWNER: Petroleum Newspapers of Alaska LLC (PNA)
Petroleum News (ISSN 1544-3612) • Vol. 22, No. 24 • Week of June 11, 2017
Published weekly. Address: 5441 Old Seward, #3, Anchorage, AK 99518
(Please mail ALL correspondence to:
P.O. Box 231647 Anchorage, AK 99523-1647)
Subscription prices in U.S. — $118.00 1 year, $216.00 2 years
Canada — $206.00 1 year, $375.00 2 years
Overseas (sent air mail) — $240.00 1 year, $436.00 2 years
"Periodicals postage paid at Anchorage, AK 99502-9986."
POSTMASTER: Send address changes to Petroleum News, P.O. Box 231647 Anchorage, AK 99523-1647.

CORRECTION

A thousand, not a hundred

The article "A massive Cook Inlet natural gas resource" in the May 28 issue of Petroleum News incorrectly reported consulting petroleum geologist Gary Player as having suggested that there may be 100 trillion cubic feet of natural gas dissolved in non-potable aquifers in the onshore portions of the Cook Inlet basin. Player actually stated that there may be 1,000 trillion cubic feet of gas dissolved in the aquifers. Petroleum News apologizes for any confusion.

● EXPLORATION & PRODUCTION

May ANS down 4% on planned maintenance

April Cook Inlet output down 11% on Middle Ground Shoal shutdown for fuel gas line repairs, Anna platform gas condensate spill

By KRISTEN NELSON
Petroleum News

May crude oil production from Alaska's North Slope was down 3.8 percent from April as volumes were reduced for Alyeska Pipeline Service Co.'s first planned maintenance shutdown of the season, an 18-hour line shutdown May 6-7. Cook Inlet crude oil production for April was down 11.3 percent from March, with major month-over-month production drops at Granite Point and Middle Ground Shoal as a fuel gas line was repaired at Granite Point and the source of a slick on the water was identified at the Anna platform at Middle Ground Shoal.

ANS production averaged 544,808 barrels per day in May, down 21,426 bpd from an April average of 566,234 bpd.

The largest per-barrel drop was at the BP Exploration (Alaska)-managed Prudhoe Bay field, the Slope's largest, which averaged 301,144 bpd in May, down 3.6 percent, 11,225 bpd, from an April average of 312,369 bpd. Prudhoe production was the lowest, 259,968 bpd, on May 6 during the trans-Alaska oil pipeline maintenance shutdown.

Prudhoe volumes include satellite production from Aurora, Borealis, Midnight Sun, Orion, Polaris, Sag River, Schrader Bluff and Ugnu, as well as volumes from the Hilcorp Alaska-operated Milne Point and Northstar fields.

Milne Point averaged 21,206 bpd in April, up 1 percent, 219 bpd, from a March average of 20,987 bpd. Northstar averaged 7,490 bpd in April, down 1.7 percent, 130 bpd, from a March average of 7,620 bpd.

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

Fields down month-over-month

The largest month-over-month percentage drop was at the Hilcorp-managed Endicott field, which averaged 12,725 bpd in May, down 18.6 percent, 2,901 bpd, from an April average of 15,626 bpd. Endicott volumes include satellite production from Eider, Minke and Sag Delta, as well as from the Badami field operated by Glacier Oil & Gas subsidiary Savant Alaska and from the ExxonMobil Production Co.-operated Point Thomson field.

ANS production averaged 544,808 barrels per day in May, down 21,426 bpd from an April average of 566,234 bpd.

AOGCC data for April show Badami averaged 876 bpd, down 0.8 percent, 7 bpd, from a March average of 883 bpd.

Point Thomson averaged 6,416 bpd in April, up 1.8 percent, 113 bpd, from a March average of 6,303 bpd.

Tax Division volumes for Endicott in May show a range of daily volumes from a low of 9,292 bpd May 17 to a high of 15,977 May 3. Since volumes in the 8,000-9,000 bpd range were typical of Endicott prior to Point Thomson coming online in April 2016, the fluctuation in daily production in May suggests variance in Point Thomson volumes.

The ConocoPhillips Alaska-managed Kuparuk River field averaged 141,387 bpd in May, down 4 percent, 5,900 bpd, from an April average of 147,287 bpd. Kuparuk includes satellite production from Meltwater, Tabasco, Tarn and West Sak, as well as volumes from the Eni-operated Nikaitchuq field and the Caelus Alaska-operated Oooguruk field.

AOGCC data for April show Nikaitchuq averaging 22,836 bpd, up 9.9 percent, 2,056 bpd, from a March average of 20,780 bpd, and Oooguruk averaging 14,159 bpd, up 2.2 percent, 298 bpd, from a March average of 13,862 bpd.

Volumes from BP-operated Lisburne averaged 24,057 bpd in May, down 4.6 percent, 1,168 bpd, from an April average of 25,225 bpd. Lisburne volumes include Niakuk, Point McIntyre and Raven.

The ConocoPhillips-operated Alpine field averaged 65,495 bpd in May, down 0.4 percent from an April average of 65,727 bpd. Alpine volumes include satellite production from Fiord, Nanuq and Qannik.

In year-over-year comparisons, Kuparuk production was down 2.4 percent from May 2016; Alpine was down 0.4 percent from May 2016.

All other ANS producing centers showed year-over-year increases: Prudhoe Bay was up 5.2 percent, Endicott (with the addition of Point Thomson) was up 38.7 percent; and Lisburne was up 1.9 percent.

Cook Inlet production drop

Cook Inlet crude oil production for April averaged 11,694 bpd, down 11.3 percent, 1,483 bpd, from a March average of 13,177 bpd — that a drop of 6.2 percent, 866 bpd, from a February average of 14,042 bpd.

The major drivers were the Granite Point and Middle Ground Shoal fields, where Hilcorp had shutdowns following a gas condensate leak at the Granite Point Anna platform and a fuel gas leak on a fuel gas line at the Middle Ground Shoal field.

Production from the Anna platform in the Granite Point field was down for most of April after Hilcorp shut down crude oil production April 1 when an oil sheen was observed following a bump to the platform. A final situation report from the Alaska Department of Environmental Conservation estimated that 3 gallons or less of natural gas condensate were released from the platform's gas flaring system during maintenance. ADEC authorized restart of the Anna platform and the associated subsea oil pipeline April 28.

At the Middle Ground Shoal field, Hilcorp shut the field down in late March until a subsea gas fuel line could be repaired. Initial repair work was done in April and a permanent repair clamp was installed May 19 on the line between Platform A and Nikiski, so the field was down part of March and all of April.

The largest per-barrel drop was at Middle Ground Shoal, which averaged 2 bpd in April, down 99.8 percent, 1,346 bpd, from a March average of 1,348 bpd, that volume a 22.8 percent drop, 399 bpd, from an average of 1,747 bpd in February.

see **MAY OUTPUT** *page 6*

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MCDOWELL REPORT

sented 15 percent of total jobs and 16 percent of total wages in the city. The Kenai Peninsula, a region where the oil and gas industry is active, saw 5,000 jobs and $400 million in wages derived from the industry, with oil and gas companies particularly prominent in the Kenai Peninsula Borough's property tax revenue. The North Slope Borough, where the North Slope oil fields are located, saw 1,845 jobs and $105 million in wages related to the oil industry. The borough obtained 97 percent of its property tax revenues from the industry.

Other places enjoying significant oil and gas impacts consisted of the Fairbanks North Star Borough, the Mat-Su Borough and the city of Valdez. In 2016 Fairbanks saw 2,960 oil and gas derived jobs and $1.9 billion in wages; Mat-Su saw 3,270 jobs and $287 million in wages; and Valdez, home of the Valdez marine oil terminal, saw 680 jobs and $71 million in wages.

In summary, Calvin stressed the importance to the Alaska economy of spending by the oil industry on oil and gas exploration, development and facility renewal.

"A healthy oil and gas industry economy is a healthy Alaska economy. A weakened oil and gas industry is a weakened Alaska economy," he said. ●

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● PIPELINES & DOWNSTREAM

Challenges for trans-Alaska oil pipeline

Barrett outlines the current status of the 800-mile oil artery that delivers product to tidewater from the North Slope fields

By ALAN BAILEY
Petroleum News

At this stage in its life the trans-Alaska pipeline, the line that ships oil from the North Slope oil fields to the Valdez Marine Terminal, faces four key issues: declining oil throughput, aging infrastructure, the challenges of operating in the rugged Alaska conditions and cybersecurity, Tom Barrett, president of Alyeska Pipeline Service Co., told the Commonwealth North Energy Action Coalition on June 2. Alyeska operates the pipeline on behalf of the oil companies that own the line.


JUDY PATRICK
TOM BARRETT

Oil throughput

From the perspective of oil throughput, Barrett reported some good news, in that oil production from the North Slope has increased somewhat over the last couple of years. However, that represents a bright spot in an otherwise relentless decline in North Slope production. And, with throughput far below the levels seen during the years of peak North Slope output, the oil flow in the line has slowed to a point where the cooling of the oil in the frigid temperatures of Alaska's Interior are causing problems. Last winter saw temperatures drop to minus 40 F to minus 50 F for a couple of weeks in the Interior, Barrett said. And the pipeline is above ground, exposed to the winter weather, for half of its length.

Faced with problems of wax and ice formation in the line in the low temperatures, Alyeska has had to increase the frequency with which it pigs the line. The company now applies heat to the oil at some pump stations, through techniques such as recirculating the oil through pump station piping. A major risk stems from the possibility of a hard shutdown during the winter, Barrett said, commenting that the challenge would be to restart the frozen line. To mitigate this particular risk, Alyeska has installed five methanol injection stations along the line, so that the methanol could act as an antifreeze for the fluids in the line. So far, Alyeska has not had occasion to use this system — methanol cannot be injected continuously because the chemical would have to be subsequently removed, to enable the oil to be processed in refineries.

Low flow limitations

Although the pipeline can handle current oil flow rates at about 500,000 barrels per day, at some point, if the rate drops below about 350,000 to 400,000 barrels per day, it would become harder and harder to keep the pipeline running, Barrett said. He also cautioned that any significant modification to the pipeline infrastructure to address low flow issues would likely take two to three years to design and install.

The simple solution to the various problems would be to push up the throughput by bringing more North Slope oil into production. Barrett wondered how the current strong opposition from some people to development in Alaska could be addressed. He expressed some optimism based on remarks made by Ryan Zinke, the new secretary of the Interior, about encouraging North Slope oil development conducted in an environmentally responsible manner.

One new challenge in recent years has come from competition from shale oil production in the Lower 48, Barrett commented.

Aging infrastructure

In terms of the pipeline system's aging infrastructure, Alyeska has had to increase its spend on inspection and maintenance programs in the past few years. One maintenance challenge is obtaining spare parts for equipment installed decades ago, Barrett commented.

He said that the main pipeline is in general in pretty good shape. At the Valdez Marine Terminal Alyeska is now conducting a project using self-propelled "crawler pigs" to inspect sections of pipeline that had previously been inaccessible. The use of this new inspection technology at locations such as pump stations has probably saved Alyeska about $200 million so far, Barrett said.

> *Faced with problems of wax and ice formation in the line in the low temperatures, Alyeska has had to increase the frequency with which it pigs the line.*

The Alaska challenge

Operating in Alaska poses particular challenges, especially given the extreme remoteness of much of the territory that the pipeline crosses. Everything needed for a repair or maintenance job, including equipment and a camp, has to be transported to site. And, because of the need for 100 percent reliability of communications for people operating at remote locations along the pipeline, Alyeska has had to continue to maintain its expensive radio communication system that spans the pipeline's length. New digital and satellite communications technologies, while not as expensive, do not have the required level of reliability in northern latitudes, Barrett said. Alaska is an expensive place to operate in, he added.

On the other hand, the strength of the pipeline infrastructure and the capability of people in the industry to operate in Alaska's harsh environment present advantages for the pipeline, Barrett commented.

Cybersecurity

Cybersecurity, the need to protect the pipeline's digital monitoring and control system, and the company's business systems, from digital attack, represents a new

see PIPELINE CHALLENGES page 11

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MAY OUTPUT

The month-to-month drop at Granite Point was 46.2 percent, with the field averaging 1,334 bpd in April, down 1,147 bpd from a March average of 2,481 bpd.

Glacier Oil & Gas' West McArthur field averaged 1,260 bpd in April, down 5.1 percent from a March average of 1,328 bpd, while the company's other Cook Inlet field, Redoubt Shoal, averaged 834 bpd in April, down 2 percent, 17 bpd, from a March average of 851 bpd.

BlueCrest's Hansen field, the Cosmopolitan project, averaged 145 bpd in April, almost flat from an April average of 146 bpd.

All other Cook Inlet fields, all Hilcorp-operated, had month-over-month increases.

Beaver Creek averaged 185 bpd in April, up 2.2 percent, 4 bpd, from a March average of 181 bpd.

McArthur River averaged 3,727 bpd in April, up 14.6 percent, 473 bpd, from a March average of 3,254 bpd.

Swanson River averaged 2,029 bpd in April, up 5.4 percent, 105 bpd, from a March average of 1,924 bpd.

Trading Bay averaged 2,178 bpd in April, up 31 percent, 515 bpd, from a March average of 1,663 bpd.

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

Contact Kristen Nelson at knelson@petroleumnews.com

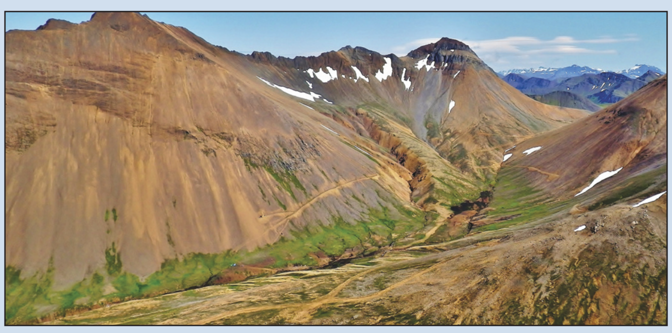
North of 60 Mining News

page 8 ATAC targets Carlin-type gold with $10M drill program at Rackla, YU

www.MiningNewsNorth.com *The weekly mining newspaper for Alaska and Canada's North* Week of June 11, 2017

NEWS NUGGETS

Compiled by Shane Lasley



FULL METAL MINERALS LTD.

CopperBank's Pyramid project on the Alaska Peninsula hosts a porphyry deposit with 1.34 billion pounds of copper, 74.4 million lb of molybdenum and 488,500 ounces of gold, according to a resource calculated in 2013.

CopperBank ready to drill Pyramid

CopperBank Resources Corp. June 5 announced plans to complete at least 1,500 meters of drilling at its Pyramid copper-gold-molybdenum project in Southwest Alaska. The Pyramid project covers 94,830 acres of Aleut Native Corporation lands on the Alaska Peninsula. This property hosts 122 million metric tons of inferred resource averaging 0.41 percent copper, 0.1 grams per metric ton gold and 0.021 percent molybdenum. While completed by a reputable engineering firm in 2013, CopperBank is not treating this historical estimate as current mineral resources. The primary objective of this year's drilling is to expand this resource area at Pyramid in advance of infill drilling planned for 2018. Expansion of high-grade resources around hole PY11-16, which cut 155 meters of 0.71 percent copper, 0.18 grams per metric ton gold and 0.018 percent molybdenum, is the primary target area for this year's drilling. The bottom 34 meters of this hole returned 0.844 percent copper, indicating the depth extension of this deposit. The North zone will also be tested to verify the lateral extensions of known mineralization –particularly around hole 11PY007, which cut 104 meters averaging 0.56 percent copper and 0.13 g/t gold from a depth of six meters. CopperBank hopes this program will provide a better understanding of the distribution and the controls of the mineralization, and verify the continuity of higher grade zones, particularly with overlap between supergene chalcocite mineralization hypogene chalcopyrite mineralization. "This long anticipated drilling program will give our technical team the direction for next steps in the development of the project, and specifically a better view of the higher grade sections of the deposit," said CopperBank Executive Chairman Gianni Kovacevic. "The superior location and ownership structure further demonstrate that Pyramid is one of only a handful of established copper projects that is located on private property in the United States, with the added benefit of being located only four kilometers to all-year ice-free deep tide water."

Endurance explores, expands Interior Alaska gold properties

Endurance Gold Corp. June 5 reported the start of this year's exploration program at its Elephant gold property in Interior Alaska. This work will start with an induced polarization and magnetic ground geophysical survey. The geophysical crew is expected to mobilize to Elephant before the end of June. Endurance will also carry out additional prospecting, trenching, and soil and rock sampling at Elephant, Trout and Wolverine, the three properties that make up the Elephant project. Results from the ground geophysical program will be used to plan a drill program, which the company hopes to carry out this fall. "This survey will provide information required to efficiently plan the drilling

see **NEWS NUGGETS** *page 10*

SHANE LASLEY

Core from a 17.3-meter section of a hole drilled into the Main Peak zone in 2012 that averaged 21.8 g/t gold, 7.4 g/t silver and 0.32 percent copper. This year, Peak Gold is seeking similar gold-rich skarn mineralization near the Main Peak deposit.

EXPLORATION

Peak Gold resource

Royal Gold, Contango Ore expand Peak deposits, seek new zones at Tetlin

By SHANE LASLEY

Mining News

Having outlined 1.26 million ounces of gold, 5.11 million oz of silver and 39.6 million pounds of copper in the measured and indicated resource category at the Peak deposits, Royal Gold and Contango Ore are now looking for new zones of similar high-grade gold mineralization at other prospect across the Tetlin gold project near Tok, Alaska.

"Having discovered and now defined a substantial body of ore, our drilling plans for the summer of 2017, which commenced in mid- May, are targeted towards more exploratory prospects in the general area of the Main and North Peak deposits," explained Contango Ore President and CEO Brad Juneau.

This work is being carried out by Peak Gold, a joint venture funded and managed by Royal Gold.

Under a 2015 JV agreement, the Denver-based royalty company can earn a 40 percent interest in Peak Gold by investing US$30 million on exploratory work at Tetlin by October, 2018. Through the end of March, Royal Gold had spent roughly US$20 million on exploration at Tetlin, an investment that has earned it a nearly 25 percent stake in the JV.

Substantial resources

Since Royal Gold joined Contango Ore in exploring Tetlin, the Peak Gold JV has focused its efforts upon expanding and upgrading a resource calculated for Contango Ore following the 2013 drill program.

At the time Peak Gold was formed, Contango Ore had already outlined 6 million metric tons of indicated resources averaging 3.46 grams per metric ton (664,112 oz) gold, 11 g/t silver and 0.25 percent copper in the Main Peak zone. An additional 3.9 million metric tons of inferred resources averaging 2.07 g/t (256,000 oz) gold, 14.28 g/t silver and 0.23 percent copper had been outlined in this deposit.

> *"The results obtained by Peak Gold through drilling this past year have been outstanding."*
> *—Contango Ore CEO Brad Juneau*

The drilling completed by Peak Gold over the past two years has focused on two primary objectives – upgrading and expanding the deposit identified at Main Peak and delineating a deposit at North Peak, a parallel zone about 250 meters to the northeast. Both goals were met.

"The results obtained by Peak Gold through drilling this past year have been outstanding," said Juneau.

Plugging these drill results into a resource calculation published on June 2 has resulted in a nearly twofold expansion of the amount of gold reporting to the higher confidence measured and indicated categories.

According to this updated resource, the Main Peak and North Peak zones now encompass 10.6 million metric tons of measured and indicated resource averaging 3.64 g/t (1.24 million oz) gold, 14.18 g/t (4.83 million oz) silver and 0.16 percent (37.3 million pounds) copper.

The global resource for these two deposits – measured, indicated and inferred – now stands at 15.65 million metric tons averaging 2.98 g/t (1.5 million oz) gold, 14.68 g/t (7.39 million oz) silver and 0.16 percent (55 million lb) copper. This is calculated using a gold-equivalent cut-off grade of 0.5 g/t gold.

"We now have substantial quantities of measured and indicated resources relative to inferred resources, the result of substantially more drilling over the past year defining the known deposits already discovered at Main and North Peak," said the Contango Ore CEO.

Nearby prospects

With the Main and North Peak deposits fairly well outlined, Royal Gold and Contango Ore are

see **PEAK GOLD** *page 8*

NORTHERN NEIGHBORS

Compiled by Shane Lasley

SHANE LASLEY

A helicopter rests on the Osiris deposit at ATAC Resources' Rackla Gold property in the Yukon. The Carlin-style gold identified at Carlin is the first target of a C$10 million drill program slated for 2017.

ATAC starts $10M program at Rackla

ATAC Resources Ltd. June 5 reported the start of a C$10-million exploration program at its Rackla Gold project in the Yukon. The company currently has two drills targeting Carlin-type gold targets at the Conrad zone at the eastern end of the 1,742-square-kilometer (673 square miles) Rackla property. Following the completion of an earn-in agreement with Barrick Gold Corp. in April, Atac divided the roughly 185-kilometer- (115 miles) long Rackla property into three projects – Rau, which encompasses 660 square kilometers (255 square miles) at the western end of Rackla; Osiris, a 302-square-kilometer (117 square miles) property at the eastern end of Rackla that hosts the Osiris, Conrad, Ibis, and Sunrise discoveries; and Orion, a 780-square-kilometer (301 square miles) section in the middle that hosts the Orion, Anubis, and eight other early stage Carlin-type gold prospects. ATAC's 2017 program is to include roughly 15,000 meters of drilling targeting high-grade gold at the Osiris and Rau projects. Currently, two drills are targeting the Conrad zone at Osiris. Barrick, meanwhile, has budgeted around C$4.9 million for a separate program at Orion this year. This work is starting with grassroots target delineation through detailed mapping, prospecting, geochemical sampling and trenching. The major has the option to earn an initial 60 percent interest in Orion by investing C$35 million on exploration at the project over the next five years. "ATAC will conduct advanced-stage drilling on its wholly-owned Osiris and Rau projects while Barrick focuses on systematically exploring the Orion project, said ATAC President and CEO Graham Downs. "With this two-pronged exploration approach, we are able to evaluate significant portions of the Rackla Gold Property while continuing to advance existing high-grade gold zones."

Triumph returns to Freegold Mountain

Triumph Gold Corp. (formerly Northern Freegold Resources) June 7 announced the start of a 13,000-meter drill program at its Freegold Mountain gold-copper project in the Yukon. This drilling is testing a number of new targets identified last year. The 2016 program, which was focused on identifying geological controls on mineralization at the Revenue and Nucleus porphyry deposits, identified an early stage of porphyry-style mineralization that was not targeted during past exploration. The work defined three new exploration targets, one at each the Revenue and Nucleus deposits, and a newly identified porphyry target at the Generation zone. Drilling has begun at the newly identified

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Petroleum news

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

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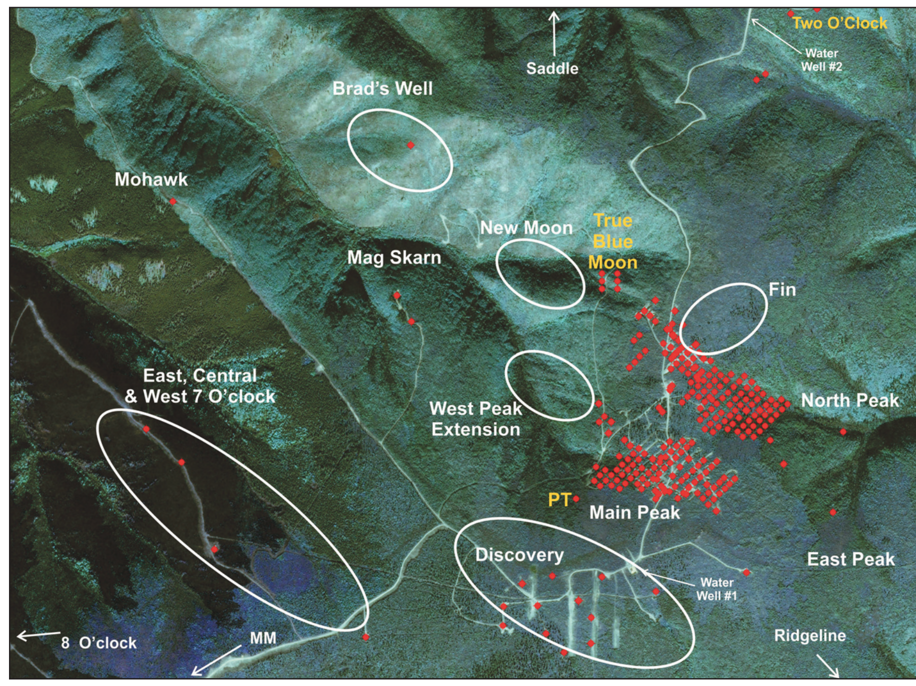

CONTANGO ORE INC.

Peak Gold has identified six targets across a 2,500-acre-area in the immediate vicinity of the Peak zones for an exploratory drill program now underway.

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PEAK GOLD

now seeking new zones of similar gold-rich skarn mineralization nearby.

The work includes the drilling of six priority prospects – Discovery, West Peak Extension, Fin, New Moon, Brad's Well and 7 O'clock – over a 2,500-acre-area in the immediate vicinity of the Peak zones.

Juneau said "these prospects are sizeable in potential area with similar geophysical and geochemical properties to our Main Peak and North Peak" deposits.

The Discovery zone, situated about 500 meters southwest of Main Peak, was tapped during exploratory drilling in 2011 that resulted in the Peak zones discovery later that year.

TET1105, the first hole targeting Discovery, cut 3.7 meters averaging 3.1 g/t gold, 300.2 g/t silver and 0.26 percent copper.

TET1107 – drilled about 100 meters north of hole 5 – cut 6.4 meters grading 7.4 g/t gold, 4.9 g/t silver and 0.15 percent copper.

Contango Ore, however, cut thicker zones of similar grade mineralization at the Main Peak zone in 2012, which became the primary drill target over the ensuing two years.

West Peak Extension, an exploration target about 300 meters northwest of Main Peak, will also be tested this year.

Drilling at West Peak, which lies between Main Peak and West Peak Extension, last year cut promising mineralization. One such hole, TET16218, hit five mineralized intercepts, including 15.01 meters averaging 7.1 g/t gold from a depth of 191.47 meters.

TET16262, drilled about 50 meters west of hole 218, cut six zones of gold mineralization, including 8.53 meters of 5.75 g/t gold from a depth of 151.08 meters.

The grades and thicknesses encountered in the northwestern margins of West Peak has encourage Peak Gold to further test this area.

Fin is a prospect area protruding off the northeast side of North Peak.

New Moon and Brad's Well lie about 500 and 1,000 meters northwest of North Peak, respectively.

7 O'clock is a large northwest trending geophysical and geochemical anomaly roughly 1,250 meters west of Main Peak.

Investigating Noah

In addition to seeking new deposits in the immediate vicinity of the Peak zones, Royal Gold and Contango Ore are applying what they have learned of the unique characteristics of the gold mineralization in these high-grade deposits to newly acquired state mining claims to the west.

The Peak Gold partners recently added to its already expansive land holding at Tetlin by staking 68,900 acres of state mining claims blanketing Noah and a number of gold, silver and base metals prospects the Alaska Division of Geological & Geological Surveys identified on state lands to the west of the main Tetlin property.

With the state lands previously staked by Peak Gold and the 659,000 acres of privately owned Alaska Native lands that Juneau leased from Tetlin Village in 2008, the overall Tetlin land package now covers 843,400 acres of land with dozens of gold, silver and copper prospects, most of which have very limited exploration.

Peak Gold decided to pick up the Noah claim blocks after re-interpreting its own proprietary geological, geophysical, and geochemical data, alongside recently released public geological, geochemical and airborne geophysical data provided by DGGS.

Noah, one of the prospects DGGS investigated on the claims staked by Peak Gold, was drilled by Kennecott Exploration in 1998. While results from this drilling were never published, the state geological survey had access to core samples from this drilling that are stored at the Alaska Geologic Materials Center in Anchorage.

Investigating the area drilled, DGGS geologists identified a roughly 1.5-mile-wide intrusion with geochemical similarities to what is found near the Peak deposits.

The field work carried out by Alaska geologists in 2015 and 2016 confirmed many of the known prospects on these state lands west of the Peak zones, including 0.18 oz/t gold at the Noah porphyry prospect; 0.29 oz/t gold at the Shalosky vein; and massive sulfide grading 13 percent zinc, 1.9 percent copper, and 0.75 oz/t silver at the Eagle prospect.

Additionally, their investigation also turned up 20 undocumented mineral occurrences across this underexplored area.

Peak Gold will know a little more about this this stretch of state land west of Tetlin by the end of 2017.

Juneau said the partners "plan to do surface recon work on the recently acquired Noah claims as well as Tetlin Hills areas not previously sampled in detail in an effort to determine if drilling on these areas is warranted." ●

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NORTHERN NEIGHBORS

copper-gold porphyry zone at Generation, located in an area of deep overburden about 800 meters north of the Revenue. The Generation Zone is exposed in Revenue Creek as a result of historical placer mining activity and consists of multiple generations of dense stockwork veining centered on a strong geophysical anomaly. Nine historical samples collected from Generation Zone averaged 706 parts per million copper and 38 parts per billion gold. Triumph said the identification of high density stockwork with multiple vein events, high temperature alteration, and associated copper and gold mineralization indicates that Generation represents a high-temperature core to a porphyry copper-gold system. The company plans to complete 2,000 meters of drilling to test this this theory. The company also plans to drill Revenue and the adjacent Blue Sky zone. Other areas to be drilled include the Nucleus Zone and a soil and geophysical anomaly that stretches 2,000 meters along strike between the Nucleus and Revenue deposit areas. The Nucleus deposit hosts 74.74 million metric tons of indicated resource averaging 0.54 grams per metric ton (1.3 million ounces) gold and 0.06 percent (105.3 million pounds) copper; plus 63.79 million metric tons of inferred resource averaging 0.4 g/t (800,000 oz) gold and 0.05 percent (491,800 lb) copper. The Revenue deposit hosts 80.8 million metric tons of inferred resource averaging 0.39 g/t (1 million oz) gold and 0.14 percent (241.4 million lb) copper.

INDEPENDENCE GOLD CORP.

Hole YCS15-03 cut 6.1 meters averaging 4.25 grams per metric ton gold in the Denali zone at Independence Gold's Boulevard project, Yukon.

Independence explores gold portfolio in Yukon

Independence Gold Corp. May 31 announced plans for a C$2-million exploration program in the Yukon this year that will include drilling at its Boulevard gold project, adjacent to Goldcorp's Coffee project, and geochemical sampling on several of the company's Yukon properties and other property acquisitions. Goldcorp has invested in Independence and currently owns 19.9 percent of the exploration company. During the 2017 program, Independence plans to continue systematically exploring the Boulevard project, undertaking a detailed geochemical sampling program over numerous known anomalies to identify targets for drilling. The company also plans to complete roughly 2,500 meters of drilling to further evaluate the Denali, Sunset, and Sunrise zones, and test new targets identified during the sampling program. The Denali zone is a 1,200-meter-long multi-element geochemical anomaly located about 12 kilometers (seven miles) west of the Coffee gold deposit that has been confirmed by drilling in multiple holes. YCS15-03, drilled in the center of this anomaly, cut 6.1 meters of 4.25 grams per metric ton gold. Sunrise-Sunset, a 2,300-meter-long multi-element soil anomaly located about nine kilometers (six miles) south of the Coffee deposit, has also been confirmed by drilling. BV16-54, drilled there last year, cut 39.6 meters averaging 1.58 g/t gold. The company also plans to carry out reconnaissance geochemical sampling program to identify potential future drill targets across underexplored areas of the Boulevard property. In addition to work at Boulevard, Independence plans to undertake exploration programs on its other Yukon gold properties in the Yukon, including Moosehorn and Henderson, both of which received funding this season from the Yukon Mineral Exploration Program. Moosehorn hosts a 1,400-meter-long gold-arsenic soil geochemical anomaly located along a topographic high that drains into multiple creeks mined for placer gold. The company plans to complete a reconnaissance style geochemical sampling program across the remainder of property and to test the known anomaly with a GeoProbe. The Company also plans to drill approximately 400 meters on Henderson to discover a source for the placer gold which has been mined from North Henderson Creek. Independence said it continues to evaluate additional early stage projects in Yukon and intends to add to its current portfolio.

Lower Yukon taxes bolster Eagle Gold

Victoria Gold Corp. June 7 reported that a reduction in the Yukon corporate tax has improved the economics of its Eagle Gold project. In April, Yukon Finance Minister Sandy Silver announced that Yukon's general corporate tax rate will be lowered from 15 to 12 percent. A recalculation on the economic parameters detailed in a 2016 feasibility study for Eagle Gold shows that the after-tax net present value (5 percent discount for developing a mine there increases from C$508 million to C$527 million under the new tax structure; and the after-tax internal rate of return increases from 29.5 percent to 30 percent. "As a Yukon resident and CEO of Victoria Gold, I am very pleased to see the current administration investing in the future of the territory by supporting current and future businesses," said John McConnell. "With this tax decrease the new government is helping to ensure a vibrant mining industry well into the future." An economic impact study completed by the Centre for Spatial Economics concluded that development and operation of the Eagle Gold Mine would produce a cumulative C$1.5 billion of gross domestic product in the Yukon over the life of the operation. On average, there will be 250 additional persons per year employed in the territory over the life of the mine, with roughly 175 of those persons being directly sourced from the Yukon and employed on the mine site.

Strikepoint begins Yukon exploration

Strikepoint Gold Inc. June 7 reported the start of its first exploration program at Mahtin, a Yukon gold project about 40 kilometers (25 miles) southwest of Victoria Gold's Eagle Gold mine project. Early in 2017, Strikepoint cut a deal to acquire 22 Yukon properties from IDM Mining that have been the target of roughly C$25 million of exploration by Ryan Gold Corp. Of these, Strikepoint has selected three – Mahtin, Pluto and Golden-Oly – as ready to be drilled. In preparation for the arrival of a drill to Mahtin, an exploration crew is carrying out detailed mapping and sampling over two core targets – Mahtin North and May-Qu – as well as regional follow up on several other previously unexplored geochemical anomalies. Mahtin North consists of a copper-gold skarn unit in contact with a gold-arsenic sheeted vein intrusion. Sampling in 2012 returned assays of up to 15.05 grams per metric ton gold in the peripheral skarn, while the stock itself remains as an untested soil anomaly with a geochemical signature which suggests intrusion related gold deposits similar to Victoria's Eagle deposit. Preliminary rotary air blast drilling will test the high-

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NORTHERN NEIGHBORS

est-grade contact zone at this target. May-Qu, found at the southeastern end of Mahtin on the southeast end of the property, features is a Cretaceous-age granodiorite stock known as Bos. Samples collected from Bos Stock in 2012 identified gold-bearing quartz-arsenopyrite sheeted veins within the granodiorite with grades as high as 3.37 g/t gold. The westerly nose of the intrusion has become a focus for distal polymetallic veins that returned assays of up to 2.59 g/t gold and 313 g/silver.

Work on the target will include detailed mapping of proposed drill targets and sampling of the Bos Stock and west of the main stock for additional polymetallic silver veins. In addition to target preparation and RAB drilling, Strikepoint is carrying out aerial drone surveys of the property, backpack drill prospecting, detailed mapping and grab sampling of surface showings.

Victoria finds gold near Eagle deposit

Victoria Gold Corp. June 5 reported results from the first 22 holes drilled into the Eagle West zone, a new Dublin Gulch target immediately adjacent to the Eagle Gold deposit. Highlights from these initial holes include 21.3 meters of 2.11 grams per metric ton gold in hole DG17-805C; 21 meters of 0.88 g/t gold in DG17-783C; and 16.2 meters of 0.85 g/t gold in DG17-779C. The company said these results show the potential to add gold to the development phase Eagle Gold mine project. The 2017 Dublin Gulch exploration program has been underway since early April and is focused on the continued testing of the Potato Hills trend mineralization concept. While there are six first order drill targets, Eagle West is a second order target drilled early in the program due to its accessibility. "The Eagle West discovery demonstrates the exploration potential along the Potato Hills trend and another successful application of our new geological model developed from Olive-Shamrock definition drilling - shear zones related to the intrusive contact zones," said Victoria Gold President and CEO John McConnell. "We currently have four diamond drills operating on the property and are focused on the Olive-Shamrock Zone and other first order Potato Hills trend drill targets."

New zinc explorer emerges in Yukon

Fireweed Zinc Ltd. May 29 announced the completion of a C$4 million initial public offering and the start of trading on the TSX Venture Exchange. Fireweed is a new exploration company that has an option to acquire Macmillan Pass, a major advanced zinc-lead project in eastern Yukon. Macmillan Pass includes two large zinc-lead-silver deposits known as Tom and Jason. Together, these deposits historical resources of 6.43 million metric tons averaging 6.33 percent zin, 5.505 percent lead and 56.55 grams per metric ton silver in the indicated category; and 25.55 million metric tons averaging 6.71 percent zinc, 3.48 percent lead and 33.86 g/t silver in the inferred category. The Tom deposit has historically seen a 3,423 meters of underground development, 5,953 meters of underground core drilling in 84 holes, and 27,541 meters of surface core drilling in 128 holes; while at Jason a total of 37,924 meters has been drilled in 128 core holes from surface. Fireweed has the option to acquire full ownership of Macmillan Pass by investing C$1 million on property exploration and paying C$1 million in cash to Hudbay Minerals Inc. Fireweed has already paid C$250,000 and the balance is due upon exercise of the option. Additionally, upon exercise of the option, Fireweed must issue shares to Hudbay equal to 15 percent of Fireweed's then issued and outstanding shares on a fully diluted basis, but excluding shares issued for acquisitions outside of the Tom and Jason deposits. The Macmillan property has a camp, road and airstrip, which allows Fireweed to immediately begin drilling and other exploration work on the property. Fireweed plans to complete at least C$1.2 million of exploration at the project this year with the aim of bringing the historical resources on both the Tom and Jason deposits to current standards and seek new discoveries across the 2,864-hectare (7,077 acres) property. John Robins, a geologist with over 25 years of experience, is executive director of Fireweed. Robins' career includes founding and serving as executive chairman of Kaminak Gold Corp., which discovered the Coffee Gold deposits in Yukon and sold the company to Goldcorp for C$520 million in 2016. Brandon Macdonald, a geologist with over 20 years in the mining industry, will serve as CEO of Fireweed. His diverse experience includes exploration geology worldwide and investment banking in the London, where he worked in structuring project financings and investments at Macquarie Bank. ●

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NEWS NUGGETS

on three of the six known targets. We are confident in planning step-out holes at the South zone target but the IP will be critical to planning drill holes to test for higher-grade gold bearing feeder structures at the Central and North zones," said Endurance President and CEO Robert Boyd. Elephant Mountain is near the all-weather Elliott Highway about 76 miles northwest of Fairbanks within the Rampart-Eureka-Manley Hot Springs mining district.

Additionally, Endurance reported the expansion of its McCord gold property in the Livengood Mining District of Interior Alaska. The company said it has entered into an agreement to option nine claims adjacent to McCord and staked another 11 claims in the area. Located adjacent to the east side of International Tower Hill's Livengood gold project, McCord is accessible from the Elliott Highway. The optioned claims have only been evaluated by the vendor for their placer gold potential. An auger drill program completed in March discovered fine gold, gold-in-quartz, gold-in-oxide wad, and significant quantities of cinnabar, a mercury sulfide mineral, in an area of the McCord Creek valley. Endurance said the gold has low abrasion characteristics suggesting proximity to source. Endurance plans to evaluate concentrate samples collected by the vendor and conduct a soil sampling program on the expanded portions of the McCord Gold project. Results from the soil sampling program will assist in determining a follow-up program of geophysics and drilling. ●

FINANCE & ECONOMY

EIA forecasts lower OPEC production

North Sea Brent spot prices average $50 in May, down $2 from April, expected to average $53 per barrel this year, $56 next year

By KRISTEN NELSON
Petroleum News

The U.S. Energy Information Administration said June 6 in its Short-Term Energy Outlook that North Sea Brent crude oil spot prices averaged $50 per barrel in May, down $2 from the April average. The price is forecast to average $53 per barrel this year and $56 per barrel in 2018, with West Texas Intermediate crude oil spot prices forecast to average $2 per barrel less than Brent in both years.

The agency is forecasting crude production from the Organization of the Petroleum Exporting Countries to average 32.3 million barrels per day this year and 32.8 million in 2018, based on the extension of voluntary production cuts, through March 2018, that OPEC announced May 25.

U.S. crude oil production averaged an estimated 8.9 million bpd last year and is forecast to average 9.3 million this year.

"U.S. crude oil production in 2018 is forecast to average 10 million barrels per day, well above the previous annual record production level of 9.6 million barrels per day set in 1970," EIA acting Administrator Howard Gruenspecht said in a statement.

"Increased drilling activity in U.S. tight oil basins, especially those located in Texas, is the main contributor to oil production growth, as the total number of active rigs drilling for oil in the United States has more than doubled over the past 12 months," Gruenspecht said.

US natural gas production up

EIA said dry U.S. natural gas production is forecast to average 73.3 billion cubic feet per day this year, up 1 bcf per day from 2016.

"After declining during 2016, U.S. natural gas production is forecast to increase in both 2017 and 2018," Gruenspecht said.

EIA said the 2016 decline was the first annual decline in U.S. natural gas production since 2005.

The agency said capital expenditures for 22 U.S. natural gas producers increased year-over-year in the first quarter of this year, after almost two years of annual declines.

Natural gas futures prices averaged $1.98 per million British thermal units in the first quarter of 2016, rising to $3.06 in the first quarter of 2017, a 55 percent year-on-year increase, EIA said.

"Higher prices increased cash flow, which helped to stabilize and eventually increase capital expenditures. With natural gas prices projected to rise by the fourth quarter of 2017, producers are continuing to add drilling rigs," the agency said.

The natural gas directed drilling rig count was 100 rigs higher for the week ending June 2 than at the same time last year, with increases in rig counts and drilling efficiencies both contributing to the EIA's forecast of an average of 76.6 bcf per day production next year, up for an expected 73.3 bcf this year.

Brent down 89 cents

EIA said Brent front-month crude prices have declined by 89 cents since May 1, settling at $50.63 per barrel June 1. WTI declined by 48 cents during the same period, settling at $48.36, with the prices for May $1.98 per barrel lower for Brent and $2.54 lower for WTI than April.

OPEC extended voluntary production cuts May 25, and EIA said the "high level of global fuels inventories relative to their five-year average level appeared to be a significant consideration" in the decision.

In the Organization of Economic Cooperation and Development commercial inventories of liquid fuels remain 257 million barrels higher than the five-year average, a 79 million barrel reduction since January 2017.

Production cuts/growth

EIA noted that voluntary OPEC production cuts are being "partially offset by production growth in other countries,

see **EIA FORECAST** page 15

GOVERNMENT

New BSEE chief urges change of focus

Scott Angelle, the new director of the federal Bureau of Safety and Environmental Enforcement, urged more focus on economic opportunities in a May 31 town hall meeting with employees in Sterling, Virginia.

"The vision I would share with you is that I don't believe we are an either/or agency. Rather than have a high focus on safety and the environment, and a low focus on energy production, or vice versa, my goal is to raise the status of all three," Angelle was quoted as saying in a June 2 BSEE release.

"Not to go backwards on safety, but at the same time to go forward on economic opportunities. That's some of the culture of change I hope to be bringing in," Angelle said.

He said he intended to build on what has been developed at the agency, "and not ever take a step back, but to simultaneously understand that the economic development part of the Outer Continental Shelf activities is important. It's important to America, it's important to jobs, it's important to families," he said.

Angelle told agency employees that he comes from a generation of Americans "that believes that clean water and green grass and fresh air are not a luxury, and equally important are economic development and job opportunities" and challenged agency staff to contribute ideas to help improve the agency and encouraged them to embrace change.

The statement said Angelle will be traveling to the Gulf Coast, California and Alaska in the coming weeks to meet with staff and stakeholders.

—PETROLEUM NEWS

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PIPELINE CHALLENGES

risk for Alyeska, Barrett said. The control system is isolated from the Internet. And the company tests all digital equipment for viruses before installation. During these tests Alyeska has found infected equipment. And the company detects perhaps 600 to 800 penetration attempts on its systems every month — the company works closely with law enforcement in addressing these problems. And, following the recent worldwide cyber attacks, the company issued a warning to its employees, cautioning them about the need to protect their own computers through actions such as ensuring the installation of up-to-date software, Barrett said.

The use of social media, and the possibility of inappropriate or discriminatory postings, is also a new challenge for Alyeska, Barrett commented.

Marine transition

One major project that Alyeska is currently conducting is the transition of the marine services for the Valdez Marine Terminal from Crowley Marine Corp. to Edison Chouest Offshore, planned for completion in July of next year. Edison Chouest, a global marine operator, is building a fleet of new state-of-the-art tugs and barges, to replace most of the vessels of the current decades-old fleet, Barrett said. The fleet provides tanker escort services to and from the Valdez terminal across Prince William Sound, and support for offshore oil spill response capabilities.

Although there has been some debate over questions of local hire for the Edison Chouest personnel, Barrett said that Alyeska cannot legally require local hire as part of the marine services contract. However, he noted, Edison Chouest is building new houses and offices in Valdez for people who will be involved in its operations.

Business ethics

Barrett said that he feels particularly proud that for the last five years Alyeska has been recognized as one of the world's most ethical companies. It is unacceptable to cut corners in operations where people's lives are on the line, he said. There is an institutional aspect to setting organizational conditions that motivate personal integrity, encouraging people to do the right thing. Perhaps this is an issue that needs more attention, in a world where trust in government, media, business and non-governmental organizations appears to be the lowest it has ever been, he suggested.

For long term success, industry in Alaska needs to address questions of integrity and trust, as well as tackle issues arising from the competitive oil market, Barrett said. ●

Contact Alan Bailey at abailey@petroleumnews.com

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WIELECHOWSKI Q&A

without a doubt challenging economically.

Petroleum News: What do you think at this stage has been accomplished with HB 111?

Wielechowski: I think there is a consensus that has arisen that we can't afford cashable tax credits anymore. I think it's a good idea to get out of the cashable tax credit business. So that's certainly a positive. I think there has become more of an awareness of the way our tax structure works. We have a lot of new people who don't understand the intricacies with the deductible tax credits. I think the debate has helped people become more aware of that.

Petroleum News: So whatever has emerged, do you think the Legislature will be back to the table discussing this next year or the year after, or will that depend strictly on the makeup of the Legislature and the administration?

Wielechowski: I think there is a growing consensus in the building that the oil tax structure is not a durable one. I think that is across all spectrums in both bodies. The reason I feel that way is I look at the oil tax consultants who have been hired. We have several new consultants who have been hired. I think that is a good thing. I think legislators want to make sure we have a system that is durable and ensures we are getting appropriately compensated. I think those experts were hired in part to help see that was the case.

Petroleum News: They were also hired to have a model in place by the end of the month. How can those models benefit the Legislature?

Wielechowski: Particularly since we have a net profits tax, it requires us to become a lot more knowledgeable about our oil tax structure and the finances that are behind it. In the past, when you had gross, you applied the rate at the point of production. I remember when I started 10 years ago, we would have companies appear before us and we were talking about the net profits tax. I would ask some of the companies that would appear before us, one example was Exxon, which flat out refused to tell us how much they made.

I don't know how you can come to a state Legislature and argue that Alaska is not a profitable place to do business and refuse to divulge what your profits are. That seems a little odd to me. Our experts have verified that. Gaffney Cline years ago testified how they were shocked at how little information we had. They had never seen a net profits jurisdiction with as little information as the state of Alaska.

As lawmakers who are tasked with coming up with a system that is fair and durable — fair to us and fair to the oil industry — it's critical that we have this information. It's critical that we have information to figure out what's the net present value of various fields and various projects. What's the internal rate of return? I think those are the two key metrics people look at and we don't have that information. We had none of that information this year in our debate. I've never seen an oil tax bill to the magnitude of HB 111 progress this far without being done by the executive branch.

As legislators we have a couple of staffers. The executive branch has thousands of staffers and hundreds of people who work in oil and gas. It's very hard to do this as a legislative body when you don't have a staff to do this and you don't have access to the information you need to come up with a system. Rich Ruggiero testified "I can't believe I'm here 10 years later and you still don't have this information."

Petroleum News: What would be next for you? A simpler tax system?

Wielechowski: I think most people agree that our tax structure is one of the most complex in the world. That's what most experts have testified to. It is very complex. You have different tax credits available to

see **WIELECHOWSKI Q&A** *page 13*

Petroleum news

Oil Patch Bits

SafeVision announces new spectacle kit inserts

SafeVision LLC, a leading provider of prescription safety eyewear and corporate eyewear programs, now offers a new line of prescription spectacle kit inserts. The inserts are designed for all major brands of full face respirator masks and gas masks.

Designed for use in any workplace, these inserts meet the new optical and safety standards now required for use inside of full face masks.

New lightweight insert frames allow for maximum field of vision, easy installation and removal for cleaning, and as a complete unit, meet full compliance. For more formation visit www.safevision.net or contact Al Alaimo at aalaimo@safevision.net.

Fluor begins construction for Dow project in Texas

Fluor Corp. has begun the mechanical construction for The Dow Chemical Co.'s new ethylene derivative facility in Freeport, Texas.

"Having recently finished construction of Dow's ethylene production facility in Freeport safely and on schedule, this project is a natural transition for Fluor and our craft workforce," said Jack Penley, senior vice president of construction and fabrication for Fluor. "We are proud of our craft workforce's attention to safety, productivity and experience on the

see **OIL PATCH BITS** *page 14*

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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WIELECHOWSKI Q&A

you, depending on a whole variety of absolutely unpredictable situations. I do think it needs to be simplified. I think we've gotten ourselves into a situation where I don't know how you fix it simply at this point. I will look to the experts to give us some advice on that. I don't know that going to a gross system is the best solution. It's certainly the easiest and simplest solution.

Back in 2007 (his first year), I was a big supporter of the gross tax structure, but then I was persuaded after I saw numbers and the projects on specific fields that a net structure was better for the state. The problem is when the system was altered in SB 21 it was altered in ways that a lot of people didn't understand. It had negative impacts to the state.

We are in a situation where we are getting very low compensation for our resources at low prices, then as oil prices rise, we don't get very much more until oil starts getting up to a price which is not predicted for the next decade. I think we need to take a look at that. You want to keep an oil tax structure as simple as you can, but at the same time, oil companies are pretty smart. They have great accountants and great lawyers who are pretty good at figuring out these systems. Usually they are better than the state. That can end up costing the state a lot more than the state thinks. When you add that level of complexity, unless you really, really analyze well, there is a chance you are going to lose out on it as a state.

Petroleum News: Where do you think the perspective of the term government take should be applied? Some include royalty as government take; others do not because in some states royalties go to private land owners, not the state.

> ***"I think it's really critical that we line up buyers for the gas before we spend a lot more money on the project. I think that is really critical; you have got to have buyers lined up."***
> ***—Sen. Bill Wielechowski, D-Anchorage***

Wielechowski: Government take has to include everything an oil company pays, whether it's royalties, corporate income taxes, property taxes, severance taxes. Everything they pay to a public or private land owner. You have to include all of that. You have to get an apples-to-apples comparison. If you are in Texas and you're talking about a 5 percent tax, but you're paying a 25 percent royalty to a private landowner as opposed to a 12.5 percent royalty, that's an enormous difference. You need your experts to ferret that out. Lease expenditures are another thing. You're paying $25,000 an acre in Texas and you're only paying $25 here in Alaska. How do you not factor that in? That's another thing we'll look to our experts for.

Petroleum News: Let's switch to AKLNG. How do you see things right now, say from a 20,000-foot view?

Wielechowski: I think it's good to re-evaluate where we are with the gas line, but I'm not someone who thinks we should end our pursuit of that right now because gas prices go up and they go down. We happen to be at a point where they are down. That being said, this is a 40- or 50-year project so you don't base your decisions on where the price of gas is today or last year. You base it on where you think it will be the next 50 years. The projections are that demand for LNG will continue to grow. It's a cleaner fuel source. Countries are moving to cleaner fuel sources.

We have a lot of advantages here in Alaska with our gas. We have a known resource. We are pulling up 6 bcf of gas per day in Prudhoe Bay and re-injecting it. That's an enormous amount of gas. Quite frankly we have an enormous amount of gas in Cook Inlet. I'm not in the camp that says we should end the project. I think we want to keep our options open. We've spent so much money getting to FERC approval. I'd like to see us get to a point where we can present it to FERC. I'd like to see us get to a point where we don't spend all the money we do as a state to try to move the project forward. So I'm not ready to throw in the towel. The numbers we've seen from Wood Mackenzie and others, that you can make it viable if you come up with different financing strategies, are encouraging. Clearly we couldn't go the way we were going with the three producers. That was uneconomical.

Petroleum News: You voted to remove $50 million from AGDC for other expenses in the capital budget vote. What drove that?

Wielechowski: That would have been interesting if it had been the subject of hearings and other debate. What happened was there was a motion made and no objections, so it passed. That being said, I don't have a problem with cutting it back. They still have a pretty significant amount of money that is available to them to continue their pursuit. If they need more money, then we should evaluate that.

Petroleum News: What would you like to hear next from the administration?

Wielechowski: I'd like to hear about the reception we are getting from the international markets. I'd like to hear the substance of the conversations they are having in Japan, Korea and China. I think that's where the natural market is for our gas. I think it's really critical that we line up buyers for the gas before we spend a lot more money on the project. I think that is really critical; you have got to have buyers lined up.

Petroleum News: You've been getting periodic updates delivered to your office. Have those helped? There was a criticism that AGDC has not been communicative enough.

Wielechowski: I haven't criticized them for that. They have come in and testified in front of Senate Resources, and I have appreciated that. I think it's important that on the gas line that we don't micromanage it. I've said that for years. One of the things that can kill this project more than anything else is simply that the Legislature gets too involved in it and micromanages it. You are going to have political changes in the Legislature. If AGDC is whipsawed back and forth in how they are going to pursue this gas line with every election — that's every legislative election, every new Resources Committee and every Finance Committee — that's a problem. They are an independent organization and they need to go out and work within the directives we've given them and try to get us a gas line. I'm willing to give them some space. ●

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ICEWINE WELL

Energy said, with production testing planned for late June, early July.

Artificial stimulation and production testing are geared to resolve current uncertainties, the company said, including whether complex artificial fracture systems can be created within the HRZ.

"These complex fracture systems are evident in the best performing shale plays as they result in maximized stimulation rock volume, which directly impacts potential flow rates," the company said.

Australian-based 88 Energy's U.S. operating subsidiary, Accumulate Energy Alaska Inc., holds North Slope acreage in partnership with Burgundy Xploration.

The Icewine No. 1 well was completed in December 2015; drilling at the Icewine No. 2 appraisal well began in the second quarter of this year.

—KRISTEN NELSON

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STERLING UNIT

properly plug and abandon the remaining but inactive production wells at the unit.

In its annual plan of development, submitted to BLM in early March 2017, Hilcorp instead proposed a sequential approach to plugging and abandoning, starting with the federal wells. The company said it would begin plugging and abandoning the suspended SU 23-15 well and the shut-in SU 41-15RD well starting in the third quarter of this year.

After plugging and abandoning the two wells, Hilcorp said it expected to contract the federal, state and privately held acreage from the unit and to voluntarily relinquish the leases associated with that acreage, leaving only Cook Inlet Region Inc. leases within 1,500 feet of the remaining two wells at the Sterling pad — SU 43-9X and SU 32-09 — for future production. (A fifth well at the unit — SU 43-09 — is an active disposal well.)

Contraction would allow the Sterling unit to continue as an active administrative entity. But given the recent inability of the company to restore production, BLM believes termination is more appropriate, according to a letter BLM sent to state Division of Oil and Gas Director Chantal Walsh on May 18, 2017, seeking her thoughts on the matter. In a June 2, 2017 reply, Walsh said the state would not object to unit termination.

Unsuccessful revival

The proposed termination follows years of unsuccessful efforts to revive production.

Hilcorp became the operator of the Sterling unit in 2013, as part

In its annual plan of development, submitted to BLM in early March 2017, Hilcorp instead proposed a sequential approach to plugging and abandoning, starting with the federal wells.

of its initial acquisition of properties throughout the Cook Inlet region. The unit was among the oldest in the basin, producing some 14.5 billion cubic feet of natural gas since coming online in 1962.

Hilcorp asked BLM for permission to suspend production in October 2014, and the SU 41-15RD and SU 32-09 wells went offline, bringing unit production to a halt.

In October 2015, the company unsuccessfully used slickline and braided line to retrieve stuck fish — materials in the well bore — from the SU 32-09 well. In September and October 2016, the company perforated two Lower Beluga intervals in the SU 41-15RD well. The gun stuck across another interval slated for perforation and fishing operations were unsuccessful. Another perforated interval in the Lower Beluga only produced water.

During the year, Hilcorp also conducted a field-wide study of the Tyonek, Beluga and Sterling formations at the unit. "Based on technical and other confidential information available to Hilcorp, we have determined that although limited drilling/side track drilling opportunities may exist, such investments are not prudent under current economic conditions, particularly given the limited and seasonal nature of the Cook Inlet gas market," the company told BLM in its most recent plan of development for the unit.

—ERIC LIDJI

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OIL PATCH BITS

Freeport site over the past five years. We will leverage these best practices and expertise to deliver this project with capital efficiency and schedule certainty for Dow."

Fluor's mechanical construction scope includes setting precast and steel structures, piping, equipment, painting and insulation for the unit. More than 400 craft professionals are expected at peak construction for Fluor's scope, with mechanical completion planned for 2018.

The unit is designed for the production of high melt index polymers such as AFFINITY GA polyolefin elastomers for hot melt adhesives, along with broad capability to produce conventional ENGAGE polyolefin elastomers and AFFINITY polyolefin plastomers for applications in packaging, transportation, infrastructure and consumer markets. Dow's Freeport, Texas, complex is the largest integrated chemical manufacturing complex in the Western hemisphere.

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FURIE RIG

Furie also plans to drill a deep exploration well into the Jurassic in the Kitchen Lights unit this year.

KLU A-1 development well that the company started drilling last September at the Julius R gas production platform in the Kitchen Lights unit. That well forms part of a Kitchen Lights gas field development commitment associated with a gas supply agreement with Enstar Natural Gas Co.

Furie also plans to drill a deep exploration well into the Jurassic in the Kitchen Lights unit this year. That well has a planned depth of more than 20,000 feet, seeking oil in Mesozoic strata below the Tertiary rocks that host the producing Cook Inlet oil and gas fields.

—ALAN BAILEY

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● FINANCE & ECONOMY

Investors expect increase in US drilling

ASSOCIATED PRESS

The price of oil has fallen sharply as investors bet that President Donald Trump's decision to pull the United States out of the Paris climate agreement will increase the country's oil and gas production.

The cost of a barrel of crude slumped 2.4 percent, or $1.18, to $47.18 in electronic trading in New York June 2, hours after Trump said the U.S. would immediately stop implementing the Paris deal. He said his administration could try to renegotiate the existing agreement or try to create a new one that is more favorable to the U.S.

The deal would have required the U.S. to reduce polluting emissions by more than a quarter below 2005 levels by 2025, potentially limiting the growth of high-emissions industries like oil and gas production. Economists, however, say that the climate deal would likely help create about as many jobs in renewable energy as it might cost in polluting industries.

U.S. oil production has already been increasing in recent months since the price of crude came off lows last year, making expensive shale oil extraction more economically viable.

"Now that U.S. President Trump has announced that the U.S. will be withdrawing from the Paris Climate Agreement, it is expected that the U.S. will expand its oil production even more sharply," said analysts at German bank Commerzbank.

The increase in U.S. production is neutralizing the efforts of the OPEC cartel and other major oil-producing nations, like Russia, to support prices by limiting their output. OPEC and 10 other countries led by Russia agreed in late May to extend for nine months, to March, a production cut of 1.8 million barrels a day initially agreed on in November.

June 2, the head of Russia's state-controlled Rosneft oil giant said that that a rise in shale oil output in the U.S. would likely offset the effect from the OPEC and Russian production cuts. ●

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APPRAISAL WELL

wells would probably require hydraulic fracturing to enable adequate production rates.

Appraisal drilling

Caelus needs to do some appraisal drilling, both to determine what oil flow rates might be achievable from the Torok reservoir and to verify the extent of the oil resource. The company had said that it planned to return to Smith Bay in the coming winter to drill a single appraisal well. However, the company has apparently decided to cancel that plan.

Smith Bay is located at an extremely remote location, on the Beaufort Sea coast towards the western end of the North Slope. Conducting drilling in the bay requires a major logistical exercise, involving the staging of equipment and supplies, and the construction of a very long ice road from the central North Slope. And, while an oil resource of the scale that Caelus has reported could justify major investment, initial development of the field, including the construction of an appropriate oil pipeline to the central North Slope, would be a very expensive undertaking.

Caelus has stated that first oil from a Smith Bay field could come within five years of field development starting, that the capital cost of the project might be in the range $8 billion to $10 billion and that viability would require a sustained oil price in the mid-$60s. The company has also suggested that the construction of a road between the Alpine field in the central North Slope and the town of Utqiagvik (Barrow) would knock $1 billion off the development cost.

Development would likely involve the drilling of 400 wells from four well pads, Caelus has suggested.

Although Caelus has previously indicated a hoped for startup year of 2022 for a Smith Bay field, a delay in the appraisal drilling would clearly push back that expectation. In addition to the need for appraisal drilling and flow testing before a development decision, any federal permitting required for the project would presumably trigger the need for an environmental impact statement, the preparation of which might take a couple of years. ●

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EIA FORECAST

moderating the pace of liquid fuels inventory draws in 2017."

OPEC production, now forecast to average 32.3 million bpd this year and 32.8 million bpd in 2018, is 200,000 bpd and 400,000 bpd lower than previously forecast, and EIA said it now expects global inventories to decline by almost 200,000 bpd this year, with the largest draws expected in the third quarter.

The agency said that if inventory draws of this magnitude happen and gross U.S. refinery runs remain above 17 million bpd, "the possibility exists for some upward pressure on crude oil prices," with Brent expected to average $54 in the third quarter.

"However, because U.S. tight oil production is relatively responsive to changes in oil price, and given an estimated six-month lag between a change in oil prices and realized production, higher crude oil prices in mid-2017 have the potential to raise U.S. production in 2018," EIA said.

This expectation could contribute to oil price weakness in late 2017 and early 2018, EIA said, adding that the current forecast assumes OPEC's cuts are extended beyond March 2018, but that noncompliance begins to grow late this year and increases somewhat in 2018.

Supply growth from the U.S., Brazil and OPEC in 2018 is expected to contribute to inventory growth by some 100,000 bpd next year.

EIA said growth in U.S. production has been the largest contributor to the 800,000 bpd non-OPEC supply gain from January through May of this year.

U.S. oil-directed active rigs dipped to 316 in May 2016 and more than doubled to 733 at the beginning of June. ●

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PIPELINES & DOWNSTREAM

Tesoro to change name to Andeavor

Tesoro Corp. will change its name to Andeavor after acquiring the oil refiner and marketer Western Refining in a $4.1 billion deal.

The Peninsula Clarion reports (http://bit.ly/2sSjwl5) the deal closed June 1 and will double Tesoro's nationwide workforce to 13,000 employees.

Tesoro Government and Public Affairs Manager Kate Blair says the change won't affect the 225 employees at the Nikiski refinery.

Andeavor will have 10 refineries located in Alaska, California, Minnesota, New Mexico, North Dakota, Texas, Utah and Washington, with the capacity to refine 1.1 million barrels of oil per day.

Blair says the Nikiski refinery has a capacity of about 72,000 barrels per day.

Following the multibillion-dollar acquisition, Andeavor will own more than 3,000 nationwide gas stations and convenience stores.

The name change will go into effect Aug. 1.

—ASSOCIATED PRESS

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HILCORP PLANS

redevelopment program it is conducting in the Granite Point field and will be starting drilling in that field in June.

Onshore on the Kenai Peninsula Hilcorp continues drilling at an annual rate sufficient to maintain natural gas production to meet market demand. The company also anticipates some exploration drilling.

"We will also be drilling exploration wells on the Kenai Peninsula in search for large gas fields that we are confident exist," Wilkins said.

Recent problems

Wilkins also reflected on the problems that Hilcorp has faced in Cook Inlet in recent months over a gas leak from a subsea gas line and a minor oil spill at the Anna platform.

> *"We will also be drilling exploration wells on the Kenai Peninsula in search for large gas fields that we are confident exist."* **—*David Wilkins, Hilcorp Alaska***

"This past winter was certainly challenging and one that brought a lot of negative attention, not only to Hilcorp, but to our industry as a whole," Wilkins said.

He said that he was proud of the manner in which his team had responded to the Cook Inlet incidents, with every team member taking the right actions, and with the company self-reporting on the problems while also working in lock step with the regulators. The company remained open, honest and transparent throughout the incidents, he said.

"I can't guarantee that we won't have incidents in the future, but I will promise you that my team is doing everything in its power to learn from what has happened and to prevent incidents like this from happening again," Wilkins said.

Wilkins also commented on his company's recent announcement of a plan to close down the Drift River terminal on the west side of the inlet by shipping oil by subsea pipeline to the Kenai Peninsula. The Drift River terminal is a cause for safety concern because of its proximity to the Redoubt volcano. The oil pipeline plan demonstrates Hilcorp's commitment to environmental stewardship and a willingness to work cooperatively, investing to overcome the challenges of the aging infrastructure, he said.

The North Slope

Wilkins reviewed his company's upcoming plans for the North Slope, where Hilcorp operates the Milne Point, Northstar and Endicott fields, as well as being the operator for the planned Liberty oil field development, offshore in the Beaufort Sea.

"On the North Slope we are particularly bullish on the opportunities at Milne Point, where we believe a significant resource still remains to be recovered, from light oil trapped in deep reservoir rocks to heavy oil in the shallower Schrader Bluff and Ugnu formations," Wilkins said. "We see plenty of reasons for investment and hundreds of wells yet to be drilled."

Hilcorp is building a new pad, the Moose Pad, on the west side of the Milne Point unit. The company estimates ultimate recovery of 30 million to 50 million barrels of oil via the pad, with production of 15,000 barrels per day from as many as 70 production and injection wells, Wilkins said.

Hilcorp commissioned the new Innovation drilling rig that is now drilling at Milne Point. This is the lightest modular rig on the North Slope and is capable of drilling closely spaced wells, a factor that will enable the rig to operate at Endicott and Northstar, Wilkins said.

The Bureau of Ocean Energy Management will soon release the environmental impact statement for the Liberty project — Hilcorp is working diligently with regulators in Alaska and Washington, D.C., to bring this project to fruition, Wilkins said. The field holds an estimated 100 million barrels of oil and is expected to produce at a rate of at least 60,000 barrels per day for 10 to 15 years.

Wilkins commented on disappointment that Liberty has become a target for what he characterized as anti-development groups that want to permanently close the region to oil and gas activity. These attempts to lock up Alaska's resources ignore the national and local benefits of greater energy security, job creation and new government revenue streams, he said.

"The opposition also ignores what we find most attractive about Liberty — the use of technology that's been proven environmentally sound for more than 30 years," Wilkins said, referencing his company's decision to develop the field from an artificial island, a technique successfully used at Endicott, Northstar, Oooguruk and Nikaitchuq.

"We believe that we have chosen the most prudent development plan available," he said.

Rigs and Alaska jobs

Overall, Hilcorp currently has four drilling rigs operating in Alaska — one on the North Slope, one onshore on the Kenai Peninsula and two offshore in Cook Inlet. Each rig accounts for about 100 drilling jobs, a high proportion of which are held by Alaskans, Wilkins said.

In characterizing his company's approach to its Alaska endeavors, Wilkins referenced the Swanson River field, the oil field on the Kenai Peninsula that triggered Alaska's eventual oil and gas bonanza. He hopes that Hilcorp exhibits the same perseverance and hard work that brought about that initial Swanson River development by a group called "the Spit and Argue Club."

"These were men who liked to think big, think positive and think long term," Wilkins said.

With Swanson River being an important source of natural gas, as well as an oil field, Hilcorp plans to drill more wells this year, and five to 10 further wells next year. The company has also re-instituted a gas flood program in the field. And, since arriving in Alaska, Hilcorp has boosted oil production from the field from 500 barrels of oil equivalent per day to more than 2,500 barrels per day.

"The story at Swanson River parallels Hilcorp's commitment to Alaska," Wilkins said. "We're here for the long haul. We look forward to being good neighbors for many, many years to come. ●

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HB 111

The Senate would get its version of Senate Bill 26, the Permanent Fund Protection Act, and there would be larger payments to the oil and gas industry for tax credits.

The Senate would have to accept what the governor called a modest broad-based tax, based on the education head tax proposed by Sen. Click Bishop, R-Fairbanks, in Senate Bill 12.

The House's operating budget would be adopted. The capital budget would be the governor's priorities plus Senate deferred maintenance (oil and gas tax credit payments are also in the capital budget).

In discussing the proposed compromise at a June 6 press availability, Revenue Commissioner Randall Hoffbeck said the addition of ringfencing to the Senate version of HB 111 would mean that loss carry forwards could only be used against the field where they were incurred until production begins, ensuring that loss carry forwards result in production. Once production begins from the field where the loss carry forwards were incurred, Hoffbeck said, then the loss carry forwards could migrate. There is currently no ringfencing on the North Slope, allowing losses at one field to be used by a producer to offset production taxes at another field.

Initial reactions to the compromise suggestion indicate a hard sell for the governor's proposal in both bodies.

—KRISTEN NELSON

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