OPEC holds firm
Cartel to extend oil quotas through 2018; Russia continues involvement

By ALAN BAILEY
Petroleum News

Following its conference on Nov. 30, the Organization of the Petroleum Exporting Countries announced that it was going to extend its oil production quotas through to the end of 2018. Subsequent media reports have indicated that Russia has agreed to continue with its participation in the production quota arrangements. The new agreement has come despite increased political tension between Saudi Arabia and Iran, two key OPEC members.

The price of Brent crude has hovered around $63 per barrel since early November, having climbed steadily from around $45 in late June. The price of North Slope oil tends to track quite close to the Brent price. OPEC’s current quotas had been scheduled to end in March — the potential subsequent rise in oil supplies could presumably have helped push the oil price into a downward trajectory.

Repsol big sale bidder
Two state lease sales draw in $21 million, federal NPR-A sale draws $1.2M

By KRISTEN NELSON
Petroleum News

Alaska did very well in its fall oil and gas lease sales, drawing 19 bids on 16 tracts in the Beaufort Sea areawide, with estimated high bonus bids of $1,247,717.33, and 124 bids on 103 tracts in its North Slope areawide sale, with estimated high bonus bids of $19,939,832. There were no bids in the North Slope Foothills sale.

On the western side of the North Slope, the Bureau of Land Management offered 900 tracts in its National Petroleum Reserve-Alaska, but received only seven bids on seven tracts from ConocoPhillips.

The big bidder of the day was Repsol E&P USA Inc., which took all 45 tracts on which it bid in the North Slope sale for $14,779,488, a total of 67,040 acres, an average of $220.46 an acre, compared to the overall sale average of $110.97 per acre.

Alaska and Anadarko Petroleum. Those companies are developing Greater Mooses Tooth in NPR-A and have announced a major discovery in NPR-A at Willow.

see LEASE SALES page 14
Alaska North Slope crude oil production averaged 544,221 barrels per day in November, up 1.12 percent (6,015 bpd) from an October average of 538,206 bpd, but down 0.9 percent from a November 2016 average of 549,263 bpd.

The largest per-barrel month-over-month increase was that reported for the BP Exploration (Alaska)-operated Prudhoe Bay field, which averaged 311,356 bpd in November, up 1.4 percent (4,270 bpd) from an October average of 307,086 bpd, and down 2.8 percent from a November 2016 average of 320,368.

Prudhoe production, as reported by the Alaska Department of Revenue’s Tax Division, includes satellite production from Aurora, Borealis, Midnight Sun, Orion, Polaris, Sag River, Schrader Bluff and Ugnu; the Hilcorp Alaska-operated Endicott (and satellites Eider and Minke), Milne Point and Northstar fields; Badami, operated by Glacier Oil & Gas subsidiary Savant; and ExxonMobil Production Co.-operated Point Thomson. The Tax Division consolidates North Slope oil production by major facilities rather than reporting individual fields, providing 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 included with Prudhoe AOGCC data for October show Badami averaged 819 bpd, down 1.6 percent, 14 barrels, from a September average of 833 bpd.

Endicott averaged 6,806 bpd in October, up 29.3 percent (1,541 bpd) from a September average of 5,264 bpd, Milne Point averaged 18,738 bpd in October, up 3.7 percent, 675 bpd, from a September average of 18,063, while Northstar averaged 8,138 bpd, up 9.7 percent, 719 bpd, from a September average of 7,419 bpd. Northstar was up 50.4 percent year-over-year, from a September 2016 average of 5,409 bpd.

But the largest-year-over-year increase was at Point Thomson, where production has been up and down since the field came online in April 2016. In October 2016 Point Thomson averaged 31 bpd; this October the field averaged 7,492 bpd, up almost 350 percent from 5,822 bpd in September, and up some 240 times from 31 bpd in 2016.

Point Thomson was built to accommodate 10,000 bpd of condensate, and ExxonMobil has told the Division of Oil and Gas that problems in reaching that production level were based on gas injection compressor difficulties. ExxonMobil provided extensive information on the problems and the division said in August that it was hopeful that the problems are resolved.

Kuparuk production up

Production from the ConocoPhillips Alaska-operated Kuparuk River field averaged 143,884 bpd in November, up 2.4 percent, 3,321 bpd, from an October average of 140,563 bpd, but down 1.4 percent from a November 2016 average of 145,906 bpd.

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

see ANS OUTPUT page 5
Birch: AKLNG deal lacking details

Anchorage Republican says he is willing to give administration, AGDC benefit of the doubt, but still needs more answers

By STEVE QUINN
For Petroleum News

House Rep. Chris Birch had a busy first year in office, especially having a seat on House Resources. Months-long talks on oil taxes held court early but periodic updates on the prospects of Alaska’s natural gas going to market were also important. Birch is fresh off a hearing that provided an update from the Alaska Gasline Development Corp. on the recent development agreement with three Chinese entities. The Anchorage Republican remains dubious about what the agreement means and says he would like more details on the market and competitive forces. Birch shared his thoughts on this and other developments such as the prospects of advancing exploration in the Arctic National Wildlife Refuge’s 1002 Area coastal plain.

Petroleum News: Let’s start with Monday’s House Resources hearing, which featured an update from AGDC on the AKLNG project. What’s your general impressions of the hearing?

Birch: In general, it’s a lack of substance and lack of engagement with the producers — I think some of that came out last night — and in looking at that nine-page agreement, there was just a lack of engagement and investment on the part of the Chinese. When you talk about the human relationship, you look forward to the engagement ring or the promise ring and I didn’t even see any of that in the relationship.

Petroleum News: You had asked some questions about the market. What were your takeaways on that?

Birch: My takeaways are that President Meyer was rather dismissive of the Canadian engagement. I think that is a mistake. When there was concern about gas in Cook Inlet there was discussions about Kitimat and gas resources on the Canadian side for supplying Alaska and Pacific markets. I think that is a much more viable competitor than was given credit for last night. On the Chinese market — and I just know this from paying attention — there are some huge gas lines going from Russia into China. Their proximity and access is competing with us. By and large, from a marketing standpoint, I have a hard time getting a delivered gas price that will work.

Petroleum News: Do you have any other concerns beyond the markets and price?

Birch: I’m deeply concerned about our capabilities and access to capital. When you start looking at competitive projects, I brought up the issue of brownfield projects in the Gulf of Mexico. Those are much more scalable. You can invest $2 billion or $3 billion and get a scaled back version to meet demand and have the same price. We are looking at a project that will have arguable $30 billion or $40 billion — or more — invested before you see any revenue. I think the questions and concerns regarding that risk and who takes that risk are certainly atop of my list.

Petroleum News: Do you have any positive takeaways?

Birch: Not really. I don’t think there is any new news here. You know there is some conjecture that this is the furthest we got in a project. I remember the Yukon Pacific days and the Yukon Pacific with a lot further down the road with the project and permitting than anything else and that was before there was gas all over the Lower 48. I don’t see anything positive presented to us, either the slide deck or the nine-page agreement. In my view, there is nothing that cements any engagement or investment by Sinopec or any of the large players involved. Alaska is writing big, fat checks every year. I haven’t seen any cash investment or financial engagement on the part of our purported partners.

Petroleum News: What more engagement would you like to see with the producing partners?

Birch: When you talk about a $1 netback — and I think that has a potential of going negative — and they talked a little bit about that last night. Is it worth selling gas at near zero or well below prevailing market to get a rather dicey project out the door? I’m not there yet. I was much more comfortable when we had the producers put their capital in this and writing their checks to support the project. Then you would think you’ve got companies who have years and years of experience, plus expertise and they are willing to put cash on the barrel head to make a project go. I am concerned when it’s all state capital so far.

Petroleum News: Now there some people who place credence in the fact that there are some heavy hitters who signed the agreement. They say that should count for something. How do you feel about that?

Birch: I think you have to look to the agreement. What’s asked and what’s offered. I haven’t seen any money exchange hands. When you talk about firm commitments, I haven’t seen any interest in jointly shared costs going forward. That’s what I would be looking for, a financial commitment. I think I mentioned it (Monday) night, we’re dealing with some pretty astute business people. We talked a little bit about PILT (payment in lieu of taxes) and tax structure. We spent years anguishing in the Legislature over what is the appropriate tax structure. I don’t know if the Chinese government is 100 percent aware or dialed into the fact that the Alaska Legislature has the right to change whatever the tax structure is at some point in the future. Maybe that was discussed. I doubt it. This was done at a pretty high level. There was a lot of showmanship. I would be looking pretty hard at the numbers and the hard reality of investment.

Petroleum News: What were your impressions of the agreement?

Birch: If you sold a $100,000 condominium in the state of Alaska, you would get earnest money agreement at the outset to establish your interest, commitment and follow-through. I was joking with somebody that I want to see pallet loads of cash off of a Chinese military airplane with a red star on it being offloaded at the airport as a multi-million statement of earnest. The only thing that gives me hope is you’ve got the president of the United States and China trying to be involved in the development of this project. As an engineer who has competed for engineering services contracts, I’d have to say how good a deal is this? It will see BIRCH Q&A page 13

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Questions of cost over Fire Island expansion

CIRI says that it is not liable for Chugach Electric’s costs for the preparation of tariffs for a wind farm expansion.

By ALAN BAILEY
Petroleum News

As Cook Inlet Region Inc. continues to promote its proposed phase two extension of its Fire Island wind farm off-shore Anchorage, the company has responded to a Chugach Electric Association filing with the Regulatory Commission of Alaska. Chugach Electric had told the commission that CIRI Wind would need to cover Chugach Electric’s estimated cost of $34,000 for responding to CIRI’s interconnection request for the phase two project. CIRI has asked for tariffs for two different phase two options.

Chugach Electric said that the $34,000 figure includes $49,000 for a conceptual design and cost estimate for expanding the capacity of the power transmission cables from Fire Island.

Tariff request

In a Nov. 28 letter to Chugach Electric, Suzanne Settle, CIRI senior director of energy development, said that the electricity utility had misinterpreted CIRI’s request as an interconnection request for the phase two development. In fact, CIRI was requesting a tariff for the Fire Island expansion as a qualifying renewable energy facility under the terms of the federal Public Utilities Regulatory Policies Act, or PURPA. Under PURPA, a statute designed to encourage use of renewable energy sources, electricity utilities are required to purchase power under reasonable terms from qualifying, independent renewable power facilities. The RCA has adopted PURPA regulations in Alaska.

While CIRI Wind would accept responsibility for some interconnection costs, should the company move ahead with the Fire Island phase 2 development, Chugach Electric has no authority to impose costs on CIRI Wind for the preparation of tariff filings in association with a qualifying facility tariff, Settle wrote.

Settle also questioned the fact that Chugach Electric had told the RCA that it would not be possible to complete the tariffs for both phase two options within a 60-day deadline for responding to CIRI Wind’s tariff request. Under PURPA regulations Chugach Electric cannot over-ride the 60-day deadline — if the utility cannot respond to the complete tariff request within 60 days, it must apply to the RCA for a waiver of the deadline, Settle wrote.

Promoting phase two

For several years CIRI has been promoting a phase two expansion of its Fire Island wind farm but has been struggling to persuade any of the Alaska Railbelt electricity utilities to sign up for further wind power.

Agreement signed, then canceled

The article titled “CIRI Wind requests new connection” in the Dec. 3 issue of Petroleum News incorrectly stated that Cook Inlet Region Inc. has not succeeded in signing up any customers for a proposed phase two expansion of the wind farm on Fire Island. In fact, in June the company did sign a power purchase agreement with Golden Valley Electric Association. However, the two companies subsequently had to cancel the agreement because of problems in forming contracts with Railbelt utilities for the transmission and integration of the phase two power on the Railbelt grid.

Also the article incorrectly stated that Chugach Electric started purchasing phase one Fire Island wind power in September 2011. The purchases actually started in September 2012.

Petroleum News apologizes for any confusion.
continued from page 2

**ANS OUTPUT**

AOGCC data show that Nikaitchuq averaged 19,766 bpd in October, down 0.5 percent, 102 bpd, from a September average of 19,867, and down 12.5 percent from an October 2016 average of 22,592 bpd.

Oooguruk averaged 12,029 bpd in October, up 14.6 percent from a September average of 10,493, but down 4.2 percent from an October 2016 average of 12,558 bpd.

BP-operated Lisburne, part of greater Prudhoe Bay, averaged 25,465 bpd in November, down 1.9 percent, 505 bpd, from an October average of 25,970, but up 11.9 percent from a November 2016 average of 22,763 bpd.

Lisburne volumes include Niakuk, Point McIntyre and Raven.

ConocoPhillips Alaska-operated Colville River averaged 63,516 bpd in November, down 1.7 percent, 1,071 bpd, from an October average of 64,587, but up 5.5 percent from a November 2016 average of 60,226 bpd. Volumes include the Alpine main field and satellite production from Fiodr, Nanuq and Qannik.

**Cook Inlet production steady**

Cook Inlet production averaged 15,889 bpd in October, down marginally from a September average of 15,898 bpd.

The largest month-over-month change was at Hilcorp Alaska’s Middle Ground Shoal field, which came back online in September. In October the field averaged 1,554 bpd, up 138.3 percent, 902 bpd, from a September average of 652 bpd.

All other Cook Inlet fields had month-over-month average production declines.

Hilcorp’s Beaver Creek, Cook Inlet’s smallest, averaged 131 bpd in October, down 7.2 percent from a September average of 141 bpd.

BlueCrest’s Hansen field, the Cosmopolitan project, averaged 232 bpd in October, down 26.7 percent from a September average of 316 bpd.

The Glacier Oil & Gas Redoubt Shoal field averaged 1,180 bpd in October, down 30.7 percent from a September average of 1,702 bpd, while Glacier’s West McArthur River field averaged 1,210 bpd in October, down 0.7 percent from a September average of 1,210 bpd.

Hilcorp’s Swanson River averaged 1,757 bpd in October, down 5 percent from a September average of 1,848 bpd; the company’s Trading Bay field averaged 1,945 bpd in October, down 2.3 percent from a September average of 1,990 bpd.

Hilcorp’s Granite Point field averaged 2,333 bpd in October, down 0.2 percent from a September average of 2,339, and the company’s McArthur River field, Cook Inlet’s largest, averaged 5,555 bpd, down 2.5 percent from a September average of 5,699 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.

**FIRE ISLAND**

companies had to eventually cancel the agreement after negotiations for power integration and wheeling services from Railbelt utilities failed. The difference in cost between the agreed Fire Island wind power price and the cost of the power that GVEA purchases from other utilities should have been more than sufficient to cover the integration and wheeling costs, Settle said. A 2016 filing with the Federal Energy Regulatory Commission indicated that at that time GVEA had purchased power from other utilities at an average price of 7.9 cents per kilowatt hour, while GVEA’s most recent RCA filing indicates an average price of power of 8.79 cents.

**Utility comments**

During a September meeting of the RCA, executives from Railbelt utilities commented on the challenges that integrating wind power brings. The utilities said that their generation facilities cannot always fully counterbalance peaks in wind power output and that wind power use may erode into their ability to pool their gas fueled power generation for maximum generation efficiency.

The utilities are moving towards the pooling of their power generation and transmission system usage in an overall transition towards a more unified Railbelt electrical system. One issue to be resolved is the question of having a single operator to oversee the operation of the complete grid and to manage rules and policies for grid usage. Grid-wide policies would presumably include policies for the connection and use of power from independent power producers such as independently owned wind farms.

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[Contact Kirsten Nelson at kirsten@petroleumnews.com]
Hope exists amid continuing recession

Job losses in Alaska continued in first half of year but there is cause for some optimism about the future of the state’s economy

By ALAN BAILEY
Petroleum News

As Alaska’s recession persists, job losses continued in the first four months of this year, Neal Fried, economist with the Alaska Department of Labor and Workforce Development, told the Resource Development Council’s annual meeting on Nov. 15. However, in May and June the rate of job losses showed a slowing trend. And there are positive factors such as a rising oil price and new oil discoveries that could presage well for the future, Fried said.

More job losses

The data suggest that Alaska is heading for total job losses of about 5,600 this year, a similar figure to last year. And, as before, the oil and gas industry is the biggest loser in the job loss league table, Fried said. Construction is also seeing another rough year, he said. The retail industry has started to appear in the job loss figures, perhaps because people are buying less or maybe because of an increased use of e-commerce. The job losses in professional and business services have softened, perhaps because of a slowdown in activity in the mining industry. Employment in the catering industry — restaurants and bars — has not changed much, helped by a buoyant visitor industry and the importance of the catering services to local consumers.

Looking specifically at Prudhoe Bay, a bellwether area for oil industry employment, the job level there reached an all-time peak of more than 13,000 in March 2015. Since then employment has fallen dramatically, continuing to fall in the second quarter of this year to less than 9,000 after leveling somewhat in the first quarter. It will be interesting to see what happens next, Fried said.

On the plus side of the equation, there has been continuing employment growth in healthcare and local government employment seems to have stabilized.

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Long-term growth

Despite the gloom surrounding recessions, it is important to realize that economies generally grow over time, Fried said. In Alaska, despite three previous recessions since statehood, the economy has added jobs 89 percent of the time, a track record of job growth only exceeded by Arizona and Nevada across all states combined.

And recessions typically do not last long. In Alaska, where a recession is defined as a period of job losses over a period of at least three quarters, there were recessions in 1970, the 1980s and in 2009. The recession in the mid-1980s was by far the most severe, lasting nine quarters, while the others were quite mild. When it comes to the current recession, the job situation is back to where it was in 2012 and needs to recover to the situation in 2015, Fried said.

Determining whether the slowdown in job losses seen in May and June proves to be a continuing trend will depend on data for the second half of the year, when those data become available, Fried said.

On the other hand, the unemployment rate in the state, at about 7.2 percent, has stayed close to its 10-year average, he said.

One issue that causes great angst among Alaska residents is the potential impact of the recession on the real estate market. People still sense the trauma of the real estate crash that happened during the recession in the 1980s, Fried said. But most recessions do not have much impact on real estate and house prices have hardly changed during the current downturn in the Alaska economy. The number of houses sold each year has hardly changed, and the number of foreclosures continues to decline. On the other hand, the vacancy rate for residential properties has been increasing, Fried said.

Positive outlook?

There are some positive factors appearing over the horizon.

The oil price, for example, has been rising and there has been some progress in moves to export natural gas from the North Slope. While ConocoPhillips is conducting a very active exploration season on the North Slope, there have also been some large new oil discoveries. There has been a second year of increasing North Slope oil production.

Looking beyond oil and gas, the Alaska economy is perhaps a little more diverse than is generally realized, Fried suggested. The fisheries industry has been growing and adding to economic diversity, with a particularly good salmon season this year. Mining has been doing well, and the visitor industry saw a record year in 2017. Employment has continued to drop in the timber industry, although there may be some growth in this industry next year. And the military continues to provide stability in the economy.

Thus, even if the oil industry simply stabilizes rather than grows, growth in other sectors could set the economy back on an overall growth path, Fried suggested.

Moreover, the Alaska population has continued to grow somewhat during the recession. It appears that new births have more than compensated for the outmigration of people from the state.

Cultural parameters

On a light-hearted note, Fried presented a number of parameters which, while unclear in regard to their significance for the Alaska economy, perhaps raise interesting insights into the Alaska culture.

While Alaska’s coffee industry continues to thrive, the microbrewery industry is booming, having grown steadily since the early 2000s. Taxes from marijuana sales have been growing steadily but, failing some massive consumption of the material by all state residents, will not solve the state’s fiscal crisis. The number of pickup truck registrations in Alaska continues to climb. One of the more curious statistics is that the Bristol Bay region now has more pickup trucks than human beings, Fried commented. •

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Wider copper-gold cut at Zackly

PolarX Ltd. Dec. 6 reported that assay results from two additional holes drilled at Zackly continue to confirm the historical copper-gold resource for the skarn deposit within the company’s Alaska Range project. Hole ZM-17010 cut two mineralized intercepts – 5.5 meters averaging 0.65 percent copper and 1.11 grams per metric ton gold from 155.9 meters; and 18.4 meters of 1.34 percent copper and 1.15 g/t gold from 169.5 meters. Hole ZM-17015 cut 5.9 meters averaging 1.23 percent copper and 2.2 g/t gold.

PolarX said this year’s drilling often intersects significantly wider intercepts than the historical holes they twinned, predominantly due to better core recoveries in PolarX’s drilling. One such example is hole ZM-17002, which cut 33.4 meters averaging 1.16 percent copper and 1.27 g/t gold. This is substantially wider than the nearby historical hole Z-43, which cut 6.1 meters of copper-gold mineralization. Another example is ZM-17007, which cut 14.5 meters of 2.46 percent copper and 2.02 g/t gold. Nearby historical holes only cut about 1.5 meters of copper-gold mineralization.

The historical resource for Zackly was calculated at 1.54 million metric tons grading 4.5 g/t (218,944 ounces) gold and 2.9 percent (66.9 million pounds) copper. This year’s 13-hole drill program at Zackly included 11 holes designed to validate previous drill intersections and better define the deposit. These results will help underpin a revision of the historical copper and gold resource to Australian Joint Ore Reserves Committee (JORC) mineral reporting standards, which is similar to National Instrument 43-101 standards in Canada. Results from six holes are pending and the updated mineral resource for Zackly is slated for completion early in 2018. PolarX, which acquired Stellar earlier this year, has combined it with the neighboring Caribou Dome copper property and renamed the merged properties the Alaska Range project. Millrock Resources Inc., which owns a 10.74 percent interest in PolarX, executed the 2017 drill program at Zackly.

PolarX said there is evidence that a mineralized structural corridor that runs 6,000 meters west from Zackly to the Mars prospect may host several buried porphyry copper-gold deposits, including underneath Mars and Zackly. PolarX said this prospective corridor is a high priority exploration target within the Alaska Range Project.

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EXPLORATION

A lot more Bornite

Aggressive step-out drilling hits high-grade copper well beyond resource

By SHANE LASLEY

MINING NEWS

J ust how big is the high-grade Bornite copper deposit in Northwest Alaska? This is one question that South32 Ltd. wants to know as it considers paying Trilogy Metals Inc. US$150 million for a 50 percent interest in the Upper Kobuk Mineral Projects, an extensive land package that encompasses Bornite, the Arctic Mine project and dozens of other high-grade metals deposits and prospects in the Ambler Mining District.

While it will likely be many years before the full scope of Bornite is understood, the drill program carried out this year provides ample evidence that it is much larger than the more than 6 billion pounds of copper outlined in the current resource there.

“We have essentially doubled the size of the mineralized footprint with an overall Bornite system now measuring 1,500 meters by 2,500 meters,” said Trilogy Metals President and CEO Rick Van Nieuwenhuyse.

Already large

South32, which agreed to fund US$30 million on the advancement of UKMP over three years to keep its option to acquire half of the project in good standing, is focusing this initial investment on gaining a better understanding of just how big Bornite could be.

Between a combination of its own drilling and re-assaying core from historical drilling completed by Kennecott, Trilogy Metals has already outlined some 2.7 billion lb of copper in an open-pit resource for Bornite averaging roughly 1 percent copper; and another 3.7 billion lb in a deeper underground resource that averages about 2.9 percent copper.

Drilling completed by Trilogy in 2013 showed that the deepest and highest grade portion of this world-class copper deposit continues beyond a 1,000-meter-wide front to the north. RC13-0220, the most northeasterly of the 2013 Bornite holes, cut two high-grade intervals from 809.1 meters to 45.6 meters of 1.07 percent copper; and 80.4 meters of 1.89 percent copper.

RC13-0224, drilled about 800 meters west of hole 220, cut two high-grade intervals from a depth of 513.3 meters along this northern front – 229.4 meters of 1.73 percent copper; and 6.6 meters of 7.7 percent copper.

With the copper deposit getting deeper as it dipped to the north and the pool of exploration capital getting shallower, Trilogy had not traced the Bornite deposit further north until South32’s initial US$10 million investment this year.
The ability to drive to the drill sites at the Klaza deposit is an advantage for Rockhaven Resources as it considers the viability of developing a mine at the gold-silver project in southern Yukon.

Rockhaven discovers Klaza expansion zone

Rockhaven Resources Ltd. Dec. 4 announced the discovery of several new mineralized structures at it Klaza gold-silver project in southern Yukon. These discoveries include a series of new mineralized veins identified with a single drill fence consisting of five holes across an area north of the current resource area where no previous drilling or trenching had been carried out. This drilling targeted a number of linear magnetic and electro-magnetic anomalies, similar to those marking known mineralized zones.

The southern three holes cut a series of semi-massive sulfide veins that are associated with porphyry dykes. These veins and dykes closely resemble those within the inferred resource. Highlighted intercepts from this discovery drilling include 10.1 meters averaging 1.16 grams per metric ton gold and 18.7 g/t silver; 0.46 meters of 9.43 g/t gold and 180 g/t silver; and 0.94 meters of 5.63 g/t gold and 91.4 g/t silver. Rockhaven said it will test these newly identified structures along strike to the northwest; within the Western Fault Block, which hosts the high-grade Western BRX and Western Klaza zones; and to the southeast, where soil sampling has identified strong gold-in-soil anomalies. “We are excited by the discovery of multiple mineralized structures north of the Klaza Zone and consider these structures high priority targets for diamond drilling in 2018,” said Rockhaven CEO Matt Turner.

These newly identified structures along strike to the northwest; within the Western Fault Block, which hosts the high-grade Western BRX and Western Klaza zones; and to the southeast, where soil sampling has identified strong gold-in-soil anomalies. “We are excited by the discovery of multiple mineralized structures north of the Klaza Zone and consider these structures high priority targets for diamond drilling in 2018,” said Rockhaven CEO Matt Turner. These “new structures are located within 500 meters of the currently enviro...”

EPA nixes mine bonding proposal

Agency says state, federal requirement already address U.S. mining risks, added assurances would impose undue burden on sector

The U.S. Environmental Protection Agency has decided not to impose additional bonding requirements on the American mining sector, the regulator announced on Dec. 1.

Under the Obama Administration, EPA had proposed the implementation of hefty new financial assurance requirements for mining operations in the U.S. under Section 108(b) of the Comprehensive Environmental Response, Compensation, and Liability Act, more commonly known as CERCLA or Superfund.

CERCLA was enacted by Congress in 1980 in response to releases and potential releases of hazardous substances that may endanger public health or the environment. Part of this was to ensure that U.S. industries had bonding in place to cover the costs of such events at their facilities. During a July testimony before the U.S. House Subcommittee on Energy and Mineral Resources, Arizona Department of Environmental Quality Director Bret Parke said that over the nearly four decades since CERCLA was passed, states have set up financial assurance programs that surpass the issues Congress aimed to address when it passed the Superfund act.

During the same hearing, Coeur Mining President and CEO Mitchell Krebs made a similar point, noting that his Chicago-based mining company already has roughly $200 million of bonding in place to cover the estimated cost of closure and post-closure activities at its three U.S. mines. “Last December, EPA issued a proposed rule to require hard rock mining companies to demonstrate and maintain financial responsibility ‘consistent with the degree and duration of risk associated with their mining operations’, which sounds like a great idea. The only problem is, it already exists,” he said.

During a public comment period that ran from January into July, EPA heard arguments for and against the proposed bonding requirements and decided that the financial assurances in place at the state level, along with bonding required by the U.S. Bureau of Land Management and U.S. Forest Service on federal land, covered the needs described in CERCLA. “After careful analysis of public comment, the statutory authority, and the record for this rulemaking, EPA is confident that modern industry practices, along with existing state and federal requirements address risks from operating hardrock mining facilities,” said EPA Administrator Scott Pruitt. “Additional financial assurance requirements are unnecessary and would impose an undue burden on this important sector of the American economy and rural America, where most of these mining jobs are based.”

Sen. Lisa Murkowski, R-Alaska, who serves as chairman of the Committee on Energy and Natural Resources as well as the Interior-EPA Appropriations Subcommittee, has been outspoken in her opposition of the CERCLA 108(b) regulations since the Obama administration era EPA began working on them in 2011. “I’m pleased the EPA took all of the facts into consideration and decided against imposing new, duplicative, and burdensome financial assurance requirements for hardrock mines,” Murkowski said. “Significant requirements are already in place at both the state and federal levels to ensure resources are available for mine cleanup and environmental protection. Today’s decision will protect mining jobs, our nation’s mineral security, and help ensure we can responsibly access the materials needed for our national defense, manufacturing, and other high-tech industries.”

National Mining Association President and CEO President and CEO said EPA’s decision not to stack extra bonding requirements on the U.S. mining sector “shows that reason can prevail.”

“At a time when America is completely import-dependent for many key minerals, we should be supporting domestic mining and encouraging investment in the U.S. to lessen our dependence on foreign supply chains,” he added. It is estimated that if EPA would have implemented the proposed CERCLA financial requirements, the costs to the U.S. mining industry would have been upwards of $7.1 billion.
**NORTHERN NEIGHBORS**

Rockhaven said trenching and prospecting samples collected at the Victoria Target, southwest of the newly discovered veins, returned a chip sample grading 4.95 g/t gold and 135 g/t silver over 1.5 meters; and rock samples with peak values of 35.3 g/t gold and 1,145 g/t silver. Additionally, Rockhaven reported the discovery of Rusk, a target north of 5,000 meters south of the current resource area where rock sampling returned values as high as 2.82 g/t gold and 180,000 g/t silver over 30-meter trending linear structures identified there. According to a 2016 calculation, Klaaza holds 9.4 million metric tons of inferred resource grading 4.48 g/t (1.36 million ounces) gold, 89.02 g/t (26.96 million oz) silver, 0.75 percent (155.4 million pounds) lead and 0.95 percent (197.8 million lb) zinc. Rockhaven’s 2017 exploration program at Klaaza included 15,922 meters of drilling in 96 holes focused primarily on defining and expanding this near-surface resource. This year’s program also included trenching, soil sampling and ground geophysical surveys designed to evaluate prospective areas outside of the known mineral resource areas. The program successfully identified seven new mineralized zones and a number of geochemical and geophysical anomalies that are potential targets for follow-up drilling in 2018.

**Beginners Luck adds to Dolly Varden potential**

Dolly Varden Silver Corp. continues to discover new areas of high-grade silver mineralization at its Dolly Varden project in the Golden Triangle of northwestern British Columbia. This includes confirmation of the recent discovery at True North, an eastern fault-offset continuation of the Torbit deposit, and the discovery of Beginners Luck, a new target north of Torbit. Hole DV17-078 cut two mineralized zones, Upper and Lower, in the Torbit Labradorite zone. This hole cut 13 meters (9.96 meters true thickness) averaging 244.8 g/t silver, 0.14 percent lead and 0.99 percent zinc, or 255.7 g/t silver-equivalent. The more base metals enriched Lower zone of hole 78 returned 21.95 meters (16.81 meters true thickness) averaging 87.5 g/t silver, 0.8 percent lead and 1.01 percent zinc, or 176.3 g/t silver-equivalent. Torbit East marks the fourth-rich vein area discovered this year. Torbit North, Torbit East and Moose Lamb are other areas where drilling has tapped high-grade silver outside of the resource areas at Dolly Varden. “Hole DV17-078 confirms the high-grade silver discovery in Torbit East zone. The new discoveries in Torbit North, Torbit East and Moose Lamb have great potential for expansion of the existing resources in this historic mining district,” said Dolly Varden President and CEO Gary Cope. Dolly Varden also reported results from the discovery hole at Beginners Luck, a new exploration target roughly 1,500 meters north and 400 meters higher than the Torbit Deposit. A single hole drilled at Beginners Luck, DV17-080 cut 3.39 meters (2.94 meters true thickness) averaging 110.4 g/t silver, 0.04 percent lead and 0.06 percent zinc, or 115.6 g/t silver-equivalent. Dolly Varden said the Beginners Luck discovery opens a new area of the eastern side of the Kitaisha Valley for exploration.

**Saddle gold discovery continues to impress**

GT Gold Corp. Dec. 4 reported continued high-grade assays from six additional holes drilled at Saddle, an exciting gold discovery on the company’s Tatogga property in the Golden Triangle region of northwestern British Columbia. Hole TTD045 cut 3.79 meter averaging 12.95 g/t gold from a depth of 144.1 meters, including 1.04 meters of 45.93 g/t gold. The company said four additional holes drilled from the same pad – TTD047, 048, 050 and 052 – all cut high-grade gold. The best of these holes, TTD050, cut 2.31 meters of 12.05 g/t gold from a depth of 125 meters. TTD049, which was drilled about 125 meters west of the above five holes, cut 6.1 meters of 4.84 g/t gold from a depth of 120.3 meters, 2.96 meters of 4.92 g/t gold from 135.8 meters, 2.31 meters of 4.05 g/t gold from 142.9 meters, and 1.65 meters of 13.35 g/t gold from 189.4 meters. “We continue to be impressed by the strength of the mineralized system at Saddle South,” says Kevin GT Gold President and CEO Kevin Keough. “With every set of assays we receive we are learning more about the system and its potential.” Assays are pending from nine additional holes drilled at Saddle South and four holes from the neighboring Saddle North gold-in-soil anomaly.

**GT Gold mines Winns and Money discovery award**

GT Gold Corp. Nov. 30 won the prestigious Mines and Money “Discovery Award” for its Saddle gold-silver discovery in northwestern British Columbia, Canada. The award was shared with SollGold plc, an Australian company exploring the Cascabel copper-gold project in Ecuador. GT Gold Chairman accepted the award at a gala dinner that wrapped up the Mines and Money Conference in London, England, on November 30th. The Saddle gold-silver discovery is one of the few genuine new precious metals discoveries to emerge in recent years. The find has gained positive attention in the market for its combination of high grades, large scale potential. This discovery and its proximity to roads and infrastructure highlights the minerals exploration potential of northern British Columbia, neighboring Alaska and the Canadian territories.

“We are obviously very proud to receive this distinguished award, which recognizes the outstanding merit of this exciting discovery,” said GT Gold President and CEO Kevin Keough. “We would like to put credit explicitly on our exploration team, led by geologist Charlie Greig, who accomplished so much in such a short period of time, and without whom none of this would have been achieved. Credit also goes to geologists Clinton Smyth and Emily Miller, who directed and carried out the geochemical sampling in 2013 and 2014 that first revealed the gold-gold anomaly at Saddle. We would also like to thank our Tahlitan employees and partners who have not only been a great help to us, but who also stand, as a proud mining nation, to benefit greatly from this discovery. We believe there’s a great deal more to come from Saddle, and we look forward as a team to delivering on its promise.”

**Golden Predator reworks deal for 3 Aces neighbor**

Golden Predator Mining Corp. Nov. 30 announced that it has cut deals with Alexco Exploration Canada Corp. and Newmont Canada Corp. to buy full ownership of Sprogge, a large gold property adjacent to the company’s 3 Aces project in southeastern Yukon. The gold potential at Sprogge was first identified during a 1996 regional exploration program carried out by Hemlo Gold Mines. Over the next four years, early stage exploration was carried out on the property by Viceroy Exploration, Novagold Resources and Newmont Canada. In 2011, Northern Tiger Resources, which was later acquired by Golden Predator, cut a deal for Sprogge and conducted additional soil sampling, mapping and prospecting programs. This work confirmed the potential of the property to host significant orogenic style mineralization. Trenching carried out at Sprogge by Northern Tiger encountered 6.8 meters of 8.5 grams per tonne of gold at the Meadow South zone, including 1 meter of 40.5 g/t gold in a northeast striking fault zone. Sampling of the Matilda vein, which is southeast of Meadows, returned assays of up to 23.8 g/t gold. Two other zones, Ridge East and Ridge West, returned values of 7.6 g/t gold over 2.5 meters in trenching and 7.1 g/t gold in a grab sample respectively. The gold-bearing quartz veins identified at Sprogge are located within large areas of anomalous gold in soils occur on the property. Golden Predator said its greater understanding of the lithological and structural controls on mineralization at the neighboring 3 Aces project can be applied to Sprogge and considerably increases that property’s potential.

To gain full ownership of Sprogge, Golden Predator will pay CS144.5 million in cash, issue 300,000 units, consisting of one Golden Predator share and one warrant exercisable to acquire an additional share for CS1; and grant 2.33 percent in net smelter returns royalties, with provisions for Golden Predator to buy back up to half of the royalty.

“Golden Predator thanks Alexco and Newmont for their cooperation in a lengthy negotiation that has resulted in more beneficial terms to advance the property under full ownership by Golden Predator,” said Golden Predator CEO Janet Lee-Sherriff. “With the agreement concluded for 100 percent ownership we will expand our 2018 work plan to include work on the Sprogge project. We are currently developing the work plan for 2018 and reviewing the historical information on the Sprogge project which shows great promise under our orogenic model.”

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MORE BORNITE

Aggressive expansion

Instead of modestly extending the resource with modest step-out holes, South32 opted to drill with aggressive expansion drilling. The 2017 drill program did not find the edges of the mineralization.

The top of the Bornite mineralization in hole 234 was reached at a drill depth of 935.3 meters. RC17-235W, drilled about 250 meters west of hole 220, cut two zones of copper from a depth of 661.8 meters – 6.1 meters of 0.69 percent copper; and 26.9 meters of 0.94 percent copper. RC17-0236, drilled 300 meters north of hole 224, cut two high-grade copper intervals from a depth of 720.8 meters – 27.1 meters of 0.8 percent copper; and 89.3 meters of 1.13 percent copper.

“The initial three step-out holes at Bornite demonstrate that high-grade copper mineralization continues to the north and east of previously drilled resources,” said Van Nieuwenhuyse.

Results from another four holes continue to show significant intervals of high-grade copper. RC17-238, drilled about 300 meters southwest of hole 236, cut four zones of copper from a depth of 579.7 meters – 10 meters of 0.61 percent copper; 4.9 meters of 2.11 percent copper; 5 meters of 0.55 percent copper; and 12.5 meters of 1.14 percent copper.

RC17-239, which was drilled roughly 400 meters east of hole 234, cut three copper zones – 16.2 meters of 1.04 percent copper; 8.2 meters of 1.67 percent copper; and 26.1 meters of 1.46 percent copper.

RC17-237, which was drilled about 200 meters north of hole 232 and roughly 750 meters beyond the northern edge of the current resource, cut two copper zones from a depth of 947.9 meters – 18.1 meters of 0.72 percent copper and 12.4 meters of 0.75 percent copper.

RC17-240, drilled about 400 meters northeast of hole 234 and roughly 800 meters north of the resource, cut 25.1 meters of 0.96 percent copper.

Overall, the seven holes completed this year demonstrate that the Bornite deposit extends more than 700 meters northeast of the current resource and over widths of at least 1,000 meters.

The seismic technology that has been so efficient at finding pockets of oil deep underground is beginning to be applied to hardrock mineral exploration.

While these holes are too widely spaced to recalculate the Bornite resource, it is reasonable to assume that billions of additional pounds of copper will be added to this world-class deposit if infill drilling shows this mineralization is consistent across the broad expansion area.

Planning for 2018

With the success of the 2017 program, Trilogy and South32 are already making plans for 2018.

“We are in the process of planning the 2018 program with an estimated US$10 million budget. One component of the program will include a seismic program to be completed in the spring time when the ground is still frozen and the daylight has returned,” said Van Nieuwenhuyse. “The balance of the program will be directed at further in-fill and expansion drilling.”

The seismic technology that has been so efficient at finding pockets of oil deep underground is beginning to be applied to hardrock mineral exploration.

Sulfide deposits rich in copper, zinc and nickel are particularly strong reflectors of seismic energy, making them good targets for adapting the successful petroleum exploration technology to minable minerals.

While much of the 2018 drilling will likely depend upon the results from the early season seismic work, we already know the location of two holes to be drilled next year.

Hole RC17-241, which is roughly in the middle of the northern expansion holes drilled this year, and RC17-242, which is about 400 meters west of hole 238, were started but could not be finished before winter weather set in at Bornite. These holes were cemented, making them ready for finishing when drilling resumes in 2018.

“It was unfortunate that we could not complete two of the planned holes due to weather, but rest assured that we will complete these next year,” said Van Nieuwenhuyse.

Arctic PFS coming

In the meantime, Trilogy continues to finalize a pre-feasibility study for the Arctic volcanogenic massive sulfide deposit about 16 miles north of Bornite.

At a 0.5 percent copper-equivalent cut-off grade, Arctic hosts 36 million metric tons of in-pit indicated resources averaging 3.07 percent (2.44 billion lb) copper; 4.23 percent (3.36 billion lb) zinc; 0.73 percent (581 million lb) lead; 0.63 g/t (728,000 ounces) gold and 47.6 g/t (55 million oz) silver.

Triology said this resource is sufficient to support the upcoming PFS, slated for completion in the first quarter of 2018.

“Arctic is pretty special – we predict it will be one of the highest grade open pit copper projects in the world,” said Van Nieuwenhuyse. “Arctic is also located in the geographic center of a 100-kilometer (60 miles) long belt containing over two dozen known grade polymetallic deposits and occurrences. It is not hard to envision a central milling concept with the other deposits potentially feeding the mill beyond the mine life at Arctic.”

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Alaska Oil and Gas Conservation Commission report: November 2017

By ERIC LIDJI
For Petroleum News

- On Nov. 6, the Alaska Oil and Gas Conservation Commission gave notice of a proposed change to the regulations covering the casing and cementing of wells. The proposed change would require well operators to set surface casing below the base of permafrost.

The commission will hold a hearing on the proposed change on Jan. 4, 2018.

- On Nov. 7, the AOGCC approved (Area Injection Order No. 2C.051) a request from ConocoPhillips Alaska Inc. to continue water injections at the Kuparuk River Unit 35-06A well. The company reported a potential Tubing x Inner Annulus pressure communication on Aug. 21 while injecting gas and later confirmed gas communication. The communication was not observed during a 30-day water-alternating-gas monitoring period, and subsequent diagnostics including a passing non-state witnessed Mechanical Integrity Test of the Inner Annulus, convinced the commission of the integrity of the well.

- On Nov. 8, the AOGCC approved (Conservation Order No. 76.35) a request from Hilcorp Alaska LLC for a spacing exemption for the Granite Point State 24-13RD2 well.

The proposed well would be an offshore, deviated oil development well located within 1,000 feet of the existing GPS 11-24RD well, completed in the Middle Kenai Oil Pool.

The commission found that a spacing exemption was required to maximize oil recovery and would not result in waste or jeopardize the correlative rights of nearby landowners.

- On Nov. 17, the AOGCC approved (Area Injection Order No. 2C.052) a request from ConocoPhillips to continue water injections at the Kuparuk River Unit ZZ-08 well.

The company reported a potential Tubing x Inner Annulus pressure communication to the commission on Oct. 10 while injecting gas and later confirmed gas communication. The communication was not observed during a 30-day water-alternating-gas monitoring period, and subsequent diagnostics including a passing non-state witnessed Mechanical Integrity Test of the Inner Annulus convinced the commission of the integrity of the well.

- On Nov. 17, the AOGCC denied (Doc# Request Number CD-17-016) a request from Hilcorp to withdraw a directive that requires the company to provide notice to parties affected by a proposed administrative change at the Ninilchik unit in the Cook Inlet region.

Hilcorp wants to expand the extent of the Ninilchik Beluga/Tyonek Gas Pool. The revision would extend well spacing requirements into new areas, and the commission directed the company to provide notice to affected landowners and operators within 3,000 feet of the proposed expansion acreage. Hilcorp wanted the directive to be withdrawn.

- On Nov. 21, the AOGCC approved (Area Injection Order No. 2C.053) a request from ConocoPhillips to continue water injections at the Kuparuk River Unit 1E-11 well.

GOVERNMENT

USCG holds Arctic domain awareness meeting

The US Coast Guard has reported that on Nov. 28 to 29 it hosted a meeting of the Arctic Domain Awareness Center. ADAC is a Department of Homeland Security entity hosted by the University of Alaska that conducts research involving academic and industry partners in the United States and Canada. With research that includes the tracking of Arctic oil spills, the mapping of new sea lanes, the forecasting of sea ice cover and making improvements to situational awareness, ADAC’s main customer is the U.S. Coast Guard.

During the November meeting Rear Adm. Michael McAllister, commander of the Coast Guard’s 17th District, said that the Coast Guard is eager to capitalize on ADAC research by transitioning the research results into operational capability. He commented that increased vessel traffic in the Arctic is compound the challenges associated with the possibility of a major oil spill or the need for a large-scale search and rescue operation. So far this year, Coast Guard operations in the Arctic have involved 185 days of Coast Guard cutter operations and have saved 16 lives, he said.

“Traffic drives the need for capabilities to operate in the northern latitudes,” McAllister said.

Keynote speaker Adm. Charles Michel, Coast Guard vice commandant, thanked the researchers for their efforts in improving Arctic situational awareness and in helping the Coast Guard prepare for increased human activity in the region.

“We’re dealing with very dynamic changes in the Arctic,” Michel said. “The first line of effort in our Arctic strategy is improving awareness.”

—ALAN BAILEY

ENVIRONMENT & SAFETY

Questions raised over VMT spill plan

Prince William Sound Regional Citizens Advisory Council, Prince William Sound Aquaculture Corp. and Valdez Fisheries Development Association have challenged the Alaska Department of Environmental Conservation’s approval of the most recent version of the oil discharge prevention and contingency plan for the Valdez Marine Terminal. The organizations say that the latest version of the plan unacceptably lowers the level of protection for the Valdez Duck Flats and the Solomon Gulch Hatchery.

In a Nov. 21 filing with DEC, PWSRCAC and PWSAC said that, despite a request from ConocoPhillips to continue water injections at the Kuparuk River Unit ZZ-08 well, the company reported a potential Tubing x Inner Annulus pressure communication to the commission on Oct. 10 while injecting gas and later confirmed gas communication. The communication was not observed during a 30-day water-alternating-gas monitoring period, and subsequent diagnostics including a passing non-state witnessed Mechanical Integrity Test of the Inner Annulus, convinced the commission of the integrity of the well.

The Valdez Marine Terminal, operated by Alyeska Pipeline Service Co., loads oil delivered from the trans-Alaska pipeline into tankers for export from Alaska; PWSRCAC is a citizen’s group that promotes environmentally safe operations at the terminal; PWSAC operates salmon hatcheries around Prince William Sound; and VFDA operates Solomon Gulch Hatchery.

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The revision would extend well spacing requirements into new areas, and the commission directed the company to provide notice to affected landowners and operators within 3,000 feet of the proposed expansion acreage. Hilcorp wanted the directive to be withdrawn.

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Fluor awarded refurbishment contract in Canada

Fluor Corp. announced Dec. 4 that it was selected by Ontario Power Generation for the procurement and construction of refurbishment work at OPG’s Darlington nuclear generating station in Ontario, Canada. Fluor will book the undisclosed contract value in the fourth quarter of 2017. Fluor’s scope will include the replacement of emergency power generators for Units 1 and 2. The replacements are part of site safety and infrastructure projects underway to refurbish the power station. The new emergency power generators will replace the existing units that are approaching the end of their design life.

“The Darlington refurbishment program represents a significant investment in Ontario’s economy and environment,” said Simon Nottingham, president of Fluor’s Power business. “As a company with a long and diverse history in Canada, Fluor is honored to support OPG in extending the life of this important asset.”

Since the early 1990s, Darlington Nuclear Generating Station has produced approximately 20 percent of Ontario’s electricity — representing more than 2 million homes each day. To continue reliable service, the facility is undergoing a mid-life refurbishment.

ASRC announces dividend milestone distribution

Following November’s scheduled disbursement to ASRC shareholders, ASRC has now distributed more than $1 billion dollars in dividend payouts to its owners since the formation of the company in the summer of 1972. ASRC is the first Alaska Native corporation to reach such a milestone.

“For ASRC to maintain this level of consistency throughout its 45 year history is a real testament to our team of hard-working, dedicated workers as well as the vision of the Corporation’s early leadership,” said Crawford Patkotak, ASRC board chairman. “It’s very rewarding to know our people and our region have benefited from these efforts.”

“This level of success is no accident; it has been by design,” added Rex A. Rock Sr., ASRC president and CEO. “This increase satisfies one of the goals of our 2012-2017 Strategic Plan, which called for $55 per share dividend by the end of the plan’s cycle. Even through periods of unpredictability in the local and national economies we have managed to grow by using Iñupiaq values as our guide, and I look forward to the next 45 years.”

The 2017 dividend distribution for ASRC shareholders was $55 per share. The typical ASRC shareholder owns 100 shares of ASRC stock and received $5,500.

Editor’s note: Some of these news items will appear in the next Arctic Oil & Gas Directory, a full color magazine that serves as a marketing tool for Petroleum News’ contracted advertisers.
**AOGGCC REPORT**

The company reported a potential Tumbo x Inner Anmulus pressure communication on Oct. 13 while injecting gas. The company confirmed gas communication. It was not observed during a 30-day water-alternating-gas period, and subsequent diagnostics including a passing state witnessed Mechanical Integrity Test of the Inner Anmulus convinced the commission of the integrity of the well for continued water injections.

- On Nov. 21, the AOGGCC approved (Area Injection Order No. 34/007) a request from Caelus Energy Alaska Inc. to conduct a high-pressure water injectivity test in the ODSN-27i and ODSN-32i injection wells at the Oogruk unit in the waters off the North Slope.

**BIRCH & QA**

be in the details. Whose steel is going into this? I’ve got to believe if China makes steel and they pay 75 per-cent of it, it’s going to be their steel. Who is going to design it? I’m guessing if I’m paying 75 percent, I’m going to have a lot of say in who designs it. The ele-ment of steel, if you will, is how will North Slope gas compete? It would be one thing if it were at tidewa-ter in the Arctic Ocean, but it will take tons of billions worth of construction to put it in tidewater in Cook Inlet. As an engineer, I struggle with seeing how you can make that economic.

I couldn’t see anything in the nine-page agreement that would assuage me, but I’m keeping an open mind.

**Petroleum News:** What would you like to hear next from AOGGCC?

**Birch:** I would like a realistic assessment of how this project measures up from a risk component, where they realistically expect to realize capital investment necessary to construct a project of this magnitude. As the state of Alaska is in the driver’s seat, I’m not comfortable with it. What I would like to hear next from them is more engagement with the producers, more discus-sion, more concrete evidence. That could be financial or otherwise. But at this point we are looking at the reality of how much it costs to keep that operation open, and it’s significant. We need to recognize who the competition is on the Pacific Rim. I would like to see a realistic assessment of that. They are somewhat dissmis-sive of Canada as a competitor and of the brownfield project in the competitor. LNG is not a commodity. Whether is comes from the Gulf of Mexico to Europe or goes from Kitimat to someplace in the south pacific. I would like to see a realistic assessment of what the competitive forces are to our landed price in Nikiski for gas.

**Petroleum News:** Let’s switch to some recent develop-ments on federal lands and waters, starting with ANWR. It looks like Congress is inching closer to open-ing up the 1002 Area for exploration. How do you see it?

**Birch:** Well, it’s certainly been a long-fought battle. My first job on the North Slope was in 1968. I worked for a gentleman named Jim Dalton. He was with Columbia Oil. He has and they named the Dalton Highway after him. It’s been dangling out there. There has been a lot of interest and support with the 1002 Area. It’s very tantalizing. It’s actually very exciting to see that it might be on our horizon.

**Petroleum News:** Years ago, ANWR was thought to be part of a solution toward energy independence. Now we hear ANWR in the context of energy dominance. How do you see it?

**Birch:** At the RDC briefings, the gentleman from Armstrong gave a phenomenal presentation on what’s going on in NPR-A and the Colville River area, so I think the development in NPR-A and ANWR is going to be part of and contribute to American energy domi-nance. Certainly our near-term goals are to keep the pipeline full. We’ve seen a lot of good effort that way.

**Petroleum News:** Well, several weeks ago, the Department of Natural Resources gave a presentation about production — and with that, pipeline throughput — increasing. What does it say about the industry being able to adjust to the price cli-mate?

**Birch:** I think what we’re seeing with Hilcorp and some of the secondary operators on the North Slope arena, we are seeing some tremendous innovation and an ability to innovate up there. We’re seeing some great ideas and great talent, and companies that have the ability to not only increase production from existing fields but also do the additional exploration necessary.

**Petroleum News:** What ConocoPhillips has got going in NPR-A with Willow and some of those other fields is remarkable. I think it bodes well for us and it certainly bodes well for the tax policy that’s been in place for a limited amount of time and validated by the photos; I would hope we could have some tax stability for those making the major capital investments. On the down side of that I’ve friends who are in business of housing employees on the North Slope. They are looking at 30 percent to 40 percent capacity of unused beds. There are some challenging times ahead of us. I don’t think it’s reasonable of us to think it’s going to be busi-ness as usual. I think we need to be very aware and alert to what we need to do as a state to remain compet-itive to the investment community.

**Petroleum News:** Also in the news was word of Eni getting the go-ahead to drill in federal waters.

**Birch:** It’s remarkable what they are able to do. I believe it’s going to be a regional (drilling) rig. It means you can go from a safe, secure on-land, island location. I believe some of the longest reach wells are over in Sakhalin. Those are remarkable distances they are achieving there with land-based rigs. The Eni initia-tive wouldn’t have happened without the federal gov-ernment relenting with the policy and practice.

Hopefully it’s a wave for the future. I know when I was touring the Hilcorp operation last fall, they had discus-sions about that, too.

One of the visuals that I was a gentleman talking about spudding a well in the Dená’a Center and putting a drill bit into the kitchen in the Kincaid Chalet some distance away, talking about the remarkable capacity. We toured the Hilcorp drill rig. We were on the floor of one of the portable rigs. It’s a high-tech world. You’ve got a relatively young person with a joy-stick driving the bit and a couple of seasoned hands over looking his shoulder telling him where to place that bit.

**Petroleum News:** Shell had a tough time there. Some believed it was the regulations; others believed it was new territory that made things difficult. What are your hopes for Eni?

**Birch:** Well, I think it bodes well for Alaska and cer-tainly our offshore prospects. Our challenges up here are weather largely. Depth is not an issue. When they do leases in the Gulf of Mexico, they are incredible deepwater wells. The operations we have up here, I think Shell had a lot of adversity that was introduced after they had their lease sale and after they started their planning and mapping out of the operations. One would think if an Eni is successful and you see some of that development happens, it keeps the door open. I think Shell’s leases, they have a partner still maintaining them.

**Petroleum News:** HB 111 produced a working group. I know you’re not on the working group, but just the same what would you like to see from those 10 people?

**Birch:** I think you need to realize the uptick in tax credits — cashable oil tax credits — into the $100s of millions that have not been paid. I think it’s a baby step to the creation of Sam McGee in Robert Service’s book, a promise made is a debt unpaid. I’ve had people tell me we don’t have a financial duty to make these payments all today. I’ve met with people in my office in Alaska — a number of people at ANWR as a long-term positive potential for the state, certainly for the North Slope Borough and Alaska in general. The working group has potential of putting some information together that is helpful for the legislative body as a whole.

**Petroleum News:** What about taxes. Do you expect more debate on oil taxes next year?

**Birch:** I hope not. I struggle with the fact that we have oil tax credits — cashable oil tax credits — into the $100s of millions that have not been paid. I think it’s a step back to the creation of Sam McGee in Robert Service’s book, a promise made is a debt unpaid. I’ve had people tell me we don’t have a financial duty to make these payments all today. I’ve met with people in my office in Alaska — a number of people at ANWR as a long-term positive potential for the state, certainly for the North Slope Borough and Alaska in general. The working group has potential of putting some information together that is helpful for the legislative body as a whole.

**Petroleum News:** Many of those promises were made by another administration when oil prices were above $100 — a reasonable assumption?

**Birch:** I think you need to realize the uptick in investment and exploration. If you look at Caelus and Armstrong, again that slide deck at the RDC presenta-tion is phenomenal. I was sitting next to a former ConocoPhillips geologist and his comments involved — who put their faith into the state of Alaska reim-bursement. That hasn’t been realized. I hope the work-ing group addresses that. That weights in on the tax structure. We are talking how credits are instrumental part of a tax debate, so that’s got to enter into it at some point.

**Petroleum News:** The commission imposed a $60,000 penalty against the company for failing to install appropriate gauges at the well and a $32,000 penalty for failing to provide monthly pressure reports. The commission also ordered the company to begin the application process for plugging and abandoning the exploration well before Dec. 14, 2017.

Tolsona Oil and Gas has 30 days to appeal the ruling to superior court.

- The AOGGCC has set its public meeting schedule for the coming year.

The commission intends to meet on Jan. 3, Feb. 7, March 7, April 4, May 2, June 6, July 11, Aug. 1, Sept. 5, Oct. 3, Nov. 7 and Dec. 5. All meetings begin at 10 a.m. •
LAND & LEASING

No substantial new information for sales

The Alaska Division of Oil and Gas has issued a decision of no substantial new information for the 2018 Cook Inlet and Alaska Peninsula acrewide oil and gas lease sales. Best interest findings are prepared every 10 years for the sales, with annual calls for new information prior to each year’s sale. No sale date has yet been announced, but these sales are held in the spring, usually in May, although last year the sales were held in June.

The Cook Inlet sale typically draws bids but the Alaska Peninsula acrewide sales, which began in 2005, drew bids only in that year, in 2007 (there was no 2006 Alaska Peninsula sale) and in 2014.

—PETROLEUM NEWS

Nenana area OK’d for exploration licensing

The Alaska Division of Oil and Gas has issued a preliminary determination of state lands subject to oil and gas exploration licensing in the Nenana area. The Nov. 30 decision notes that exploration licensing is designed to encourage exploration far from infrastructure in areas with unknown hydrocarbon potential and where the operator bears a higher investment risk.

Exploration licensing does not pertain to North Slope and Cook Inlet areas where there are existing leasing programs, and requires that any data collected be provided to the state.

The acreage is basically west of Nenana and includes a portion of the Denali Borough on its southern border. Specifics, including a map and section, township and range descriptions, are available on the division’s website at https://dog.dnr.alaska.gov/Home/Newsroom.

Areas which would be available for exploration licensing under the determination include “free and unencumbered” state acreage.

The division said “land within the Nenana determination area has unknown oil and gas potential and there is limited access to existing oil and gas infrastructure in much of the region.” Some oil and gas exploration has occurred there in the past, but, the division said, “technological advancements may facilitate more effective and efficient exploration.”

Comments on the preliminary determination are due by 5 p.m. Jan. 2.

—PETROLEUM NEWS

EXPLORATION & PRODUCTION

Hilcorp applies to expand Milne L pad

Hilcorp Alaska LLC has applied to the Alaska Department of Natural Resources, Division of Oil and Gas, to add gravel to expand the L pad at Milne Point. The expansion would allow the installation of three Titan 130 Turbines skids, a fuel gas metering skid, two 1,130-barrel diesel tanks (in containment for emergency startups), piping for diesel and fuel gas supply to the Titans, electrical equipment rooms and switchgear rooms.

Hilcorp is also requesting approval to add gravel to drift up to five additional development wells.

The proposed schedule would have gravel placement for additions — on three sides of L pad — to begin March 1. Compaction and seasoning of the gravel would be completed this summer and the Titan 130 Turbine skids, fuel gas metering skid, fuel gas and diesel piping, electrical equipment rooms and switchgear room would be installed in August. Hilcorp said it anticipates that drilling would begin in July and continue through the end of 2018.

—PETROLEUM NEWS

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LEASE SALES

Total acreage receiving bids in the NPR-A sale was 79,998 and total bids were $1,159,357. This compares to last year’s NPR-A sale which brought in $18.8 million from four bidding groups, including ConocoPhillips and Anadarko, who accounted for the majority of dollars bid in that sale.

The tracts on which the companies bid in this year’s sale are on the southern border of a large block of tracts they already hold, all on the western side of NPR-A.

Beaufort Sea

The state’s Beaufort Sea sale drew 19 bids on 16 tracts from four bidding groups, a total of $1.2 million in apparent high bids on 37,602 acres. Armstrong Energy, an independent with a major position on the North Slope, took one tract in the sale; the other acreage was picked up by small companies and investor groups. J. Andrew Bachner, 90 percent, and Keith C. Forsgren, 10 percent, took all nine tracts on which they bid, ranging from north of the Arctic National Wildlife Refuge in the east to north of Pikka and the Colville River unit in the west, for a total of $757,445.86 for 19,630 acres.

Samuel H. Cade, 75 percent, and Daniel K. Donkel, 25 percent, took five tracts, 13,932 acres primarily north of ANWR and north of Point Thompson, for $350,662.27.

The single tract Armstrong took in this sale is north of Oooguruk. The bid was $75,583.60 for 1,480 acres.

Douglas A. Barr, 75 percent, and Daniel K. Donkel, 25 percent, took a single tract, 2,560 acres, for $64,025.60.

Repsol big bidder

The big bidder of the day was Repsol E&P USA Inc., which took all 45 tracts on which it bid in the North Slope sale for $14,779,488, a total of 67,040 acres, an average of $220.46 an acre, compared to the overall sale average of $110.97 per acre. Repsol accounted for 74 percent of the apparent high dollar bids and 37 percent of the sale acreage.

Armstrong Energy LLC, which partners with Repsol on the North Slope, took 49,120 acres in the sale for $1,452,004.80, an average of $29.56 per acre, for 2.4 percent of the sale volume and 9.6 percent of the acreage. Another 88 Energy subsidiary, Regenerate Alaska Inc., took 15,520 acres for $902,336, $58.14 per acre. The two subsidiaries combined accounted for $1.3 million of the apparent high bids, some 32,800 acres in the sale.

ConocoPhillips Alaska was apparent high bidder on 15,360 acres for $1,856,563.20, an average of $120.87 per acre.

see LEASE SALE page 15

PENTEX PURCHASE

Energy Project. AIDEA had previously approved the Pentex sale but some modifications were subsequently made to the sale documents before the IGU board would agree to the purchase. The AIDEA board was scheduled to decide on whether to approve the revised sale terms on Dec. 7, after Petroleum News went to press.

Assuming that AIDEA approves the revised terms of the sale, IGU and AIDEA will proceed to conduct various actions needed to close the deal. Closure is to take place by May 31.

The concept behind the deal is that, through the Pentex purchase, IGU will be able to combine with FNG as a single gas utility, supplying natural gas to consumers in the Fairbanks region. The gas will be delivered to Fairbanks by truck as LNG from the Cook Inlet basin. The objective of the IEP is to facilitate a supply of clean, affordable energy for the Fairbanks region.

IGU is purchasing Pentex using long-term AIDEA financing, with the payment from IGU returning into a revolving fund that AIDEA is to use to purchase Pentex in 2015.

AIDEA has expressed its satisfaction with the IGU decision.

“After more than 11 months of in-depth due diligence and negotiations, we are now much closer to fulfilling the goals of the Interior Energy Project,” said AIDEA Board Chairman Dana Pruhs. “The AIDEA Board looks forward to final consideration of the financing package that will create a unified gas utility under local control.”

—ALAN BAILEY

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AGDC QUESTIONS

Except here legislators could — and did — ask a lot of questions, particularly the Republican members of the committees, about issues including netback to producers on the North Slope, the process being used to move the project forward and the deal with China.

House Resources co-Chair Andy Josephson, D-Anchorage, pointed to the importance of some potential advantages and asked the opportuni- ty to commend AGDC for its work, say- ing he sees some real success and noting that the administration cares a lot about the project and has worked very hard on it.

Meyer said AGDC is continuing to mar- ket the Alaska LNG process and was in the process of signing a letter of intent with Tokyo Gas Co. Ltd. On Dec. 5 AGDC issues a press release on the signing of that letter of intent.

“Alaska is a trusted source of LNG,” said Michael H. Hirose, president of Tokyo Gas. For more than 40 years LNG ship- ments went to Japan from the Nikiski plant.

Meyer said in the press release that the

LoI signifies the continuation of this decades-long relationship between Alaska and Tokyo Gas Co., Ltd., and helps round out the sales volumes from the Alaska LNG Project.

The China deal

In discussing the China deal with legis- lators, Meyer noted that it envisions that 75 percent capacity in the Alaska LNG project would be taken by China, which would pay for that capacity with U.S. trade debt.

AGDC would have the remaining 25 per- cent capacity for in-state use and for sale into regional Asian markets, with a focus on Korea and Japan.

Meyer told legislators AGDC believed

crossing plant and the LNG facility at Nikiski — you get a contractor competent to do the work and they do FEED as part of the lump sum turnkey; that is why, Meyer said, a number of Gulf Coast projects are already in operation.

Netback

There were also a number of questions around the concept of netback — pricing based on competing in Asia with a target of landing LNG there at $8 per million Btu. With shipping at 85 cents per million Btu, that means LNG at Nikiski has to be at $7.20, and subtracting operating and main- tenance estimated at $1.45 per million Btu, debt service of $3.60 and payments to equi- ty owners at $1.15 leaves a netback of $1 on the North Slope.

Meyer said netback is common, that it is only in the Lower 48 where you start with price. Other projects are based on netback because they are selling into a competitive market and are left with what’s left over. He said producers deal with netback all over the world and that it is standard for stranded gas.

Meyer said AGDC has had conversa- tions with the producers and they have seen the presentation. Everyone wants more, he said of how the $8 would be divided, but no one has said it isn’t acceptable, none of the producers have said this doesn’t work.

But, he said, AGDC will have those dis- cussions and finalize those agreements.

—KRISTEN NELSON

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EXPLORATION & PRODUCTION

DGGS make more seismic data available

Alaska’s Division of Geological and Geophysical Services has announced the availability of data from four 3-D seismic surveys shot on Alaska’s North Slope and the nearshore waters of the Beaufort Sea. There are two surveys from Harrison Bay, while the onshore surveys consist of the Nanuq South and Storms surveys. The survey data is issued by the DGGS Geologic Materials Center and can be obtained via the GMC website.

The data come from surveys conducted with funding assistance through state oil production tax credits. Under the terms of the credits companies carrying out the surveys had to provide the survey data to the Alaska Department of Natural Resources, with the data then becoming available to the public after 10 years. DNR has been collating and compiling the massive amount of data submitted and has already released several datasets through the GMC.

—ALAN BAILEY

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LEASE SALES

acre, 9.3 percent of apparent high bid dollars for 8.6 percent of acreage.

Smaller entities, without North Slope operations, accounted for the remainder of the sale.

Third largest

In a statement after the sale the Alaska Department of Natural Resources said that ranked by dollar amount the North Slope sale was the third largest since areawide sales began in 1998. DNR said that by aver- age bid amount, some $110 per acre, the sale is the state’s largest since the areawide sales began.

Gov. Bill Walker said the sale results were another indication that the state is attractive to investors. “I am particularly pleased to see Repsol E&P adding to its promising North Slope portfolio and showing strong interest in exploration south of its existing leases in the Pikka Unit,” the gov- ernor said.

DNR Commissioner Andy Mack noted the level of competition in the lease sale. “The surge of interest from companies that have been exploring on our lands over the last decade indicates a positive direction for the oil industry on the North Slope,” he said.

“Today’s results are stronger than we expected,” said Division of Oil and Gas Director Chantal Walsh. “On state lands, companies have already leased many of the available tracts. And yet for what acreage was available, we received extremely com-
data from the International Energy Agency, global oil supply and demand were approximately in balance in mid-November, with OPEC countries accounting for around one-third of the supply.

In announcing the outcome of its November conference, OPEC said that global economic growth expectations had increased and that oil demand has been robust, growing to more than 1.5 million barrels per day currently and into next year. This demand figure appears substantially higher than EIA’s reported worldwide demand level for mid-November.

Oil market rebalancing

OPEC also said that rebalancing of the oil market had gathered pace, with the overhang in oil stocks in the countries of the Organization for Economic Cooperation and Development halving since May to some 140 million barrels. The volume of crude oil being held in floating storage has also dropped substantially, OPEC said.

Because, in particular, of uncertainties in future supply levels, but also because of some uncertainty over demand growth, OPEC said that in June it will consider further adjustments to its policy, based on prevailing market conditions and progress in the rebalancing of the oil market.

OPEC’s reference to supply uncertainty presumably refers in particular to U.S. shale oil, a commodity that has become a fulcrum player in the global oil market. With the flexibility to move production up and down relatively easily in response to market signals, shale oil could place boundaries around the range of price movement, pushing up supply levels as the price climbs. On the other hand, buoyant shale oil production also depends on the willingness of investors to put money into shale oil development. At the same time, shale oil development and production have been becoming increasingly efficient, driving down production costs.

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ANWILCA

The term “1002 area” refers to section 1002 of the Alaska National Interests Lands Act, the statute that established ANWR in its current form. Recognizing the oil and gas potential of the coastal plain, ANILCA deferred a decision on whether to allow the opening of a defined area of the coastal plain for oil and gas development. Under the terms of the statute, only Congress can authorize the opening of the 1002 area.

There have been multiple attempts over the years to have Congress and the president pass legislation that would open the 1002 area. The current effort involving the placement of ANWR language in the budget bill appears to be the most likely to succeed — presumably President Trump would sign the legislation if it is passed by both the House and the Senate.

The U.S. Fish and Wildlife Service, a bureau within the Department of the Interior, manages ANWR and maintains a conservation plan for the refuge. The current plan, published in 2015 under the Obama administration, does not envisage oil and gas exploration in the refuge and, in fact, had requested Congress to designate the entire refuge, including the 1002 area, as wilderness. Congress has not made that declaration, but presumably Fish & Wildlife would need to make plan changes and undertake some form of environmental review process before conducting oil and gas lease sales, or allowing exploration activities, in the refuge.