



**page 2** President signs tax bill opening ANWR for leasing, exploration

## This week's Mining News

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Compiled by Shane Lasley

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Trump executive order calls for an American critical minerals strategy

**Ucore hails critical minerals EO**  
Ucore Rare Metals Inc. Dec. 22 said President Donald Trump's executive order to ensure reliable supplies of critical minerals is a fundamental policy shift that is important to the company and its Baklan Mountain rare earth elements project in Southeast Alaska.

**Alaska's critical mineral potential**  
The Trump Administration's focus on securing domestic sources of critical minerals could help reinvigorate mineral exploration and mine development in Alaska.

**State certifies North Tarn No. 1A well and approves plan of development**  
The state has certified the North Tarn No. 1A well and approved an associated plan of development for bringing the Southern Miluveach unit into production by early 2019.

Trump executive order calls for an American critical minerals strategy. Read more in North of 60 Mining News, page 5.

## State, Exxon reach agreement on Point Thomson expansion plan

The state and ExxonMobil have reached agreement on the company's expansion plan of development for the Point Thomson unit. In August the state accepted the company's POD for the initial production system but rejected the expansion project plan.

In an Aug. 29 letter rejecting the expansion project planning portion of the POD, Division of Oil and Gas Director Chantal Walsh cited conditions which ExxonMobil discussed for moving ahead with expansion project planning and also a lack of details.

The expansion plan proposal includes building facilities, see **POINT THOMSON** page 10

## AOGCC issues Nikaitchuq North exploration well drilling permit

The Alaska Oil and Gas Conservation Commission has issued a permit for Eni US Operating Co. Inc. to drill the Nikaitchuq North No. 1 offshore exploration well.

The drilling permit issued on Dec. 8 covers a directional exploration well heading north and involving four state leases — ADL 388571, ADL 388574, ADL 388583 and ADL 391283 — plus the federally managed waters of the Arctic Outer Continental Shelf. The federal Nikaitchuq North leases lie in the Harrison Bay Block 6423 unit to the north.

Eni is using Doyon Rig 15 to drill the extended-reach well from the existing drill site on Spy Island. The company expects the 35,000-foot well to take between 70 and 80 days.

see **ENI PERMIT** page 11

### EXPLORATION & PRODUCTION

# Upping of estimates

Interior publishes new oil & gas assessments for NPR-A & Beaufort Sea

By **ALAN BAILEY**  
Petroleum News

The U.S. Department of the Interior has announced the release of new assessments of technically recoverable undiscovered oil and gas resources in the National Petroleum Reserve-Alaska and the Beaufort Sea outer continental shelf. Based on a re-evaluation of the resource potential of the Nanushuk and Torok formations, the rock units associated with major recent oil discoveries in the region, the assessments indicate a much higher oil and gas potential in the region than previously thought.

The new USGS assessment for NPR-A involves six new Nanushuk and Torok plays or assessment units.

### Dramatic uptick

Essentially, the government scientists have reassessed the potential of the Nanushuk and Torok, while leaving the assessments for other rock units unaltered from assessments conducted in earlier years. However, given that the last assessment for

see **NEW ESTIMATES** page 9

### EXPLORATION & PRODUCTION

# Mustang moving forward

State certifies North Tarn No. 1A well and approves plan of development

By **ERIC LIDJI**  
For Petroleum News

The state has certified the North Tarn No. 1A well and approved an associated plan of development for bringing the Southern Miluveach unit into production by early 2019.

By certifying the well as capable of producing in paying quantities, the state Division of Oil and Gas has given operator Brooks Range Petroleum Corp. a pathway to preserve the Southern Miluveach unit and its leases until the beginning of sustained oil production.

Without the certification, the Southern Miluveach unit would have expired at the end of this year and its

*“But if, for instance, BRPC delays the module installation and the unit sits untouched for many months, the Division might conclude that BRPC has ceased operations and the unit would automatically terminate.” —Division of Oil and Gas Deputy Director James B. Beckham*

leases would have retroactively reached the end of their primary terms.

BRPC drilled the North Tarn No. 1A sidetrack in April 2011, before the formation of the unit. The see **WELL CERTIFIED** page 12

### UTILITIES

# Consolidated power

Anchorage mayor proposes sale of ML&P to Chugach Electric Association

By **ALAN BAILEY**  
Petroleum News

Anchorage Mayor Ethan Berkowitz is proposing the sale of municipality-owned electric utility Municipal Light & Power to Chugach Electric Association. The result would be a single, consolidated utility in Anchorage, serving the city's electricity consumers. The idea is to achieve long-term cost savings and efficiencies by eliminating the duplication of functions and through the more efficient use of resources such as hydropower. The plan is to ask voters for approval of the sale by putting the proposal on the upcoming municipal ballot in April.

*One specific benefit that ML&P customers can expect to see is the areawide implementation of the smart metering that Chugach Electric has already put in place for its existing customers, enabling customers to monitor the details of their electricity usage, Thibert said.*

tous because a lot of people over a long period of time have worked hard to get us to this point,” Berkowitz told reporters during a Dec. 21 press conference.

“This has been a long time in coming. This has see **ML&P SALE** page 10

## ● GOVERNMENT

# President signs tax bill opening ANWR

Statute requires two oil and gas lease sales within 10 years in the 1002 area of the refuge coastal plain; limits surface impact

By **ALAN BAILEY**  
Petroleum News

On Dec. 22 President Trump signed into law House Resolution 1, a major overhaul of the U.S. tax system, which also includes provisions opening the coastal plain of the Arctic National Wildlife Refuge for oil and gas exploration and development. The bill marks the end of a decades long effort to have Congress open the ANWR coastal plain to oil and gas, under the terms of the Alaska National Interest Lands Conservation Act. Section 1002 of this act allows oil and gas activities in a specified area of the coastal plain, if Congress passes a statute approving the opening. HR 1 meets that statutory requirement.

## Highly prospective

The so-called 1002 area is thought to be highly prospective for oil and gas. And, being on the coastal plain of the North Slope, not too distant from existing infrastructure, development could presumably be economically viable. The statute that has now been passed limits surface development to just 2,000 acres, the assumption being that modern directional drilling could access a much larger area of the subsurface. However, with seismic data for the region being limited to old, relatively sparse, 2-D seismic, new seismic surveying would presumably be needed to identify potential drilling targets, especially in the more western part of the region where the subsurface rock strata are relatively undeformed.

The statute requires the secretary of the U.S.

Department of the Interior to hold at least two areawide lease sales within 10 years, with the first sale taking place within four years and the second within seven years. Each lease sale must encompass at least 400,000 acres, including areas with the highest potential for hydrocarbon discoveries.

Federal management of the oil and gas program will be subject to the same statutes and regulations as those that apply to the National Petroleum Reserve-Alaska. The royalty rate for oil production from ANWR will be 16.67 percent, with 50 percent of the royalties going to Alaska and the remainder to the federal government. The statute also requires the secretary of the Interior to issue any necessary rights of way for access across the ANWR coastal plain for oil and gas related activities.

## Alaska delegation delighted

U.S. Sen. Lisa Murkowski, R-Alaska, who wrote the ANWR language in HR 1, appeared behind the president on the steps of the White House following the signing of the bill. Murkowski had previously commented that the new statute was “an opportunity for Alaskans that will bring many bright days into the future.”

Other members of the Alaska congressional delegation, all of whom have been staunch supporters of the legislation, also expressed their delight at the bill’s passage.

“For decades, Alaskans have fought for the right and opportunity — against an unwilling federal government



DONALD TRUMP

*The statute that has now been passed limits surface development to just 2,000 acres, the assumption being that modern directional drilling could access a much larger area of the subsurface.*

— to allow Alaska to develop the 1002 Area of the Arctic National Wildlife Refuge so that we can strengthen our communities and build a better life for our children,” said U.S. Sen. Dan Sullivan, R-Alaska. “But for decades, we’ve been denied that right. Today that has changed. I want to thank all of the hundreds — if not thousands of Alaskans — who have spent countless hours over the years to get this done.”

“This is a historic moment for Alaskans and I am incredibly proud of the work this delegation has done over the years to open the 1002 Area of ANWR,” said Congressman Don Young, R-Alaska. “Congress specifically set aside this land to be used for responsible resource development and it was always intended to unleash America’s potential energy production.”

## ASRC satisfaction

Arctic Slope Regional Corp., the Native regional corporation for the North Slope, expressed its satisfaction with the passage of the legislation.

“This is a very important milestone for ASRC as well as our region”, said Rex A. Rock Sr., ASRC president and CEO. “Unlocking the energy potential of a small portion

see ANWR page 4

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• PIPELINES & DOWNSTREAM

# Cook Inlet tariff, pipeline, storage issues

By **KRISTEN NELSON**  
*Petroleum News*

Recent filings with the Regulatory Commission of Alaska address pipeline, tariff and storage issues in the Cook Inlet area of Southcentral Alaska.

Kenai Beluga Pipeline, a Harvest Alaska subsidiary, has applied to RCA for permission to temporarily suspend natural gas transportation service on the Kasilof Extension of the former Kenai-Kachemak Pipeline, now owned and operated by KBPL.

The Division of Oil and Gas terminated the Kasilof unit agreement Oct. 17, 2016, and the lease for the Kasilof production pad expired Jan. 31, 2017.

In a notice of the application RCA said KBPL stated in its application that the Kasilof production pad is no longer in service.

“There are currently no other projects in the area that might use the Kasilof Extension,” KBPL said. “The Kasilof Extension may be needed for future projects, but such projects are not likely to arise for several years or more.”

The company said maintenance crews will continue to monitor and maintain the Kasilof Extension “so it can be restarted quickly if and when a future project arises which requires natural gas transportation in the area.”

Harvest Alaska has applied for two tariff increases, one

for the Swanson River Oil Pipeline and one for the Cook Inlet Pipe Line from Granite Point or Trading Bay to the Drift River Terminal.

On the Granite Point/Trading Bay to Drift River line, the request is for an increase to \$4.59 per barrel from the current \$3.35 per barrel.

Glacier Oil & Gas, identifying itself as the only shipper on the line other than CIPL’s upstream affiliate (Hilcorp Alaska), has requested that RCA suspend the requested tariff increase and “investigate fully Harvest’s justification for the various elements that make-up the proposed rate” in the tariff. Glacier notes that Harvest has said it will permit and construct a pipeline across Cook Inlet, and said as Harvest “undertakes this significant infrastructure development project and the resulting change in service, understanding the complexities of the parent-subsidiary relationship and how cost are allocated between the two is essential to forming a baseline for future rate-making associated with that significant change in service.”

Harvest’s proposed tariff increase for the Swanson River Oil Pipeline is from 42 cents per barrel to \$3.04 per barrel. In its application the company told RCA: “The major reasons for the increase are lower volumes, the costs arising from the full integration of SROP into the Harvest Alaska, LLC pipeline inspection and maintenance program, and the full allocation of costs that were not included in the previous 42 cents per barrel settlement rate.”

Enstar Natural Gas Co. has applied to RCA for a change in a cost element for its gas cost adjustment relating to its firm storage service agreement with Cook Inlet Natural Gas Storage Alaska. RCA said Enstar and CINGSA have an agreement to amend Enstar’s firm storage service agreement to increase its maximum daily withdrawal quantity. Enstar is requesting that RCA approve the revised cost element with the same effective date as the proposed amendment, Feb. 1, 2018.

Enstar recovers CINGSA firm storage service reservation and capacity fees through its gas cost adjustment. Enstar is proposing to increase its maximum daily withdrawal quantity from 91,000 mcf per day to 102,900 mcf per day.

Enstar told RCA the increase will help it “ensure reliable peak day supplies for all gas sales customers” served under its tariff.

Enstar said the change will address costs associated with peak deliverability — adequate natural gas on the coldest days — and compared the cost of increasing its maximum daily withdrawal quantity, estimated at \$1.13 million per year, with the \$3 million it pays currently for an annual needle peak call option which allows it to purchase up to an additional 20,000 mcf per day on up to 25 days. ●

Contact *Kristen Nelson*  
at [knelson@petroleumnews.com](mailto:knelson@petroleumnews.com)

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## EXPLORATION & PRODUCTION

### DGGS reports on oil stained sandstone

Alaska's Division of Geological and Geophysical Services has published a report describing a new discovery of oil-stained rock in Jurassic strata near Tuxedni Bay, on the west side of Cook Inlet. The discovery provides more tantalizing evidence for the presence of oil in Mesozoic rocks of the region. The producing oil fields of northern Cook Inlet all have reservoirs in younger rocks that are Tertiary in age, although the oil is understood to have originated in a Jurassic source rock in the Mesozoic.

Early oil exploration in the region targeted the Mesozoic on the west side of the more southerly part of the inlet, but no commercial oil discoveries were made. The Iniskin Peninsula, immediately south of Tuxedni Bay, became a particular focus of that exploration.

The new discovery of oil staining, made during DGGS-led geologic field work in the summer of 2017, was in the Tonnie siltstone member within the middle Jurassic Chinitna formation. The geologists observed petroliferous rocks with a thickness of 35 meters over a lateral extent of at least 250 meters.

"The scale of this exposure is at least two orders of magnitude greater in area than any of the previously discovered oil-stained outcrops in the Iniskin-Tuxedni Bays area," the DGGS report says.

The oil may have been trapped in sands within the Tonnie by muddy sediments that envelope the sands, the report says.

—ALAN BAILEY

## GOVERNMENT

### State to release more exploration data

On Dec. 20 Alaska's Division of Oil and Gas announced that within 30 days it would release for public access more exploration data obtained under the terms of state oil and gas production tax credits. Companies making use of tax credits in support of exploration activities have had to file resulting exploration data with the division, with the data becoming publicly available after specific time intervals.

In this new data release, the state is making available a 3-D seismic survey shot by Veritas DGC Land on the coast and in nearshore waters of the Beaufort Sea, immediately north of the Prudhoe Bay unit on the North Slope. Also from state waters of the Beaufort Sea come some reprocessed 2-D seismic data and data from an ocean bottom geotechnical study near Cross Island. The state is also releasing data from a geological field program in the central and southern part of the National Petroleum Reserve-Alaska.

Data released by the division can normally be obtained through the Division of Geological and Geophysical Surveys' Geologic Materials Center.

—ALAN BAILEY

## EXPLORATION & PRODUCTION

### US drilling rig count rises by 1 to 931

The number of rigs drilling for oil and natural gas in the U.S. rose by one the week ending Dec. 22 to 931.

That exceeds the 653 rigs that were active this time a year ago.

Houston oilfield services company Baker Hughes reported that 747 rigs were drilling for oil (unchanged from the previous week) and 184 for natural gas (up one).

Among oil- and gas-producing states, New Mexico gained four rigs, and North Dakota added one. Texas and Wyoming each lost two rigs, and Oklahoma lost one.

Alaska, Arkansas, California, Colorado, Kansas, Louisiana, Ohio, Pennsylvania, Utah and West Virginia were unchanged.

The U.S. rig count peaked at 4,530 in 1981. It bottomed out in May of 2016 at 404.

—ASSOCIATED PRESS

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<b>Kay Cashman</b>	EXECUTIVE PUBLISHER & FOUNDER
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<b>Forrest Crane</b>	CONTRACT PHOTOGRAPHER
<b>Renee Garbutt</b>	CIRCULATION MANAGER

**ADDRESS**  
P.O. Box 231647  
Anchorage, AK 99523-1647

**NEWS**  
907.522.9469  
publisher@petroleumnews.com

**CIRCULATION**  
907.522.9469  
circulation@petroleumnews.com

**ADVERTISING**  
Susan Crane • 907.770.5592  
scrane@petroleumnews.com

**FAX FOR ALL DEPARTMENTS**  
907.522.9583

*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. 53 • Week of December 31, 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.

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## ANWR

of ANWR's coastal plain means economic growth for Kaktovik, and economic revitalization for our North Slope communities as well as the rest of the state."

However, some from the Alaska Native communities have expressed concern at the potential impact of oil and gas activities on the ANWR coastal plain. In particular, the Gwich'in people of the Alaska Interior worry about the potential impact on the Porcupine caribou herd, a primary subsistence resource for Interior communities.

### Environmentalist opposition

And protecting ANWR from industrial

activity has become a prime objective of environmental organizations, which argue that oil and gas development poses an unacceptable risk to the region's wildlife and fragile ecosystem.

"Today truly is a dark day for wildlife conservation, and it is a deep betrayal of the will of the American people," said Jamie Rappaport Clark, president and CEO of Defenders of Wildlife, following final passage of the bill. "But even following this irresponsible vote, the fight to save the Arctic is not over. Defenders of Wildlife and our supporters are committed to saving this irreplaceable wilderness." ●

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at abailey@petroleumnews.com



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## NEWS NUGGETS

Compiled by Shane Lasley



Rare earth element salts derived from a solution sourced from Ucore Rare Metals' Bokan Mountain project in Southeast Alaska.

### Ucore hails critical minerals EO

Ucore Rare Metals Inc. Dec. 22 said President Donald Trump's executive order to ensure reliable supplies of critical minerals is a fundamental policy shift that is important to the company and its Bokan Mountain rare earth elements project in Southeast Alaska.

The executive order signed by Trump on Dec. 20 instructs federal agencies to identify and publish a list of critical minerals, and develop a strategy to reduce the United States' reliance on other countries to supply them. The order acknowledges that continued reliance on foreign nations such as China for a critical supply of minerals is dangerous and jeopardizes the United States' technological superiority and military readiness.

"This EO represents a turning point in US critical mineral policy, and a sea change in thinking from the past 30 years," said Ucore President and CEO Jim McKenzie. "It portends the dropping of unnecessary and duplicative regulatory barriers, the opening of capital markets to mining investment, and the US government finally embracing the link between critical materials and national security."

The U.S. Geological Survey Dec. 19 published a report that identifies 23 critical minerals. Rare earth elements are included on this list of minerals considered essential to the economic and national security of the United States.

While their high-tech applications make them vital to the wellbeing of the United States, the fact that more than 90 percent of the nation's rare earths come from China elevates their status to critical.

Ucore's Bokan Mountain project at the southern tip of Prince of Wales Island in Southeast Alaska has been identified as a potential domestic source of rare earths.

A preliminary economic assessment completed for Bokan envisions a 1,500-metric-ton-per-day mining operation that would churn out 2,250 metric tons of rare earth oxides annually during the first five years of full production. This yearly supply included some of the more critical REEs such as 95 metric tons of dysprosium oxide, 14 metric tons of terbium oxide and 515 metric tons of yttrium oxide.

With the technical expertise of Utah-based IBC Advanced Technologies Inc., Ucore is also pioneering the use of molecular recognition technology to separate the 16 individual REEs, elements usually found together but are notoriously hard to separate.

SuperLig-One, a pilot plant using this technology, a successfully separated rare earths from a solution derived from Bokan Mountain and is being applied to non-conventional sources

see NEWS NUGGETS page 7

## PUBLIC POLICY

# Critical minerals order

Trump executive order calls for an American critical minerals strategy

By SHANE LASLEY

Mining News

Following a U.S. Geological Survey report that identifies 23 minerals critical to the economic wellbeing and security of the United States, President Donald Trump issued an executive order calling on federal agencies to devise a strategy to ensure America has reliable supply of these critical minerals.

"It shall be the policy of the federal government to reduce the nation's vulnerability to disruptions in the supply of critical minerals, which constitutes a strategic vulnerability for the security and prosperity of the United States," reads the executive order signed by Trump on Dec. 20.



DONALD TRUMP

Interior Secretary Ryan Zinke welcomed the focus on domestically sourcing critical minerals and the added tasks the executive order puts on Interior agencies, such as the USGS.



RYAN ZINKE

"The nation was largely built on the products produced from its mineral deposits," he said. "The future will also be built on a foundation of minerals, many of which will continue to be discovered and produced from across the country."

### Critical minerals defined

The terms critical minerals and strategic minerals were first used in the United States during World War I. Over the ensuing century, however, the definitions of these overlapping terms have been somewhat subjective and has been interpreted differently by various agencies and individuals depending on their individual priorities.

USGS now considers strategic minerals a subset of critical minerals and has established criteria to determine which minerals should be considered critical.

In an 862-page report, "Critical Mineral Resources of the United States – Economic and Environmental Geology and Prospects for Future Supply", the federal geological department defines critical minerals as non-fuel minerals or mineral materials essential to the economic and national security of the United States; vulnerable to supply chain disruptions; and serve an essential function in the manufacturing of a product, the absence of which would have significant consequences for the U.S. economy or security.

With this definition, the USGS has identified 23 critical minerals – antimony, barite, beryllium, cobalt, fluorite or fluorspar, gallium, germanium, graphite, hafnium, indium, lithium, manganese, niobium, plat-



Thick rare earth element bearing veins at Ucore Rare Metals' Bokan Mountain project in Southeast Alaska.

### Alaska's critical mineral potential

The Trump Administration's focus on securing domestic sources of critical minerals could help re-invigorate mineral exploration and mine development in Alaska.

At least 15 of the 23 critical minerals identified by the U.S. Geological Survey – antimony, barite, beryllium, cobalt, fluorspar, gallium, germanium, graphite, indium, platinum group elements, rare earth elements, rhenium, tantalum, tellurium, tin and vanadium – are found across the Far North state.

Working alongside the Alaska Division of Geological & Geophysical Surveys, USGS

see MINERAL POTENTIAL page 6

inum group elements, rare earth elements, rhenium, selenium, tantalum, tellurium, tin, titanium, vanadium, and zirconium.

"For a number of these commodities – for example, graphite, manganese, niobium, and tantalum – the United States is currently wholly dependent on imports to meet its needs," according to the USGS report.

### Critical minerals strategy ordered

Trump's critical minerals executive order instructs Secretary Zinke, in coordination with Secretary of Defense James Mattis, to identify and publish a list of critical minerals, and develop a strategy to reduce the United States' import reliance for these increasingly important ingredients to modern personal and military devices.

Within six months of establishing the critical minerals lists Trump wants a report that includes:

- a strategy to reduce the Nation's reliance on critical minerals;
- an assessment of progress toward developing critical minerals recycling and reprocessing technologies, and technological alternatives to critical minerals;
- options for accessing and developing critical

see CRITICAL MINERALS page 7

## NORTHERN NEIGHBORS

Compiled by Shane Lasley



PRETIUM RESOURCES INC.

Achieving commercial production at its Brucejack Mine in July, Pretium Resources has now applied to increase the capacity of the northwestern B.C. high-grade gold operation roughly 40 percent.

### Pretium applies for Brucejack expansion

Pretium Resources Inc. Dec. 21 announced plans to increase the production at its Brucejack gold mine in northwestern British Columbia by roughly 40 percent. The company has submitted an application to BC regulatory agencies to increase the mine's production rate to 3,800 metric tons per day.

The mill at Brucejack has a nameplate capacity of 2,700 metric tons per day. However, it has outperformed that capacity since the mine reached commercial production in July. During the third quarter, the mill processed 261,262 metric tons of ore, which equates to roughly 2,840 metric tons per day. The material processed averaged 10.5 grams per metric ton gold and recovery was 96.5 percent. As a result, the operation produced 82,203 ounces of gold and 83,233 oz of silver during the third quarter.

The application submitted by Pretium on Dec. 20, 2017 reflects a production rate increase to an annual average of 1.387 million metric tons from the currently approved 0.99 million metric tons. The approval process is expected to take approximately six to twelve months.

Pretium is currently assessing the mill upgrades required to increase the production rate. Based on preliminary engineering, the capital cost to increase the mill capacity is estimated to be less than US\$25 million and will be updated when the engineering process is complete.

### Back River gold gets review board okay

Sabina Gold & Silver Corp. Dec. 20 reported that the Nunavut Impact Review Board has issued the final project certificate for Back River, allowing the company to advance the gold mine project through the final licensing and permitting stage.

Sabina submitted the original environmental impact statement for a 3,000-metric-ton-per-day mine at Back River project late in 2015. NIRB recommended to the Minister of Indigenous and Northern Affairs Canada not to advance the project through permitting. After reviewing the recommendation, the federal regulators returned the project to NIRB for further consideration.

Answering a call for further information, Sabina provided the review board an addendum early in 2017, which led to the eventual issuance of the project certificate.

see **NORTHERN NEIGHBORS** page 7

continued from page 5

## MINERAL POTENTIAL

recently developed a geospatial tool that integrated and analyzed a massive load of geologic information and used this data to estimate the resource potential for six deposit types that host a large array of minerals, including most of those now deemed critical.

After crunching all the data, this tool turned up new and expanded areas of Alaska with the potential for these minerals that are vital to modern living but that the United States depends upon foreign countries for more than half of its supply.

"Some of the areas that showed high potential were already known, but many of these areas had not previously been recognized," explained Sue Karl, an Alaska-based USGS research geologist and lead author of the study. "Areas identified by this method that have high resource potential based on limited data indicate both understudied and underexplored areas that are important targets for future data collection, research investigations and exploration."

### Critical minerals Alaska

The geospatial tool worked particularly well for identifying new areas of Alaska to explore for rare earth elements, or REEs, a group of 16 minerals that possess unique characteristics that make them important ingredients to many high-technology devices used by both civilians and the military.

While their high-tech applications make them vital to the wellbeing of the United States, the fact that more than 90 percent of these metals come from China elevates their status to critical.

Ucore Rare Metals' Bokan Mountain project in Southeast Alaska has already been identified as one potential domestic source of rare earths and a swath of Southeast Alaska extending 200 miles northwest from Bokan is known to host additional REE prospects.

While Southeast Alaska is the best known REE hunting grounds in Alaska, USGS' geospatial tool identified eight large swaths across the northern part of the state worth checking out.

The federal and state geological agencies found that, for the most part, specialized granites containing tin, indium, tungsten, titanium, tantalum and fluorspar can be found in the same regions of Alaska that are prospective for REEs.

Tin and indium are important ingredients for architectural glass, flat screens, solar cells, semiconductors, smartphones and superconductors.

Tungsten and titanium are primarily used for high-strength metal alloys.

Tantalum is an important ingredient for automotive electronics, mobile phones, computers, and high-performance glass lenses.

Fluorspar is used to make specialty glass, ceramics, and enamelware.

Beyond the REE prospective areas, USGS' geospatial tool identified the Lost River-Kougarok region on the Seward Peninsula and a stretch of the central Brooks Range as other good places to look for the granites that host this group of critical minerals.

The geospatial tool also proved to be effective in turning up new areas of Alaska to explore for the elusive platinum group metals – platinum, palladium, rhodium, iridium and ruthenium.

The largest use for this suite of metals, especially palladium and platinum, is as a catalyst to help scrub harmful emissions from petroleum burning automobiles and petroleum refineries. These metals are also used in modern electronics, such as increasing storage on computer hard disks and as an alloy for restorative dentistry.

Platinum, palladium and rhodium are used as investments and are commonly minted into physical bars and coins.

The United States currently relies on foreign sources for about 90 percent of these critical metals.

Though an economic lode-source of PGMs has yet to be discovered in Alaska, about 650,000 ounces of these obscure metals have historically been mined from Salmon River placer deposits in the Goodnews Bay area. This region of Southwest Alaska continues to be an intriguing place to look for PGMs, according to USGS' geospatial tool.

Other areas of the state, however, show higher potential. The best known of these is the Wrangellia terrane, a distinct belt of rocks along much of the southern slopes of the Alaska Range eastward through southern Yukon and into western British Columbia.

While intriguing signs of rich deposits of PGMs are found in the Alaska portion of the Wrangellia, such as the Man property about 165 miles southeast of Fairbanks, an economic deposit has yet to

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**Petroleum**  
NEWS

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

Shane Lasley

PUBLISHER & NEWS EDITOR

Kay Cashman

EXECUTIVE PUBLISHER & FOUNDER

Rose Ragsdale

CONTRIBUTING EDITOR

Mary Mack

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Susan Crane

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COLUMNIST

Judy Patrick Photography

CONTRACT PHOTOGRAPHER

Forrest Crane

CONTRACT PHOTOGRAPHER

Renee Garbutt

CIRCULATION MANAGER

Mapmakers Alaska

CARTOGRAPHY

ADDRESS • P.O. Box 231647  
Anchorage, AK 99523-1647

NEWS • 907.229.6289  
publisher@miningnewsnorth.com

CIRCULATION • 907.522.9469  
circulation@petroleumnews.com

ADVERTISING  
Susan Crane • 907.770.5592  
scrane@petroleumnews.com

FAX FOR ALL DEPARTMENTS  
907.522.9583

Several of the individuals listed above are independent contractors

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## NEWS NUGGETS

such as REE bearing coal tailing

“With our plans for strategic metals production capabilities in Southeast Alaska and with significant strategic minerals resources at hand, Ucore is well positioned to take advantage of this executive order and its benefits,” said McKenzie.

### Pebble Mine permits submitted

The Pebble Partnership Dec. 22 submitted permit applications for the Pebble Mine project to U.S. Army Corps of Engineers, initiating the project review process under the National Environmental Policy Act.

With roughly 56.8 billion pounds copper, 70.4 million ounces gold, 3.4 billion lb molybdenum and 343.6 million oz silver in measured and indicated resource, Pebble hosts both the largest undeveloped copper and undeveloped gold resource on Earth.

While a deposit of this size lends itself to an equally world-class sized mining operation, the project submitted for permitting is relatively modest in size.

“For the Pebble team, this day has been a long time in the making and is the result of a tremendous amount of hard work. We have listened to our stakeholders, supporters, and skeptics, and are presenting a much smaller mine with enhanced environmental safeguards,” said Pebble CEO Tom Collier.



TOM COLLIER

In response to stakeholder concerns, the Pebble Partnership has also chosen not to use cyanide for secondary gold recovery and is keeping the mining infrastructure out of the Upper Talarik Creek drainage, a region noted for its salmon habitat.

While a detailed project description has not yet been published, some of the new project design elements include:

- a 20 year mine-life;
- a mine site footprint of 5.9 square miles;
- a tailings storage facility with enhanced environmental safeguards, a buttress on the embankment and segregated pyritic tailings in a separate, lined storage

see NEWS NUGGETS page 8

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## NORTHERN NEIGHBORS

Back River is now in the final regulatory and licensing phase.

“After a multi-year environmental assessment process, we are very pleased to end the year with the issuance of the final project certificate for Back River,” said Sabina President and CEO Bruce McLeod.

In conjunction with the issuance of the project certificate, Zhaojin International Mining Co. agreed to purchase 24.93 million shares of Sabina at a price of C\$2.65 per share for a total investment of roughly C\$66.1 million. Upon completion of the private placement, Zhaojin International will own approximately 9.9 percent of Sabina’s issued and outstanding common shares

on a non-diluted basis.

“We are very excited to welcome Zhaojin, a leading Chinese gold producer, as a strategic investor,” said McLeod. “This financing with Zhaojin provides Sabina with a cornerstone investor that has financial and technical resources to assist us in advancing the project to production.”

“With this capital in hand, we are currently working on finalizing plans and budgets for 2018 which will focus on de-risking the project with initial pre-construction activities as well as furthering exploration activities,” the Sabina CEO added.

According to a 2015 feasibility study, the 3,000-metric-ton-per-day mine submitted for permitting would average 198,100 ounces of gold per year over an 11.8-year mine life at a cost of US\$534 per oz. ●

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## CRITICAL MINERALS

minerals through investment and trade with our allies and partners;

- a plan to improve the topographic, geologic, and geophysical mapping of the United States and make the resulting data and metadata electronically accessible to support private sector mineral exploration of critical minerals; and

- recommendations to streamline permitting and review processes related to developing leases with the goal of enhancing the access, discovery, production and refining

of critical minerals in the United States.

Zinke, who has worked on both ends of the critical minerals supply chain, welcomed the stance taken in the executive order.

“The fact that previous administrations allowed the United States to become reliant on foreign nations, including our competitors and adversaries, for minerals that are so strategically important to our security and economy is deeply troubling,” he said. “As both a former military commander and geologist, I know the very real national security risk of relying on foreign nations for what the military needs to keep our soldiers and our homeland safe.” ●

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## MINERAL POTENTIAL

be identified here.

As part of its critical metals investigation, USGS also looked at carbonate-hosted copper deposits, which often also host the critical minerals cobalt, germanium and gallium.

Cobalt is an important ingredient of super-alloys used to make aircraft turbine engines. This application makes up nearly half of the United States’ consumption of this critical mineral.

Germanium and gallium have properties that make them important minerals in many modern applications including solar cells, infrared optics, LEDs, semiconductors and smartphones.

Bornite, a large and high-grade copper deposit that is part of Trilogy Metals’ Upper Kobuk Mineral Projects in Northwest Alaska, is one carbonate-hosted deposit with significant quantities of cobalt.

Interestingly, USGS’ geospatial tool found that almost the entire length of the Brooks Range, especially the underexplored northern slopes stretching the entire width of Alaska, is prospective for the style of copper deposits known to host cobalt, germanium and gallium.

In addition, the USGS study identified two areas of the Seward Peninsula

and a long stretch of the Wrangellia terrane as prospective for carbonate-hosted copper deposits that may have associated critical minerals.

### Narrowing the search

Overall, the geospatial tool seems to have broadened Alaska’s critical mineral potential, while narrowing the search to the hottest areas across the 663,000-square-mile minerals-rich state.

“Using this process, we have identified the potential for critical minerals in new areas such as the northern Brooks Range, and have expanded the area with potential for resources around known mineralized areas like the Seward Peninsula and east-central Alaska,” the authors of the study wrote in a summary of their findings.

For explorers seeking critical minerals, the new and under-explored areas turned up by the geospatial tool may provide enough data to unearth new deposits in areas where no one has thought to look.

The full report – complete with source information, datasets and maps – can be found under the title “GIS-based identification of areas that have resource potential for critical minerals in six selected groups of deposit types in Alaska” in the publications section of USGS’ website.

—SHANE LASLEY

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907-522-4664

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## NEWS NUGGETS

facility;

- a power plant fueled by natural gas from a pipeline extending from the Kenai Peninsula across Cook Inlet to the Project site with compressor stations on the Kenai Peninsula and at a port facility to be constructed at Amakdedori on the west side of Cook Inlet;
- an 83-mile transportation corridor from the mine site to a year-round port site located on Cook Inlet at Amakdedori that includes a 30-mile road from the mine site to a ferry terminal on the north shore of Iliamna Lake, an 18-mile lake crossing utilizing an ice breaking ferry to the south shore of Iliamna Lake, and a 35-mile private double-lane road to the Amakdedori Port; and
- spur roads from the transportation corridor to the communities of Iliamna, Newhalen and Kokhanok.

Collier said the permitting process is the correct place to evaluate an important Alaska asset such as Pebble.

"The Pebble resource is on state of Alaska land and could generate hundreds of millions in annual economic activity for Alaska as well as generating revenues for state and local governments. It could also provide much needed year-round jobs for Southwest Alaska. As such, all Alaskans have a stake in knowing whether we can safely and responsibly operate a mine at Pebble and the place to determine this is through the rigorous permitting process," said Collier.

Once the Army Corps of Engineers has determined the sufficiency of Pebble's application package, the Pebble Partnership will publish a detailed project description on its website.

The submission of permit applications to develop a mine at Pebble completes the three major milestones Northern Dynasty Minerals Ltd., owner of the Pebble Partnership, set out to achieve this year.

"At the outset of 2017, we established three ambitious corporate objectives for Northern Dynasty and the Pebble



Core from drilling through the thick layers of high-grade graphite at the Graphite Creek project in western Alaska.

Project," said Northern Dynasty President and CEO Ron Thiessen. "We committed to reaching a resolution with the US Environmental Protection Agency to restore the Pebble Project to normal course permitting, to re-partnering on the Pebble Project and to initiating permitting under NEPA. As we approach the end of the year, I'm proud to report that we will hit our mark on all three important milestones."

### Critical Graphite Creek awareness

Graphite One Resources Inc. Dec. 21 said a U.S. Geological Survey report on critical minerals of the United States and an executive order to develop a federal critical mineral's strategy highlights the importance of the company's Graphite Creek project in western Alaska.

The USGS report lists graphite among the 23 metals and minerals critical to "the national economy and nation-

al security of the United States." Additionally, Graphite is one of just four critical minerals on the list for which the U.S. is fully import-reliant.

"The report and President Trump's executive order track with the ongoing discussions our team has been having with key U.S. officials at the federal level and the state of Alaska, with interest far more intense now than our initial discussions five years ago," said Graphite One CEO Anthony Huston.

One of the reasons the USGS considers graphite a critical mineral is the growing demand of this mineral as anode material in the lithium-ion batteries that power electric vehicles and a rapidly expanding number of personal electronic devices.

Located about 35 miles north of Nome, Graphite Creek is the largest known deposit of graphite in North America.

Systematic drilling of only a small section of the 11 miles of known near-surface mineralization at Graphite Creek has outlined 17.95 million metric tons of indicated resource grading 6.3 percent graphitic carbon and 154.36 million metric tons of inferred resource at 5.7 percent graphitic carbon at this deposit.

The unique characteristics of the material at Graphite Creek makes it well suited for being transformed into coated spherical graphite, which is used as an anode material in the batteries of electric autos.

A preliminary economic assessment completed early in 2016 outlined plans for a mine at Graphite Creek and an off-site facility to refine the graphite that would produce 41,850 metric tons of coated spherical graphite and 13,500 metric tons of purified graphite powders annually.

"As a major graphite developer in the U.S., Graphite One is seeing a growing awareness that graphite is critical to a full range of new applications - from electric vehicle batteries and energy storage systems to defense weapons platforms," said Huston. "The USGS report makes it clear that 100 percent import dependence on graphite and other materials pose risks to the U.S. economy and national security."●

# Congratulations Fort Knox!

Kinross Gold has gained mineral rights to Gilmore, a land parcel immediately west of the open-pit at its Fort Knox gold mine near Fairbanks. With roughly 2.4 million oz of gold already identified at Gilmore, this expansion area could add roughly another five years to this iconic open-pit mine.

Kinross pays out roughly \$70 million in annual wages to its 650 Fairbanks area residents that work at the Fort Knox Mine and pays roughly \$7 million in taxes to the Fairbanks North Star Borough, making it a key contributor to the economy of Interior Alaska.

In addition to the direct jobs, the Fort Knox Mine is estimated to spur another \$50 million in wages for an estimated 650 indirect and induced jobs related to the 400,000-ounce-per-year gold operation.

Roughly another \$17 million is paid in taxes and fees to the state of Alaska and the mine spends more than \$200 million on goods and services from more than 400 private sector vendors in Alaska, making this mine an important contributor to the economic well-being of the state.

With the previously federal owned Gilmore land parcel conveyed to the state, Fort Knox will likely be able to extend these economic benefits to Interior Alaska and across the state for several more years.

Congratulations to Kinross Gold and the employees of the Fort Knox Mine!

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Sumitomo Metal Mining Pogo LLC  
Usibelli Coal Mine

*Gilmore expansion promises longer mine, good paying jobs near Fairbanks*





## ● GOVERNMENT

# BSEE halts offshore oil inspections study

By MICHAEL VIRTANEN

Associated Press

The Trump administration has halted an independent scientific study of offshore oil inspections by the federal safety agency created after the 2010 spill in the Gulf of Mexico.

The National Academies of Sciences, Engineering and Medicine was told to cease review of the inspection program conducted by the federal Bureau of Safety and Environmental Enforcement. Established following the massive BP spill, the bureau was assigned the role of improving offshore safety inspections and federal oversight.

The order marks the second time in four months that the Trump administration has halted a study by the National Academies. In August, the Interior Department suspended a National Academies study of potential health risks for people living near Appalachian surface coal mines.

Part of the Interior Department, the Bureau of Safety and Environmental Enforcement is also tasked with

*The order marks the second time in four months that the Trump administration has halted a study by the National Academies. In August, the Interior Department suspended a National Academies study of potential health risks for people living near Appalachian surface coal mines.*

improving offshore drilling environmental protections. It was established in 2011 to separate enforcement of offshore drilling from federal revenue collection and permitting to avoid possible dysfunction and conflicts in enforcement against violations.

## New inspection component

Bureau spokesman Greg Julian said Dec. 21 a new “risk-based” component to the inspection program is being developed within the bureau, and the academies study “was paused ... to allow time to ensure that there are no duplicate efforts.” The bureau focus is increasing

the safety of offshore oil and gas operations, he said.

The Dec. 7 bureau letter ordering the suspension of all work under the contract said that within 90 days the department would decide whether to lift the order or terminate the study altogether.

“The National Academies are grateful to the committee members for their service and disappointed that their important study has been stopped,” spokesman William Kearney said Dec. 21.

The committee of scientists examining the inspection program held its only meeting in late October in Washington, D.C., Kearney said. Future meetings planned for the Gulf region have been put on hold.

The explosion of the Deepwater Horizon platform in April 2010 killed 11 people at a BP oil well site about 40 miles off Louisiana’s coast. The massive spill that followed gushed an estimated 3.1 million barrels of oil into Gulf waters before the well was capped 87 days later.

“I think this is an example of Trump demonstrating he wants to open up federal waters to more drilling at the

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## NEW ESTIMATES

the NPR-A, published in 2010, indicated a relatively low volume of undiscovered oil, the new assessment represents a particularly dramatic uptick in the expectations for oil resources in the reserve. In the Beaufort Sea, while the new assessment indicates a major increase in expectations for oil in the Nanushuk and Torok plays in the more western sector of the region, these plays represent only around 10 percent of the total resource expectation for the Beaufort Sea as a whole. Thus, the impact of the new assessment on the total estimated oil and gas resource for the Beaufort Sea is rather more modest than the impact of the new NPR-A assessment on expectations for that region.

In addition to new insights into the petroleum geology as a result of major oil finds in the Nanushuk and Torok, the new assessments have gained from access to new high-resolution 3-D seismic data. The data have enabled the identification of subtle potential oil and gas traps in the subsurface. However, as indicated by a wide range of possible oil and gas volumes, there is considerable uncertainty over how much hydrocarbon resource may actually exist undiscovered. And, given the absence of modern seismic data for the Beaufort Sea in the area of the Nanushuk and Torok plays, the scientists in the Bureau of Ocean Energy Management had to use onshore seismic to infer the potential distribution of prospects in the offshore.

The Nanushuk and Torok are in the Brookian sequence, the youngest and shallowest of the Arctic Alaska petroleum bearing rock sequences.

## The revised estimates

For the NPR-A, U.S. Geological Survey scientists now think that there may be anywhere from 1.7 billion barrels to 21.8 billion barrels of undiscovered, technically recoverable oil, with a mean estimate of 8.8 billion barrels. The corresponding figures for natural gas are 5.5 trillion cubic feet to 112.9 tcf, with a mean of 28.2 tcf. The last assessment, published in 2010, indicated a mean oil resource of 896 million barrels and a mean gas resource of around 53 tcf. The fall in the estimated gas volume results primarily from the dropping of some Brookian plays that had been thought to hold much gas.

The NPR-A assessment also suggests the possibility of 50 million to 1,439 million barrels of technically recoverable, undiscovered natural gas liquids in the reserve.

The new assessment for the Beaufort Sea, prepared by BOEM and involving a re-assessment of the western part of the region, suggests 4.4 billion to 15.4 billion barrels of undiscovered, technically recoverable oil, with a mean of 8.9 billion barrels. Estimated natural gas resources

range from 14.3 tcf to 42.2 tcf, with a mean of 27.7 tcf. The estimated mean volume of oil in the Nanushuk play has increased from 475 million barrels to 1.2 billion barrels.

BOEM’s comparison between its new assessment and the previous assessment for the Beaufort Sea, published in 2006, is expressed in terms of barrels of oil equivalent, a parameter that combines both oil and natural gas in energy equivalent terms. The boe estimate for the Nanushuk and Torok combined has increased from 693 million boe to 1,389 million boe, while the estimate for the Beaufort Sea as a whole has increased from 13,142 million boe to 13,838 million boe.

## Administration’s energy focus

The new assessments follow an order issued in May by Interior Secretary Ryan Zinke, requiring the development of a new activity plan for the NPR-A and new oil and gas assessments for Arctic Alaska. The order reflected the Trump administration’s focus on energy development and a view that Alaska is critical to achieving U.S. energy dominance. On Dec. 22 Zinke commented on the significance of the new oil and gas assessments.

“Earlier this year I visited the North Slope to talk with Alaska Natives and elected officials about what responsible energy development means for the communities and the state. The response was overwhelmingly positive and the message was clear: the path to American energy dominance starts in Alaska,” Zinke said. “Today’s updated assessment is a big step toward that goal. Thanks to the incredible work of scientists at the USGS and BOEM, we know what’s available and what our potential is.”

“Just as we have always known, this assessment shows that the NPR-A has significant potential and will remain a big part of our energy future,” said U.S. Sen. Lisa Murkowski, R-Alaska. “I thank Secretary Zinke for traveling to this area with me earlier this year, for directing USGS to update its resource assessment, and for working with Alaskans on a better plan for responsible development.”

“A frontier to many, Alaska’s North Slope is our home; It is rich with potential,” said Richard Glenn, Arctic Slope Regional Corp. executive vice president of lands and natural resources. “Any good land use and resource exploration decisions require the best available subsurface data and interpretation. I commend our colleagues on the USGS team for taking up this effort.”

## Six new plays

The new USGS assessment for NPR-A involves six new Nanushuk and Torok plays or assessment units. Each of the two formations is divided into three assessment units, based on different regions of the NPR-A: regions in the northeast, northwest and south. Together the two formations form a massive wedge of sediment

deposited in an ancient deepwater basin. The Torok, the older of the two formations, tended to be deposited on the floor of the basin and on the basin-side slope. The sands of the Nanushuk tended to be deposited in shallow water and were derived from geographic features such as ancient river deltas.

In the more northern part of the NPR-A oil pools tend to be captured in what are termed stratigraphic traps, trapping situations resulting from the juxtaposition of different sediments, based on the manner in which the sediments were deposited. Modern 3-D seismic data are proving particularly effective in locating this type of trap. The USGS scientists distinguished between western and eastern assessment units in the north, in recognition that the geometry of the basin margin to the west appears less favorable for trap formation than in the east.

In the more southerly part of the NPR-A, large scale folds and faults in the Brookian strata support the likelihood of hydrocarbons being held in structural traps, traps formed as a consequence of the folding and faulting. Moreover, in this region the thermal history of the rocks appears more conducive to the formation of natural gas than oil. Hence the recognition of distinct assessment units in both the Nanushuk and the Torok to the south.

However, the known existence of a significant oil pool in the Brookian at Umiat, on the border of the northern and southern regions, does demonstrate the potential for finding oil in a structural trap towards the south.

## Offshore plays

BOEM’s Beaufort Sea assessment involved a new evaluation of two plays in the western part of the Beaufort Sea planning area: the Nanushuk topset clinothem and the Torok turbidite clinothem plays.

The upgrade of BOEM’s expectations for oil resources in the Nanushuk stemmed in particular from new major discoveries of light oil at Willow and Pikka, onshore in the northeastern NPR-A and to the east of the Colville River delta. The use of onshore prospect distributions identified from 3-D seismic data as an analogy with what may be found offshore has significantly upped the number of prospects estimated to exist in both the Nanushuk and the Torok in the offshore. On the other hand, the agency scientists have somewhat downplayed the potential of the Torok, given a reduction in the anticipated oil recovery from the Torok in the Nanuq satellite field in the onshore Colville River unit, the new assessment says,

The dominant hydrocarbon play in the Beaufort Sea outer continental shelf remains what is referred to as the Brookian foldbelt play, a play that may hold anywhere up to 7.6 billion barrels of oil, with a mean estimate of 2.9 billion barrels, the new Beaufort Sea assessment says. ●

Contact Alan Bailey  
at [abailey@petroleumnews.com](mailto:abailey@petroleumnews.com)

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## ML&P SALE

been discussed many times over the past 40 years,” said Janet Reiser, chair of the Chugach Electric board.

### \$1 billion deal

Total payments to the municipality from Chugach Electric for the deal, including up-front payments, annual acquisition payments and payments in lieu of taxes, would amount to some \$1 billion over a 30-year period. The consequence would be payments to the municipality to replace the revenues that the municipality currently receives through its ownership of ML&P.

And the idea is to achieve the utility consolidation without loss of jobs, although the number of jobs would decline over time through attrition. The plan is also to ensure that electricity rates do not rise for consumers. In fact the municipality and Chugach Electric anticipate ultimate benefits of \$111 million to \$220 million in terms of reduced electricity rates, plus \$170 million in Chugach Electric capital credits returned to utility members, as a result of the consolidation.

“There will be no loss of employees at ML&P as a result of this,” Berkowitz said. “It will benefit taxpayers over the long haul and in the short haul. It will benefit ratepayers. It also does a lot for the municipality in terms of stabilizing the revenue picture that we’re going to have, which is very critical in terms of making sure that our economy is on a firm footing regardless of what happens at the state level.”

Lee Thibert, CEO of Chugach Electric, commented on the anticipated benefits from the consolidation.

“With a relatively small Anchorage population, two utilities really are not necessary. We can be more efficient with one utility,” Thibert said, adding that three key factors for success in the consolidation consist

of the protection of jobs at the two utilities, maintaining the necessary revenue stream for the municipality and continuing to provide the services that the community needs.

“We have met all of our goals,” Thibert said of the work that has gone into preparing the ML&P purchase proposal. “Over time we believe rates will go down for all ratepayers, both ML&P and Chugach. We believe rate savings will be in the neighborhood of hundreds of millions of dollars over the next 30 to 40 years. There will be no layoffs.”

### System unification

For many years there has been a debate over the fragmented nature of the Alaska Railbelt electrical network, with six independent utilities owning and operating various sectors of the interconnected electricity generation, transmission and distribution system, a system serving a relatively small number of customers and a modest sized load, albeit over a wide geographic area. As part of moves towards more integrated system management, Chugach Electric, ML&P and Matanuska Electric Association are already in the process of implementing procedures to make tightly coordinated use of their generation and transmission assets, to assure optimum use of the most efficient generation facilities. Presumably, the consolidation of Chugach Electric and ML&P would fit within this general move to more unified system operation.

And for some time Chugach Electric and ML&P have also been working together in projects such as the shared ownership of the new Southcentral Power Project gas-fired power station in Anchorage, and through both utilities now owning shares of the Beluga River gas field.

### Push for consolidation

The recent impetus towards consolidated ownership of the Anchorage utilities came in particular from the April recommenda-

tions of an Anchorage Economic Development Corp. working group. Those recommendations were soon followed by the Anchorage Assembly passing a resolution, directing the Berkowitz administration to investigate consolidation possibilities.

During the course of the subsequent investigation, it became evident that, because of differences in the structures of the two utilities, a merger of the utilities would not be possible, Berkowitz said — hence the proposal for the purchase of ML&P that has now emerged. Thibert said the timing of the consolidation is particularly appropriate, given that energy efficiencies and new technologies are now resulting in flat or declining electrical loads, and that the current interest rate environment is very favorable.

“We believe now is the time to move forward,” Thibert said.

### Functional unification

The aims of the consolidation include the establishment of a single headquarters complex, with all functions combined, companywide, Thibert said. Consolidation will include call centers and customer billing. There will be consolidated functions for power distribution and transmission; for warehousing; for vehicle fleet operations; and for legal, regulatory, environmental and insurance support. Other areas with scope for the elimination of duplication include participation in the oversight of some hydroelectric generation facilities and of the Alaska transmission intertie that connects the Southcentral Alaska with the Interior segment of the Railbelt grid.

Thibert also emphasized the importance of combining the two utilities’ technical and engineering expertise.

“Having one entity, we can combine all that expertise for the benefit of ratepayers,” he said.

One specific benefit that ML&P customers can expect to see is the areawide

implementation of the smart metering that Chugach Electric has already put in place for its existing customers, enabling customers to monitor the details of their electricity usage, Thibert said.

And the utility consolidation will bolster the practicalities of addressing structural changes in the electricity industry, including the increased use of renewable energy and distributed generation, he said. According to a presentation to the municipality, the utility consolidation will facilitate the integration of renewable energy sources, with, for example, less curtailment of power from the Fire Island wind farm, offshore Anchorage.

### MEA a stakeholder

Thibert also commented that Matanuska Electric Association is a stakeholder in the process for the consolidation of the two Anchorage utilities and that Chugach Electric would be conducting continuous conversations with MEA with regard to the consolidation project.

“Chugach will be working with MEA, to make sure that they’re not disenfranchised, and to make sure that there will be benefits to MEA ratepayers as well,” Thibert said.

Berkowitz commented that the Municipality of Anchorage also has obligations toward MEA ratepayers, given that some of these ratepayers live within the municipality.

Thibert said that following the municipal elections at the beginning of April, it would probably take about 60 days to complete the definitive documentation for the ML&P purchase agreement. The agreement would then need to be filed with the Regulatory Commission of Alaska around June or July for its approval. RCA approval would likely take around six months, a timeframe that would suggest that the earliest that the purchase could be completed would be January 2019. ●

Contact Alan Bailey  
at abailey@petroleumnews.com

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## POINT THOMSON

including a gas pipeline, to allow shipment of Point Thomson natural gas to Prudhoe Bay for injection there, and would also result in increased condensate production from Point Thomson. Expansion is a requirement of the settlement the Point Thomson unit owners reached with the state in 2012 which requires an expansion plan if a major gas sale has not been sanctioned by June 2016. The settlement includes options of either increasing to 30,000 barrels per day of condensate or — the option in the current expansion plan — by moving natural gas to Prudhoe Bay for injection there.

### Clarification

Cory Quarles, ExxonMobil Production Co.’s Alaska production manager, provided an extensive response to the division in an Oct. 12 letter that he described as “clarification and explanatory information in response to issues raised” by Walsh.

In a Dec. 22 approval of the revised expansion project planning POD, Walsh said the Oct. 12 letter provided new information supplementing the original POD and said the October letter “represents an amendment” to the proposed POD. It is this amended planning POD which the division has accepted.

Walsh said the division’s “primary concern” with the initial planning POD “was that it conditioned planning work on a commercial agreement and a decision to fund,” citing numerous uses of conditional language in the original planning POD.

Walsh said that in a July 12 technical meeting ExxonMobil representatives “confirmed that it intended the Planning POD to be conditional, stating that Exxon

would not proceed with Expansion Project Planning work unless the Working Interest Owners first entered a commercial agreement with the Prudhoe Bay Unit working interest owners and also decided to fund the work.”

### WIO authorization

In the revised planning POD ExxonMobil told the state it does not condition all planning work on Prudhoe Bay unit owners agreeing to delivery of gas to Prudhoe, and said engineering and permitting work is ongoing. Walsh said this was “very different” from language in the original submittal, and statements the company made to the division.

In its revised planning POD ExxonMobil said the Point Thomson unit operating agreement requires that Exxon obtain authorization from the working interest owners and said it has obtained authorization for work through the end of 2017.

The company said it had not received all necessary approvals for work required through a projected decision point at the end of 2019, and clarified the status of owner approvals and the process for receiving those approvals.

“This merely describes typical industry practice,” Walsh said in the Dec. 22 letter. “Noting the current status of Working Interest Owner authorizations is very different from the language in the initial POD, which indicated that Exxon would only complete planning work ‘if funded,’” Walsh said.

Walsh said under the revised planning POD ExxonMobil commits to proposed planning work, and if Point Thomson WIO do not fund the planning work, or if there is no commercial agreement reached with the Prudhoe WIO, “those events will not in any way absolve Exxon from fulfilling its obligation to complete the planning work promised in the Revised Planning POD.”

### Planned activities

The potential expansion would increase production to more than 50,000 barrels per day of condensate (up from the facilities’ current capacity of 10,000 bpd) and 920 million cubic feet per day of natural gas which would be shipped to Prudhoe Bay and injected there. Current production of natural gas is 200 million cubic feet per day which is reinjected to maintain pressure in the Point Thomson reservoir.

Two new production wells would be drilled from the central pad under the proposed expansion plan, and two wells, PTU 15 and PTU 16, would be converted from injectors to producers. A disposal well would also be drilled.

In the approval letter Walsh noted five expansion project activities proposed for 2017-2019: negotiating a commercial agreement to inject gas into the Prudhoe Bay unit; discussing technical alignment and scope with the Prudhoe working interest owners; FEED (front-end engineering and design) planning and execution; development of applications for federal and state permits; and preparing unspecified “deliverables.”

### Reactions to approval

The Walker administration was pleased with the decision, announcing it with a Dec. 22 press release which said the state “has approved ExxonMobil’s plan to engineer the expansion of the Point Thomson project on the North Slope,” and calling it “a positive step to achieve major gas sales and increase oil production.”

Gov. Bill Walker noted that the Alaska LNG Project has recently “been endorsed by the Trump Administration and the Chinese government.”

“Our approval of the Point Thomson to Prudhoe Bay pipeline plan adds to the momentum of the Alaska LNG

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## BSSE STUDY

expense of people on the planet,” said the Sierra Club’s Kelly Martin. “He is much more supportive of corporate polluters than protecting people’s safety.”

### BSSE decision

The Interior Department headed by Secretary Ryan Zinke declined to comment. Spokeswoman Heather Swift said it was a bureau decision to halt the study, not a department decision.

Greenpeace spokesman Travis Nichols said there is no excuse for rolling back safeguards for workers and the environment. “The Trump administration is aggressively trying to unlearn all of the lessons of the Deepwater Horizon disaster,” he said.

In August, the Interior Department’s Mine Safety and Health Administration cited budget reasons for suspending the National Academies study of potential health risks to those near Appalachian surface mines. But Kearney said Dec. 21 that other studies for the department weren’t halted. That study remains on hold though the scientific group has said it ought to be continued.

“Given how important this study is to the citizens and communities surrounding these surface mining sites in Appalachia, the National Academies believe the study should be completed and are exploring options to do so,” Kearney added. “Some private donors have expressed an interest in funding the completion of the study.” ●

—Associated Press writer Matthew Daly in Washington contributed to this report.

## INTERNATIONAL

### Iraq plans new Kirkuk-Ceyhan oil pipeline

Iraq on Dec. 24 invited companies to submit statements of interest in building a new pipeline from the northern city of Kirkuk to Turkey’s Mediterranean port of Ceyhan. The new 350-kilometer (220-mile) pipeline will carry up to 1 million barrels a day, the state-run Oil Projects Co. said. A 305-kilometer (190-mile) gas pipeline to feed pumping stations, tanks and other service installations will be included in the project, it said.

The new line will be built alongside an existing 1.6 million barrel-per-day pipeline, which runs through restive Sunni areas and has been idle since it was badly damaged by militant attacks in 2014.

Iraqi forces drove the Islamic State group from the area earlier this year, but the militants are expected to continue to launch insurgent-style attacks.

Interested companies have until Jan. 24 to submit applications for pre-qualification before receiving the final tender documents. Authorities did not provide a timeline for the project, which will be offered under a build-own-operate-transfer scheme. At least 25 percent of the project will be owned by Iraqi entities.

Iraqi forces seized the disputed city of Kirkuk from Kurdish forces in October. The Kurds, who had taken control of Kirkuk and other disputed areas when IS swept into Iraq three years ago, exported oil through their own pipeline to Turkey.

—ASSOCIATED PRESS

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## POINT THOMSON

Project and demonstrates the commitment of the Point Thomson working interest owners to move gas from Point Thomson into Alaska Gasline Development Corp.’s 800-mile pipeline,” Walker said, referring to AGDC’s proposal for AKLNG, which includes a gas treatment plant on the North Slope, an 800-mile gas pipeline to Cook Inlet and a liquefaction facility at Nikiski. Liquefied natural gas would be shipped from Nikiski, with AGDC and the state targeting Asian markets.

“It’s clear that ExxonMobil is committed to commercializing North Slope gas, particularly from Point Thomson. This helps align the company’s work in Alaska with the State of Alaska and AGDC,” said Department of Natural Resources Commissioner Andy Mack.

ExxonMobil said in a statement: “The preferred future development for the Point Thomson resource is through a major gas sales project, and ExxonMobil remains committed to making our natural gas available to the State’s LNG project through bilateral negotiations of mutually agreed terms. However, as stated in the Expansion Planning POD and consistent with the Settlement Agreement, ExxonMobil is evaluating gas injection into Prudhoe Bay as an alternative pending working interest owner approval.”

—KRISTEN NELSON

Contact Kristen Nelson  
at [knelson@petroleumnews.com](mailto:knelson@petroleumnews.com)

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## ENI PERMIT

The results of the Nikaitchuq North No. 1 well will determine whether Eni proceeds with a sidetrack this winter and a second well next winter, according to company officials.

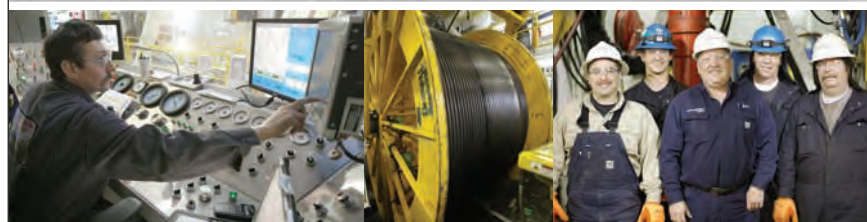
The federal Bureau of Safety and Environmental Enforcement said in a Dec. 27 release that its inspectors were on site Dec. 25 and that the well has been spud.

—ERIC LIDJI

Contact Eric Lidji  
at [ericlidji@mac.com](mailto:ericlidji@mac.com)



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## WELL CERTIFIED

company tested the well at the time but did not bring it into production.

Attempts to bring the unit into production have been ongoing ever since. But the company has been hampered in its effort by a series of technological and financial delays.

With the deadline approaching, BRPC was forced to take a new path.

### Return to North Tarn

The company returned to North Tarn No.

1A from Nov. 23 to Nov. 27, 2017, to conduct fracture stimulation and an associated flow test for the purposes of receiving certification.

Flow rates from the well “indicate high flow-capacity typical for Kuparuk C-sand with clear evidence of the fracture stimulation,” according to a Dec. 20 decision from Division of Oil and Gas Deputy Director James B. Beckham, meeting the criteria for certification.

The testing also revealed a high gas-to-oil ratio. According to Beckham, the ratio is in line with measurements taken before a previous stimulation in 2012. The ratio, he continued, is likely influenced by “excess

gas injection” on the western side of Kuparuk River Unit Drill Site 2M, which is approximately one mile east of North Tarn No. 1A.

At the 2M-37 and 2M-38 wells at the Kuparuk River unit, the gas-to-oil ratio increased until the 2M-37 was converted to water injection. The state expects a similar situation for North Tarn No. 1A. “Given the planned gas capacity for (the Southern Miluveach unit), higher oil rates could be processed, but a (gas-to-oil ratio) waiver would need to be approved by (the Alaska Oil and Gas Conservation Commission),” Beckham wrote.

### Timeline

Operators often use well certification to prevent a lease from expiring. But regulations also allow the distinction to be used to keep a unit from expiring, so long as the company is actively producing or conducting operations under an approved plan of development.

In a related decision on Dec. 20, Beckham approved the fifth plan of development for the Southern Miluveach unit. But he expressed some concern and noted that BRPC had failed to meet its work commitments in the four previous plans of development for the unit.

“BRPC’s pattern of failing to meet its work commitments is concerning because the life of the unit is now dependent on BRPC doing work,” Beckham wrote, referring to the year-end expiration date for the unit that has since been extended by well certification.

To maintain the unit, BRPC must conduct operations “on a continual, sustained

basis,” Beckham noted. “That does not mean that if there is (a) day without activity, the unit will expire. But it does mean that BRPC needs to be actively operating the unit to achieve production so that sustained production can then provide the basis for extending the unit.”

The new plan of development requires BRPC to finish installing on-pad piles in the first quarter of 2018, install Alaska-built modules between June and December 2018 and Canadian-built modules by the end of September 2018, and install cross-country pipelines and connect into the Alpine infrastructure system by the first quarter of 2019.

Even with the timetable, uncertainties remain. “If BRPC conducts these operations along the specified timelines, it will likely be sufficient to find that ‘operations are being conducted,’” Beckham wrote. “But if, for instance, BRPC delays the module installation and the unit sits untouched for many months, the Division might conclude that BRPC has ceased operations and the unit would automatically terminate. Thus, it will be critical for BRPC to timely complete the above work commitments or risk losing the unit.”

To ensure that the company is meeting its commitments, Beckham also required BRPC to provide written quarterly updates detailing the nature and date of its completed work.

BRPC is still waiting for a state decision about its request to expand the Southern Miluveach unit to include some 21,472 additional acres to the west of the unit. ●

Contact Eric Lidji  
at ericlidji@mac.com



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#### ALASKA CONTACT:

**Mike Holzschuh**  
Senior Territory Manager  
North America  
206-423-4955

1519 Ship Avenue  
Anchorage, AK 99501

Anchorage: 907-274-0477  
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