



Inlet lease sale area expanded for 2020-2028 areawide sales

The Alaska Department of Natural Resources' Division of Oil and Gas issued a decision of substantial new information and a supplemental finding Dec. 17 for the 2020 Cook Inlet Areawide Lease Sale reflecting expansion of the sale area.

The division said the addition of the Southwest Cook Inlet exploration license area, and the receipt of substantial new information concerning lower Cook Inlet in response to its request for agency information issued Sept. 10, prompted the need for a supplement to the 2018 Cook Inlet Areawide best interest finding. (See story in Sept. 15 issue.)

"Substantial new information regarding exploration activities in the vicinity of the SW Cook Inlet Area has become available through public applications, industry press releases, and technical

see **LEASE SALE AREA** page 9

Conoco files plan of ops for Fiord West Rhea-1 well, ice pad

On Dec. 16, the state Division of Oil and Gas posted a public notice for ConocoPhillips Alaska's proposed Fiord West Kuparuk East Pilot program west of the Alpine field in the North Slope Colville River unit. The project involves one well, Rhea-1, a 600 by 600 foot ice pad and 0.4 mile access ice road that will connect to the Alpine Resupply Ice Road System.

Per its Nov. 21 application, ConocoPhillips plans to conduct a vertical seismic profile at RHEA-1 using a tundra approved vibroseis vehicle, or vibe. The vibe truck will travel from the well location 1 mile to the west utilizing the 0.4 mile

see **RHEA-1 WELL** page 11

All bleak for Canadian LNG; Chevron dents hopes for Kitimat

Just as Canada seemed on the verge of achieving its dreams to create a global LNG hub it has been dealt internal and external blows.

With construction underway on the Shell-led C\$40 billion LNG Canada project and hopes building that Chevron/Woodside were close to giving final investment approval to their C\$20 billion Kitimat LNG venture two setbacks landed with a thud.

Canada's newly installed Environment Minister Jonathan Wilkinson did a full about face on the endorsement issued by his predecessor Amarjeet Sohi that the federal government believed LNG exports should count toward Canada's global greenhouse gas targets.

see **CANADIAN LNG** page 4

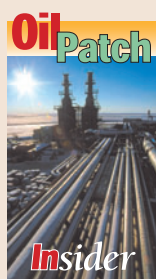
Hilcorp adds 900 Alaska workers; Goldman curbs Arctic oil lending

HILCORP ALASKA, an affiliate of Hilcorp Energy Co., said Dec. 19 that it expects to add 900-plus employees to its Alaska workforce, boosting it from approximately 500 employees to around 1,500 as it prepares to complete the acquisition of BP Alaska's upstream and midstream assets.

Nearly 90% of Hilcorp Alaska's current employees are Alaska residents.

Shortly following the acquisition announcement in late August, Hilcorp said it began a thorough review of workforce needs and close coordination with BP to ensure opportunities with it would be available to BP's local workforce.

see **INSIDER** page 10



GOVERNMENT

State approval needed

DNR describes due diligence process, says it will take as long as it takes

By **KRISTEN NELSON**

Petroleum News

There is no timeline for the state's evaluation of the proposed purchase by Hilcorp of BP's Alaska assets, announced Aug. 27, Department of Natural Resources Commissioner Corri Feige told a joint meeting of the House and Senate Resource committees Dec. 16.

The companies have said they hope to see closure in the second quarter, she said, but the state is doing a thorough review and due diligence and it will take the time it takes.

If this were a baseball game, Feige told legislators, we're in about the third inning, so it's early in the game, with the state still getting information in the



CORRI FEIGE

door. DNR's Division of Oil and Gas only received the confidential purchase and sale agreement Oct. 11, Feige said, noting that is a 400 page document.

DNR has the responsibility to approve transfer of leases, one major part of the sale of BP's Alaska assets to Hilcorp, while the Regulatory Commission of Alaska must approve transfer of BP's share of the Trans Alaska Pipeline System.

The Alaska Oil and Gas Conservation Commission and the Department of Environmental Conservation have their own approvals.

The \$5.6 billion sale covers both upstream and midstream interests.

see **BP-HILCORP TIMELINE** page 8

UTILITIES

Major steps to alignment

Electric utilities form agreements for Railbelt Reliability Council, cybersecurity

By **ALAN BAILEY**

For Petroleum News

In a major step towards a more unified approach to operating the Alaska Railbelt electrical system, the managers of the six Railbelt electric utilities have now agreed on a memorandum of understanding for the formation of a Railbelt Reliability Council, or RRC, to oversee the operation of the Railbelt electrical grid. The plan is to obtain utility board approval of the MOU by the end of the year. Also, in November the utilities announced that they had agreed on a set of cybersecurity rules that will go into effect on Jan. 1.

During a Regulatory Commission of Alaska public meeting on Dec. 11 the commissioners

The RCA involvement in the various grid unification issues dates back to a 2014 directive from the Legislature for the RCA to investigate the manner in which the Railbelt electrical system was operated.

reviewed the status of grid unification efforts while also expressing support for pending Senate Bill 123, a bill designed to give clear statutory authority for the relationship between the RCA and the RRC. The Alaska Legislature will consider SB 123 during the upcoming legislative session.

see **RAILBELT UTILITIES** page 6

EXPLORATION & PRODUCTION

Pikka oil reserves rise

Oil Search initiates sale of 15% of its 51% stake in North Slope unit, nearby leases

By **KAY CASHMAN**

Petroleum News

Oil Search received more good news about its Pikka project from an independent assessment recently completed by resource specialist Ryder Scott that boosted the development's certified gross 2C contingent recoverable oil from 500 million barrels to 728 million barrels, a 46% increase. The Pikka unit is west of Alaska's central North Slope.

According to a Dec. 18 Oil Search Ltd. material progress report, the Ryder Scott estimates — 513 million, 728 million and 907 million barrels of 1C, 2C and 3C recoverable oil resources, respectively — include only oil that will be produced under the



KEIRAN WULFF

present Pikka unit development plan. That scenario includes 106 deviated wells (53 producer/injector well pairs), but the project is permitted for up to 151 wells.

Also, the current Pikka development plan only includes production from the Nanushuk and Alpine C reservoirs, and excludes "several reservoirs within the unit, field extensions outside the unit and other discovered resources that may be developed," Oil Search said.

In 2016 Bill Armstrong, the founder, president and CEO of the company that brought Oil Search and Repsol SA into Pikka, said plans were to eventually tap as many as six different reservoirs in the unit.

see **PIKKA RESERVES** page 7

● GOVERNMENT

Time running out for giant oil sands mine

Canadian government to pass final judgement on Teck project by end of February; strong, not unqualified, First Nations backing

By GARY PARK

For Petroleum News

Within two months the Canadian government is scheduled to determine whether there is a road ahead for the Alberta oil sands, or, as suspected by many, it slams the door on that sector.

At stake are plans by mining giant Teck Resources to invest C\$20.6 billion on an open-pit operation in northeastern Alberta to extract raw bitumen and convert it into 260,000 barrels per day of synthetic crude, generating 7,000 construction jobs and full-time work for 2,500, many drawn from neighboring Indigenous communities.

Covering 115 square miles, the Frontier Mine is expected to remove 3.2 billion barrels of bitumen.

To date, Teck has negotiated support and benefits agreements with 14 First Nations. The signatories include the



JASON KENNEY

Athabasca Chipewyan First Nation, long an opponent of oil sands development, although Chief Allan Adam accuses Alberta Premier Jason Kenney of refusing to address lingering environmental concerns.

"We won't let Canada approve this project unless Alberta is at the table fulfilling its environmental obligations, because we are just not going to take hot air anymore," Adam said.

He said Alberta needs to resolve fears about the loss of fish, bison and caribou habitat and failure to do so will trigger legal action.

Kenney calls it stark choice

Kenney has said Canadian Prime Minister Justin Trudeau faces a stark choice — either give final approval to Frontier, or risk leaving "this country's largest resource ... with no way forward."

Kenney said "this should be a simple federal ratification.

This is a net plus for Canada."

He noted that even if Frontier is built Alberta will remain within the greenhouse gas emissions limit it has set for the province's largest resource projects of 100 million metric tons a year, partly because of technical innovations that have reduced the carbon intensity of oil sands production in recent years.

Frontier was first announced in 2011 and is unlikely to see mining start before 2026, five years behind the initial plan.

The federal government has set a deadline of Feb. 28 for its cabinet to deliver a verdict on Frontier after receiving the recommendations of Environment Minister Jonathan Wilkinson.

Teck hedging on FID date

Even if it gets a green light, Teck is hedging on when a

see **FRONTIER MINE** page 4

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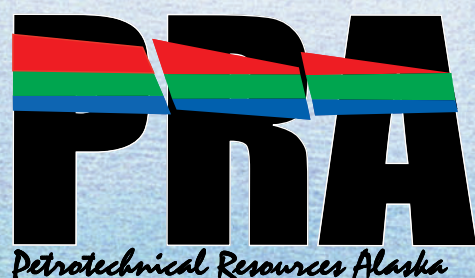


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• EXPLORATION & PRODUCTION

EIA: 2018 US proved reserves up from 2017

Annual reserves report shows 12% gain for crude oil, 9% gain for natural gas, setting new records; largest increases in Texas

By **KRISTEN NELSON**
Petroleum News

The U.S. Energy Information Administration released its U.S. crude oil and natural gas proved reserves report for 2018 and said strong oil and gas prices drove increases in proved reserves in the U.S. to record levels last year.

“The United States increased its proved reserves of oil and natural gas, establishing new records in 2018 according to a recently released EIA report,” EIA Administrator Linda Capuano said in a Dec. 13 statement. “Crude oil and lease condensate increased by 12% from 2017, and natural gas climbed 9% during the same period,” Capuano said.

Proved reserves, the agency said, are the “estimated volumes of hydrocarbon resources that analysis of geologic and engineering data demonstrates with reasonable certainty are recoverable under existing economic and operating conditions.”



DR. LINDA CAPUANO

Crude oil reserves

Proved reserves of crude oil in the United States increased from 39.2 billion barrels at year-end 2017 to 43.8 billion barrels at year-end 2018, EIA said, a new record, topping the previous record set in 2017.

Combined crude oil and lease condensate reserves increased 12% to 47.1 billion barrels.

The 2018 annual average spot price for West Texas Intermediate crude oil at Cushing, Oklahoma, was up 29%, averaging \$65.66, compared to \$51.03 per barrel in 2017.

In Texas, which saw the largest year over year increase, 2.3 billion barrels of crude oil and lease condensate proved reserves were added, “the largest net increase of all states in 2018,” the result, EIA said, of increased prices and development of the Permian basin in West Texas.

New Mexico had the next largest gain in crude oil and lease condensate proved reserves, 750 million barrels, followed by North Dakota at 422 million barrels.

Natural gas

Proved reserves of natural gas were up 9% from 464.3 trillion cubic feet at year end 2017 to 504.5 tcf at year end 2018, EIA said, another record, beating the previous record set in 2017.

The annual average spot price for natural gas at the Louisiana Henry Hub was up 12% from \$2.99 per million British thermal units in 2017 to \$3.35 per MMBtu in 2018.

Texas had the largest net increase, up 22.9 tcf of natural gas proved reserves, followed by Pennsylvania, up 14.2 tcf and New Mexico, up 4.2 tcf.

EIA said changes in reserves estimates are due to new discoveries, thorough appraisal of existing fields, production of existing reserves, changes in prices and costs and evolution of technologies.

The agency said the report is from “inde-

Alaska, which ranks sixth among the top seven U.S. oil reserves states, saw increases in both 2017 and 2018, and with an increase of proved reserves of 405 million barrels, a 20% increase, giving it the fourth-largest net increase of crude oil.

pendently developed estimates of proved reserves from a sample of operators of U.S. oil and natural gas fields” which it surveys, then using the sample “to further estimate the non-reported portion of proved reserves.” EIA said it received responses from 416 of 426 sampled operators, “which provided coverage of 90% of oil and natural gas proved reserves at the national level.”

Texas leads

EIA said U.S. natural gas and crude oil reserves experienced a steady decline from the late 1970s to 1996, with the downward trend for natural gas reversing in 1997 due to technology changes — horizontal drilling and hydraulic fracturing techniques.

The trend in crude oil reserves reversed in 2008 “when innovations in horizontal drilling and hydraulic fracturing were applied to tight oil-bearing formations, such as the Bakken Shale of the Williston Basin,” EIA said.

The upward trends reversed in 2015, when there were significant price drops for both oil and natural gas, then trended upwards again from 2016 to year-end 2018, as “prices and reserves trended upwards, annually,” the agency said.

U.S. proved reserves of crude oil and lease condensate increased in all top seven U.S. oil reserves states in 2018, EIA said.

Alaska ranks sixth

Alaska, which ranks sixth among the top seven U.S. oil reserves states, saw increases in both 2017 and 2018, and with an increase of proved reserves of 405 million barrels, a 20% increase, giving it the fourth-largest net increase of crude oil.

The state also had a positive net revision to its reserves, which EIA said, “occur primarily when operators change their estimates of what they are able to economically produce using existing technology and current economic conditions.” Changes also occur when operators buy and sell properties, the agency said, and when adjustments are made to reconcile estimated volumes.

There was a net upward revision of U.S. crude oil and lease condensate reserves of 413 million barrels in 2018, with the largest net upward revisions of crude oil and lease condensate proved reserves in the Federal Offshore, 599 million barrels, and Alaska, 441 million barrels.

EIA data show Alaska with published proved reserves of 2.016 billion barrels at the end of 2017, increasing to 2.421 billion barrels at the end of 2018. The agency shows no lease condensate proved reserves for Alaska. ●

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FINANCE & ECONOMY

EPA, BP settle hazardous waste violations

The U.S. Environmental Protection Agency said Dec. 16 that it has settled with BP Exploration Alaska over violations of the company's hazardous waste permit for activities on Alaska's North Slope.

"The EPA alleges, in part, that the company failed to maintain adequate insurance for bodily injury and/or property damage to third parties that might occur as a result of the company's storage and handling of hazardous waste on Alaska's North Slope," the agency said in a statement.

BP agreed to pay a penalty of \$125,100, EPA said.

EPA said the company is allowed to store hazardous waste under its EPA-issued hazardous waste permit, which also requires the company to maintain a dedicated pool of funds from which third parties could receive compensation for losses related to the storage or handling of BP's hazardous wastes, with the funds required to be kept separate from coverage for legal defense and cleanup costs.

A consent agreement signed by the parties Oct. 28 says that starting in 2014, BP's liability coverage "failed to establish adequate financial responsibility exclusive of legal defense costs for bodily injury and property damage to third parties caused by sudden accidental occurrences arising from operations of the Prudhoe Bay facility as required" by the company's permit and federal statute.

The agreement also says that in an inspection EPA found several items not properly labeled "Hazardous Waste" at various facilities.

Terms of settlement in the consent agreement say while BP "neither admits nor denies the specific factual allegations and legal conclusions" in the agreement, the company "wishes to resolve all claims and disputes arising from these factual allegations."

The company agreed to pay the assessed penalty of \$125,010 within 30 days of the effective date of the final order, which was dated Nov. 5. The consent agreement says BP certified that as of the date of the agreement, Oct. 28, all the alleged violations had been corrected.

BP Exploration spokeswoman Megan Baldino told Petroleum News in a Dec. 17 email that: "BP worked closely with EPA to resolve its concerns with the insurance it had obtained for this facility and is in compliance with the order."

—KRISTEN NELSON

continued from page 1

CANADIAN LNG

As he landed in Madrid for the latest United Nations climate change summit, Wilkinson said Canada had to be "very careful" about the LNG industry's claims that LNG exports could play a key role in the government's goals of lowering greenhouse gas emissions by 30% below 2005 levels by 2030 on its way to reducing emissions to zero by 2050.

He said the belief that LNG could displace coal-fired electricity in China and yield a net benefit for Canada would be "unlikely to happen in the very short term."

Wilkinson said ongoing global negotiations are attempting to write accounting rules that ensure transparency, environmental integrity and no double counting of emissions.

Environmental economists doubt that any country or company would both pay for LNG and also forgo the credits associated with those transactions.

Wilkinson's comments troubled Alberta Premier Jason Kenney and Tim McMillan, president of the Canadian Association of Petroleum Producers, who questioned why the minister was apparently ready to voluntarily present a watered down version of their claims to collecting all or part of the GHG credits linked to LNG exports.

Kenney called on the government to reconsider its position before allowing Wilkinson to "surrender Canada's interest," adding he was "disappointed" by what he has heard from the minister.

McMillan said Wilkinson's comments were "a bit frustrating" by indicating he had no intention to make a case for

Canadian LNG exports.

He said that without "making dramatic policy decisions" investment in Canada's LNG development could be hampered.

In the thick of the Madrid negotiations, the outlook for Canada took a setback when Chevron said it was considering putting its 50% stake on Kitimat LNG on the block.

"Although (Kitimat) is a globally competitive LNG project, the strength of Chevron's global portfolio of investment opportunities is such that Kitimat LNG will not be funded by Chevron and may be of higher value to another company," the company said in a statement.

Chevron said it would continue to work closely with its Australian partner Woodside Petroleum and First Nations partners during the search for a buyer.

Jeremy McCrea, a Raymond James analyst, said it would have been nice to see Kitimat LNG come on stream shortly after LNG Canada, but Chevron's comments "may be tempering this type of enthusiasm."

"To see them potentially take a write-down of their gas reserves (by about US\$11 billion) and make the comments they did is a bit of a reversal from what we've been seeing from them," he said, adding that Chevron may be "taking a pause" given the outlook for global LNG prices.

McCrea there were no obvious buyers for the Chevron stake, although Rockies LNG, a consortium of British Columbia and Alberta gas producers, has been exploring the prospect of building a project.

—GARY PARK

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FRONTIER MINE

final investment decision is likely, noting that will depend on several factors, including market conditions.

The Institute for Energy Economics and Financial Analysis said in late 2018 that Teck appeared "ill-equipped and ill-prepared to take on such a mega-project" and that neither an increase in oil prices, nor declines in production costs were likely to be enough to improve the financial outlook.

Kenney said Frontier could generate C\$12 billion in federal taxes over its 41-year lifespan, while Alberta stands to gain C\$55 billion and neighboring municipalities C\$3.5 billion in property taxes.

In July, a joint federal-provincial envi-

ronmental review panel said the project should receive the final necessary approval from the federal environment minister because the undertaking is "in the public interest," even though there could be "significant adverse effects" on the region's wetlands, old-growth forests and wildlife.

However, the panel noted that, in its experience, the agreement between Teck and Indigenous communities "is unprecedented for an oil sands development of this type."

Feedback from the communities during the review process led directly to many revisions to Teck's plans, including reductions in the project footprint, greenhouse gas intensity and water usage. ●

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CORRECTION

Damage costs misstated

The article titled "Enstar requests earthquake cost recovery" in the Dec. 15 issue of Petroleum News incorrectly stated that Enstar Natural Gas Co. incurred about \$1.3 billion in unanticipated costs as a consequence of the November 2018 earthquake in the Anchorage area. Enstar's earthquake related costs were actually about \$1.3 million.



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PIPELINES & DOWNSTREAM

FERC revises Trans-Foreland EA schedule

The Federal Energy Regulatory Commission said Dec. 12 that its staff has revised the schedule for completion of the environmental assessment for Trans-Foreland Pipeline Co. LLC's Kenai LNG Cool Down Project.

Dec. 13 was identified in June as the EA issuance date, FERC said, but Trans-Foreland told the commission in October that it would not file certain information until January.

On Dec. 9, FERC staff issued a follow-up data request, "requiring Trans-Foreland to clarify certain critical and complex information and address data gaps that were not addressed by Trans-Foreland in previous responses to staff data requests."

Trans-Foreland filed an application with FERC in March to make facility modifications at the Kenai LNG Plant to bring parts of the plant out of warm idle to allow for import of liquefied natural gas with the goal of providing up to 7 million standard cubic feet per day of natural gas to Trans-Foreland's affiliated Kenai Refinery.

Trans-Foreland is a wholly owned subsidiary of Tesoro Alaska Co., now called Andeavor, which also operates the nearby refinery.

FERC said Trans-Foreland is proposing the addition of a 1,000 horsepower electric-driven boil-off gas, BOG, booster compressor unit and other changes "to facilitate the import of LNG to cool down the existing LNG storage tanks and associated LNG facilities."

—KRISTEN NELSON

EXPLORATION & PRODUCTION

US active rig count holds steady at 799

Baker Hughes reports the number of rigs drilling for oil and natural gas in the U.S. held steady at 799 the week ending Dec. 13, following drops the previous seven weeks of three, one, three, 11, five, eight and 21 rigs respectively.

In its weekly rig count the Houston oilfield services company said the active rig count was down 272 from 1,071 active rigs a year ago.

The company reported that 667 rigs targeted oil (up four from the previous week; down 206 from a year ago) and 129 targeted natural gas (down four from the previous week; down 69 from a year ago). There were three miscellaneous rigs active (unchanged from the previous week and up by three from a year ago).

The company said 52 of the U.S. holes were directional, 693 were horizontal and 54 were vertical.

West Virginia was up by three rigs from the previous week; Pennsylvania was up by one.

Rig counts in California, Louisiana, North Dakota, Oklahoma, Texas and Utah were unchanged from the previous week.

Texas, at 400, has the most active rigs in the country.

Alaska, Colorado and New Mexico were each down by one rig.

Ohio and Wyoming were each down by two rigs.

Baker Hughes shows Alaska with six rigs active for the week ending Dec. 13, unchanged from a year ago.

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

—KRISTEN NELSON

New Cannery Loop development well planned

The Alaska Department of Natural Resources' Division of Oil and Gas has approved an application from Hilcorp Alaska LLC for a grass roots development well at the company's Cannery Loop unit. The unit produces natural gas.

The proposed CLU No. 15 well would be drilled from CLU Pad 3, the division said, with drilling activities to include installation of well cellar and conductor, installation of flowlines, facility piping and instrumentation lines to connect the well to existing production infrastructure on CLU Pad 3.

Drilling is expected to begin Jan. 10 and to last for some 40 days, with installation of gas flowlines and electrical instrumentation to follow. Those activities are expected to be complete by April 1.

The company's most recent plan of development, submitted May 1, listed one proposed development well, CLU No. 14. The division approved that grass roots well in June and Alaska Oil and Gas Conservation Commission records show the well began production in mid-September, with October the first full month of production for the well. The field produced 216,751 thousand cubic feet in October 2018 and 256,259 mcf this October, an increase of 18%.

The CLU No. 14 was drilled from CLU Pad 1, some 1.5 miles south of the city of Kenai near the mouth of the Kenai River.

There were six wells in production at the gas field prior to CLU No. 14 coming online; currently there are seven.

The CLU was formed in June 1978, the division said in its Dec. 12 approval letter, following the CLU 1 gas discovery well in the Tyonek formation.

—KRISTEN NELSON



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RAILBELT UTILITIES

Julie Estey, Matanuska Electric Association director of public relations, explained to the commissioners the status of the MOU for the RRC formation.

“We now have an MOU that all of the general managers or CEO’s have agreed to take to their boards,” Estey told the commissioners. “That is happening within this week and next week. So we believe we’re on track to meet your stated deadline of a signed MOU by all six utilities by the end of this calendar year.”

The Railbelt electricity grid

Although covering a large geographic area, the Railbelt grid is small in terms of its electrical load and generation capacity. But the fact that it has evolved into ownership and operation by six independent utilities and the state of Alaska has resulted in inefficiencies that can translate into relatively high electricity prices for consumers. The balkanized nature of the system has also led to complications in terms of the ability of independent power producers, including purveyors of renewable energy, to connect to the system.

A further problem has been the lack of a consistent set of enforced reliability standards, including standards for cybersecurity. Cybersecurity relates to the need to protect the electrical system from attacks against the computer and digital communications systems that have become critical components of the electrical infrastructure.

The RCA involvement in the various grid unification issues dates back to a 2014 directive from the Legislature for the RCA to investigate the manner in which the Railbelt electrical system was operated. In response, in 2015, the commission issued a report, recommending a number of changes to the management of the system — since then the commission has been encouraging voluntary efforts by the utilities toward meeting the commission’s recommendations. The overall objective is to minimize the cost of electricity for consumers while maintaining an acceptable level of supply reliability. There are also issues relating to the implementation of renewable energy sources.

RCA recommendations

In its 2015 report the commission recommended the implementation of merit-

ordered economic dispatch on the system; the formation of a single transmission company, or transco, to operation the transmission grid; and the implementation of a single set of enforceable reliability standards. The commission also opened a docket to investigate the formation of some form of unified operator, to oversee how the entire electrical system is managed. Merit-ordered economic dispatch involves the continuous use of the most cost-effective power generation.

The RRC is the practical manifestation of the unified operator concept. It would oversee reliability standards; administer rules for open access to the grid; conduct Railbelt-wide system planning; and investigate the economic value of economic dispatch for all or part of the system. A board with representation from the utilities and other electricity system stakeholders would govern the organization.

The utilities had been making progress towards the implementation of economic dispatch, but initiatives in this direction have been placed on hold pending the proposed purchase of Municipal Light & Power by Chugach Electric Association. A merger of these two Anchorage based utilities would presumably lead to economic dispatch in at least their sectors of the grid.

In March four of the utilities and the American Transmission Co. filed an application for RCA certification of a transmission company. However, this application was withdrawn later in the year following objections from some utilities about the manner in which the proposed transco was structured and would operate. Key concerns included governance of the proposed company, which would operate as a for-profit corporation. Some utilities expressed a view that the RRC should be formed first, to provide governance of the entire system, including the transco.

In April 2018 the utilities filed an agreed set of reliability standards. And cybersecurity standards have now been added. Enforcement and maintenance of these standards will require the RRC. But a clear definition of the relative roles of the RRC and the RCA in standards enforcement and maintenance will also be essential — hence a primary purpose of the legislation as expressed in SB 123

Report to the Legislature

The commission had planned to submit a report to the Legislature earlier this year, documenting what has happened in the years subsequent to the commission’s 2015 report. During the Dec. 11 public meeting Commission Chair Robert Pickett commented that the commission had deferred issue of its report, because around April and May the various unification initiatives had stalled, thus painting a rather negative picture. Publication of the report at that point would not have fairly reflected the efforts over the previous four years to solve the issues around more unified grid operation, Pickett said.

But now, with the deadline for the RRC MOU pending, the intent is to review the language of the report to Legislature during a commission public meeting on Jan. 8. That should enable the report to be completed by Jan. 15, ready for submission to the Legislature before the beginning of the legislative session, Pickett said.

The commissioners also reiterated their belief that statutory changes are needed, to clarify the relationship between the RRC and the RCA, giving the RCA clear regulatory authority over the electrical system operator, as distinct from individual electric utilities. The commission also wants statutory authority for the approval of any proposed major changes to the Railbelt electricity infrastructure, to assure that major, expensive upgrade projects are in the best interests of consumers. The commissioners unanimously passed a resolution supporting SB 123.

Cyber security exercise

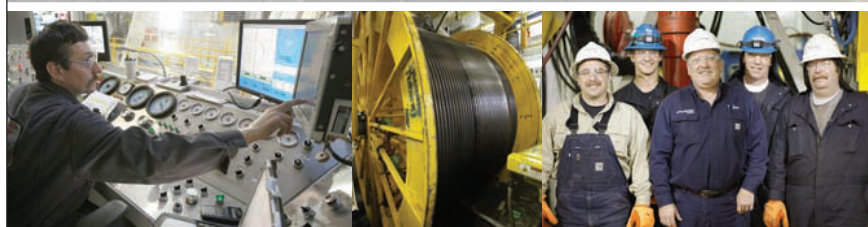
Also during the Dec. 11 meeting RCA engineering analyst Jay Layne spoke about the involvement of five of the Railbelt electric utilities in a November two-day national cyber attack simulation, called GRIDEX, designed to evaluate cyber security arrangements in the electricity industry, and to learn lessons regarding potential cybersecurity policies. This was the first time that Alaska utilities had participated in a GRIDEX exercise. The exercises, organized by the Electricity Information Sharing and Analysis Center, or E-ISAC, are held every two years. E-ISAC is operated by North American Electric Reliability Corporation, the grid reliability and security arm of the Federal Energy Regulatory Commission.

Because of the security sensitivity of the information involved, the detailed findings of a GRIDEX exercise are not made public. However, a public lessons learned document should be published in March, Layne said. ●

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continued from page 1

PIKKA RESERVES

Resources in the other reservoirs and nearby areas are currently being independently assessed with results expected to be released in 2020.

The Ryder Scott assessment was done as part of Oil Search's pre-FEED, or front-end engineering and design, work, in anticipation of the FEED phase which, as expected, Oil Search Ltd. subsidiary Oil Search Alaska has entered.

Taking on a third partner

Oil Search board's approval to enter FEED is "contingent on joint venture approval and finalization of several third party agreements expected in early 2020," the company said.

The Dec. 18 report also announced commencement of Oil Search's divestment of up to 15% of its 51% interest in the Pikka unit and adjacent exploration leases. This process is expected to be finalized in mid-2020, ahead of the final investment decision in third quarter.

Oil Search's 49% partner in the area, Repsol, has made no announcement about divesting any of its Pikka interest, which is not a surprise, as the Madrid-based major has indicated it wants to increase its North Slope assets.

Lowering its ownership to 35% does not put Oil Search's Pikka operatorship in jeopardy. Protecting its position as operator was accomplished through "a standard APIN model joint operating agreement" with Repsol that Oil Search talked about June 27 after it its buyout of Armstrong. The APIN agreement is "better suited for a major development and the introduction of a new partner," Oil Search said.

APIN is the Association of International Petroleum Negotiators, an independent not-for-profit professional membership association that supports energy negotiators around the world.

Land use deal, winter exploration

Oil Search also said it signed a "landmark" land use agreement for Pikka development with Kuukpik Corp., the Native corporation for Nuiqsut, the closest North Slope community.

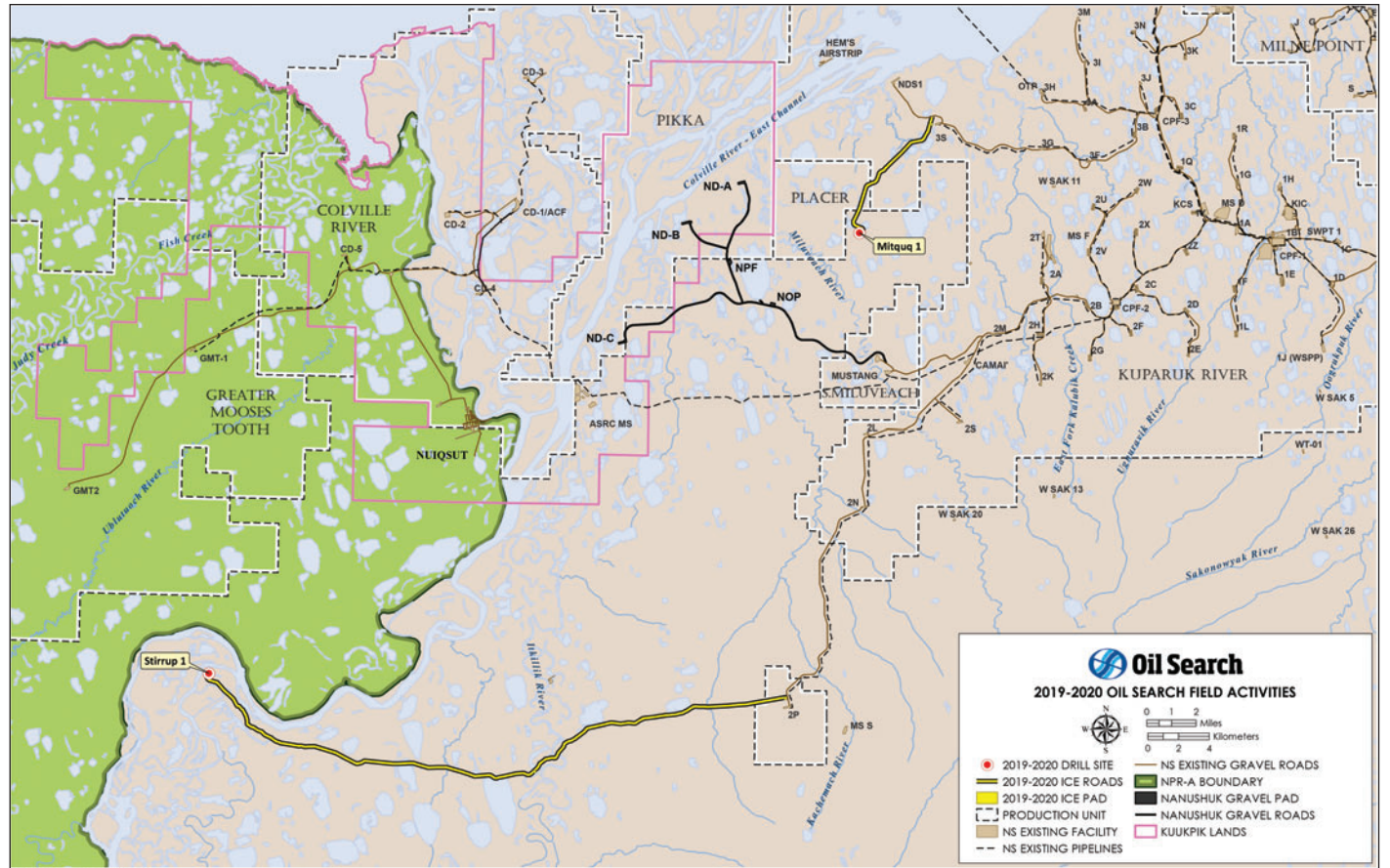
The agreement "lays the foundation for a long term relationship with Kuukpik and the community," Oil Search said.

The company said its winter exploration and construction program is well underway (see map in pdf and print versions of this article). Activities should result in the laying of more than 1.4 million cubic yards of gravel, the construction of 56 acres of gravel pads, a 192-foot bridge and approximately 25 miles of gravel roads to Pikka development drill sites and planned facility locations, as well as two exploration wells, that will test Nanushuk analogues east of the Pikka unit with Mitquq 1 and its sidetrack, and west of the Horseshoe Block with Stirrup 1.

Mitquq 1 is expected to spud in late December and Stirrup 1 in January, while the first gravel mine site is targeted to open before yearend, with gravel haul starting in January.

The Dec. 18 report also mentioned that subsequent to signing the land use agreement with Kuukpik, the North Slope Borough Assembly approved Oil Search's Master Plan for the Pikka development and re-zoning, which allowed gravel road and well pad construction to start in the current winter season (see the Dec. 15 issue of Petroleum News).

During FEED "detailed technical requirements and engineered designs" will be finalized and long-lead items, including pipeline and process facility equipment, will be ordered, Oil Search said.



The plan is still to begin early Pikka production of up to 30,000 barrels of oil per day in 2022 from one of the three well pads (previously drill site ND-B was named) and construction of a three-phase pipeline tied to adjacent processing facilities with space that can support the early production system, or EPS.

Most of the facilities utilized in the EPS will be used in the full field development, which is expected to go online in 2024 with a peak of 135,000 bpd through Oil Search's processing facility.

In addition to the drill sites, roads and the NPF, full field development includes an operations center with a 200-bed camp plus office, stand-by generation, warehouse and maintenance facilities, two bridges and about 35 miles of pipelines.

Future development to the east?

In its Dec. 18 report Oil Search said it was top bidder on 39 leases covering 80,000 acres in the Dec. 11 state of Alaska North Slope lease sale, at a cost of US\$5.7 million (see the Dec. 15 issue of Petroleum News). The leases are adjacent to the company's existing unexplored Lagniappe acreage on the eastern North Slope, adding to Oil Search's "high-quality portfolio on the North Slope in areas with exploration potential and opportunities for future expansion and/or new development, given the proxim-

ity to existing infrastructure."

The initial 195,000 acres in the Lagniappe block were acquired by Armstrong in the November 2018 state lease sale under the name Lagniappe. Those tracts are currently 50% owned and operated by Oil Search. "We feel a deep responsibility to the community, the state and to the environment and want to ensure our presence con-

tributes to the long-term wellbeing and sustainability of the residents at Nuiqsut and to the state of Alaska more broadly. This remains core to our corporate DNA," Keiran Wulff, president Oil Search Alaska and CEO-Designate, said Dec. 18. ●

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ALASKA

RAILROAD

continued from page 1

BP-HILCORP TIMELINE

Upstream, BP Exploration (Alaska) owns a 26.36% working interest in the Prudhoe Bay unit (and is the operator), some 32% of Point Thomson, 50% of Milne Point, 50% of Liberty (a federal unit) and 50% of the 19 Arctic Slope Regional Corp. leases in the Arctic National Wildlife Refuge.

After closure of the sale, Hilcorp will hold 26.3% of Prudhoe (and be unit operator), 100% of Milne (it currently holds 50%), 100% of Liberty (it already holds 50%), 50% of the ANWR leases (the other 50% are held by Chevron USA Inc.) and some 37% of Point Thomson.

Feige said the difference in Point Thomson between BP's 32% and the 37% Hilcorp will hold is ConocoPhillips' 5%

interest. DNR recently received transfer notice of ConocoPhillips' 5% working interest ownership in Point Thomson to Hilcorp, a transfer unrelated to the BP-Hilcorp transaction, she said.

ConocoPhillips announced its intention to drop its Point Thomson acreage in 2017 and said at the time that the acreage was being relinquished to the other unit owners per the unit operating agreement.

In the midstream, Hilcorp subsidiary Harvest will acquire the 50% interest held by BP in the Milne Point Pipeline (Harvest currently holds the other 50%) and 32% of the outstanding membership interests of Point Thomson Export Pipeline.

Harvest will acquire BP's interest in TAPS, some 48.4% and a 47.6% interest in TAPS terminal tankage in Valdez, along with some 49.1069% of issued and outstanding shares of Alyeska Pipeline Service

Co. and some 25% of the Prince William Sound Spill Response Corp.

Comparison to BP-ARCO merger

Peter Caltagirone, senior policy and legal advisor in the DNR commissioner's office, contrasted the current sale to the BP-ARCO transaction in 2000.

They are completely different deals, he told legislators, with BP-ARCO being a merger between two publicly traded companies while the proposed Hilcorp acquisition is a sale.

The BP-ARCO proposed merger was subject to Federal Securities and Exchange Commission and Federal Trade Commission oversight with anticompetitive and antitrust issues at stake in a merger which would have combined some 70% of Alaska production in one company.

SEC didn't have concerns, but FTC filed a complaint in February 2000 seeking to enjoin the deal and eventually ARCO's Alaska assets were spun off to Phillips Petroleum. The main concern, Caltagirone said, was price manipulation at West Coast refineries.

As for share of Alaska production, Hilcorp now has some 12% and will increase that share to 28% with the acquisition.

The proposed Hilcorp acquisition was looked at by the FTC but it found no antitrust or competitiveness concerns, Caltagirone said, putting the issue in the state's hands.

Role of DNR

Feige noted that no transfer of an interest in a lease is binding unless approved by the DNR commissioner. And that approval is not a rubberstamp process, she said, with the Division of Oil and Gas doing the bulk of work around due diligence

Matt Snodgrass, the division's commercial section head, said the state has contracted with a third party to help further the analysis on the financial health of Hilcorp. The division uses that information to inform financial assurance arrangements, which provide assurance that public interest will be protected, now and into the future. The goal, Snodgrass said, is to assure that Hilcorp has the ability to deliver on its commitments.

The division has been dealing with Hilcorp on financial assurance agreements since the company entered the state in 2011, he said, and has an extensive record of successful negotiations with Hilcorp, with the sixth amended and restated financial assurances agreement executed earlier in December.

The type of significant highly confidential financial information DNR has access to is akin to that required for a 10K filing with the SEC, Snodgrass said.

In addition to audited annual financial statements and unaudited quarterly financial statements, DNR requires a third party estimate of DR&R (dismantlement removal and restoration) costs every three years.

The state doesn't just require reporting, Snodgrass said, it has the inbuilt ability to take action: automatic triggers protect the state should there be a material change in a company's financial health, with increased surety required.

Feige said a key takeaway on the transaction is that BP has represented to the state that it will remain secondarily liable for the upstream DR&R obligations of BP Exploration (Alaska) as they existed at the time of the transfer.

BP is also retaining obligations related to DR&R for TAPS with all parent company guarantees from BP Corporation North America Inc. remaining in place regarding that obligation.

Role of Attorney General

John Ptacin, chief assistant Attorney General, chief of the Oil and Gas section, legal advisor to the division, told legislators that like the Regulatory Commission of Alaska, the state wants to know if Harvest is fit. The AG's office is part of the team along with outside counsel Morrison & Foerster, he said.

RCA makes the decision on TAPS changing hands, Ptacin said, noting that RCA is a quasi-judicial body that will hear from the parties, including the state.

RCA has been reviewing filings on the transfer for completeness, and earlier in December opened a docket, requiring documents by Dec. 23.

What RCA will be considering, Ptacin said, is whether Harvest is fit and able to take over 48% ownership and whether the transaction in the public interest.

He noted that Hilcorp won't run TAPS — they are buying 48% of Alyeska Pipeline Service Co., which runs TAPS, and will become a voting member along with other owners.

There are a lot of broad questions for RCA, Ptacin said, and that process is just getting started.

RCA does not have a deadline for this process — they'll take a hard look, he said.

AOGCC, DEC

Caltagirone reviewed the role the Alaska Oil and Gas Conservation Commission will take, which includes approving a new operator at Prudhoe.

The Department of Environmental Conservation oversees oil discharge prevention and response requirements, Feige said, and will either file a change of owner amendment for the Prudhoe oil discharge prevention and contingency plan or file a new plan, which requires a pre-application

see BP-HILCORP TIMELINE page 10



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LEASE SALE AREA

presentations and papers,” the division said in its decision. “There is a potential for near-term oil and gas exploration and development activities on the Iniskin Peninsula and in Cook Inlet federal waters.”

When it put out a request for substantial new information in September, the division said it was considering adding the Southwest Cook Inlet exploration license area. The Dec. 17 decision confirms that addition: The division will offer all available state-owned acreage, including the SW Cook Inlet area, in the expanded sale area at oil and gas lease sales to be held from 2020 to 2028, it said.

“After weighing the facts and issues known at this time, considering applicable laws and regulations, and balancing the potential positive and negative effects given the mitigation measures and other regulatory protections, the director finds the potential benefits of lease sales within the expanded Sale Area outweigh the possible negative effects,” the division said, adding, “The director finds that lease sales within the expanded Sale Area are in the best interests of the State of Alaska.”

SW Cook Inlet license area

The Southwest Cook Inlet oil and gas exploration license area previously was issued to Cook Inlet Energy LLC on June 20, 2014, for a 4-year term with an option to convert to leases after a work commitment was satisfied.

The exploration license was relinquished in late 2015

prior to conversion to lease, but exploration activity has continued on adjacent Native corporation lands, the division said.

The Cook Inlet sale area boundary is expanded by about 169,000 acres, on and around the Iniskin Peninsula about 120 miles south of Tyonek.

“The SW Cook Inlet area is located on the west side of Cook Inlet across from Homer, Anchor Point, and Seldovia. The area extends south as far as Ursus Cove and north as far as Saddle Mountain and is bounded by the Kenai Peninsula Borough boundary to the west and federally owned Cook Inlet marine waters to the east,” the division said.

The four sections of state-owned land on the Iniskin Peninsula were originally conveyed to the state in the Alaska Statehood Act for the support of public schools, but in 1978 the Legislature transformed the public school trust from a land-based trust into a monetary trust and the school trust lands were designated general grant lands, the division said.

Alaska Range ecoregion

The SW Cook Inlet Area is within the Alaska Range ecoregion, rather than the Cook Inlet basin ecoregion as is the rest of the sale area.

“Shorelines north of Anchor Point and Tuxedni Bay are primarily sediment controlled, while shorelines on the lower west side of Cook Inlet, including the SW Cook Inlet Area and Kalgin Island, are primarily bedrock controlled,” the division said. “Key habitats of the expanded Sale Area include fresh, marine, and estuarine waters and intertidal and terrestrial habitats that support fish and wildlife populations.”

Freshwater and anadromous fishes, including all five species of Pacific salmon, are found in the area’s waters. Waters that have been identified as important for anadromous fishes receive special protection. As of June 1, the Alaska Department of Fish and Game has identified approximately 112 lakes and over 500 stream channels as important anadromous water bodies within the sale area, the division said. Expansion to include the SW Cook Inlet Area adds nearly 30 important anadromous stream channels.

The sale area has all or portions of 20 federal, state, and local legislatively designated habitat areas. The SW Cook Inlet Area adds an additional 100 acres of the Alaska Maritime Wildlife Refuge encompassing small islands and rocky outcrops offshore the Iniskin Peninsula, including Gull Island and Scott Island which support seabird nesting colonies, the division said.

Over 450 species of birds are found in Alaska, many of which occur year-round or seasonally in the Cook Inlet region. Waterfowl, shorebirds, and seabirds concentrate in specific sale area habitats.

The division said ADF&G provided updated information for trumpeter swans and Steller’s eiders in the SW Cook Inlet area, adding that aerial surveys of nesting habitats show that trumpeter swans have nested on the Iniskin Peninsula since the early 1990s.

Three stocks of northern sea otters exist in Alaska, the southwest and southcentral stocks occur in the sale area in lower Cook Inlet, the division said, adding that the most recent population estimate for lower Cook Inlet is 20,000.

see LEASE SALE AREA page 10



Oil Patch Bits



LTI, Inc. delivers container homes for Impossible Roads Foundation

As reported by Lynden News Dec. 12, LTI Inc. drivers delivered 13 containers from Seattle to Ferndale, Washington, in November to assist the nonprofit Impossible Roads Foundation with a special Veterans Day project. The containers are retrofitted as homes for disabled veterans and will be distributed in the Whatcom County area.

“You guys truly are lifesavers,” writes John Hope of the

Impossible Roads Foundation. “We do not know how we could build and provide these tiny homes to veterans without the kindness and generosity of you delivering them to us.”

Matson donated the 40-foot high-cube containers and LTI Inc. contributed transportation to support the project. The containers are built specifically for the veterans’ needs with ADA access. “We dubbed every tiny home we create ‘The Impossible Tiny Home’ because it is a small miracle that all of the materials, insight, design, labor, and personnel came together to build them,” Hope said.



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Companies involved in Alaska’s oil and gas industry

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BP-HILCORP TIMELINE

meeting at least 60 days before an application is submitted. That meeting was held Nov. 20, Feige said. An application is due at least 180 days before the start of operations, she said.

Prudhoe has been in operation for 40 years and for contamination existing at the time of the sale, both BP and Hilcorp are responsible, with BP a responsible party and Hilcorp conducting activities related to cleanup activities, long term monitoring and implementation of institutional controls, required for contamination which remains in place.

After the sale, Hilcorp will be responsible for contamination it causes or contributes to.

Feige said that in determining what is in the public interest DNR looks at a broad suite including the capability of Hilcorp and its history in the state.

She said the state has seen their history in taking mature assets and what they've done to streamline operations,

lower operating costs, so that informs the state's thinking. For DNR, she said, protecting the public interest goes directly to royalty income which feeds the Permanent Fund and production.

Issues of philanthropy and local hire are not part of DNR's oversight, Feige said, but noted Hilcorp has said they have a philanthropy plan and on the local hire issue, which is important to the administration, Hilcorp has interviewed more than a thousand people to date and is putting together a plan.

No aspect of the BP transaction was considered in putting together this year's revenue forecast she said. The decline going forward reflects the fact that BP has worked to reduce operating costs and debottleneck production and has flattened the decline curve without drilling additional wells and we are now seeing a return to the natural decline at Prudhoe, which has been about 4%.

If you put Prudhoe Bay into the hands of someone who is a late stage mature asset specialist, Feige said, the expectation is that they'll be able to reduce costs and drive the decline flat again. ●

continued from page 9

LEASE SALE AREA

Otters on the west side of lower Cook Inlet belong to the southwest stock, and those on the east side belong to the south-central stock, the division said.

An abundance of uses

Uplands in the SW Cook Inlet Area are predominately private lands owned by regional village corporations, the division said.

Fisheries in the region support commercial, subsistence, personal use, and sport harvest, it said, however the SW Cook Inlet Area is beyond areas where sport fishing is typically concentrated on the Kenai Peninsula.

Wildlife populations support hunting and trapping by local and nonlocal resident and non-resident hunters, it said.

"Communities using the SW Cook Inlet

Area for subsistence include: Nikiski (bird eggs, shellfish) and Seldovia (shellfish) in Chinitna Bay accessing bird eggs by boat and shellfish by airplane (AOOS 2019); Port Alsworth (marine invertebrates, furbearers, small mammals), Iliamna (marine invertebrates, nonsalmon fish), and Pedro Bay (marine invertebrates, nonsalmon fish) with marine invertebrates and fish taken in Chinitna, Oil, Iniskin, and Iliamna bays, and furbearers and small mammals taken on the Iniskin Peninsula," the division said. "The communities of Nanwalek and Port Graham, located on the east side of Cook Inlet, also rely on salmon and other resources from lower Cook Inlet."

The director's full decision and the supplemental findings are available online at:

<http://dog.dnr.alaska.gov/Services/BIFAndLeaseSale>.

—STEVE SUTHERLIN

Contact Steve Sutherlin
at ssutherlin@petroleumnews.com

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INSIDER

As of today, more than 800 BP employees have been offered a position with Hilcorp, which represents over 80% of all BP employees who applied for a position with Hilcorp. Interviews and offers will continue to be made in the coming weeks as the transition continues.

Further, Hilcorp expects to post more than 150 additional positions in the coming months.

"We are very excited to continue our growth and investment here" said Jason Rebrook, president of Hilcorp. "For decades the energy industry has been a key driver of the state's economic growth and has helped create a better quality of life for all Alaskans. Hilcorp is excited to build upon that legacy through innovation and responsible resource development."

Alaska has produced more than 18 billion barrels of oil, accounting for more than 20% of U.S. domestic production, since Prudhoe Bay went online.

—PETROLEUM NEWS

Goldman curbs lending on new Arctic drilling

GOLDMAN SACHS IS NO LONGER financing new Arctic drilling, the big U.S. investment bank said Dec. 15 in its updated Environmental Policy Framework.

While it stressed protecting the Arctic National Wildlife Refuge's coastal plain, the framework said the bank's new policy "includes but is not limited to" ANWR.

Goldman's policy change came as climate talks in Madrid ended, with delegates from almost 200 countries tempering language on climate change issues they had agreed on in previous years. According to news reports the delegates agreed there was an "urgent need" for nations to make deeper cuts to greenhouse gases, but they set aside work that would have devised ways to add market mechanisms to meet their goals.

CEO David Solomon praised the bank's decision in an opinion piece in the Financial Times, writing that "over the next 10 years, Goldman Sachs will target \$750 billion of financing, investing and advisory activity to nine areas that focus on climate transition and inclusive growth," including clean energy and transportation, sustainable food and agriculture, and education.

Goldman's new policy also included refusing to finance new coal-fired power plants in developing nations. The bank had previously only done this in the U.S. and developed countries, unless the borrowers had carbon capture and storage or comparable technology.

Gov. Mike Dunleavy said the state of Alaska needs to reassess its relationship with Goldman Sachs in light of the bank's new policy on not financing new Arctic drilling.

"I think it's unfortunate," Dunleavy said in an interview on FOX Business' Varney & Co. "We do a lot of business with Goldman Sachs. We're going have to reevaluate that, have a discussion with them."

—KAY CASHMAN

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RHEA-1 WELL

ice road where possible.

The program is expected to begin around Jan. 15, using a standard drilling rig (unnamed in application).

The slant pilot hole will target the Fiord West Kuparuk reservoir near where extended reach laterals are planned in second quarter from the CD2 gravel pad using Doyon 26, the new extended reach drilling rig scheduled to be shipped from Deadhorse in March and to begin drilling in early April.

The purpose of Rhea-1, which will be approximately 12 miles north of the village of Nuiqsut and three miles north of CD2, is to evaluate static subsurface properties and production to assist ERD well planning and execution efforts.

Fiord West Kuparuk PA

Rhea-1 — and the six development wells that will be drilled by Doyon 26 — will be in the new 12,015-acre Fiord West Kuparuk participating area, which is jointly managed by the state of Alaska, Arctic Slope Regional Corp. and the U.S. Bureau of Land Management and includes state and joint state-ASRC and BLM leases.

A participating area defines the portion of a unit from which production is expected occur. The Colville River unit has six other participating areas, four oil pools and eight reservoir areas, ConocoPhillips said in its Dec. 21, 2018 application to form the Fiord West Kuparuk PA, noting there are satellite oil pools at three drill sites — Qannik at CD2, Fiord at CD3 and Nanuq at CD4, with separate PA agreements.

“All CRU oil pools are developed primarily with horizontal well technology,” ConocoPhillips said in the application.

The Qannik and Nanuq PAs are primarily

Rhea-1 — and the six development wells that will be drilled by Doyon 26 — will be in the new 12,015-acre Fiord West Kuparuk participating area, which is jointly managed by the state of Alaska, Arctic Slope Regional Corp. and the U.S. Bureau of Land Management and includes state and joint state-ASRC and BLM leases.

ly waterflooded, while Alpine, Fiord Nechelik, Fiord Kuparuk and Nanuq Kuparuk employ MWAG, gas-alternating waterflood using either miscible gas or sub-miscible enriched gas.

Twenty thousand bpd at peak

The proposed Fiord West Kuparuk East Pilot program does not require any permanent facilities or an airstrip. The airstrip at CD1 might be used in support of the project.

At its peak, Fiord West is expected to produce 20,000 barrels of oil a day.

In recent presentations Scott Jepsen, senior vice president at ConocoPhillips Alaska, said Fiord West has “been on our books” for about 20 years, but because of where it is located — in an environmentally sensitive along the coast — the company couldn’t access it. That has all changed with the new high-tech ERD rig, which will be able to tap 154 square miles of reservoir versus the 55 square miles accessed by standard rotary rigs.

Exploration and geology

There are seven exploration wells in the vicinity of the Fiord West Kuparuk PA — Nechelik 1, Temptation 1, Temptation 1A, Nigliq 1, Nigliq 1A, Iapetus 2 and Char 1.

Six of these wells encountered the

Lower Cretaceous Kuparuk River formation, per the division following ConocoPhillips March 15 status update for the Colville River unit and the June approval of the Fiord West Kuparuk PA.

“The Kuparuk River sandstone is a shallow marine transgressive sequence deposited on the Lower Cretaceous Unconformity,” and varies across the two Fiord PAs from 1 foot thick to 21 feet.

The division said the Kuparuk A sandstone is not present in the area.

Drilling began in the area in 1996 when ConocoPhillips Alaska predecessor ARCO Alaska drilled the Temptation 1 and a deviated sidetrack, the Temptation 1A, encountering 9 feet of gross Kuparuk sandstone in the original well and 8 feet of gross sandstone in the sidetrack.

In its application for the Fiord West Kuparuk PA, ConocoPhillips said the Temptation wells “were the first wells west of the fault trapped CD3 Fiord Kuparuk accumulation to find significant Kuparuk C thickness and reservoir quality.”

Fiord 5 was drilled to both Kuparuk and Nechelik targets in 1999, with 15 feet of gross sand in the Kuparuk. Both zones were tested, with the Nechelik interval producing 1,400 barrels per day of 29-degree American Petroleum Institute gravity oil. The combined Nechelik and Kuparuk test produced 2,500 bpd.

The division said development wells in the CD3 Fiord Kuparuk field have shown oil gravity in the Kuparuk area to be above 29 degrees API.

Phillips Alaska drilled Nigliq 1 and Nigliq 1A about 5 miles west of the Fiord 5 well in 2001, the division said, with 2 feet of gross Kuparuk C sandstone found in Nigliq 1 and 5 feet in Nigliq 1A.

ConocoPhillips drilled Iapetus 2 in 2005, encountering 10 feet of gross Kuparuk C sandstone as well as Nechelik

sandstone. The division said the well was not tested.

Per the agency the company drilled Char 1 in 2008, encountering 12 feet of gross Kuparuk C sandstone. The well was perforated and flow tested, “producing 23,190 barrels of oil over a seven-day period,” an oil rate which averaged some 3,620 bpd with an API oil gravity of 39 degrees.

The Kuparuk C has also been penetrated by several wells as part of the Fiord Nechelik development at CD3, the division said, with gross thickness between 3 and 8 feet along the eastern edge of the Fiord West Kuparuk PA.

The PA “is defined as the Kuparuk C sands correlative to the Kuparuk C sandstone found in the Char 1 well,” the division said, with the top of the Kuparuk C sandstone in that well at 7,252 feet measured depth and the base the Lower Cretaceous Unconformity at 7,264 feet MD.

All comments can be sent to the Division of Oil and Gas by email to dog.permitting@alaska.gov, or by regular mail to the agency’s office at 550 West 7th Avenue, Suite 1100, Anchorage, AK 99507.

All comments must be in writing.

A copy of the final decision will be sent to any person who provides written comments. Comments must be received by the comment deadline of 4:30 p.m., Alaska Standard Time, Jan. 16.

—KAY CASHMAN

Editor’s note: See ConocoPhillips Fiord West Kuparuk Overview map on page 33 of this document:

http://dog.dnr.alaska.gov/Document/565F1A64D2EE49748040FC32E700ABC/B/12-16-2019_Newsroom_LONS_19-007_Rhea_1_Development_Well_Application

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