Petroleum news

page 2 OPEC: China, India lead energy demand; oil retains highest share

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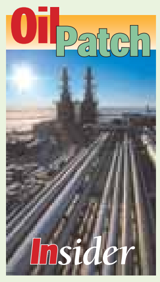
USGS' Houseknecht: Good news and bad news for Alaska; Crude oil passes $80 a barrel



FOR THE LAST TWO YEARS the top Arctic petroleum geologist for the U.S. Geological Survey has been campaigning for a senior research geologist to be hired and posted in Alaska, versus Reston, Virginia where he is stationed.

David Houseknecht, USGS senior research geologist, told Petroleum News Sept. 25 that the USGS is moving forward to hire such a person in the near future.

The bad news for Alaska is Houseknecht, 67, who has made significant contributions to understanding the petroleum

see **INSIDER** *page 8*

Siemens says it has new gas supply for Fairbanks LNG production

During its meeting on Sept. 18 the board of the Interior Gas Utility in Fairbanks continued a discussion of a proposal by Knik Tribe and Siemens to build a new liquefied natural gas plant for an increased LNG supply for Fairbanks and the surrounding Interior. The board is figuring out how to further the objectives of the Interior Energy Project, an Alaska Industrial Development and Export Authority project to enable an increased supply of affordable natural gas in Fairbanks.

Long term supply

Kelly Laurel, director for energy and infrastructure for Siemens Government Technologies, told the board that, in a

see **FAIRBANKS LNG** *page 6*

Fresh review for Trans Mountain

The Canadian government has set a 22-week deadline for the National Energy Board, its chief energy regulator, to review the Trans Mountain pipeline expansion in hopes of gaining a final go-ahead for the project.

In making the announcement Sept. 21, Natural Resources Minister Amarjeet Sohi and Fisheries and Oceans Minister Jonathan Wilkinson said this new phase will take into account the impact of additional tanker traffic in Pacific waters off British Columbia.

They said the second step, in response to a Federal Court of Appeal ruling in August that overturned approval of the Trans Mountain expansion, will be unveiled in the next few weeks to

see **PROJECT REVIEW** *page 8*

MPC-Andeavor merger OK'd by stockholders; close expected 10/1

Marathon Petroleum Corp. and Andeavor stockholders voted Sept. 24 to approve the merger of MPC and Andeavor announced April 30. The approval came at separate stockholder meetings, with MPC stockholders approving the issuance of shares of MPC common stock in connection with the merger and Andeavor stockholders approving adoption of the previously disclosed agreement and plan of merger.

The combined company will carry the Marathon Petroleum Corp. name and have an initial enterprise value of more than $90 billion.

The votes satisfy one of the final conditions to the closing of the merger, which is expected Oct. 1, subject to satisfaction or waiver of the remaining customary conditions to closing.

MPC became an independent company on July 1, 2011. It

see **MARATHON MERGER** *page 7*

EXPLORATION & PRODUCTION

Drilling progresses

Furie is testing one Kitchen Lights development well, drilling another

By ALAN BAILEY

Petroleum News

Furie Operating Alaska has completed the KLU A-1 well and is currently using the Spartan 151 jack-up rig to drill the KLU A-4 well at the Julius R. platform in the Kitchen Lights unit, offshore in Cook Inlet, Scott Pinsonnault, the company's chief operating officer, told Petroleum News Sept. 20. The objective is to have four production wells in operation in the Kitchen Lights gas field — the field already produces from the KLU Nos. 2 and 3 wells at the platform.

"We've continued our summer operations. We've completed the A-1 well and have tested in in the Sterling. It is very productive in the Sterling," Pinsonnault said. The field holds gas both in the Sterling formation and in the shallower Beluga formation.

"Our goal is to meet our obligations under our contracts. If we have excess gas leftover, we can sell it at spot, or put it into storage." —Scott Pinsonnault, Furie Operating Alaska

Testing continues

With multiple well perforations in the Sterling,

see **FURIE DRILLING** *page 11*

EXPLORATION & PRODUCTION

It's a busy time

Hilcorp completing pipeline project, moving ahead on Moose Point, Liberty

By ALAN BAILEY

Petroleum News


DAVE WILKINS


MIKE DUNN

Hilcorp Alaska is moving ahead on several fronts, Dave Wilkins, the company's senior vice president, told the Resource Development Council on Sept. 20.

"2018 is stacking up and I'm confident that it is going to be one of the best years since Hilcorp's been in Alaska," Wilkins said. "Our production will be up by the end of the year. We will have made more barrels of oil and mcfs of gas than we ever had in Alaska by the end of the year."

Hilcorp's cross-inlet pipeline project, for shipping oil west to east under the Cook Inlet, is nearing completion; the new. Moose Pad development in the Milne Point unit will be on line by the end of the year; and the federal Bureau of Ocean Energy Management has published the final environmental impact statement for the Liberty project, in the Beaufort Sea.

see **HILCORP MOVES** *page 10*

FINANCE & ECONOMY

Canada investment lags

Legislation up for vote in Senate overhauls resource project regime, replaces NEB

By GARY PARK

For Petroleum News

Capital investment in Canada is lagging far behind the western industrialized world and worse could be in store if the government of Prime Minister Justin Trudeau pushes ahead with legislation that one expert says could "drive a nail into the coffin of the resource sector."

Rick Peterson, founder of a not-for-profit group of Canadian investment industry professionals, has launched a campaign to scuttle Bill C-69 known as the Impact Assessment Act having rounded up the support of 500 people in only a few days.

"Bill C-69 is so terrible that it's really not salvageable at all," he told the Calgary Herald. "It has to be stopped completely. It must be killed."

Compounding this mood of despair, the highly respected C.D. Howe Institute issued a new report earlier in September warning that Canada's economic competitiveness is under threat.

Peterson said that will need the votes of 48 of 95 sitting Senators, 31 of whom are Conservatives and are expected to oppose the legislation, leaving lobbyists to rally support from 17 additional senators who have no direct ties to any political party.

Bill C-69 is designed to overhaul Canada's resource project assessment regime, including replacing the National Energy Board with a new

see **CANADA INVESTMENT** *page 10*

● FINANCE & ECONOMY

OPEC: China, India lead energy demand

Organization's 2018 World Oil Outlook says oil retains highest share in global energy mix through 2040; gas has largest growth

By KRISTEN NELSON
Petroleum News

The Organization of the Petroleum Exporting Countries released its 2018 World Oil Outlook 2040 Sept. 23, laying out what the organization sees for the global economy and global energy.

The outlook projects that the global economy in 2040 will be more than double that of 2017, but with major regional shifts over the period. While Organization for Economic Cooperation and Development countries in the Americas accounted for 20 percent of global gross domestic product in 2017, followed by OECD Europe and China at 18 percent each, other Asia at 10 percent and India at 8 percent, by 2040 China's GDP is expected to increase to 24 percent, while OECD America will drop to 15 percent and OECD Europe to 12 percent.

The global population, 7.55 billion in 2017, is projected to grow to 9.21 billion in 2040, an increase of 1.66 billion, with the rate of growth decelerating over the period and the population aging. Population growth will primarily be in the developing world — Africa, India and the Middle East, with much slower growth in the OEDC region.

The outlook says demand for OPEC crude will decline in the medium term, from 32.6 million bpd in 2017 to 31.6 million bpd in 2023 but recover to current levels after U.S. tight oil peaks, rising to nearly 40 million bpd by 2040.

Global GDP is expected to increase at an average annual rate of 3.4 percent, slightly lower, the outlook says, than its 2017 assumption, and with faster growth, 3.6 percent in the earlier period, 2017-23, slowing to 3.2 percent by 2030-40.

Energy demand

The outlook says primary energy demand is expected to increase by 91 million barrels of oil equivalent per day between 2015 and 2040, reaching 365 million boe per day in 2040 in the outlook's reference case from 274 million boe per day, averaging 1.2 percent growth per year.

Developing countries, including China and India, account for almost 95 percent of the increase, with an annual average growth of 1.9 percent.

"Primary energy demand in China and India is the most significant contributor to overall energy demand growth," the outlook says. Developing countries are projected to see an increase in energy demand of almost 86 million boe per day between 2015 and 2040, with energy demand in India and China in this period projected to grow by 22 million boe and 21 million boe per day respectively, more than 50 percent of the energy demand growth in developing countries during the period.

Demand in the group of other developing countries — excluding China, India and OPEC — is expected to increase some 29 million boe per day in the period, with significant growth also expected in OPEC countries, increasing from 20 million boe to almost 33 million boe per day.

Natural gas has the largest estimated demand growth, increasing by almost 32 million boe per day between 2015 and 2040, with the share of natural gas in the energy mix accounting for 25 percent in 2040, up 3.3 percent from 2015.

see OPEC OUTLOOK page 9

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● ENVIRONMENT & SAFETY

P&A work beginning on old Aurora wells

By KRISTEN NELSON
Petroleum News

When Aurora Gas went bankrupt, it had 19 wells on the west side of Cook Inlet — and only six were purchased out of bankruptcy, by the company which became Amaroq.

Of the 13 not purchased, Commissioner Cathy Foerster of the Alaska Oil and Gas Conservation Commissioner told legislators in March that 10 are on Cook Inlet Region Inc. land. Foerster said if the operator doesn't plug and abandon a well, it becomes the responsibility of the landowner. In CIRI's case, she said, when the original operator sold the CIRI leases to Aurora Gas, CIRI insisted the original operator retain the responsibility to P&A the wells, should Aurora Gas fail to do so.

Foerster said CIRI has pursued that obligation and the P&A work will be done, but the remaining three are on state land and the Alaska Department of Natural Resources, as the landowner, is responsible to P&A.

Disposal injection approved

P&A work on the wells has begun.

On Sept. 20, AOGCC approved an application for use of the Aspen No. 1 well for limited commercial water disposal, in connection with P&A work that Plugging Inlet LLC is doing on a number of west side wells.

In a Sept. 10 letter to the commission, George Pollock, a consultant for Plugging Inlet, said that company is the current operator of the Aspen No. 1 Class II disposal well and said the company proposes to inject Class II fluids — produced water and brine — generated by the legacy Aurora Gas LLC wells.

In a Sept. 20 approval letter, the commission said the requested administrative approval was for "limited duration, commercial disposal, water only injection" at the Aspen 1 well.

The commission put numerous conditions on the approval, including that it is only for waste fluids associated with the bankruptcy of Aurora and requirements to P&A those wells. AOGCC listed (in addition to the Aspen 1 disposal well): Lone Creek 1, 3 and 4; Kaloa 2; Moquawkie 1, 3 and 4; Simpco Moquawkie 1 and 2; Nicolai Creek 10, 11 and 129; and Three Mile Creek 2.

In its application Plugging Inc. lists Amaroq as the operator of the Nicolai Creek wells and Glacier as the operator of the Three Mile Creek well.

For the other listed wells, Plugging Inlet is the operator.

Plugging Inlet said it was requesting a limited duration approval — until completion of the P&A work or until Jan. 1, 2019. ●

Contact Kristen Nelson at knelson@petroleumnews.com

● INTERNATIONAL

EU, Iran set financial 'vehicle' for trade

By EDITH M. LEDERER
Associated Press

Five world powers and Iran agreed Sept. 24 to establish a financial facility in the European Union to facilitate payments for Iranian imports and exports including oil, a key move sought by Tehran following the U.S. pullout from the 2015 nuclear deal and its re-imposition of sanctions.

Foreign ministers from Britain, France, Germany, Russia, China and Iran said in a joint statement that the so-called "Special Purpose Vehicle" will "assist and reassure economic operators pursuing legitimate business with Iran."

The nuclear agreement is meant to prevent Tehran from developing nuclear weapons, but U.S. President Donald Trump announced in May he was unilaterally pulling out because he felt it wasn't strong enough and didn't cover other issues of concern to the U.S. and its allies, such as Iran's military influence in the Middle East and ballistic missile program. The U.S. has also accused Iran of promoting international terrorism, which Tehran vehemently denies.

Iran's economy is already suffering from the sanctions that Washington re-imposed after walking away from the nuclear agreement, and the U.S. has threatened to punish companies from other nations that continue doing business with Iran.

Iran's economy is already suffering from the sanctions that Washington re-imposed after walking away from the nuclear agreement, and the U.S. has threatened to punish companies from other nations that continue doing business with Iran.

Five committed to deal

In sharp contrast, the five other world powers who signed the nuclear deal remain strongly committed to it, and the new financial facility is almost certain to anger the Trump administration.

European Union foreign policy chief Federica Mogherini told reporters after the closed-door ministerial meeting that the financial facility is also aimed at preserving the nuclear agreement. The EU and Iran say the deal is working, and the joint statement notes that the International Atomic Energy Agency has now certified 12 times that Iran is in compliance with its obligations.

"In practical terms," Mogherini said, "this will mean that EU member states will set up a legal entity to facilitate legitimate financial transactions with Iran and this will allow European companies to continue to trade with Iran in accordance with European Union law and could be open to other partners in the world."

She said the agreement follows extensive exchanges and announced that a meeting of technical experts will be held to "operationalize" the new financial facility.

The joint statement said the six countries that signed the 2015 nuclear agreement "reconfirmed their commitment to its full and effective implementation in good faith and in a constructive atmosphere." They called the agreement "a key element of the global non-proliferation architecture and a significant achievement of multilateral diplomacy."

The participants reaffirmed their joint statement on July 6, "in particular to pursue concrete and effective measures to secure payment channels with Iran." ●

EXPLORATION & PRODUCTION

OPEC agreement not to increase production

A meeting of OPEC and its allies ended without any decision to further increase oil output despite President Donald Trump's call for lower prices.

Members of the Organization of the Petroleum Exporting Countries met Sept. 23 in Algiers with non-members including Russia.

The committee said in a statement that it was satisfied "regarding the current oil market outlook, with an overall healthy balance between supply and demand."

It also urged "countries with spare capacity to work with customers to meet their demand during the remaining month of 2018."

Trump has been calling publicly for OPEC to help lower prices by producing more.

"We protect the countries of the Middle East, they would not be safe for very long without us, and yet they continue to push for higher and higher oil prices!" he tweeted Sept. 20.

Drop in Iran's supply

The price rise is notably caused by a recent drop in Iran's supply because of U.S. sanctions.

OPEC and Russia have capped production since January 2017 to bolster prices. Output fell below those targets this year, and in June the same countries agreed to boost the oil supply.

Saudi Arabia Energy Minister Khalid al-Falih told reporters that participating countries have provided over the last three months "a lot of supply to offset decreases" in Iran, Venezuela and Mexico. "Markets are quite balanced today, there's plenty of supply to meet any customer that needs it."

—ASSOCIATED PRESS

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● PIPELINES & DOWNSTREAM

Keystone XL construction to start in 2019

By GRANT SCHULTE
Associated Press

The developer of the Keystone XL oil pipeline plans to start construction next year, after a U.S. State Department review ordered by a federal judge concluded that major environmental damage from a leak is unlikely and could quickly be mitigated, a company spokesman said Sept. 24.

TransCanada spokesman Matthew John said the company remains committed to moving ahead with the project following years of reviews from federal and state regulators. The company has already started preparing pipe yards, transporting pipe and mowing parts of the project's right of way in Montana and South Dakota, but TransCanada said in court documents it doesn't plan start construction in Nebraska in the first half of 2019.

The State Department has noted that TransCanada has a lower overall spill rate than average in the pipeline industry.

Enviros: Fight will continue

The report issued Sept. 21 from the Trump administration's State Department drew criticism from environmental groups, who say they'll continue to fight the project they view as an environmental threat.

"The Trump administration sees no problem with building the Keystone XL — in other news, the grass is still green and the sky is still blue," said Kelly Martin, a campaign director for the Sierra Club.

The updated, 338-page report was released a little more than a month after a federal judge in Montana ordered the U.S. State Department to conduct a more thorough review of the pipeline's proposed pathway after Nebraska state regulators changed the route.

Original EIS in 2014

The original environmental impact study was issued in 2014, before Nebraska regulators approved a longer "mainline alternative" route that veered away from the company's preferred pathway. President Donald Trump approved a federal permit for the project in March 2017, reversing former President Barack Obama's decision to reject it amid concerns over greenhouse admissions.

The report said the $8 billion, 1,184-mile pipeline would have a "negligible to moderate" environmental impact under its normal operations, and continuous monitoring and automatic shut-off valves would help company officials quickly identify a leak or rupture. Additionally, the report said TransCanada has a response plan in place that should mitigate the effects if it's implemented quickly.

The pipeline would carry up to 830,000 barrels of crude oil per day from Canada through Montana and South Dakota to Steele City, Nebraska, where it would connect with the original Keystone pipeline that runs down to Texas Gulf Coast refineries.

"Prompt cleanup response would likely be capable of remediating the contaminated soil before the hazardous release reaches groundwater depth," the report said.

Pending suit in Nebraska

Environmentalists, Native American tribes and a coalition of landowners have prevented the company from moving ahead with construction. In addition to the federal lawsuit in Montana that seeks to halt the project, opponents have a pending lawsuit before the Nebraska Supreme Court. Oral arguments in the Nebraska case aren't expected until October.

Critics of the project have raised concerns about spills that could contaminate groundwater and the property rights of affected landowners. In Nebraska, a major battleground for the project, opponents are trying to change the makeup of the Nebraska Public Service Commission in hopes of overturning its previous decision to approve an in-state route for the pipeline.

The latest State Department report is a draft that must still face public review and comments, but federal officials say they expect to have the final draft ready by December. In court documents from the Montana lawsuit, TransCanada's attorneys said they believe all the pending lawsuits will be resolved before construction begins.

The pipeline would carry up to 830,000 barrels of crude oil per day from Canada through Montana and South Dakota to Steele City, Nebraska, where it would connect with the original Keystone pipeline that runs down to Texas Gulf Coast refineries. The State Department has noted that TransCanada has a lower overall spill rate than average in the pipeline industry. ●

Congratulations

Hats off to Joe Marushack & team

Joe Marushack, President
ConocoPhillips Alaska

The latest success of ConocoPhillips, whose leadership is very upbeat about its Alaska North Slope oil business, has been the federal Bureau of Land Management publishing a final supplemental environmental impact statement for the company's Greater Mooses Tooth 2 development in northeastern NPR-A. The SEIS has as its preferred option ConocoPhillips' plan to build a 14-acre drill pad that could host up to 48 wells. The light oil would be transported by pipeline via the Greater Mooses Tooth 1 pad to the Alpine central processing facility.

Furthermore, ConocoPhillips has upped its estimated peak production for Mooses Tooth 2 from 30,000 barrels of oil per day to 38,000 bpd. The project will cost some $1.5 billion.

Our congratulations and appreciation goes out to ConocoPhillips!

Afognak Leasing LLC
Air Liquide
Alaska Crane
Alaska Energy Services, LLC
Alaska Dreams
Alaska Frac Consulting LLC
Alaska Frontier Constructors (AFC)
Alaska Gasline Development Corporation (AGDC)
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Oil Search
Opti Staffing
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Petroleum Equipment & Services, Inc.
PND Engineers, Inc.
PRA (Petrotechnical Resources of Alaska)
Price Gregory International
Resource Development Council
SAExploration
Security Aviation
Sourdough Express
Strategic Action Associates
Summit ESP, a Halliburton Service
Superior Machine & Welding Inc.
Tanks-A-Lot
The Local Pages
Udelhoven Oilfield System Services Inc.
Unique Machine
Volant Products
Waste Management
Weston Solutions

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FAIRBANKS LNG

recent development, Siemens has an offer of a gas supply from a Cook Inlet gas producer, involving a long term fixed and competitive gas price. Siemens has previously said that a key motivation for building an LNG plant is that the plant could form a foundation for Siemens to create an expanding business in Alaska, serving customers beyond just IGU. Laurel indicated that the proposed gas contract fits with that vision, and that the prospect of serving a wider customer base was a driver in achieving attractive terms for the supply.

"I think we have really found a great partner who is very interested and aligns their goals and objectives and sees a vision for helping all of Alaska, not just the Interior," Laurel said.

However, given that Siemens does not have any agreement with IGU for the supply of LNG, the proposed gas supply contract has not yet been signed: Details of the contract, including the gas supplier and the gas price remain confidential.

Supply for GVEA

Siemens representatives also commented that, as a potential first step towards establishing an industrial LNG demand beyond the supplies needed for IGU, they had discussed with Fairbanks electric utility Golden Valley Electric Association the possibility of supplying LNG to GVEA. In particular GVEA may be able to purchase LNG in the summer, when IGU's gas demand will be low. GVEA has in the past had an interest and involvement in the Interior Energy Project: Originally the utility had been a key potential customer for LNG delivered to Fairbanks, but later, when the price of fuel oil in Fairbanks fell, reduced its interest to the possible purchase of gas during the summer.

Siemens has previously said that a key motivation for building an LNG plant is that the plant could form a foundation for Siemens to create an expanding business in Alaska, serving customers beyond just IGU.

The quandary that the IGU board now faces is how to compare the Knik/Siemens proposal with a plan developed by the IEP, to expand an existing LNG plant, the Titan plant, now owned by IGU, near Port Mackenzie on Cook Inlet. Either of these projects would provide the required LNG supply expansion, but each involves a completely different value proposition for IGU. And each has its associated risks and uncertainties.

The Siemens concept involves the construction of a new, relatively small LNG plant on Native owned land adjacent the Alaska Railroad near Houston. LNG would be transported to Fairbanks on the railroad. The plant would be of modular design, expandable as LNG demand increases. Feedstock gas would come via a nearby Enstar Natural Gas Co. gas transmission pipeline, through a connecting spur pipeline that would need to be constructed. Siemens would build the proposed plant under contract to Knik Tribe, which would own the project. Siemens would capitalize the project, at no cost to IGU. IGU would then buy LNG from the plant at an agreed price.

Siemens wants MOU

At this stage, Siemens wants to sign a memorandum of understanding with IGU, before proceeding any further with the project. That MOU would involve an agreement on a term sheet for an LNG pricing model, Siemens officials explained to the board. There would be a penalty payment, as compensation for work conducted by Siemens, if IGU subsequently backed out of the project. Ultimately, work done under the terms of the MOU could lead to a liquefaction services agreement, based on which the LNG plant would be built and go into operation,

The signing of the MOU would not preclude IGU from continuing to investigate the Titan plant expansion option.

Having purchased Pentex Natural Gas Co., the owner of the Titan plant, from AIDEA earlier this year, IGU operates that plant, would capitalize any expansion to the plant and would continue to operate the plant after expansion. AIDEA would provide financial assistance through Sustainable Energy Transmission and Supply, or SETS, loans, AIDEA bonds and a state appropriation for the project. LNG is shipped from the plant to Fairbanks using road LNG trailers.

As provider of much of IGU's funding under the Interior Energy Project, AIDEA has financial oversight of major IGU expenditure.

Comparison needed

The IGU board now wants to conduct a side-by-side comparison of the two LNG supply options, in order to be able to make an objective decision over which option to choose. But making this comparison will not be straightforward, given the major differences between the two business models. Ultimately the decision will presumably revolve around the relative cost to consumers of gas in Fairbanks, and the reliability of the gas supply. But, given the status of the two projects, there are some significant risks and uncertainties

see FAIRBANKS LNG *page 7*

Cost increases for Fairbanks LNG storage tank

The projected cost of a large, new liquefied natural gas storage tank, being constructed in Fairbanks by the Interior Gas Utility, has increased from $48.7 million to $54.2 million, IGU management reported to the IGU board on Sept. 18. The tank is being constructed to support an enlarged gas supply for residents and businesses in the Fairbanks region, as part of the Alaska Industrial Development and Export Authority's Interior Energy Project.

It appears that a major reason for the cost uptick was a discovery, during excavation of the foundations for the tank, that additional refrigeration would be needed of soil outside of the area of the tank itself. Deeper excavation is required than originally planned, and there has been an increase in the cost of steel required for the project, Dan Britton, IGU general manager, reported to the board.

The board passed a resolution approving the change to the storage tank budget but also expressed significant concern about any budget overrun. Additional money spent on the tank could impact funding availability for other aspects of IGU's efforts to expand gas supplies for Fairbanks. Moreover, the cost of developing the infrastructure that supports the gas supply impacts the cost of gas delivered to gas customers. This cost, in turn, would impact the demand for gas in Fairbanks — the level of gas demand is a critical factor in the economics of the expanded gas supply.

—ALAN BAILEY

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MARATHON MERGER

operates an integrated refining, marketing and transportation system concentrated primarily in the U.S. Midwest, Northeast, East Coast, Southeast and Gulf Coast. It is headquartered in Findlay, Ohio, and has some 43,800 employees.

The exploration and production portion of the company, under the Marathon Oil name, became an independent E&P company July 1, 2011.

Marathon was formerly a major Cook Inlet E&P player. It sold most of its Cook Inlet oil production in 1996 and focused on natural gas.

In early 2012 it sold its Alaska assets to Hilcorp Alaska. The company had been operating in Alaska for almost 58 years, but its focus as Marathon Oil was on liquids-rich resource plays.

Andeavor is an integrated marketing, logistics and refining company, with operations primarily in the western and midcontinent U.S. it operates 10 refineries in the midcontinent and western U.S. It has some 14,000 employees.

Formerly known as Tesoro Corp., the company operates a refinery on the Kenai Peninsula and also owns the liquefied natural gas facility which was built by a partnership of Phillips Petroleum and Marathon. Plant operator ConocoPhillips put the LNG plant up for sale and mothballed it in the fall of 2017. A sale of the LNG facility to Andeavor closed Jan. 31 of this year.

—KRISTEN NELSON

Contact Kristen Nelson at knelson@petroleumnews.com

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FAIRBANKS LNG

involved. Uncertainty over future gas demand in the Fairbanks region also complicates the situation.

At this stage, IGU has not conducted the front-end engineering and design for the Titan expansion. And so the cost of the expansion, and the resulting cost of the delivered LNG, remain somewhat uncertain. Dan Britton, IGU general manager, told the board that there is a contingency of plus or minus 30 percent for the estimated cost of the expansion.

Siemens said that its modular LNG plant design involves an existing, proven modular technology with well understood costs, and that it has cost estimates from Alaska contractors. However, further plan refinement is required for the civil work and infrastructure construction at Houston — work on this refinement would proceed following the signing of an MOU with IGU.

Board member Gary Wilken said that he had conducted a comparison of the cost models for the Titan expansion and the Siemens proposal, and that it appeared to him that gas delivered from the Siemens system would be more expensive. Laurel responded that the MOU between IGU and Knik Tribe/Siemens would clarify the LNG pricing associated with the proposed Houston plant.

—ALAN BAILEY

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EXPLORATION & PRODUCTION

National rig count down 2 to 1053

The number of rigs drilling for oil and natural gas in the U.S. was down by two the week ending Sept. 21 to 1,053.

At this time a year ago there were 935 active rigs.

Houston oilfield services company Baker Hughes reported that 866 rigs targeted oil (down one from the previous week) and 186 targeted gas (no change). One was listed as miscellaneous (down one).

Among major oil- and gas-producing states, Texas gained six rigs.

Oklahoma was down three, Alaska was down two and North Dakota was down one.

California, Colorado, Louisiana, New Mexico and Wyoming were unchanged.

The Baker Hughes rotary rig count shows five rigs active in Alaska, unchanged from a year ago.

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

—PETROLEUM NEWS

LAND & LEASING

Call for new info on Alaska Peninsula

The Alaska Department of Natural Resources, Division of Oil and Gas, has issued a call for new information for the 2019 Alaska Peninsula areawide oil and gas lease sale. The Alaska Peninsula areawide sale will be held in conjunction with the Cook Inlet areawide sale, tentatively scheduled for next spring.

The division is requesting substantial new information concerning the Alaska Peninsula that has become available over the past year.

The deadline for information to reach the division is 5 p.m. Oct. 26.

The division said that based on the information received it will either issue a supplement to the finding or a decision of no substantial new information.

The most recent final best interest finding for the Alaska Peninsula was issued in 2014 and is available on the division's website at http://dog.dnr.alaska.gov/Services/BIFAndLeaseSale/.

The division said it is not seeking new information on the Cook Inlet lease sale area because a preliminary Cook Inlet Areawide best interest finding was issued June 29, with public comments accepted through Aug. 30.

The spring Cook Inlet sale will be based on the final best interest finding which should be available by the end of the year, the division said.

—PETROLEUM NEWS

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INSIDER

geology of the state, will eventually retire.

The good news is, the person hired for the senior research geologist in Anchorage will eventually take Houseknecht's place as project chief and he or she will continue to be based in Alaska.

"It will make it much easier to do the job to have the project lead in Alaska," he said.

And more good news: Houseknecht doesn't intend to hand over the reins anytime soon — not for at least a few years, in fact.

"I'm having too much fun to retire," he said, fresh from field work this past summer on the North Slope and Brooks Range.

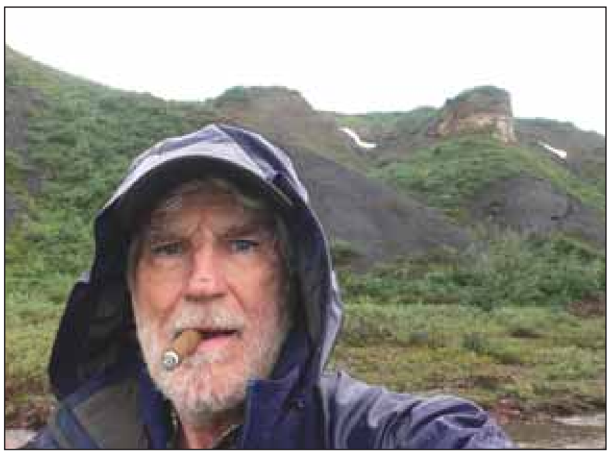
Houseknecht will work closely with the new person for several years, in the same way the former supervisory geologist Ken Bird did with him.

The new person will give Houseknecht more time to concentrate on what he most enjoys: utilizing the scientific research conducted in the Arctic, analyzing it, interpreting it, and publishing papers on what he and co-authors see — the result of interest and value to the energy industry, as well as those looking to understand the science behind it, and even those who oppose resource development.

USGS papers and assessments are published and made public at the same time for public consumption — the agency resists all attempts by political leaders and advocacy groups to release its reports early.

Houseknecht's position requires three talents, which the new senior geologist will also need, he said.

"I describe them as three tentacles: One is conducting research that provides the scientific foundation for conducting assessments of undiscovered oil and gas resources and providing the technical leadership for the project team scattered across the country. Two is maintaining current knowledge of industry activities and serving as liaison to industry, federal and state agencies, and non-government organizations. The third is providing an interface with the political world, which commonly involves communicating objective technical information in a politically volatile environment." (Petroleum News suspects this includes knowing how to resist political pressure.)



COURTESY DAVE HOUSEKNECHT

Dave Houseknecht on the last day in the USGS field trip this summer — rainy and buggy and working in muddy source rocks.

Houseknecht joined USGS in 1992, serving as energy program manager until 1998. He has worked on basin analysis and petroleum resource assessments of Arctic Alaska and adjacent Arctic regions since 1995, spending nearly four years working closely with Bird before he assumed the lead for the USGS Alaska petroleum project.

He frequently represents the USGS scientific perspective on petroleum resources in ANWR, NPR-A, and other areas of Alaska and the global Arctic to Congress and the Administration.

Previously, Houseknecht was a professor of geology at the University of Missouri (1978-1992) and a consultant to the oil industry (1981-1992), working on domestic and international projects.

He received geology degrees from Penn State University (Ph.D. 1978, B.S. 1973) and Southern Illinois University (M.S. 1975).

—KAY CASHMAN

Crude oil prices surpass $80 a barrel

THIS HAS BEEN A YEAR OF RECOVERY for the oil and gas industry, especially in the Lower 48 states.

Alaska has seen growth, but 2019 looks to be closer to a boom year than this past year, given the major new oil discoveries on the North Slope and all the attention they are garnering around the world.

Activity suggests Alaska will gain a few more oil and gas companies in the coming year; and that those already here will become increasingly active, eager to develop newly discovered resources.

Equally important is the latest oil price milestone which broke the $80 a barrel mark this past week.

According to a Sept. 24 posting from OilPrice.com, an oil price spike is "starting to look increasingly possible," with a repeat of 2008 "not entirely out of the question."

The statement was supported by a new report from Bank of America Merrill Lynch Business Solutions.

BofAML has a price target for Brent at $95 per barrel by the end of the second quarter 2019. In 2008, Brent spiked to nearly $150 per barrel.

—KAY CASHMAN

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PROJECT REVIEW

cover a fresh round of consultations with Indigenous communities.

Sohi said the government will appoint a special marine technical adviser to be part of the NEB's new review, although that person has yet to be named.

"We are confident this revised plan will allow us to meet the high standards that Canadians expect when it comes to the environment," he said.

Sohi said the government has yet to decide whether to appeal the federal court verdict but has opted to respond to the court's findings.

The review will examine the impact on killer whales of the additional tankers that will sail from Kinder Morgan's marine terminal in the Port of Vancouver.

Under Kinder Morgan's plan to increase shipments of crude to 890,000 barrels per day from 300,000 bpd, the number of tankers will go to about 37 a month (34 Aframax class tankers and three barges) from the current five.

In a separate development, Kinder Morgan staged a large emergency spill response drill at the terminal on Sept. 19.

"Our goal is to operate, manage and protect the pipeline system so that our emergency response plans are never used, while being fully prepared for any type of incident," said Michael Davies, vice president of operations at Trans Mountain.

Alberta Premier Rachel Notley was unimpressed with the federal government's actions.

"We still remain a bit skeptical, as a result we will be watching very closely," she told a news conference. "Our concern has always been (the prospect) of the NEB process having to restart."

Shannon Stubbs, natural resources spokesperson for the opposition Conservative Party, said the government has put no timeline on when Indigenous consultations must be completed or when construction on the pipeline might be restarted.

Keith Stewart, an energy strategist with Greenpeace, said the government is merely treating the latest review as a "box-checking exercise," adding that is not true consultation.

—GARY PARK

The review will examine the impact on killer whales of the additional tankers that will sail from Kinder Morgan's marine terminal in the Port of Vancouver.

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OPEC OUTLOOK

Oil highest share

The outlook says oil will retain the highest share in the global energy mix in the period, with a share of nearly 28 percent in 2040, with fossil fuels projected to remain the dominant component in the global energy mix at 75 percent, down 4 percent from 2015.

Global oil demand is projected to increase by 14.5 million bpd, up from 97.2 million bpd in 2017, reaching 111.7 million bpd in 2040, but with that growth decelerating over the outlook period.

Long-term demand is projected to decline in OECD, rise moderately and then flatten in Eurasia, and increase by more than 22 million bpd in developing countries, rising from 44.4 million bpd in 2017 to 66.6 million bpd in 2040. The largest additional oil demand and the fastest growth rate is expected in India, growing at 3.7 percent per year and with the largest additional demand of 5.8 million bpd, likely passing the 10 million bpd mark toward the end of the forecast period.

US tight oil growth

The outlook says non-OPEC supply is projected to grow by 8.6 million bpd in the 2017-23 period, due to strong performance in U.S. tight oil production. Total non-OPEC liquids supply is expected to grow from 57.5 million bpd in 2017 to 66.1 million bpd in 2023, with 5.6 million or 65 percent in the U.S.

Non-OPEC supply is expected to peak in the late 2020s at just below 67 million bpd, as U.S. tight oil supply peaks, and then decline slowly to average 62.6 million bpd by 2040, "with modest growth in Kazakhstan, Canada and Brazil insufficient to offset natural decline in most other parts of the non-OPEC supply picture." Global tight oil is expected to peak at a one-quarter share of non-OPEC supply.

The outlook says demand for OPEC crude will decline in the medium term, from 32.6 million bpd in 2017 to 31.6 million bpd in 2023 but recover to current levels after U.S. tight oil peaks, rising to nearly 40 million bpd by 2040.

Investment

Required investment in all sectors of the oil industry will total almost $11 trillion up to 2040, the outlook says, with global upstream investments over 2018-40 estimated at $8.3 trillion, mostly in non-OPEC countries, where investment is estimated to average $350 billion per year, declining to some $280 billion as the crude supply declines. ●

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Oil Patch Bits

Nordic-Calista's Therrien and Cassee receive promotions

Nordic-Calista Services said Sept. 21 that it is pleased to announce the promotions of Noel Therrien and Udo Cassee.

Noel Therrien was promoted from operations manager to the position of general manager.

NOEL THERRIEN

UDO CASSEE

Noel has been with Nordic-Calista Services in the local Alaska market for 25 years and has worked in many positions within the company with 38 years of service to date. Therrien started out as a roughneck in the Canadian oilfield in 1979, working back and forth between the Alaska and Canadian oil fields in various rig positions, promoting into management, and returning to Alaska to live in 1992. He has extensive experience in workovers and completions, sidetracks, over balanced/underbalanced drilling with coil tubing, coil tubing drilling and grass roots well drilling.

Udo Cassee was promoted from operations superintendent to the position of operations manager.

Udo had been the operations superintendent for Nordic-Calista Services, a position he assumed in 2005 after joining this company in 2003. Before Nordic-Calista Services, Cassee spent 11 years of his oilfield career with Schlumberger where he worked through different management and engineering positions in the Netherlands, Norway, United Kingdom and Alaska.

He has experience in contracting including negotiations, financials and liability analysis. This is complemented by his extensive involvement in cementing, downhole tools and coiled tubing applications, drilling, sidetrack and workover with jointed pipe or coiled tubing, overbalanced and underbalanced drilling with coiled tubing, offshore, land and arctic operations.

Lynden's Green Initiative celebrates 10 years

COURTESY LYNDEN

Lynden announced Sept. 20 that its Green Initiative is celebrating 10 years. The 10-year mark coincides with Lynden being named one of the top 75 Green Supply Chain partners for 2018 by Inbound Logistics magazine. It is Lynden's eighth award.

"Lynden's Green Initiative grew out of a depression era distaste for waste and a commonsense desire to do what's right," said Coordinator Anna Deal. "Now, 10 years later, I am truly amazed at what we have accomplished together."

"Lynden's operating companies have continued to invest in modern high efficiency equipment to increase payload and reduce idle time, work with drivers to improve driving habits, and to look for innovative ways to improve freight operations. These efforts have paid off with the steady and measurable improvement in our freight efficiency and reduced emissions," Deal explained. "We are doing more with less at all levels."

For more information visit www.lynden.com

Editor's note: Some of these items will appear in the next Arctic Oil & Gas Directory, a full color magazine that serves as a marketing tool for Petroleum News' contracted advertisers. The next edition will be released in March.

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HILCORP MOVES

The company currently has four drilling rigs in action in Alaska, Wilkins said.

The cross-inlet pipeline

The cross-inlet pipeline project involves converting one of the twin Cook Inlet Gas Gathering System, or CIGGS, pipelines under Cook Inlet from the carriage of gas to the carriage of oil. That will enable Hilcorp to ship oil by pipeline from oil fields on the west side of the inlet to Nikiski on the Kenai Peninsula. The idea is to enable the decommissioning of the Drift River oil terminal on the west side of the inlet.

"We are wrapping up that and expect to be on line with that project in mid-October, which is phenomenal," Wilkins said of the pipeline project.

The project involves the construction of some short oil pipeline segments to connect the CIGGS line to the existing oil infrastructure. Hilcorp has also been upgrading the gas pipeline between Nikiski and the offshore Tyonek gas production platform and laying a new subsea gas line between the platform and the west side of the inlet — the reconfigured Tyonek pipeline system will replace the gas transportation capacity lost when one of the CIGGS lines starts carrying oil.

Moose pad

The new Moose pad is situated in the far western part of the Milne Point unit, with multiple wells planned. Hilcorp has previously indicated that the project will involve developing oil from the Kuparuk and the Schrader Bluff. The Schrader Bluff typically contains relatively viscous or heavy oil.

Hilcorp has set the conductors for five initial wells at the Moose pad and anticipates moving the drilling rig to the pad by the end of October, Wilkins said.

"The production facility will get commissioned and we will have first oil in 2018," he said, adding that 2019 will be the prime year for drilling from the pad.

Wilkins also commented that Hilcorp has started a polymer flood program at Milne Point, for the enhanced production of heavy oil. The company now has two pilot plants operational for the program — results so far look really good, with the heavy oil set to boost overall oil production, he said.

Liberty

Hilcorp plans to develop the Liberty oil field from a small artificial gravel island in 19 feet of water in the Beaufort Sea, about five miles offshore, some 15 miles east of Prudhoe Bay. A buried subsea pipeline would carry sales grade crude oil to shore, to connect with the existing Badami pipeline. This will be the first oil field development that is entirely within federal land of the Arctic Alaska outer continental shelf.

The Liberty oil is relatively light, which will be a benefit to overall North Slope oil production and the operation of the trans-Alaska pipeline, given the recent tendency for oil produced from the Slope to become heavier, Wilkins said. And the excellent reservoir rock, in the Kekiktuk formation, equivalent to the reservoir in the Endicott field, will enable high production rates, peaking at 60,000 barrels per day. The field has proven reserves of 80 million to 130 million barrels of oil, with an anticipated operational life in excess of 20 years, Wilkins said.

"It's a new business opportunity for the support industry. It's over $1 billion of investment," he said.

Permitting in progress

Mike Dunn, Hilcorp project manager for the Liberty project, said that, following publication of the EIS, Hilcorp anticipates a record of decision from BOEM in October. Another major permit, the federal Pipeline and Hazardous Materials Safety Administration permit for the pipeline system to the shore, should come by the end of this year, or early next year, he said. Hilcorp anticipates approval of the oil spill response plan for the field in the first or second quarter of 2019. At that point Hilcorp and its partner companies for Liberty will take another look at the economics and make a final decision on whether to move forward with the development.

Although Hilcorp cannot speak for its partners, at this stage the company does think that the project is a go, Wilkins said.

Proven design

Dunn commented that the development concept for Liberty involves a simple, proven field design, modeled after Northstar and other Beaufort Sea developments — processing facilities on the island will connect to the subsea pipeline to shore. The pipeline itself will be of a pipe-in-pipe design, with a 16-inch outer pipe and a 12-inch inner pipe that carries the oil. The pipeline bundle will include a utility pipeline for potentially carrying fuel gas from Badami, and a fiber optic cable for communications.

"We're very comfortable with the design that's been proposed," Dunn said of the field as a whole.

The design involves the use of modules small enough to be trucked to the North Slope, rather than having to be shipped from out-of-state using a sealift operation. This arrangement will enable most of the modules to be fabricated in Alaska, although the power generation unit and the separation trains will need to be manufactured out of state, Dunn said. The modules will be trucked to the Slope and then transferred to the Liberty island by barge. A key means of making the modules small enough to be truckable is a design involving the installation of a separate separation train for each production well, Dunn said. Each separation train will be able to handle up to about 15,000 barrels of oil per day, he said.

Winter drilling

Under the environmental protection requirements spelled out in the EIS, Hilcorp will be able to conduct general drilling at any time of the year but will only be allowed to drill into the oil reservoir in winter conditions. These drilling stipulations impact the development plan for the field.

Construction of the artificial island will take place in the winter of 2020 to 2021 and the winter of 2021 to 2022 will see the construction of the subsea pipeline, Dunn said. Hilcorp will move the various modules to the island during the following summer, with the drilling rig being moved within that same summer timeframe. Drilling will start at the beginning of September, with an objective of drilling four wells during the coming winter. That winter's drilling will include the drilling of a disposal well, towards the southwest. The first of the development wells will be a gas injector, followed by a production well. The fourth well will be another injector, for the injection of water alternating gas.

Startup of the facilities should begin in May 2023, Dunn said.

Ultimately Hilcorp anticipates drilling 10 to 12 development wells at Liberty, he said. ●

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CANADA INVESTMENT

Canadian Energy Regulator.

The legislation sailed through the Liberal-dominated House of Commons earlier this year, leaving only the Senate as a barrier.

Peterson listed 10 reasons why Bill C-69 should be killed, including provisions that could extend project review timelines from an average four years by another eight to 10 months, at the same time U.S. regulators are working on two-year deadlines.

Project control

He said the bill gives the federal environment minister the power to decide whether a project goes ahead, pointing out that the legislation was introduced by Environment Minister Catherine McKenna, with no participation by the ministers of industry or natural resources.

Martha Hall Findlay, president of the nonpartisan think tank Canada West Foundation and a former high-profile Liberal Member of Parliament, offered a blunt response when asked what could happen if Bill C-69 becomes law.

"Kiss our investment climate goodbye," she said. "Investors — domestic, foreign, current, potential — their commentary is overwhelming. They say, 'if this passes we are going elsewhere.'"

Hall Findlay said she has heard comments from those who had projects approved under the current regime and now insist they would not bother even filing an application under Bill C-69.

Northern Gateway

She said the resource industry has already had a taste of what the Trudeau government apparently has in mind.

Enbridge's plan to ship 525,000 barrels per day of oil sands bitumen on its Northern Gateway pipeline to Prince Rupert for shipment to Asia spent years and hundreds of millions of dollars working through the regulatory process and obtaining approval from the cabinet of former Prime Minister Stephen Harper.

The scheme was killed in short order after Trudeau was elected in 2015 with no offer of compensation, sending out a clear warning to future proponents of resource ventures, despite it claims to endorse bitumen exports beyond North America.

Compounding this mood of despair, the highly respected C.D. Howe Institute issued a new report earlier in September warning that Canada's economic competitiveness is under threat.

Kronick said that anyone who is even "tangentially related" to the Trans Mountain pipeline would have no reason to "bother investing" in the industry given when has happened to that project.

It estimated that Canadian business will make capital investments this year equal to C$13,900 per worker compared with C$19,700 in the 34 member countries of the Organization for Economic Cooperation and Development and C$23,200 in the United States.

"If business investment is falling, especially per-worker, it gives you ... an indication of the prospects for the economy," said Jeremy Kronick, associate director of research for C.D. Howe.

He said capital investment took a hit in 2014 when oil prices took a nosedive and that money has yet to start flowing again despite a recovery of oil prices.

Kronick said that anyone who is even "tangentially related" to the Trans Mountain pipeline would have no reason to "bother investing" in the industry given when has happened to that project.

He also said that the same risk-averse banking system that shielded Canada from the worst of the financial crisis in the post-2008 years are now shielding Canada from getting the most out of the recovery.

CIBC chief economist Avery Shenfeld said that if businesses have slowed down in their desire to invest capital "we're going to be limited in the amount of headroom we have to grow exports." ●

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FURIE DRILLING

Furie is conducting tests in the well that will enable an understanding of the pressure relationships between the reservoir zones and hence establish an optimum production strategy. Furie is holding back on production from the Beluga until the Sterling is depleted, because the Beluga reservoirs tend to hold more water than does the Sterling — the need to deal with produced water adds to gas production costs. With testing in progress, and no gas flared from the field, the testing is resulting in some Sterling gas from the A-1 well already feeding into the overall field production, Pinsonnault said.

Work on the A-1 well has been progressing in parallel with the drilling of the A-4 well, a situation which has been challenging because the cantilevering of the large Spartan rig over the drilling deck of the small Julius R. platform precludes the concurrent operation of some other type of rig on the platform. Instead, the rig crew has been using wireline equipment to conduct the A-1 completion and testing work, Pinsonnault said,

Drilling to the Tyonek

At this point the drilling of the A-4 is progressing down towards the Sterling, having already penetrated the Beluga. Intermediate casing has been set in the well.

"We cemented it and as of yesterday we're back to drilling," Pinsonnault said. It will likely take another seven to 10 days to drill down the remaining 3,600 feet into the "exploration tail" in the Tyonek, he said,

"We're excited about that," Pinsonnault said. "We have good reason to believe that it's prospective. There's a direct hydrocarbon indicator, a bright spot, on the seismic."

If Furie meets with success in the Tyonek, the company will complete the well in that formation. Otherwise, the fallback position is to complete in the Beluga and produce from there. Either way, the company anticipates ending up with four producing wells, to meet a contractual requirement in the company's gas supply agreement with gas utility Enstar Natural Gas Co.

And completion of the A-4 well will mark the end of this year's Kitchen Lights drilling program.

Working on plan

In terms of drilling in future years, Furie is still working on a revised Kitchen Lights development plan, for filing with the Department of Natural Resources in early October.

"It will definitely be focused on more development activity in the existing field, because we've got production targets to maintain under our offtake agreement. So that's obviously the most important thing for us," Pinsonnault said.

The company is reviewing potential exploration projects but does not yet know what route it may take on these.

"That's a work in progress," Pinsonnault said.

In the coming winter, with four wells rather than two in operation, Furie wants to see how the Kitchen Lights production rates settle out during the winter months, when gas demand is high.

"Our goal is to meet our obligations under our contracts," Pinsonnault said. "If we have excess gas leftover, we can sell it at spot, or put it into storage." ●

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FURIE OPERATING ALASKA

The Spartan 151 jack-up rig cantilevered over the Julius R. platform for development drilling in the Kitchen Lights gas field in the Cook Inlet.