



## In 3rd quarter ConocoPhillips AK incurs \$341M in taxes, royalties

On Oct. 31 in connection with ConocoPhillips' quarterly 2024 earnings presentation, ConocoPhillips Alaska reported a net income of \$267 million in the third quarter of 2024.

During the quarter, ConocoPhillips Alaska incurred an estimated \$341 million in taxes and royalties, which includes \$251 million to the state of Alaska and \$90 million to the federal government.

Additionally, in the third quarter, ConocoPhillips Alaska invested \$691 million in capital.

"Continued progress on projects like Willow and Nuna, along with our agreement to acquire certain Chevron oil and gas assets in Alaska, underscores our commitment to Alaska and demonstrates the effectiveness of the stable fiscal regime," said Erec Isaacson, president of ConocoPhillips Alaska.

"Year to date, we've invested more than \$2 billion in Alaska projects, which surpasses our total 2023 capital expenditures. This investment creates jobs and promotes economic

see **CONOCO EARNINGS** page 8

## Nikaitchuq, Oooguruk purchase from Eni cost Hilcorp \$1 billion

Eni said Nov. 4 that its sale to Hilcorp of 100% of its Nikaitchuq and Oooguruk has closed for a value of \$1 billion, adding that the transaction had received approval of relevant authorities, and "is in line with Eni's strategy focused on the rationalization of the upstream activities of rebalancing its portfolio and divesting non-strategic assets." The company said it would continue to be present in the U.S. in the upstream Gulf of Mexico "as well as in energy transition projects in the renewables, biofuels and magnetic fusion."

Hilcorp did not comment on closure of the sale, but when the acquisition was announced in June, Greg Lalicker, chief executive officer of Houston-based Hilcorp Energy Co., parent company of Hilcorp Alaska, said: "The addition of the Oooguruk and Nikaitchuq assets seamlessly integrated with Hilcorp Alaska's existing portfolio, presenting us with an exceptional opportunity to invest and optimize operations in a way that will drive increased production. We will leverage our experience gained at

see **ENI SALE** page 11

## Cost of upgrading rural power houses has increased dramatically

During an Oct. 23 presentation to the Regulatory Commission of Alaska Curtis Thayer, executive director of the Alaska Energy Authority, commented that the cost of upgrading powerhouses in rural Alaska has doubled in recent years. AEA helps rural communities by replacing outdated and inefficient generation equipment with modern equipment. Powerhouses that used to cost \$3 million to \$4 million now cost \$5 million to \$7 million, Thayer said.

AEA is now seeing deferred costs of over \$300 million for equipment replacements, Thayer said, adding that recent federal grants for energy upgrades from the Infrastructure Investment and Jobs Act and the Inflation Reduction Act did not provide any funding for the upgrading of diesel generation

see **POWER UPGRADES** page 8



EREC ISAACSON



CURTIS THAYER

### EXPLORATION & PRODUCTION

## Narwhal unit approved

Commits to drilling 2 exploration wells in 2026 to evaluate Nanushuk

By **KAY CASHMAN**  
Petroleum News

On Nov. 1 the Alaska Department of Natural Resources' Division of Oil and Gas approved the formation of the Narwhal unit by joint venture partners Narwhal LLC and EE Partners Corp., which each hold a block of leases in the unit.

In state of Alaska submerged lands of West Harrison Bay offshore the National Petroleum Reserve-Alaska, the Narwhal unit encompasses approximately 77,848.60 acres and encircles Shell Offshore's recently relinquished 88,000-acre West Harrison Bay unit.

The Narwhal unit area is on trend with pub-



DEREK NOTTINGHAM

lished maps of Nanushuk topset trends that connect to existing discoveries.

### Exploration plans

EE Partners submitted a unit plan of exploration, or POE, as part of the application, and met with the division for a technical presentation in August.

In the POE, EE Partners outlines a comprehensive five-year plan.

For the years 2024 and 2025, Narwhal commits to several non-drilling initiatives, including completing and filing critical path permits, evaluating drilling rig options, continuing the comprehensive geological and geophysical technical

see **NARWHAL UNIT** page 9

### FINANCE & ECONOMY

## Oil ricochets back

Oil plummets on dollar rise and inventories, GOM hurricane rescues prices

By **STEVE SUTHERLIN**  
Petroleum News

Crude futures plummeted in early European trading Nov. 6 as the U.S. dollar firmed up in the wake of the Nov. 5 presidential election, but oil prices came roaring back after U.S. markets opened, to deliver a small loss.

Alaska North Slope crude pared away 36 cents to close at \$74.35, as West Texas Intermediate trimmed 16 cents to close at \$71.83 and Brent fell 35 cents to close at \$75.18.

The U.S. dollar on Nov. 6 sprang to the highest level seen since September 2022, taking oil prices down by more than \$2.00. Crude — priced in dollars — becomes more expensive for buyers that must

exchange foreign currency to buy it, which exerts downward pressure on its price.

Later in the day, the U.S. Energy Information Administration reported a bearish build in U.S. commercial crude inventories for the week ending Nov. 1, up 2.1 million barrels from the previous week to 427.7 million barrels — 5% under the five-year average for the time of year.

Analysts polled by Reuters had on average expected inventories to rise by just 1.1 million barrels.

Total motor gasoline inventories rose by 0.4 million barrels for the period to 211.3 million barrels, 2% below the five-year average for the time of year, the EIA said. Distillate fuel inventories jumped 2.9 million barrels to 115.8 million barrels, 6% below the

see **OIL PRICES** page 9

### UTILITIES

## Valuable Railbelt asset

Bradley Lake hydro has cheapest power but also transmission constraints

By **ALAN BAILEY**  
For Petroleum News

During an Oct. 23 presentation to the Regulatory Commission of Alaska Curtis Thayer, executive director of the Alaska Energy Authority, talked about the importance of the Bradley Lake hydroelectric project to power supplies in the Alaska Railbelt, and the steps that AEA is taking to improve access to power from the facility through the transmission system.

Thayer characterized Bradley Lake, situated in the southern Kenai Peninsula, as the "crown jewel" of the Railbelt power generation arrangements.

"It provides 10% of the energy on the Railbelt and it provides it at 4-cent power, which is one of

the cheapest on the Railbelt," Thayer told the commission. And 17% of the Bradley Lake power goes all of the way to Fairbanks, he commented.

### The Dixon Diversion

AEA is currently assessing the Dixon Diversion Project, a project that would divert water from the nearby Dixon Glacier to increase the annual electricity production from Bradley Lake by around 50%. The project would involve directionally drilling a tunnel from the glacier to Bradley Lake and, thus, raising the water level in the lake by somewhere around 14 to 28 feet. And the Bradley Lake powerhouse has the space to install an additional generator, in support of the project, Thayer said.

see **BRADLEY LAKE** page 11

## ● EXPLORATION &amp; PRODUCTION

# AOGCC approves vertical gas pool expansion

*Sterling-Beluga pool at Beluga River to include shallower interval; Hilcorp Alaska says 5 wells could have shallower completions*

By **KRISTEN NELSON**

*Petroleum News*

The Alaska Oil and Gas Conservation Commission has approved a request from Hilcorp Alaska for a vertical extension of the Sterling-Beluga gas pool at Beluga River to include a shallower interval.

In an Oct. 29 order the commission said the June 28 application from Hilcorp, the Beluga River operator, was for an amendment to Conservation Order No. 802 to vertically extend the pool allowing the company to perforate Sterling formation sands in the BRU 232-04 well in the expansion area. Hilcorp has identified four other wells which may be completed in the expansion area in the future.

The Sterling-Beluga gas pool, SBGP, contains some 8,227.1 acres, two-thirds onshore and the remainder offshore on the western side of Cook Inlet.

Hilcorp and Chugach Electric Association are the Beluga River unit working interest owners. From the surface down to 7,000 feet Hilcorp has one-third WIO and Chugach Electric has two-thirds WIO. Below 7,000 feet Chugach Electric holds a 100% WIO. The commission said the SBGP and proposed vertical expansion are Sterling and Beluga formation sands above 7,000 feet.

Landowners are the Alaska Department of Natural Resources, the U.S. Bureau of Land Management, Cook Inlet Region Inc., Chugach Electric and S&E Foster Properties.

## History

The commission said Standard Oil Company of California “unexpectedly discovered” the SBGP in a 1962 exploration well targeting oil in deeper horizons near the center of the present Beluga River unit. The well blew out April 28, 1962, at 3,249 feet measured depth “after drilling a portion of the upper Sterling Formation,” a blowout Standard Oil attributed in a press release to “an unexpected high-pressure low-volume gas pocket.” After drilling, completing and testing the well, Standard Oil said in another release that they had a “significant gas discovery.” In late 1962 the well was completed and shut in. Four additional wells were drilled from 1962 to 1964, delineating the field.

Regular gas production began in 1968.

The commission said the SBGP averaged some 42.8 million cubic feet per day from 24 wells in August, with cumulative production from the field of 1.4 trillion cubic feet, with much of the production to date from the Sterling formation.

## SBGP pool

The SBGP previously encompassed the interval in well BRU 224-13 from 3,345 feet MD to 7,000 feet MD, equivalent to some 3,241 feet and 6,896 feet true vertical depth.

The Hilcorp request proposed to change the limits to 3,097 feet MD to 7,000 feet MD, equivalent to about 3,004 feet TVD and 6,896 feet TVD.

The commission said Sterling reservoir sands, up to 200 true vertical feet, are generally thicker and typically have excellent reservoir quality and little cementation. The underlying Beluga is generally much thinner, 3 feet to 50 feet TVD, “laterally discontinuous, isolated, lens-shaped bodies,” and generally of lower reservoir quality with modest cementation.

The Hilcorp proposal adds 234 true vertical feet of shallower Sterling formation sands to the SBGP.

“There are over 100 individual sands within the proposed expanded pool with various drive mechanisms and gas and water contacts,” the commission said.

## Reservoir management

“Hilcorp plans to actively work to extend the life of

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● EXPLORATION & PRODUCTION

# Baker Hughes US rig count unchanged at 585

Permian, most active basin, down 1 at 303; international count for October up 3 from September at 950, but down 12 year-over-year

By KRISTEN NELSON  
Petroleum News

The Baker Hughes' U.S. rotary drilling rig count was 585 the week ending Nov. 1, unchanged from last week, and down by 33 from 618 a year ago, also unchanged from two weeks ago. Over the last eight weeks the rig count was unchanged in two weeks, down in four and up in two weeks with gains of nine and losses of six, compared to a downward trend dominant since the beginning of May. This is the lowest domestic rig count since December 2021.

A drop of 17 to 731 on May 12, 2023, was the steepest weekly drop since June of 2020, during the first year of the COVID-19 pandemic, when the count also dropped by 17 to 284 on June 5, following drops as steep as 73 rigs in one week in April. The count continued down to 251 at the end of July 2020, reaching an all-time low of 244 in mid-August 2020.

For 2023, the count hit its low point Nov. 10 at 616, down from a high of 775 on Jan. 13, 2023. In 2022, the count bottomed out at 588 Jan. 1, reaching a high for the year of 784 on Nov. 23.

When the count dropped to 244 in mid-August 2020, it was the lowest the domestic rotary rig count had been since the Houston based oilfield services company began issuing weekly U.S. numbers in 1944.

Prior to 2020, the low was 404 rigs in May 2016. The count peaked at 4,530 in 1981.

The count was in the low 790s at the

**Baker Hughes shows Alaska with 10 rotary rigs active Nov. 1, unchanged from the previous week and up by one from a year ago when the count was nine.**

beginning of 2020 prior to the COVID-19 pandemic, where it remained through mid-March of that year when it began to fall, dropping below what had been the historic low in early May with a count of 374 and continuing to drop through the third week of August 2020 when it gained back 10 rigs.

The Nov. 1 count includes 479 rigs targeting oil, down one from the previous week and down 17 from 496 a year ago, with 102 rigs targeting natural gas, up one from the previous week and down 16 from 118 a year ago, and four miscellaneous rigs, unchanged from the previous week and unchanged from a year ago.

Fifty of the rigs reported Nov. 1 were drilling directional wells, 517 were drilling horizontal wells and 18 were drilling vertical wells.

## Alaska rig count unchanged

North Dakota (34), Pennsylvania (13) and Utah (12) were each up by a single rig.

Texas (281) was down two rigs week over week and Oklahoma (42) was down one rig.

Rig counts in other states were unchanged from the previous week: Alaska (10), California (6), Colorado

(12), Louisiana (36), New Mexico (100), Ohio (10), West Virginia (10) and Wyoming (17).

Baker Hughes shows Alaska with 10 rotary rigs active Nov. 1, unchanged from the previous week and up by one from a year ago when the count was nine.

The rig count in the Permian, the most active basin in the country, was down one from the previous week at 303 and down by seven from 310 a year ago.

## International rig count up 3 in October

Baker Hughes' monthly international rig count for October, issued Nov. 1, is up by three from September at 950, and down by 12 from a count of 962 in October 2023, with land rigs down nine to 726 month over month and offshore rigs up 12 to 224.

Baker Hughes began providing a

monthly international rig count in 1975. The international count excludes North America, which is included in the company's worldwide figures.

The Middle East accounted for the most rigs in the international totals for October, 342, followed by Asia Pacific with 231, Latin America with 155, Europe with 122 and Africa with 100.

The U.S. rig count averaged 585 in October, down two from September, and down 37 from October 2023, while the Canadian count for October averaged 219, up by two from September and up by 27 from October 2023.

Worldwide the rig count averaged 1,754 in October, up four from 1,751 in September and down 22 from 1,776 in October 2023. ●

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## GOVERNMENT

### Carbon storage regs out for comment

The Alaska Department of Natural Resources has proposed regulations on carbon storage, exploration licensing and leasing out for public comment, with comments due no later than 5 p.m., Dec. 2, DNR's Division of Oil and Gas said Oct. 23.

The regulations are a result of the passage of House Bill 50 earlier in the year.

In a statement after the bill was signed into law July 31, the governor's office said establishment of new regulations for carbon capture utilization under HB50 would enable Alaska to benefit from global carbon markets by leasing state subsurface lands for carbon storage, and that the leasing of land for carbon storage can provide new sources of state royalties and net profit shares.

"Underground storage of CO2 complements Alaska's existing oil and gas industry through enhanced oil recovery and enabling another voluntary pathway for companies within Alaska to meet their own carbon management goals, while DNR has the opportunity to maximize the value of previously undeveloped state resources for the benefit of all Alaskans," said DNR Commissioner John Boyle.

Leasing for carbon storage will be based on the pattern the state uses for exploration licensing, with 5-year terms and work commitments, and completion of commitments allowing the licensee the ability to convert the license to leases.

The Alaska Oil and Gas Conservation Commission will pursue primacy over Class VI wells for CCUS injection from the U.S. Environmental Protection Agency and will create a regulatory structure for CCUS in Alaska, AOGCC said in its fiscal note on the bill, with fiscal year 2025 work expected to focus on obtaining primacy.

The commission held a hearing on proposed revisions to its regulations related to HB50 Nov. 7.

—KRISTEN NELSON

continued from page 2

## POOL EXPANSION

the field and increase the ultimate recovery," the commission said. "As is typical for gas field developments in the Cook Inlet Basin, Hilcorp plans to develop reservoirs from the bottom up in the wells, opening and isolating sands as necessary to achieve economically viable

production. This may often involve having multiple sand bodies open at the same time in order to maintain adequate production rates."

In its conclusions the commission said expanding the SBGP to include shallower Sterling sands is appropriate for continued development of the gas pool. ●

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### • GOVERNMENT

# Mustang appeals AOGCC fine on drilling

Issue is change to approved permit to drill for one of two wells at Southern Miluveach unit M-03A well, a sidetrack completed 9/13

By KRISTEN NELSON

Petroleum News

The Alaska Oil and Gas Conservation Commission has fined Mustang Holding LLC, operator of the Southern Miluveach unit, \$50,000 for unauthorized changes made to the drilling permit the commission issued while drilling for the SMU M-03A well, one of two sidetracks the company drilled at the unit this summer. Both SMU M-03A and SMU M-01B were completed in September.

After the commission notified Mustang of the proposed enforcement action and fine in July, the company requested an informal review which was held Aug. 14.

The commission said in its Aug. 29 decision that Mustang “provided further context surrounding its actions” during the informal review and said, “it did not intend to violate AOGCC regulations.”

As previously reported by Petroleum News, the commission said the company did not get either verbal or written approval for changes to the requirements of the permit to drill.

The Aug. 29 decision and order fined Mustang \$50,000 for violations of regulations for failing to meet the requirements of the permit to drill for the well, which “required a gamma ray sonde at bit measurement to assure drilling would not enter the Kuparuk sand because of safety concerns.”

Mustang then requested a public hearing, which the commission held Nov. 5.

In overhauls prepared for the public hearing Mustang said it believes many of the assertions in the Aug. 29 decision and order “are incorrect and reputationally damaging” and asked that the order be rescinded, while also asserting it “wishes to reaffirm our intention to maintain a professional, transparent, honest, and mutually respectful relationship with AOGCC.”

Mustang said the well was “safely and responsibly drilled.”

The commission said its regulations were violated because Mustang did not submit a 10-403 Sundry to change the permit to drill for review and approval.

But while the commission said Mustang did not receive either verbal or written approval for the change from the permit to

drill, Mustang said it did receive “written approval to change the program by email.”

The company said three qualified drilling engineers working on the well interpreted email communication from the commission as approval to drill and said that during a crucial point in drilling it could have added the assembly with the gamma ray at the bit “if either Mustang Holding LLC or AOGCC believed it was unsafe to proceed.”

The company said that in the past the commission “has allowed changes to approved programs by written email instead of by 10-403,” but said it “now recognizes this assumption may no longer be AOGCC’s practice,” and has implemented a standard operating procedure for regulatory change management.

“In the future, all changes to approved Permits to Drill will be submitted as a 10-403 unless an AOGCC representative has explicitly stated in writing that a 10-403 is not required,” Mustang said.

The company disputed language in the penalty section of the commission’s decision citing Mustang for “disregard for well control risks,” and said it maintains that “is in conflict with the engineering that went into the well, the outcomes of the well, Mustang Holding LLC’s history, and AOGCC’s written statements.”

Mustang said it implemented mitigations “based on sound engineering and on an extensive review of the prior Mustang Pad wells and a review of the surrounding wells near Mustang Holding LLC’s leases. The thorough attention placed on well control during planning and drilling resulted in overcoming the well control problems the prior operator encountered.”

As for a reference to history of compliance, the company said it was formed in September 2020 and “has very little history, and no history of non-compliance.”

Mustang said it “acknowledges that AOGCC would like communications for Permit to Drill changes to look different in the future — we will ensure this happens and we have implemented a Standard Operating Procedure for this purpose.” ●

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● THIS MONTH IN HISTORY

# Two-Bits could be first for Armstrong

20 years ago: If drilling successful at Slope prospect, independent expects to begin production by late 2005 from modular facilities

*Editor's note: This story first appeared in the Nov. 7, 2004, issue of Petroleum News.*

By KRISTEN NELSON  
Petroleum News

**S**moother, faster, better, cheaper is Armstrong Oil and Gas's mantra.

"Smoother, faster, better, cheaper: every day that's what we try to do; without that we think the competition will go by us," Stu Gustafson told the Alaska Support Industry Alliance Oct. 28, 2004, in Anchorage.

Armstrong Oil and Gas hit the ground running in Alaska three years ago, acquiring a major North Slope acreage position and bringing in two large independents as operating partners, Pioneer Natural Resources and Kerr-McGee, in the interim. The Denver-based independent participated in five exploration wells with its partners, announcing discoveries at both Oooguruk and Nikaitchuq.

Gustafson, Armstrong's vice president of operations, spoke to the Alaska Chapter of the International Association of Drilling Contractors and the Alliance the last week of October, updating Anchorage audiences on the company's three-year history in Alaska, on its plans for drilling with Kerr-McGee this winter in the Nikaitchuq and Tuvaq units in the shallow waters of the Beaufort Sea and on Armstrong's plans for its onshore Two-Bit prospect, just off the western edge of the Kuparuk River unit.

## Production in a box

Armstrong could become the first independent to do its own North Slope production processing, if this winter's drilling at its Two-Bits prospect is successful.

At Two-Bits "we'll drill two exploratory wells over this winter. It's two prospects," Gustafson said, and if one of those prospects proves up, "we will start production drilling and we will be online by year end (2005)."

Armstrong Alaska, subsidiary of Armstrong Oil and Gas, would get Two-Bits online quickly with an idea Gustafson had when faced with North Slope Native concerns about offshore production.

They don't want to see a single drop of oil in the water, he said. The solution to that concern started as an idea sketched on a napkin in the Brower Cafeteria in Barrow: Put all the facilities inside a tank, a containment vessel, so that if there is a leak the leak is automatically contained.

This production-in-a-box plan has been refined by ASRC Energy Services, Gustafson said, but basically conductor pipe is put through the floor of the tank, wellhead and piping is inside and it's monitored from offsite by cameras and heat sensors inside the tanks. The concept has been embraced by Kerr-McGee, he said, and variations on the idea are being looked at by Pioneer Natural Resources.

Gustafson said that while production in a tank began as a response to an environmental concern — keeping oil con-

tained — it is also proving economic, with drill site costs estimated at \$12 million for a 12-well site, compared to \$29 million for a conventional North Slope facility.

## Modular processing facilities

But there's more. Armstrong is also planning a standalone production facility at Two-Bits: "We believe we have to do all our own processing," he said, and plan to bring in modular processing facilities, a technology already in use elsewhere, and process oil on site. "We're looking at Arctic Service units," Gustafson said, truckable, skid-mounted production units.

With modular facilities, he said, "we're looking at repetitive designs," which will speed up permitting. And since these facilities are already in use "you can call up and order them."

There is nothing new here, he said: "This is proven technology: it works."

Two-Bits would use "no unit power, no unit processing, we do it ourselves, all the way to the LACT (lease automatic custody transfer) meter."

In a question and answer session at the end of his Alliance presentation Gustafson was asked about using existing processing facilities. He said you don't bid millions at lease sales and drill millions of dollars' worth of exploration wells "and hope that you can go to somebody else." The risk capital Armstrong has put up, he said, is based on doing it "on our own."

If Ed Kerr, Armstrong's vice president of land and business development, "is

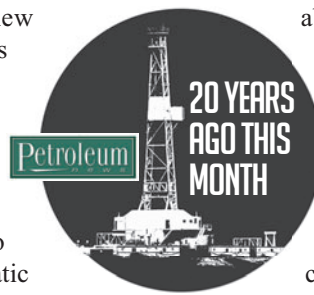
able to negotiate a better business environment for us ... we'll look at it." There have been North Slope projects that couldn't move without guaranteed access to existing facilities, Gustafson said: "The only thing that we were counting on is common carrier pipelines."

And road use: North Slope roads were built with state gravel, "so they really are state roads, and we're delighted to pay maintenance" and help the unit operators there, "but working deals gets to be long and can be convoluted, and that's not 'smoother, faster, better, cheaper.'"

## Flexible transport pipe

To move the oil off the Two-Bits pad,

see HISTORY page 6



STU GUSTAFSON

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Lisa, 30-year ConocoPhillips Alaska employee



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## HISTORY

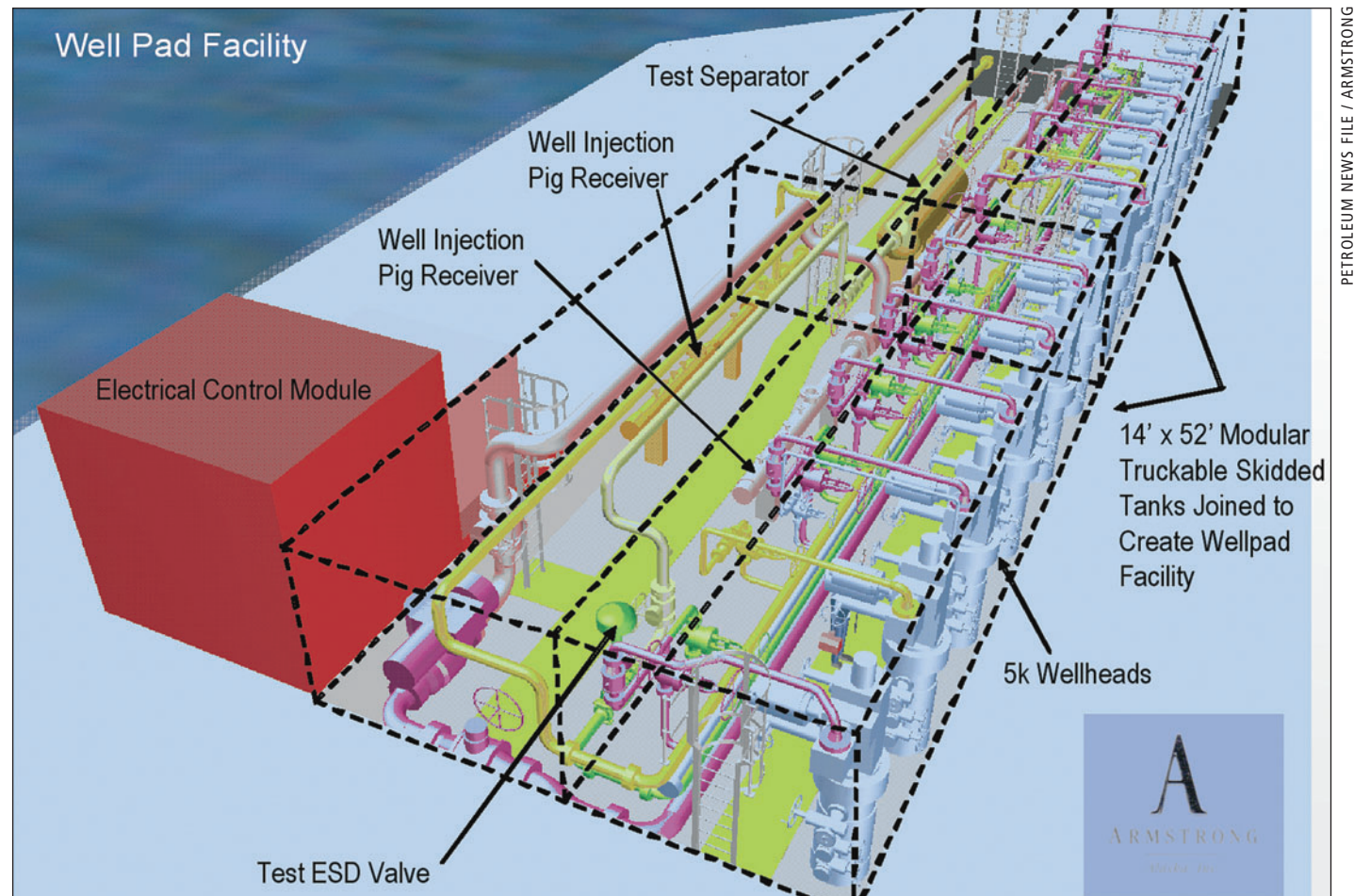
Armstrong is looking at the type of fluid transport line used in the Gulf of Mexico.

The flexible pipe comes in 3,200-foot rolls, he said, and is typically used for oil or gas gathering lines, injection lines and water or fuel transfer lines. This pipe would be laid pipe-within-a pipe inside of an outer pipe and buried in the road.

And what's next? Armstrong picked up some 115,000 acres of state oil and gas leases Oct. 27, 2004. It first acquired state leases in 2002, and had brought in a partner (Pioneer), was drilling within seven months of lease issuance and completed three wells offshore in one season, a single-company record, Gustafson said. In 2003, Armstrong doubled its acreage, brought in Kerr-McGee and drilled two wells in 2004.

"We buy prospects ... to drill," he said. We have brought in Pioneer and we have brought in Kerr-McGee, Gustafson said, and "we're working on other options." ●

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THIS MONTH IN HISTORY

# 20 years ago: Happy Valley gas flows

*Editor's note: This story first appeared in the Nov. 14, 2004, issue of Petroleum News.*

By **KRISTEN NELSON**  
Petroleum News

Gas is flowing from Unocal's Happy Valley discovery at its Deep Creek unit southeast of Ninilchik on Alaska's Kenai Peninsula.

Unocal Alaska spokeswoman Roxanne Sinz told Petroleum News that production began Nov. 5, 2004, from one well at a rate of 3-4 million standard cubic feet per day. "We will ramp up production from additional wells as soon as the operation of our new facility allows," Sinz said.

In a necessary administrative action prior to production, the Alaska Division of Oil and Gas approved formation of the Happy Valley participating area at Unocal's Deep Creek unit Nov. 4, defining the area within the unit from which Happy Valley production is coming. The participating area is 1,240 acres, approx-

imately 5.5% of the unit, the division said in its decision and includes a portion of one state of Alaska lease and portions of three Cook Inlet Region Inc. leases.

Unocal completed its first well in the Deep Creek unit, the NNA No. 1, in January 2002, tested several intervals which were wet or tight and subsequently converted the NNA No. 1 to a disposal well.

Unocal has since drilled eight Happy Valley wells. Two Lower Tyonek intervals in the Happy Valley No. 1 well tested at 4.1 million cubic feet per day, and Unocal continued to drill delineation wells in 2003 and 2004.

Unocal has also completed the pipeline connecting the Deep Creek unit to the Kenai-Kachemak Pipeline.

### Area outside PA will be explored

Under its first plan of development, covering Sept. 1, 2004, through Aug. 31, 2005, Unocal will develop reserves underlying the Happy Valley participating area and, the state said, "plans to explore the unit area outside of the participating area."

Two or more additional development wells are planned in the Deep Creek unit from the Happy Valley

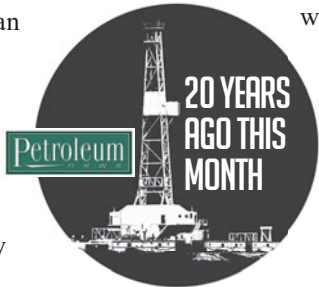
*Unocal Alaska spokeswoman Roxanne Sinz told Petroleum News that production began Nov. 5, 2004, from one well at a rate of 3-4 million standard cubic feet per day.*

pad. The state said "Unocal may establish another pad to develop the reserves in the western portion of the Happy Valley PA."

Planned exploration activities outside of the Happy Valley participating area "include both exploration drilling and seismic evaluation."

The Star No. 1 well, drilled from the Star pad in the southern end of the Deep Creek unit in 2004, produced Tyonek formation gas at a rate of 500,000 cubic feet per day and the state said "Unocal plans to recompleat and test uphole zones" in that well during the first plan of development. The state also said that as the southern accumulation at the Star pad is further delineated, both expansion of the unit area and formation of a southern participating area may be justified. ●

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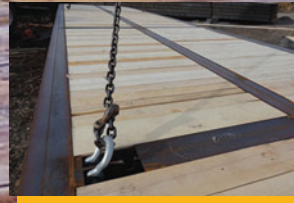
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### CONOCO EARNINGS

opportunities for Alaskans,” Isaacson added.

Since 2007, the company has incurred approximately \$45 billion in taxes and royalties to the state of Alaska and the federal government. Of that amount, about \$35 billion went directly to the state. In that same period, ConocoPhillips Alaska’s earnings were over \$27 billion.

In the Q&A session for ConocoPhillips, SVP Kirk Johnson, global operations, said this about Alaska operations: “Most importantly, the team is really sharpening the pencil right now on preparing for our 2025 winter construction season. ... And we do recognize that the scope here next year is going to be larger than the past winter season that was really quite successful for us.”

“In 2025, we’ll resume those critical activities that ... you have to do from ice roads. And so that consists of gravel placement for roads and paths. We’ll resume pipeline installations, and then we’ll also start to begin placing camps out at Willow.”

“And then lastly, and very importantly, again, now that we have those operation center modules — they’re up on the North Slope of Alaska. Once we have ice roads constructed, we’ll begin moving those modules into the Willow development area.”

—KAY CASHMAN

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### POWER UPGRADES

systems, because these systems use fossil fuels. But if aging power generation systems are not replaced in a timely manner, the generation systems can fail, Thayer commented.

As an example of the type of assistance that AEA can provide, Thayer showed an illustration of the power generation facility in the village of Tuluksak, where the agency has installed three new diesel generators. AEA builds the generation facilities in Southcentral Alaska and then ships them to the rural sites, Thayer said.

There is a similar problem with the replacement of bulk fuel storage facilities, with more than 400 of these facilities in Alaska, Thayer commented. The projected cost of deferred maintenance of these facilities now amounts to nearly \$1 billion, with the cost of replacing a fuel tank farm amounting to about \$11 million.

Thayer also said that, as part of its assistance for rural communities and with financial assistance from the Denali Commission, AEA has conducted 3D modeling of powerhouses and is carrying out a similar project for bulk fuel facilities. This enables an AEA expert to assist a rural operator remotely, seeing a visual image of exactly what the operator is working with. The Department of Energy has learned about what AEA is doing and wants to invest in the remote support technology, Thayer added.

“So it’s a project that started in house that’s having great success,” Thayer commented.

—ALAN BAILEY

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### OIL PRICES

five-year average for the season. The bearish effects of the supply build and the dollar were held in check however as Hurricane Rafael intensified into a category 3 hurricane, prompting a shut-in of some 17% of U.S. Gulf of Mexico crude production — 304,418 barrels per day, the U.S. Bureau of Safety and Environmental Enforcement said at midday Nov. 6.

Personnel were evacuated from a total of 11 production platforms and one non-dynamically positioned rig, BSEE said, adding that one DP rig moved off location out of the hurricane's path as a precaution.

“There was an over-reaction to the election results, and that a Trump victory could have caused the U.S. industry to sort of drill itself into oblivion and cause a glut,” said John Kilduff, partner at Again Capital in New York.

“But cooler heads have prevailed, and this market has a lot of problems on its hands,” Kilduff was quoted in The Globe

and Mail, adding that the Middle East hostilities are supportive because of potential supply disruption.

Trump's reelection could bring back sanctions on Iran and Venezuela, removing barrels from the market, which would be bullish, UBS analyst Giovanni Staunovo said.

ANS rose 47 cents Nov. 5 to close at \$74.71, while WTI rose 52 cents to close at \$71.99 and Brent rose 45 cents to close at \$75.53.

Prices surged on Nov. 4, with ANS taking a \$2.05 leap to close at \$74.24, as WTI and Brent each jumped \$1.98 to close at \$71.47 and \$75.08 respectively.

The price boost coincided with a Nov. 3 announcement by the Organization of the Petroleum Exporting Countries and its allied oil producing countries that the group would postpone a planned increase of oil production until the end of 2024.

ANS fell 56 cents Nov. 1 to close at \$72.19, while WTI rose 23 cents to close at \$69.49 and Brent slipped 6 cents to close at \$73.10.

On Oct. 31, ANS jumped \$1.06 to close

at \$72.75, WTI rose 65 cents to close at \$69.26 and Brent rose 61 cents to close at \$73.16.

ANS gained ground from Wednesday to Wednesday, up \$2.66 from its close of \$71.69 Oct. 30 to \$74.35 Nov. 6.

On Nov. 6, ANS closed at a \$2.52 premium over WTI, while Brent notched an 83-cent premium over ANS.

Africa is at the cusp of a new wave of deepwater sanctioning activity, according to Rystad Energy.

This includes recent success in Namibia and progress in other discovered projects such as Area 4 in Mozambique, along with further phases of Baleine development in Cote d'Ivoire and several projects in Nigeria are driving deepwater interest, Rystad said in an Oct. 31 report.

“If project timelines follow through, Africa could see annual average deepwater resource sanctioning activity surpassing 2 billion barrels of oil equivalent in the 2025-29 period,” Rystad said. “The continent hosts the potential to take the number above 3 billion boe.”

From under-construction and pre-FID

projects, Rystad Energy estimates call for some 3.5 million boe per day of new deepwater supply (pre-FID and under-construction projects) in Africa by 2035.

Rystad cautioned that deepwater projects would likely need more fiscal incentives and, in some cases, improvement in the security situation for associated facilities onshore. “Further, prioritization by Majors of the most lucrative projects in their portfolios, as they plan for an uncertain future, would also define the trajectory of such projects,” Rystad said.

The contribution of deepwater in Africa's hydrocarbon production mix was between 20-25% last decade and is expected to increase to between 35-40% by 2035, the consultancy said.

Post-COVID-19, Africa has had a muted period of deepwater sanctioning activity, with the average annual deepwater resources sanctioned dropping to some 330 million boe, compared to an annual average of some 1,890 million boe in 2015-19, Rystad said. ●

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### NARWHAL UNIT

assessment for selecting a drilling location, conducting marine and shallow hazard surveys, reprocessing 3D seismic data for higher resolution imaging of shallow sediments, contract for field equipment and services, and commence mobilization of equipment and personnel related to winter 2025-26 drilling.

In 2026, EE Partners commits to drilling two exploration wells to evaluate the Nanushuk formation. Pending ongoing analysis of geophysical data, one of the exploration wells may be drilled deeper to evaluate the Torok.

Based on the results of these initial wells, EE Partners plans to complete two additional exploration wells in 2027, continuing the evaluation of the Nanushuk and possibly the Torok formation, acquiring additional 3D seismic as needed.

In 2028, EE Partners will analyze the results of the two additional wells and submit the initial plan of development, or POD, for the Narwhal unit.

As part of the division's approval of the Narwhal unit formation, the division is requiring EE Partners to post a performance bond to DNR in the amount of \$750,000 if an exploration well is not completed by July 1, 2026. This bond must be posted no later than July 31, 2026.

If EE Partners does not complete an exploration well by Dec. 31, 2028, the bond amount will increase to \$1.5 million which must be posted no later than Jan. 31, 2029. Moreover, the Narwhal unit will automatically terminate five years from its effective date.

However, the bond will be returned upon EE Partners' completion of an exploration well.

The division approved the proposed POE, which is effective Nov. 4, 2024,

through Nov. 4, 2029.

A second POE is due 90 days before the expiration of the first POE on Aug. 6, 2029.

### Lease acquisitions

In the 2016 Beaufort Sea Areawide Lease Sale, Narwhal acquired six leases comprising 31,214.80 acres. Narwhal then acquired seven additional West Harrison Bay leases totaling 28,899.36 acres in the 2019 Beaufort Sea Areawide Lease Sale.

Narwhal's combined current leasehold is 57,950.34 acres.

EE Partners was the high bidder on seven Beaufort Sea leases in the 2023 Beaufort Sea Areawide Lease Sale. These leases comprise 23,370 acres.

The EE Partners leases in West Harrison Bay area are adjacent on one end to the Narwhal LLC leases and on-trend with the Narwhal leases' potential hydrocarbon accumulation, Narwhal/EE

Partners said in their unit application.

EE Partners was the largest participant in the 2023 Beaufort Sea Areawide Lease Sale, and the only company to acquire leases in Harrison Bay.

The applicants have invested more than \$6.8 million in the Narwhal unit leases.

### All or part of reservoirs

“A unit must encompass the minimum area required to include all or part of one or more oil or gas reservoirs, or all or part of one or more potential hydrocarbon accumulations,” the division said in its approval.

The agency noted that EE Partners had submitted confidential geological, geophysical and engineering data that demonstrated the area approved for the Narwhal unit includes all or part of an oil reservoir and potential hydrocarbon accumulations.

see NARWHAL UNIT page 10



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## NARWHAL UNIT

### Available seismic

Two 3D seismic datasets cover portions of the unit area, both of which are available publicly for a cost through the state of Alaska Geologic Material Center. The “Harrison Bay 3D (Conoco)” seismic dataset was acquired in 2004 and covers most of the southern portion of the unit area.

The “Harrison Bay 3D (FEX)” seismic dataset was acquired in 2006 and covers an area south and west of the northern portion of the unit area. Although this particular 3D dataset covers little of the unit area, it is helpful for mapping clinofom trends into the area, the division said.

Multiple 2D seismic lines also are available in the West Harrison Bay area. The 2D seismic lines, collected during the initial exploration of the National Petroleum Reserve in Alaska, or NPRA, allow for mapping the stratigraphic architecture of the area.

As part of the Narwhal unit application, Narwhal submitted mapped surfaces over the available 2D and 3D seismic, as well as the seismic to well tie from the Atigaru Pt. No. 1 well.

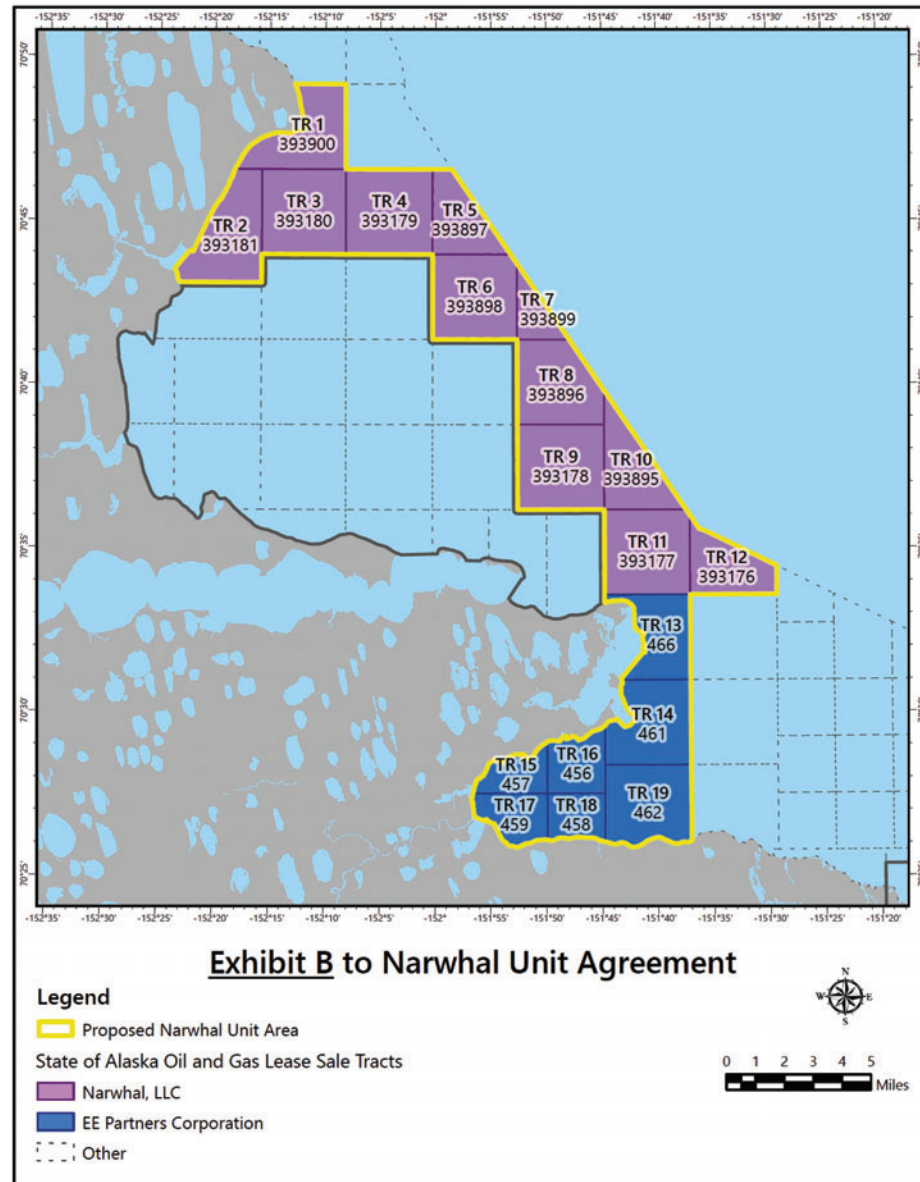
### Nearby wells

To date, no wells have been drilled within the Narwhal unit, although several legacy exploration wells have been drilled nearby, the most recent having been drilled in 1986.

None of these wells claimed discoveries in either the Nanushuk or Torok formations. The division said “this is possibly because the reservoirs in these formations often consist of thin bedded pay that can require specialized petrophysical techniques to accurately describe pay from log data, as well as fracture stimulation in order to flow. As a result, they were often overlooked in the early exploration wells.”

The outer continental shelf Mars No. 1 well, approximately 7 miles north of the Narwhal unit, was drilled by Amoco Production Co. in 1986. It targeted the Ivishak and Lisburne formations. Sidewall cores were taken over the Ivishak and Lisburne and a drill stem test in the Ivishak produced only a trace of oil with water.

The well was determined to be non-productive. The well report indicated that



sandstones in the Nanushuk/Torok were thin and high in silt and clay content. While there were no oil shows recorded on the mud log, several intervals in the Nanushuk/Torok displayed increased gas on the chromatograph and the lithology column indicated oil was observed in returns over the shakers.

The N. Kalikpik Test Well, approximately 30 miles west of the Narwhal unit, was drilled in 1982 by Husky Oil, targeting a seismic amplitude anomaly that had been interpreted as possible Kuparuk River sandstone. There were no Kuparuk sands present in the test well. Very minor gas shows were observed across the Nanushuk and Torok formations, and several very poor oil shows were observed in the same formations but were interpreted to be dead oil or organic matter.

The Cape Halkett No. 1 well, about 9 miles northwest of the Narwhal unit, was drilled in 1975 by the U.S. Navy.

Sidewall cores were gathered over most intervals. Poor gas shows were observed in the Torok formation, but no other indication of hydrocarbon was seen in the Nanushuk or Torok formations.

The Atigaru Pt. No. 1 well, which lies less than a mile outside the Narwhal unit, was drilled in 1977 by Husky Oil. It targeted the Lisburne Group carbonates and the Sadlerochit Group sandstones with secondary targets in the Kuparuk formation and the Sag River sandstone. Both the Lisburne and Sadlerochit formations showed no porosity development, the Kuparuk formation was not developed at this location and the Sag River sandstone was found to be wet. At the time, the well was deemed unworthy of further evaluation. However, oil shows were encountered in “thin, shaly, and very tight” sandstones of the Nanushuk and Torok formations.

### 2,000 feet thick

The S. Harrison Bay No. 1 well, less than 2 miles south of the Narwhal unit, was drilled in 1968 by Husky. It primarily targeted the Sadlerochit and Lisburne groups with secondary targets in the Torok formation, the Kingak formation and the Sag River sandstone. The Nanushuk Group, which was expected to be very thin, was found to be 2,000 feet thick. Hydrocarbon shows were observed in sandstones of both the Nanushuk and Torok.

Two drill stem tests were attempted over sandstones in the Torok that exhibited good fluorescence and yet these tests were negative.

The W. T. Foran No. 1 well, 7 miles northwest of the unit, was drilled in 1977 by Husky. It targeted the Sadlerochit Group sandstones and Lisburne Group carbonates, with the Kuparuk sandstone as a secondary target. All the targets had good reservoir characteristics and oil staining or shows but drill stem tests revealed that all three were water wet and that hydrocarbons had been flushed away from the area.

The Nanushuk in this well was described as tight and there were no hydrocarbon shows. Minor gas shows were recorded over fine grained sandstones in the Torok formation.

The Livehorse 1 well, drilled in 1982 by Chevron, has a surface location on the same pad as the W. T. Foran No. 1 well. The data from this well is held confidential indefinitely.

### Nanushuk fairways

Development of multiple Nanushuk fairways is occurring across the North Slope and the Nanushuk continues to be an exploration target for multiple operators.

Production is ongoing from the Nanushuk formation by ConocoPhillips at the Qannik Participating Area of the Colville River unit and the Narwhal PA of the Colville River unit.

ConocoPhillips recently applied to the Alaska Oil and Gas Conservation Commission for pool rules and a pilot enhanced oil recovery project for the Minke oil pool, another Nanushuk reservoir within the Colville River unit.

Additionally, ConocoPhillips is producing from the Nanushuk in the Kuparuk River unit and applied for the formation of the Coyote PA in 2024.

ConocoPhillips is also advancing the Willow project in NPRA, which also targets the Nanushuk formation.

Santos subsidiary Oil Search is actively developing the Nanushuk reservoir in the Pikka unit and has plans to develop it in the Quokka and Horseshoe units. Oil Search recently reported that Pikka Phase 1 is 60% complete with first oil expected in the first half of 2026.


Oil Search has stated that the Quokka and Horseshoe units will be developed sometime after Pikka Phase 1 starts up.

### Conclusion


In Its conclusion on unit application approval, the division said, “sufficient evidence has been provided for a possible reservoir and hydrocarbon presence in the area to merit designation as a potential hydrocarbon accumulation, and thus unit formation.”

Exploration drilling and fracture stimulated well tests, however, are required in the Narwhal unit “before it will be clear that this is a viable development,” the division said in its approval.

The approval was signed by division Director Derek Nottingham. ●






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## BRADLEY LAKE

Thayer said that it is possible that the project could be completed and put into operation by 2030, at which point it could account for 7.5% of the unmet needs for natural gas in the region by that time.

### Transmission upgrades

However, use of the power from Bradley Lake is constrained by limitations in the power transmission system on the Kenai Peninsula and in the transmission line that connects north to other sectors of the Railbelt electrical system. As previously reported by Petroleum News, AEA and Anchorage-based Chugach Electric Association are in the process of upgrading the transmission line from the northern Kenai Peninsula to Anchorage, increasing the voltage of the line from 115 kilovolts to 230 kilovolts.

AEA has also started work on planning a subsea high voltage direct current transmission line between Nikiski on the Kenai Peninsula and Beluga on the northwest side of the Cook Inlet. In addition to greatly increasing the transmission capacity from the Kenai Peninsula, having a second line connecting to the Anchorage region would improve the resilience and reliability of the transmission system — the current single transmission line constitutes a single point of failure in the system, thus constraining the ability to reliably share the output from power generation assets, including renewable energy systems, across the Railbelt.

In October 2023 the U.S. Department of Energy awarded a \$206.5 million grant to AEA under the federal Grid Resilience and Innovation Partnership, or GRIP, program, for the construction of the HVDC line and the installation of battery energy storage systems in the central and northern sectors of the Alaska Railbelt electrical grid. The grant is contingent on support from matching funds and has to be completed within eight years.

### GRIP grant accepted

In September AEA signed an agreement to accept the grant, thus setting the eight-year time limit. The agency has an initial tranche of matching funds that can enable work on the project to begin — the state has allocated an initial \$12.7 million towards the matching funds, while the Railbelt electric utilities had \$20 million in

bond funding available. Petroleum News understands that the grant award was announced too late in the year for more substantial funding to be included in this year's state budget.

At this point AEA is conducting some engineering analysis for the project, Thayer said. The agency anticipates completing preliminary design by the end of this year. The biggest challenges are the availability of the necessary HVDC cabling and the availability of a ship to lay the cabling, Thayer commented. It will also be necessary to conduct the process for environmental permitting, do contractor selection and acquire long lead time items, he said.

A second transmission line is also needed between Southcentral Alaska and Healy, to the north of the Alaska Range. That would significantly increase the transmission capacity between the Anchorage region and Fairbanks while also eliminating the single point of failure represented by the current line. There are already two transmission lines between Healy and Fairbanks.

However, AEA did not succeed in obtaining a federal grant for the northern transmission line in the second round of the GRIP awards program, Thayer said, commenting that no entities that received grants in the first round had received grants in the second round. However, there is a need for that northern intertie. The five military bases on the Railbelt do not feel secure with their electricity supplies, given the single transmission lines, Thayer added.

### The need for batteries

Another issue relating to the use of Bradley Lake power results from the tendency for the power across the Railbelt system to oscillate when a large electrical load is lost or if there is a trip in the power generation. The Bradley Lake system, at one end of the transmission network, can have a large impact on these oscillations. Battery energy storage systems operated by the Railbelt utilities are used to counterbalance the oscillations. AEA is planning to pay the utilities for the use of the batteries for this purpose, using available bond funding associated with Bradley Lake. However, the agency needs to figure out terms for the funding agreement that do not jeopardize federal tax credits associated with the battery purchases, Thayer said. ●

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## ENI SALE

Milne Point to further enhance the development of these assets, building upon the success achieved by Eni.”

Also in June, Luke Saugier, senior vice president of Hilcorp Alaska, said: “In 2024 Hilcorp Alaska proudly made its largest-ever budget commitment to the state and we are excited to further expand our presence on the Slope with this acquisition. Drawing from our extensive experience and expertise gained at Milne Point and Prudhoe Bay, we are fully prepared to leverage our knowledge to drive success at Oooguruk and Nikaitchuq.”

The company did not address the acquisition of Eni's Alaska assets on its corporate website, but did say that in the last 5 years it has completed more than \$5 billion of oil and gas property acquisitions.

### Regulatory approvals

On Oct. 30 the Alaska Department of Natural Resources' Division of Oil and Gas issued assignment approvals transferring working interests in leases from Eni to Hilcorp in Milne Point, Nikaitchuq and Oooguruk. The Milne Point lease transferred from Eni to Hilcorp was added to the unit in May as part of the sixth expansion of the Milne Point unit — it is on the

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northwestern edge of the unit adjacent to Nikaitchuq.

And on Nov. 1 Division of Oil and Gas Director Derek Nottingham approved the resignation of Eni U.S. Operating Co. as operator of the Oooguruk and Nikaitchuq units and designated Hilcorp Alaska as successor operator. Nottingham said Hilcorp executed the ratification and jointer unit agreement and unit operating agreement for development and operation of the Oooguruk and Nikaitchuq units, “thereby constituting their acceptance as successor unit operator.”

That approval also includes the Milne Point unit, where Eni held 100% working interest ownership in two segments, the reason, Nottingham said, for inclusion of Milne Point in the request for resignation and designation of successor unit operator.

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