S&P Global
Platts

OILGRAM NEWS

Volume 95 / Issue 227 / Friday, November 17, 2017

Gulf oil alliances strained by political tensions

A complex web of relationships colors OPEC cooperation

ANALYSIS *Abu Dhabi*—Abu Dhabi's showcase oil conference this week was overshadowed by concerns that political disputes in the Gulf region — where about a fifth of the world's crude is pumped — could complicate co-operation on production cuts.

- **Yemen conflict playing into OPEC cuts**
- **Qatar's gas spans political divides**
- **Iraq compliance gap papered over**

"Oil has always been kind of protected from geopolitical tensions—I hope it will stay that way," said UAE energy minister Suhail al-Mazrouei at the annual ADIPEC event, which takes place just weeks ahead of OPEC's final meeting of the year on November 30 in Vienna. Al-Mazrouei takes over the revolving presidency of OPEC later this month.

The UAE and Saudi Arabia are urging members of OPEC and producers outside the group to extend their agreement, which expires in March, to cut output by a combined 1.8 million b/d. However, concern has grown that geo-political tensions in the region could derail an extension to their deal.

Oil prices spiked to a 2-year high close to $65/b last week after Saudi Arabia intercepted a missile aimed at Riyadh's main airport by rebels in Yemen. The attack prompted the kingdom's Crown Prince Mohammed bin Salman to accuse Iran — which supports factions in Yemen — of open aggression. The flare-up also coincided with the arrest of hundreds of senior officials in the kingdom amid a crackdown on corruption.

However, prices have since eased to around $61/b as concerns have grown that geo-political tensions in the region could undermine co-operation on oil policy.

Qatar's dispute with its larger Arab neighbours including Saudi Arabia and Iran has also divided the core group of Gulf states within OPEC. Doha has been subjected to an economic blockade for the last six months by Saudi and the UAE, which are attempting to force the sheikdom into toning down its foreign policies and alleged support of extremists.

However, Oman's long-standing oil minister Mohammed bin Hamad al-Rumhy said that the sultanate had "no problem with Qatar" and that "for us it's business as usual." Although a

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Mexico needs to drill 762 exploration wells to evaluate shale

Mexico City—Mexico will need to drill 762 exploration wells to evaluate the country's shale oil and natural gas potential, according to Pulso Energetico, a Mexico City-based think tank backed by Mexico's Association of Petroleum Producers, or AMEXHI.

While over half of Mexico's prospective resources are non-conventional, state oil company Pemex has only drilled 18 non-conventional wells, according to Mexico's National Hydrocarbon Commission, or CNH.

And a financially strained Pemex will have a hard time with the $3.8 billion Pulso estimates will be required to develop the shale resources.

Pemex plans to drill 18 non-conventional exploratory wells over the new two years across five blocks in the Burgos and Tampico-Misantla basin, according to CNH records.

Depending on how efficient Pemex and new operators in Mexico are, drilling these 762 wells would cost between $3.8 billion-$7 billion, Pulso calculated in an analysis.

Pulso's analysis is based on drilling costs reported in the US, with the most efficient companies drilling for $5 million per well, and an average cost of $9.3 million per well.

Last year, CNH approved Pemex to drill an unconventional well at a block in the Tampico-Misantla basin, targeting the Pimienta formation at the cost of $8.9 million.

According to the US Energy Information Administration, Mexico has the world's 10th largest recoverable oil resources with 13 billion barrels and the sixth largest gas reserves, with 545 Bcf of gas.

Pemex has estimated Mexico has in place 60 billion barrels of oil equivalent of shale resources, with over half of that crude oil.

Pemex has previously estimated it would take drilling 27,000 wells over 20 years to successfully develop the six basins. Drilling these 27,000 wells would cost $135 billion-$251 billion depending on how efficient the operators are, Pulso said.

The think tank said Mexico needs help from private companies as the task of developing the country's shale resources is too large for

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TOP STORIES

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Rohingya crisis hits Myanmar's upstream sector

Reliance, Shell, other companies relinquish Myanmar blocks awarded in 2014

Singapore —A growing backlash against energy companies in Myanmar, amid the Rohingya humanitarian crisis, comes at a bad time for the country's oil and gas upstream sector that is already starting to turn off some investors.

Since Myanmar's hugely successful licensing rounds in 2014 that saw top oil majors winning exploration blocks, the country has been the hotspot for upstream activity, at least up to early 2017.

But in recent months, companies have started relinquishing the blocks that were awarded to them due to complaints of low prospectively, and more are expected to do so in coming months as they get closer to the deadline for the first phase of exploration work around March 2018.

With oil companies at a critical decision-making juncture, they now have to also worry about reputational and geopolitical risks as lobby groups start targeting investors for doing business with a Burmese government blamed for human rights violations against the minority Rohingya Muslim community.

"Myanmar upstream has lost its momentum and we need a few signals to show that it is as hot as it could have been," Jean-Baptiste Berchoteau, upstream research analyst at Wood Mackenzie said.

"We already have 4-5 blocks that have been relinquished or are about to be relinquished," Berchoteau said. "If you ask me at this moment the Rohingya situation does not help for sure."

Losing its luster

Myanmar became the hotspot for oil and gas exploration in Southeast Asia at a time when oil companies had pared back on upstream spending due to the oil price crash and no big discoveries were being made.

But companies also took advantage of another aspect of cheap oil—significantly lower exploration costs. Australia's Woodside Energy for instance undertook an aggressive exploration campaign in blocks awarded before 2014 that resulted in several gas discoveries.

These included the largest discovery in the Asia Pacific of 1.5 Tcf of gas that put Myanmar on the exploration map, Berchoteau said.

While no new licensing rounds are coming up, the blocks awarded in 2014 are approaching the end of the first study phase, after which the operator has to notify the government whether it wishes to enter the next drilling phase.

The notifications have to be submitted between September 2017 and the end of March 2018, depending on when the blocks were awarded.

Some companies have already begun relinquishing their blocks. In mid-October, India's Reliance Industries said it would relinquish Blocks M17 and M18 on completion of the study period.

Shell said earlier in the week it relinquished three blocks in mid-October along with its partners—Block MD-5 in the Thanintharyi Basin and Block AD-9 and Block AD-11 in the Rakhine Basin of Bay of Bengal subject to ministry ratification.

"We have relinquished these blocks to the Myanmar government because the 3D seismic evaluation suggests that these blocks are commercially very challenging," a spokesman said.

Blocks awarded to Oil India and ASX-listed Tap Oil have also been relinquished or are about to be relinquished, and many companies won't proceed to the next round, Berchoteau said. Tap Oil did not respond to queries. Oil India could also not be immediately reached for comment.

Berchoteau said Woodside has also been unable to find significant upside to its discoveries, and the 1 Tcf find may not be enough as it is very hard for offshore deepwater or frontier projects to be economic, especially given Myanmar's tough fiscal terms.

"So unless you have something like 4-5 Tcf (of gas) then it is very difficult to make money," he said.

Geopolitical risk

International investors in Myanmar have become increasingly jittery since early November when the UN Security Council publicly condemned violence against the Rohingya community and the excessive use of military force by the government.

Last week, a group of 47 Malaysian politicians petitioned state-run oil company Petronas to withdraw from Myanmar for its apparent failure in halting the humanitarian crisis.

Petronas is not the first oil company to take flak for its Myanmar ventures.

In October, investors representing more than $53 billion in assets under management sent letters to six oil and gas companies—China National Offshore Oil Corp, Daewoo, PetroChina, Petronas, Total, and Woodside Petroleum—asking them to "reassess their dealings" in Myanmar in light of human rights violations. — *Eric Yep*

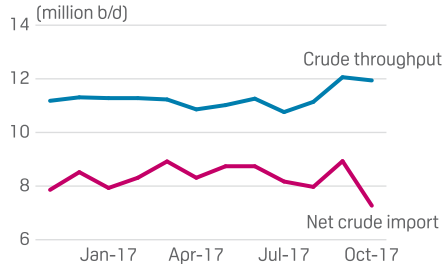
China's crude oil stocks fall for first time in a year

Singapore—China's crude oil stocks fell for the first time in 12 months in October—by 27.41 million barrels from the month before amid strong throughput at domestic refineries and fewer imports, S&P Global Platts calculations based on latest official data showed Thursday.

The last time China saw a draw in monthly crude stocks was in October 2016, when stocks fell by 8.32 million barrels. Stocks subsequently rose each month, climbing as high as 20.16 million barrels in September.

Analysts said the country was unlikely to see a significant crude stock build in November on expectations that refinery throughput would remain high.

CHINA'S NET CRUDE IMPORTS, THROUGHPUT



Note: The January and February throughput was the average of the year-to-date throughput volume for February which was released by NBS. The authority did not release each of the throughput volume for those months.

Source: National Bureau of Statistics, General Administration of Customs

China does not release official data on stocks. Platts calculates China's net crude stocks build or draw by subtracting the official refinery throughput data from the country's crude supply data. The latter takes into account net crude imports and domestic crude production.

Latest data from the National Bureau of Statistics showed that refinery throughput in October jumped 7.4% year on year to 11.94 million b/d, despite edging down 0.9% from the historical high of 12.06 million b/d in September.

"The October run was slightly lower than that in September, only because of the 19th China's Communist Party Congress, which required industrial plants to lower runs to cap pollution," said a Beijing-based analyst.

Meanwhile, China's crude imports in October hit a 12-month low of 7.34 million b/d, resulting in the country's crude supplies in the month falling 13.1% from September to 11.06 million b/d, despite posting a 4.5% rise on a year-on-year basis.

As a result, refiners needed to draw down around 884,000 b/d of crude oil from inventories to feed their units.

China's crude stocks over January-October increased 267 million barrels. The rise was 20.4% higher compared with the same period of 2016. This has already outpaced the 269 million-barrel increase seen over full year 2016, which exceeded the 153 million-barrel build seen in 2015. — *Oceana Zhou*

Iraq, Turkey discuss restart of exports to Ceyhan

Baghdad looks to reassert control over northern pipeline flows

Baghdad—Iraqi and Turkish oil export officials met in Baghdad on Thursday, the next step in a tangled process to resume federal Iraqi oil exports to the Turkish port of Ceyhan.

At the heart of the talks are the terms for Turkey to guarantee federal Iraqi authority over oil exports to the port of Ceyhan. Turkey in 2013 approved Iraq's semi-autonomous Kurdistan region's export pipeline being connected to the Iraq-Turkey Pipeline. The following year, Turkey allowed oil from Kurdistan to flow to Ceyhan and since then has all but ceded full control over Iraq's storage and loading operations to Kurdistan.

Baghdad says only it has authority to approve oil exports from the country.

"Iraq and Turkey are keen to strengthen and expand the horizons of bilateral cooperation in the field of oil and energy and work together to speed up the resumption of Iraqi oil exports through the Turkish port of Ceyhan," Iraq's oil ministry statement said in a statement.

"The issue of resuming Iraqi oil exports from the fields of Kirkuk through the Turkish port of Ceyhan was one of the topics discussed between the two sides, as well as discussing the obstacles and technical and administrative problems that stand in the way to find the necessary solutions by those concerned on both sides," oil ministry spokesperson Assem Jihad said in the statement.

He said an agreement will be finalized in a follow-up meeting in Turkey.

Baghdad has legally challenged or threatened lawsuits against oil traders, shippers and others participating in the Kurdistan Regional Government's crude trade. That prevented Kurdish tankers from unloading in the US and Canada in 2014, 2015 and this year.

Iraq has a multibillion-dollar claim against Turkey and state pipeline operator Botas for allegedly violating the agreements governing the Iraq-Turkey Pipeline. The International Chamber of Commerce's Court of Arbitration in Paris is likely to rule on the lawsuit next year at the earliest.

But much has changed in the past month and Ankara is now courting Iraq in an attempt to minimize any financial liability and repair damage to the two countries' relationship.

Kurdistan had been sending around 600,000 b/d to Ceyhan. Iraq on October 16 sent federal forces to disputed territories that Baghdad claims should be under federal control after the routing of the Islamic State group. It also came in the aftermath of the September 25 referendum on independence held by Kurdistan that Iraq's federal court ruled was unconstitutional.

Among the territories retaken October 16 were the Bai Hassan oil field and the Avana Dome structure of the Kirkuk oil field, which were producing a combined 280,000 b/d. They officially belong to the state-run North Oil Company but the Kurdistan Regional Government took them over in the security vacuum caused by the Islamic State invasion in June 2014.

The Kurdistan Regional Government is now sending around 250,000 b/d to Ceyhan, less than half its previous rate, all of which must go to settle accounts for those who prepaid for its oil, exacerbating a financial crisis.

Iraq won't use the Kurdistan pipeline to begin exporting from Bai Hassan and Avana Dome, as well as other North Oil Company output, until an agreement is reached with Kurdistan and Turkey.

Iraq said it's looking at rebuilding the leg of the Iraq-Turkey Pipeline that ran through federal territory, but is putting pressure on Turkey by talking with Iran about a 250,000 b/d pipeline for North Oil Company exports as well as rebuilding a pipeline to send North Oil Company crude south to refineries in Baghdad. The federal Iraq leg of the pipeline was destroyed by the Islamic State group. — *Staff Reports*

Libya seeks 'strategic' relationship with US oil sector

London—Libya's state-owned National Oil Corporation is seeking "strategic" support from US President Donald Trump's government and the US oil sector as the OPEC member hopes to reinvigorate the country's beleaguered oil industry.

The company said Thursday that, as part of this approach, it will open an office in the US next year, which would be NOC's first international office since 2011 when civil war first broke out.

NOC Chairman Mustafa Sanalla said this was an "important strategic choice" and thanked the US for supporting the company in the past, especially when it helped block the illegal export of a crude cargo in 2014.

In March 2014, US forces took control of the Morning Glory tanker in international waters after it had loaded from the then-rebel-held port of Es Sider.

"When it really counted, the US showed it is the guarantor of NOC's integrity and the unity of the state of Libya," he said. "And the US is playing a vital role today protecting Libya's oil industry against interruptions in supply."

The US has also emerged as a sizable buyer of Libyan sweet crude this year, with good interest from refiners on the Atlantic and Gulf coasts.

Almost 43,000 b/d of Libyan crude has flowed from the North African country to the US from January to August this year, according to data from the US Energy Information Administration, on higher refining margins and stronger refined product cracks.

In 2016, US imported 12,000 b/d of Libyan crude, less than a third of the current figure.

Recovery path

Sanalla has been traveling the world over the past 12 months to seek help and more foreign investment so NOC can reach its production goals and stabilize Libya's economy.

Earlier this year, NOC signed an agreement with Rosneft, Russia's top crude producer, for crude oil supplies, and laid the groundwork for potential investments in Libya.

In the statement, NOC also said it was embarking on a $20 billion spending program to restore production capacity over the next three years.

This year, Libyan oil production has risen to a more than four-year high, mainly due to the diplomatic efforts of Sanalla and his personnel at NOC.

But some core issues -- the lack of security and money -- continue to plague the oil sector, along with ongoing political instability.

Libyan oil production is currently just under 1 million b/d, according to S&P Global Platts estimates, but the environment remains volatile.

Libya's plans to increase its crude oil production capacity to 1.25 million b/d by the end of the year were always going to be arduous, but Sanalla remains hopeful of more progress in 2018. — *Eklavya Gupte*

Gulf oil alliances strained by political tensions

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member of the Gulf Co-operation Council, Oman isn't a member of OPEC.

Instead it is part of the group of 10 major producers outside OPEC, including Russia, which have cut around 600,000 b/d in total as part of their alliance to rebalance markets. Oman is also dependent on the supply of gas from Qatar via the Dolphin pipeline network.

Cut discrepancies

The sultanate, which produces a relatively modest 1 million b/d, has adhered scrupulously to the OPEC deal, despite the effect on its relatively weak economy. S&P Global Ratings said this month that Oman had suffered a "sharp slowdown in economic growth" as a direct result of cutting oil output by some 30,000 b/d compared with last year's levels, and downgraded the country's rating.

While Rumhi insisted this week the deal was good for Oman, the country is partly limiting its production to stay on the right side of Saudi Arabia, said Florence Eid-Oakden, chief economist at Arabia Monitor. However, it is a commitment that allows Oman to stick to a fundamental principle of "neutrality" in foreign policy.

> 'Oman charts a neutral path, but not by ignoring the wishes of others' — chief economist at Arabia Monitor

"Oman charts a neutral path, but not by ignoring the wishes of others," Eid-Oakden said.

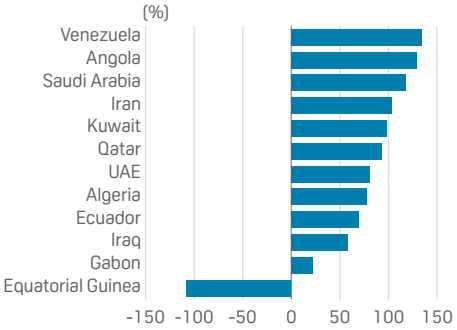
By contrast, the wealthier UAE shows little signs of fulfilling its production commitment, cutting barely half the amount it signed up for so far this year, according to the International Energy Agency.

Saudi Arabia had effectively given the UAE a pass, partly because of the latter's support for Saudi military intervention in Yemen, Eid-Oakden said.

But relations between ruling families also remain important. While the UAE's Mazrouei initially doubted a production cut deal would be effective, between the Saudi and Abu Dhabi royal families, there was "more convergence" on the desirability of a deal, Eid-Oakden said.

The UAE has been cut some slack partly because of relations between the two crown princes, Mohammed bin Salman of Saudi Arabia and Mohammed bin Zayed of Abu Dhabi, who are "in close coordination on regional matters," she said. — *Nick Coleman, Adal Mirza*

OPEC CUT COMPLIANCE JAN-OCT



Note: Compliance based on average secondary source production estimates as reported by OPEC
Source: Platts, OPEC

Kazakh oil output dips in line with cut commitments

Moscow—Kazakhstan's crude and condensate output fell to around 1.69 million b/d in October, down 33,000 b/d from September levels, allowing the country to meet in full its commitments under the OPEC/non-OPEC production cut deal again, following a rise in output in September.

- **October output down 33,000 b/d**
- **Kashagan estimated at 250,000 b/d**

In the first half of the year, Kazakhstan struggled to meet its obligations under the output agreement to reduce production by 20,000 b/d from 1.7 million b/d in the first half of the year. This was mainly due to rising crude production from the giant Kashagan field in the Caspian Sea that was relaunched three months before the agreement came into force in January.

August output at 1.667 million b/d marked the first month since January that the monthly output target had been reached, as an increase in crude production from Kashagan, as well as the Karachaganak field, was only partly offset by the continuing decline at mature fields.

Planned maintenance at the third major producing project in Kazakhstan, Tengiz, also helped to cap the output in August, before the production grew again, by 54,000 b/d, in September.

A recent revision in production plans at Kashagan is likely to help the country to keep the production levels limited, with some market sources indicating cuts in cargoes from the field recently.

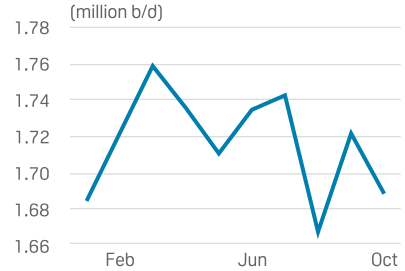
On Tuesday, Kazakhstan's energy minister, Kanat Bozumbayev, said the Kashagan project is expected to pump around 250,000 b/d by the end of the year, instead of 370,000 b/d as previously expected, according to reports by local media.

The higher production target has been postponed to mid-2018 due to maintenance delays at one of the project's four drilling islands, an official at a Kashagan partner Eni said in late October.

Kazakhstan's liquids totaled 7.140 million mt in October, compared with 7.045 million mt in September, according to data from the Kazakh Statistics Committee published Thursday.

Of the total, crude production amounted to 6.082 million mt in October, down from 6.090 million mt in September, with gas condensate production rising to 1.059 million mt from 955,200 mt in the previous month. — *Nadia Rodova*

KAZAKHSTAN'S CRUDE OUTPUT



Source: Kazakh Statistics Committee, S&P Global Platts

Hilcorp to boost North Slope crude output

Plan is to reach 42,000 b/d by year's end; Liberty project on track

Anchorage—Despite low oil prices Hilcorp Energy has increased its North Slope oil production this year and is forecasting 42,000 b/d by the end of the year, up from 36,600 b/d in January, a Hilcorp official told a business conference Thursday in Anchorage.

"Our plan is to be able to develop new oil at $40 to $50 a barrel. If we can do that, we feel we're covered [in the current price environment]," David Wilkins, the company's Alaska vice president, told contractors and business leaders at the Resource Development Council's annual meeting.

Hilcorp will also begin drilling and production at its new Moose Pad project in the Milne Point field on the slope late next year and is forecasting peak production of 16,000 b/d by 2020, Wilkins told the conference.

Moose Pad is owned 50:50 and is operated by Hilcorp and BP. Wilkins said the accumulation being targeted has an estimated 30 million to 50 million barrels of recoverable oil. Development costs are estimated at $300 million to $400 million.

Besides Milne Point, which is onshore, Hilcorp operates two offshore producing fields where it is 100% owner, Endicott and North Star in the Beaufort Sea.

Boosting older wells

The new production this year in Hilcorp's producing North Slope fields is mainly due to redevelopment of older wells drilled by BP, the former owner and operator. An example, Wilkins said, is at Northstar, where the company tapped new oil-producing intervals in older wells and plans to continue the strategy.

Hilcorp also drilled 10 wells this year in its slope fields, Wilkins said.

"We see a potential for 9 million barrels of new production just from the existing wells," he told the conference.

One other Milne Point project Hilcorp is tackling is a pilot test to boost oil production from the Schrader Bluff viscous oil deposit within Milne Point. Viscous oil is heavier and thicker than conventional crude, and while Schrader Bluff is producing technical problems have complicated efforts to increase output. Wilkins said Hilcorp will be experimenting with the injection of polymer fluids to loosen the oil.

Liberty in final permit stages

A major new project Hilcorp is pursuing is development of Liberty, an offshore deposit, which is now in the final stages of permitting with the US Bureau of Offshore Energy Management. Development costs are estimated at $1 billion, and Hilcorp expects Liberty will produce 50,000-80,000 b/d if it proceeds, Wilkins said.

Hilcorp owns 50% of Liberty with 40% owned by BP and 10% by Arctic Slope Exploration, a subsidiary of Arctic Slope Regional Corp., a Native American development corporation owned by the Inupiat Eskimo people of the North Slope. A decision to develop Liberty cannot be made until regulatory and permitting procedures are completed.

Liberty is five miles offshore and is in the federally owned Outer Continental Shelf. It would be produced from an artificial gravel island built in shallow water with a buried subsea pipeline built to shore, and would be virtually a twin to Northstar, built by BP in 2001. Northstar is six miles offshore and is similarly connected to shore with a subsea pipeline. — *Tim Bradner*

Mexico needs to drill 762 exploration wells to evaluate shale

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Pemex to tackle alone.

Mexico's Energy Secretariat, or SENER, has yet to launch the country's first non-conventional hydrocarbon auction to give access to private companies to Mexico's shale resources.

It originally planned to launch the first non-conventional auction in 2015. However, the round was postponed due to the lack of regulation over shale exploration and production.

SENER has previously said it expects to hold one auction round for non-conventional resources before the end of the current administration.

Mexico's federal government assigned $8.8 billion to Pemex's exploration and production division for 2018, a similar amount to the current year.

Of this, Pemex will spend $96 million on its oil and gas shale exploration projects in 2018, up 178% from last year.

Over the last couple of years, the company has invested $135 million in shale exploration. However, it plans to spend $220 million over the coming two years, and $400 million beyond 2021, the company's 2018 proposed budget shows.

The 18 wells CNH approved target the Upper Jurassic formation. In this horizon at the Tampica-Misantla basin is located the prolific Pimienta formation.

In the past, the company has said the Pimienta formation holds 20 billion boe of recoverable shale resources, mostly liquids hydrocarbons.

These wells have prospective resources of 340 million boe with a geological success probability rate of 71%-74%. The company expects to incorporate 203 million boe of that into its reserves.

Pemex has the option to drill an additional 11 wells in these five blocks with 184 million boe of prospective resources with a similar geological probability success rate. Pemex expects to incorporate a 130 million boe from these wells. — *Daniel Rodriguez*

ConocoPhillips to expand North Slope exploration

Anchorage—ConocoPhillips is moving ahead with an aggressive new production and exploration program on Alaska's North Slope, planning a second expansion of its producing CD-5 pad near the Alpine oil field and starting production on a recently completed project to expand viscous oil production at its West Sak project in the nearby Kuparuk River field.

Ten more production wells will be added at CD-5, which now has 22 wells producing 28,000 b/d, Lisa Bruner, ConocoPhillips' vice president for North Slope development, said at a business conference in Anchorage. The company is midway through a first expansion of the project, which is to increase the number of producers from 15 to 33 wells.

"CD-5 has been performing well above expectations," Bruner told the Resource Development Council's annual conference.

CD-5 is within the federal National Petroleum Reserve-Alaska, but subsurface mineral rights are held by Arctic Slope Native Corp., which is owned by the Inupiat Eskimo people who live in the Alaska's northern region. The pad is supported by pipelines and other infrastructure on the nearby Alpine field, which is on state-owned lands. — *Tim Bradner*

WEEKLY EIA GAS STORAGE LEVELS

Estimated working gas in storage for the week ended November 10
(numbers in Bcf)

	This week	Last week	Change	Year ago	5-Year average
East	915	925	-10	944	925
Midwest	1,108	1,112	-4	1,154	1,100
Mountain	220	224	-4	256	221
Pacific	315	317	-2	328	364
South Central	1,214	1,212	2	1,360	1,264
Total Lower 48 US	3,772	3,790	-18	4,043	3,873

Gas output from Mahakam seen heading south

Fall reflects wider trend in Indonesia as upstream investment slows

Jakarta—Indonesia's Pertamina plans to produce 1.1 Bcf/d of natural gas next year from the Mahakam block, down 14% from an estimated production of 1.28 Bcf/d in 2017, despite the state-owned company's current drilling efforts.

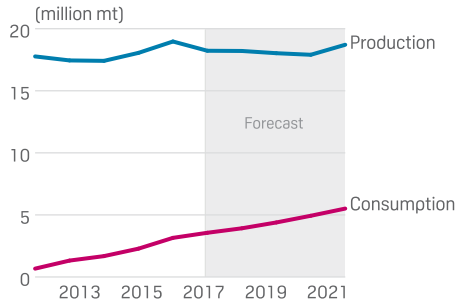
- **Mubadala Petroleum interested in stake**
- **LNG consumption up 50% over 2016-2020**

The Mahakam block is Indonesia's largest natural gas block. It currently produces 1.6 Bcf/d of gas and 63,000 b/d of crude oil and condensate, with more than 80% of its gas output going to the nearby Bontang liquefaction plant to be exported as LNG.

Falling gas output from Mahakam reflects a wider trend in Indonesia, where slowing upstream investment and aging fields are resulting in lower fossil fuel output and exports to the international markets.

Indonesia's upstream investment fell 27% to $11.15 billion in 2016 from $15.34 billion in 2015, and exploration shrank to 199 areas from 228 over the same period, according to upstream regulator SKK Migas.

INDONESIA LNG PRODUCTION vs. CONSUMPTION



Source: S&P Global Platts Analytics

Indonesia's LNG output is expected to remain relatively stable at around 18 million mt in the period over 2016-2020, following the start-up of the Donggi Senoro LNG export plant, but a growing share of the country's LNG output will be destined for the domestic market, according to S&P Global Platts Analytics.

Indonesia's LNG consumption is expected to reach almost 5 million mt/year by 2020, up by more than 50% from 2016.

Condensate production, on the other hand, is estimated to reach 48,000 b/d in 2018, up 17.7% from 40,770 b/d this year.

Pertamina's drilling efforts

The gas production decline at Mahakam comes despite a total investment by Pertamina of approximately $180 million this year to drill 14 to 15 wells in the block. This will increase to $1.8 billion in 2018, comprising $700 million in capital expenditure and $1.1 billion in operation costs, a company official said.

"As a matured block, Mahakam's annual production decline rate could reach 50% but Pertamina is working on reducing that to 20%-25%, the president director of Pertamina Hulu Indonesia Bambang Manumayoso said.

The government has appointed Pertamina to take over 100% of the stake in Mahakam once the current contract by France's Total and Japan's Inpex expire in December 2017.

SKK Migas said last week that it plans to apply the so-called contract mirroring system in the Mahakam block from January 2018 for one year.

The contract mirroring system is aimed at reducing production decline and will be applied to 500 contracts—valued at around $1.5 billion—due to be transferred from Total to Pertamina in January.

International investment

The UAE's Mubadala Petroleum has expressed interest in a stake in the Mahakam block once the contract expires this year, the oil and gas director general at the energy and mines ministry Ego Syahrial said last week. Negotiations between Mubadala and Pertamina are yet to start, he added.

Total has also shown interest in keeping a 39% stake in Mahakam, with the condition that the oil and gas allocated to the domestic market is priced against international benchmarks—under the current regulation, oil and gas companies operating in Indonesia have to allocate 25% of their production to the domestic market. However, Pertamina has insisted it is only willing to sell a maximum interest of 30% in Mahakam, Platts has previously reported.

Total estimates that the Mahakam block contains 2.7-3 Tcf of proven natural gas reserves in 2017. The proven gas reserves are estimated to dwindle to 1.3-1.6 Tcf in 2018 due to natural depletion. — *Anita Nugraha, with Abache Abreu in Singapore*

Petrobras domestic crude output falls fourth time in five months

Rio de Janeiro—Brazilian state-led oil producer Petrobras reported its fourth decline in domestic crude oil production in the past five months in October as maintenance stoppages at floating production units pumping from the prolific subsalt region once again undermined output.

Petrobras produced 2.163 million b/d of crude from fields in Brazil in October, a decrease of 0.2% from 2.168 million b/d in September, the company said in a filing with local stock regulators earlier in the week. October's production was also down 1.5% from 2.195 million b/d in October 2016

The culprit in October's production results was once again maintenance at floating production, storage and offloading vessels installed at fields in Brazil's offshore subsalt province. Petrobras has engaged in a broad maintenance schedule since early 2017 that has seen FPSOs throughout the subsalt taken offline for overhauls.

In October, the FPSO Cidade de Anchieta and the FPSO Cidade de Caraguatatuba were shuttered for maintenance, Petrobras said. The FPSO Cidade de Anchieta pumped 49,894 b/d and 1.77 million cu m/d from the Baleia Azul and Jubarte fields in September, according to the latest data available from Brazil's National Petroleum Agency, or ANP. The FPSO Cidade de Caraguatatuba produced 24,517 b/d and 651,570 cu m/d of gas in September, the ANP said.

Petrobras, however, remained on track to meet its 2017 annual production target of 2.07 million b/d. That would be down from the 2.144 million b/d the company produced in 2016, but Petrobras reduced its target on expectations that plans to sell onshore and offshore production assets would cause production to fall this year. The company has so far not been able to complete any additional oilfield divestment under its $21 billion asset-sales plan for 2017-18.

In the 10 months through October, Petrobras averaged 2.159 million b/d from domestic fields.

The maintenance shutdowns also undercut production from subsalt fields operated by Petrobras, the company said. Petrobras produced an average of 1.63 million b/d of oil equivalent from subsalt fields in October, including the volume of oil and gas produced on behalf of partners in the fields, the company said. That was down 2.9% from the 1.68 million boe/d produced in September.

Brazil's subsalt fields hit peak output of 1.69 million boe/d in June, according to Petrobras.

The outlook for additional growth in 2017 also remains murky after Petrobras decided to push the installation of two new FPSOs and the connection of new wells to recently installed floating production units into next year. The delays caused Petrobras to announce that it would reduce investment spending in 2017 to $16 billion, down from the previous outlook for $17 billion, Petrobras Exploration and Production Director Solange Guedes said this week. — *Jeff Fick*

Selling pressure remains on oil futures; ICE Brent near contango

New York—The oil complex weakened Thursday as rising US crude production, deflated geopolitical risk and doubts over the outcome of OPEC's November 30 meeting pulled NYMEX December crude down 19 cents to $55.14/b.

ICE January Brent settled 51 cents lower at $61.36/b, fading further off its two-year high last week above $64/b, as traders reassessed the likelihood of an extension of the OPEC-led supply cut agreement beyond March.

"The Brent speculative position grew to the longest it has ever been on the assumption that a deal would get done November 30, and now it's not looking like the layup everyone thought it was going to be," said Robert Yawger, director of the futures division at Mizuho Securities USA.

Russian Energy Minister Alexander Novak met with Russian oil companies Wednesday in Moscow, but has yet to publicly back an extension.

"Investors were spooked as Russia threw doubts over the extension of the production cut agreement," ANZ analysts said in a note Thursday. "There have also been murmurings of a smaller-than-expected extension of only three months," they said.

Another bullish catalyst behind the recent rally that has diminished this week is geopolitical risk in the Middle East, given the heightened tension between Iran and Saudi Arabia.

One indicator that geopolitical risk -- as opposed to supply-demand fundamentals -- was driving the market was the divergence between spot prices and timespreads, Citi Research said in a note.

The past month saw spot prices rise, while timespreads eased or stabilized, coinciding with "rocket attacks, pipeline explosions, and rhetorical declarations of war," the Citi Research note said.

Prompt ICE Brent rose from around $56/b in early October to more than $64/b a month later. Over the same period, however, ICE Brent's M1/M2 spread stayed backwardated around 20-30 cents/b.

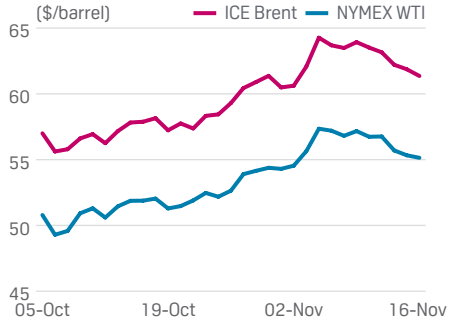
This week has seen ICE January Brent fall below $62/b and the M1/M2 spread near contango. The January/February spread settled Thursday in a backwardation of just 7 cents/b.

Weakness has also been apparent in the physical market evidenced by the shift from backwardation to contango in the Dated to Frontline contract.

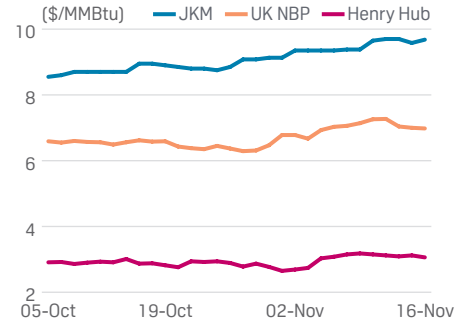
The DFL is often used by market participants to hedge against the physical Dated Brent market.

The front-month DFL contract, which was backwardated 13 cents/b November 6, weakened to a contango of 27 cents/b Monday. It was assessed Thursday in a 16 cents/b contango. —*Geoffrey Craig, with John Morley in London*

NYMEX WTI, ICE BRENT CRUDE OIL FRONT MONTH DAILY SETTLES



GLOBAL GAS PRICE COMPARISON



Source: Platts, prices are rounded

S&P Global
Platts
OILGRAM NEWS
Volume 95 / Issue 227 / Friday, November 17, 2017
ISSN: 0163-1284

Oilgram News is published every business day in New York and Houston by Platts, a division of S&P Global, registered office: Two Penn Plaza, 25th Floor, New York, N.Y. 10121-2298.

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