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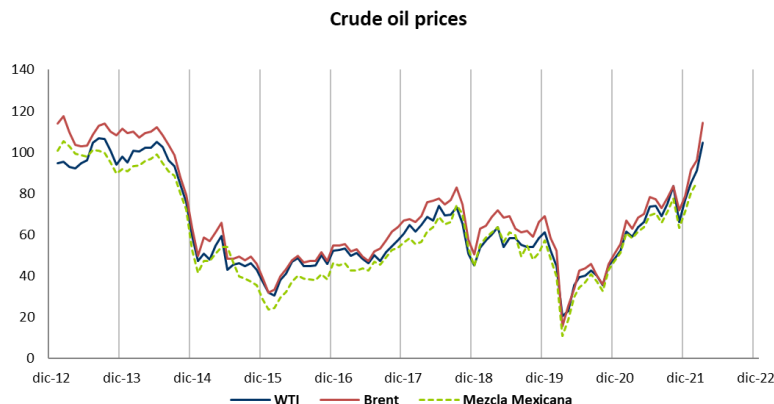
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This month in review

* 28/03/2022 **29/03/2022

Crude oil price MME US/BD	103.0
NG price HH* US/MMBTU	5.5
Mx crude production MMbd – February	1.63
Mx NG production MMpcd – February	4,673
US crude production MMbd - December	11.56
FX Rate*	19.99



Source: EIA, El Reforma, Pemex, Banxico, and CNH

Oil & Gas - Mexico

Talos Energy announces finalization of the Zama unitization process – *Talos Press Release*

Talos Energy announced today that it has received the final Unitization Resolution ("UR") from Mexico's Ministry of Energy regarding the development of the Zama field in offshore Mexico. Among other things, the UR affirms the appointment of Pemex as operator of the unit. Unitization of the Zama field was required after determination that the field is located within both the Talos-operated Block 7 and an adjacent Pemex-operated block and provides for joint development of the entire reservoir instead of each party developing its own block.

Talos will maintain a 17.35% participating interest in the Zama field, and the Company anticipates submission of a Unit Development Plan for approval by the working interest partners within 6-12 months, a critical step before the parties can make a Final Investment Decision ("FID") in 2023. Talos will participate in activities related to reaching FID, while also continuing to evaluate various strategic and legal options. The Company does not expect any material changes to its 2022 capital expenditures guidance as a result of the issuance of the UR.

Talos, as operator and 35% partner in the Block 7 lease, discovered the Zama field in 2017 as the first private sector consortium to enter Mexico following the country's major energy reforms. Zama was subsequently named the 2017 Global Discovery of the Year by Wood Mackenzie, and the field was fully appraised by mid-2019. An independent third-party reserves auditor estimated the discovered recoverable resource volumes to be between approximately 735 – 950 million barrels of oil equivalent, and Zama could produce over 160,000 barrels of oil equivalent per day once fully developed. Talos has invested approximately USD \$104 million in Zama since 2015 and these past investments are subject to cost recovery under the Production Sharing Contract.

Talos President and Chief Executive Officer Timothy S. Duncan stated: "We are very proud of our operational leadership in Mexico's private energy sector and of our accomplishments thus far with our world-class Zama discovery. We are disappointed that despite our consistent track record of success, safety and progress we were not provided the opportunity to retain our role as operator for the benefit of the project. However, we understand how important accelerated first oil from Zama is for the Mexican energy sector and all of the Company's stakeholders and we will work with the urgency required to finalize the Unit Development Plan so FID can be reached."

Pantera, Jaguar gain green light for onshore developments – CNH

CNH approved the modification plan that will give Pantera more time to explore the block under contract CNH-R02-Lo2-A9-BG/2017 in the Burgos basin. Pantera E&P will invest at least USD \$45.2mn and as much as USD \$51.2mn under baseline and incremental plans approved for an onshore block in northeast state Tamaulipas. The base plan entails drilling three exploratory wells: Kuyu-1EXP with work scheduled from July to October; Sasán-1EXP from January to April 2023; and Kaslwat-1EXP from July to October next year. The incremental plan would add a fourth, Naku-1EXP, potentially to be drilled from November 2023 to January 2024.

Pantera would make the decision on whether to move ahead on the incremental plan depending on results from drilling Kuyu-1EXP. Prospective resources in the base plan are 1.915Bcf of natural gas and 13.95Mb (million barrels) of condensate, as well as possible resources of 470.96Bcf natural gas and 3.43Mb in condensate. The incremental plan, however, entails 2.035Bcf of prospective natural gas and 494.98Bcf possible, as well as 14.83Mb in condensate and 3.61Mb possible. The modified plan would also extend modeling studies and add time to analyze cores and the results of exploratory drilling.

Fieldwood's Area 4 now Mexico's most productive private oil block – Bnamericas

Mexico's oil and gas development Area 4, including the Ichalkil and Pokoch fields, overtook Hokchi as the top privately operated oil-producing block in the country in February, according to data from hydrocarbons regulator CNH. The figures show that Fieldwood Energy's production at Ichalkil and Pokoch reached 23,496b/d of oil in February. Fieldwood began commercial production with those fields in November 2021. The company hopes to extract 455Mb of oil and 567Bcf of natural gas from them over the next 20 years.

Hokchi, in Area 2, operated by the Hokchi Energy consortium – formed by Argentina-based Pan American Energy and E&P Hidrocarburos y Servicios – saw production reach only 17,642b/d in February after reaching the top spot in November 2021. Two marine platforms are in operation at Hokchi and the consortium plans to spud 14 production wells over the coming years.

Hokchi claimed pole position in the area from Italian player Eni amid problems at the Amoca, Miztón and Tecoalli fields, located in shallow water off the coast of Tabasco state. Eni asked CNH in November 2021 to modify its current development plan for the three fields due to delays in the execution of the activities originally planned, the need to optimize the water injection strategy and the conditioning and commissioning of the FPSO. However, the regulator rejected the request. The operator says that with the current plan hydrocarbon production will be 30% lower.

CNH approves USD \$73.5 million Pemex well – CNH

CNH authorized Pemex's exploration and production arm PEP to spud the Tlense exploration well off the coast of Tabasco state. The well is located in the AE-0152-Uchukil area in the Salina del Istmo basin, neighboring areas operated by Repsol, Eni, Lukoil and Total. Pemex expects to invest a total of USD \$73.5 million to spud and complete the well over 196 days using its Blackford Dolphin S/S 18 platform. The firm expects to find prospective resources totaling 14.5Mboe.

CNH approves Pantera spudding plans – CNH

CNH allowed Pantera E&P to modify its plan for the A4-BG exploratory area straddling Tamaulipas and Nuevo León states. Pantera made a natural gas discovery in the area last November through the Tenoch exploration well. The new proposal would adjust the company's plans to account for an extended exploration period, adding between one and three exploration wells (Tsastun, Sikulan and Pusiman), a series of studies and seismic reprocessing. The company would invest a minimum of USD \$13.2 million at the site and up to USD \$28.1 million if results are encouraging.

CNH approves updated exploration plans for Pemex – CNH

CNH approved an updated exploration plan presented by Pemex's exploration and production arm PEP for its Cinturón Plegado Perdido concession off the coast of Tamaulipas state. After spudding the successful Nobilis appraisal well in 2019, Pemex now seeks to evaluate the discovery by conducting a series of studies to look for deepwater potential. For this, it will invest USD \$7.1 million over the next three years.

The commission also approved an updated work plan and budget for PEP's Ek Balam area off the coast of Tabasco. There, the firm expects to invest USD \$5.1bn over the next 20 years to spud six production wells and increase production. This year, PEP expects to invest USD \$711 million, USD 142 million more than in the previous version of the plan.

Mexico's PEP tenders supply contract for jackup rig parts – Bnamericas

PEP is due to hold a briefing session to answer questions on an open tender for a supply contract for its Yunuén and Kukulkán platforms. The two jackup rigs built for PEP in Singapore in 2015 utilize independent leg cantilever systems with maximum water depth of 400f and drilling depth of 30,000f. A jackup rig is a self-contained combination drilling rig and floating barge.

The tender, designated PEP-CAT-B-GCSEYP-302-94122-22-1, is aimed at hiring a company to supply spare parts for elevator systems at both shallow water platforms. According to the call for bids, available here, Pemex will open bidding via presentations set for April 11 and winning bidders will be announced on May 9. The competition is only open to natural or legal persons of Mexican nationality or of countries with which Mexico has entered into a free trade agreement with provisions regarding public sector purchases, and the supplied parts must be of national origin or originate in the countries of trade treaty partners.

CNH approves updated plan to Repsol – CNH

CNH greenlit updated 2022 work plans and budgets presented by Repsol in two areas off the coast of Tamaulipas state. The company expects to invest USD \$3.61 million in both areas, mainly to conduct geologic activities. Both areas have no spudding commitments, said the commission, and Repsol would only be required to spud a well if it were to request to extend the exploration period.

CNH approved modification to the exploration plan to Pantera E&P – CNH

CNH approved a request by Pantera E&P to modify its exploration plan for the A8.BG/2017 area in Tamaulipas state, and an evaluation program presented by Jaguar Exploración y Producción for the L03-TM-01/2017 area in Veracruz state. Regarding the first contract, Pantera committed to spud two exploration wells at the site, Spun and Chawana, and conduct a series of seismic interpretation activities. The company will invest between USD \$52.6 million and USD \$92.93 million during the area's exploratory phase. Regarding Jaguar's contract, the company will invest between USD \$1.86 million and USD \$3.36 million to conduct engineering and production tests, among other activities, as it assesses the area's potential.

Modec's FPSO Miamte achieves first oil in offshore Mexico – Modec Press Release

Modec announced that the FPSO MIAMTE MV34 (FPSO), operating in the Offshore Area 1 block in the Gulf of Mexico achieved the First Oil production on February 23, 2022. This is Modec's first project for Eni Mexico, a subsidiary of the integrated energy company Eni. MODEC was appointed by Eni Mexico for the supply, charter and operations of the FPSO in the Eni-operated Offshore Area 1 block in the Bay of Campeche in 2018. The charter contract will run for an initial 15 years, with options for extension every year thereafter up to five additional years.

Moored in a water depth of approximately 32 meters some 10 km off Mexico's coast, the FPSO is capable of handling 90,000 barrels of oil per day, 75 million cubic feet of gas per day and 120,000 barrels of water injection per day with a storage capacity of 700,000 barrels of oil. The FPSO is MODEC's second operations and maintenance project for Mexico, following the FSO Ta'Kuntah. The FPSO MIAMTE MV34 is the first FPSO to arrive at site in 2022. The successful project delivery helps to pave the way for our further inroads into this region.

Braskem Idesa spending USD \$150 million to boost Mexican petchem capacity – Bnamericas

Braskem Idesa has plans to invest USD \$150 million in its petrochemical complex in Veracruz state to increase production by 20%. In a surprising move after a disagreement with national oil giant Pemex that led to months-long negotiations last year regarding a gas supply agreement, which saw the government interrupting the plant's supply of natural gas and disrupting its operations for 29 days, the company has decided to continue expanding activities at its Etileno XXI complex.

The plant's expansion would be ready in 2025 and will involve additional investments in the ethane import terminal that resulted from last year's negotiations with Pemex, which is expected to cost USD \$400 million and be completed in 2024. That unit is now 40% complete. That project is expected to be able to fully supply Etileno XXI's demand for 66,000b/d of ethane and has space for future expansion as the complex grows.

Last year Pemex was able to secure a new contract to replace a previous deal to supply 66,000b/d for 20 years starting in 2010. The updated deal commits Pemex to supply 30,000b/d of ethane to the plant until the ethane import terminal is finished, or by February 2025 at the latest. Tensions had been building for years between Pemex and Braskem, given the former's mounting difficulties in meeting its ethane supply commitments. As ethane feedstock supply in Mexico gradually shrank, Pemex was forced to limit supply in order to feed its own production lines.

Pemex upping capex in bid to bolster natural gas, oil production – *NGI*

Pemex had yet another disastrous financial result in the fourth quarter, but executives said they were planning to spend more this year to get more oil and gas out of the ground. Capital expenditures for this year are pegged at “levels above” \$200 billion pesos (\$9.7 billion), CFO Alberto Velázquez said. He said this is a result of the “highest budget approved for exploration and production.” In 2021, capex was \$161 billion pesos, with 2020 capex of \$122 billion pesos.

Pemex executives said they are working to improve natural gas production partly through improving gas capture rates. Natural gas production in the fourth quarter was 3.72 Bcf/d, up 2.3% compared with the same period in 2020. Non-associated gas was up 9.1% in the same comparison. Gas production growth was led by the Ixachi field in Veracruz, which grew 106 MMcf/d from a year earlier. Natural gas capture showed a slight improvement and reached 88.1% in the fourth quarter. Executives blamed the figure on high levels of nitrogen in the Ku-Maloob-Zaap asset, along with processing infrastructure and other problems at the Ixachi and Quesqui fields.

Oil and condensate output, meanwhile, rose 4.5% to 1.751 million b/d in the fourth quarter. The gains were attributed to increases in liquid hydrocarbons production from well completions at the company’s so-called priority fields. These fields are now producing 322,000 b/d, from essentially nil at the start of 2019. Production from the fields was led by Ixachi, Quesqui and Mulach. Eighteen wells are expected to be completed in the first quarter.

Pemex is aiming for production of 1.903 million b/d this year, 1.971 million b/d in 2023 and 2.063 million b/d in 2024. The Mexican government said last year it was going to make structural changes “of a permanent manner” to help Pemex finances. One change is to keep reducing the profit-sharing duty, or DUC by its Spanish acronym, which accounts for 80% of the direct fiscal burden. The DUC rate fell from 65% in 2019 to 58% in 2020 and is currently at 52%. That figure will fall to 40% this year.

Beyond direct cash injections, the Finance Ministry is also helping in bond swaps and buybacks. Government assistance helped Pemex reduce its debt by \$58 billion pesos in 2021. Pemex reported a loss of \$124 billion pesos, or \$6 billion, in the quarter. This was compared with a profit of \$96 billion pesos a year earlier. The company blamed the result on its tax burden and exchange rate losses.

Mexico hydrocarbons watch: private players break 80,000b/d mark – *Bnamericas*

Mexican private sector oil players continued to ramp up production rapidly in January, with areas assigned in the country’s oil rounds and other areas operated by private players reaching combined production of 86,000b/d, up 15% over the previous month. This production has now risen for five consecutive months since last September. The jump between December and January was the biggest so far, adding 11,000b/d of production in one month.

There are various notable private projects that have been picking up pace this year. The most significant include plans by Fieldwood Mexico (which was recently acquired by Lukoil) to end the year producing 37,000b/d at its Ichalkil and Pokoch fields. Another key project is Eni México's Area 1, where the firm cleared the project’s main hurdle earlier this year with the arrival of a floating production, storage and offloading FPSO facility in the Miztón field, where the firm expects to add some 35,000b/d of production in 2022 to reach 65,000b/d.

However, the increased output from privately-held contracts and joint ventures has not been sufficient to push up Mexico's overall output, due to the dwindling production of national oil giant Pemex, which in January reported a crude output of 1.48Mb/d in its concessions and 82,000b/d in its projects migrated to the contract model, giving a total of 1.56Mb/d, 9,000b/d less than in December. Hydrocarbons commission CNH's calculation of output does not consider crude condensate as part of oil production, which explains the agency's mismatch with the company's own production tally.

Pemex gas flaring up 50% since AMLO took office in 2018 – *Reuters*

The volume of excess gas disposed of by the environmentally harmful practice of flaring increased 50% in Mexico between 2018 and 2020. Scientists at the Earth Observation Group of the Colorado School of Mines analyzed NASA satellite images of flare sites across Mexico and determined that flaring has increased significantly since 2018, the year President AMLO took office. Many flare sites are facilities operated by Pemex, such as the Cactus natural gas processing center in Chiapas, a municipality on the border with Tabasco.

Power/Renewable Energy – Mexico

Fitch: Uncertainty holding up 4GW in Mexico's renewable pipeline – *Bnamericas*

A floor vote on the planned constitutional reforms to Mexico's electric power sector is unlikely to come before "late 2022," according to Fitch Ratings.

Meanwhile, sector-wide uncertainty is increasing as information on a timetable, potential changes and approaches toward implementation is lacking. "Renewable projects have already been affected," Jesús Enríquez, Fitch Ratings' director of Latin America infrastructure and project finance, told an online panel hosted by the agency. In addition, energy sector regulator CRE's slowdown on permit approvals for new renewable energy projects and project expansions over the last two years has forced the "rapid growth levels that we've seen in previous years" into retreat, he said. "In the near and medium term, the severity of intended modifications will continue to effect private investors' confidence," said Enríquez.

Despite the uncertainty, he added, "we have identified a renewable and gas-based firm additions pipeline of 6.2GW that could be connected between 2022 and 2024," including a renewables additions pipeline of "roughly 4GW between 2022 and 2024." But "stable regulatory measures are needed to give investors certainty on cash-flow generation," said Enríquez. Such stability still appears unlikely, however.

Under the current proposal, all private power generation and sales contracts would be canceled and ostensibly have to be re-negotiated in line with later secondary legislation. The constitutional changes also make CFE the sole buyer of electricity, which is why Fitch believes the wholesale electricity market resulting from the 2013 energy reforms would be abolished. It also eliminates CRE and hydrocarbons regulator CNH, whose duties would go to energy ministry Sener and CFE.

A date for a floor vote remains unclear, with Carlos Morales, Fitch's director for Latin American sovereigns, saying the agency has no fixed timeline. Fitch expected ruling Morena party to push for a vote immediately after the April 10 special referendum on President AMLO's mandate, which would mean a vote during the current session ending at the end of that month. "However, as we've seen more friction between the parties and low support for the proposal".

Regarding ratings actions related to the sovereign, Morales said, "if it were to be approved [as is], we wouldn't necessarily take a negative action." He added, "I think we would wait for the implementation period to see how [it goes] and to assess the overall impact on ... economic growth, which we already have a negative view of in Mexico – but more importantly what would be the impact on the fiscal balance." Fitch confirmed Mexico's 'BBB-' rating with stable outlook in November 2021.

CFE directly awards another 5 power plant contracts – *Bnamericas*

CFE issued direct awards on five projects expected to add 2.26GW of installed capacity to the national grid for investments totaling USD \$1.74bn. The move is the latest from CFE in opting to advance with projects via through direct awards after open tenders were met with a palpable lack of interest in late 2021.

Asked about the awards announced, Víctor Ramírez, spokesperson for Mexican energy transition think tank PMCE, said, "There wasn't much interest from companies. Some of the tenders they're talking about were already declared void. "I think CFE CEO Manuel Bartlett has gone overboard with these attacks on private companies, and this is fostering mistrust," Ramírez added.

CFE awarded Finland-based Wartsila contracts to build two internal combustion engine power plants: the 429MW CCI Mexicali Oriente plant in Baja California state and 202MW CCI Parque Industrial, to be built in Sonora state. The other three are combined cycle plants: CCC San Luis Potosí (442MW) in the state of the same name and the 932MW CCC Salamanca plant in Guanajuato state, both awarded to Mitsubishi Power; and finally CCC El Sauz II (256MW) in Querétaro state, with the contract going to TSK and Siemens Energy. The specific investments are as follows: USD \$282 million in CCC El Sauz II, USD \$577 million in CCC Salamanca, USD \$338 in CCC San Luis Potosí, USD \$369mn in CCI Mexicali Oriente and USD \$169 in CCI Parque Industrial.

These follow direct awards in late February for expansion and construction of six combined cycle plants made to Siemens Energy and Mitsubishi Power after the failure of earlier attempts at open tenders.

Oil & Gas - LATAM

Shell seeks environmental license to generate offshore wind power in Brazil – *Reuters*

Shell announced it has applied for a license from Brazil's environmental agency Ibama to generate offshore wind power in six areas in the country. The studies on the areas are set to begin early this year.

The six projects are located in the Brazilian states of Piauí, Ceará, Rio Grande do Norte, Espírito Santo, Rio de Janeiro and Rio Grande do Sul. The total installed capacity of the projects will be 17 gigawatts. "The initiative demonstrates Shell's commitment to Brazil, as well as the materialization of the 'Driving Progress' strategy, focused on decarbonization goals for the energy transition," the company said in a statement.

In early January, Brazil's government issued a decree that opens space for the development of offshore wind power generation in the country.

Colombia's Ecopetrol starts green hydrogen project in Cartagena – Reuters

Colombia's majority state-owned oil producer Ecopetrol launched its first green-hydrogen pilot project at its refinery in the Caribbean city of Cartagena. Using a 50-kilowatt Proton Exchange Membrane electrolyzer, 270 solar panels, and water used by the refinery, Ecopetrol will produce 20 kg of high-purity green hydrogen each day during the three-month pilot project. The company will invest around USD \$140 million each year through 2040, taking total investment to some USD \$2.5 billion -- to produce zero- and low-emission hydrogen, adding that hydrogen it produces will be used for its own operations, in low-carbon products for sale in Colombia and abroad, as well as other uses.

Colombia's Minister of Mines and Energy Diego Mesa said the country would develop the production and use of hydrogen as a long-term clean energy source, including tax deductions to encourage participation by private sector businesses. "Today marks a historic milestone in the energetic transition, the country hoped to develop between two and three gigawatts of electrolysis for hydrogen production over the next 10 years.

Argentina's YPF aims to double oil output in five years – Reuters

YPF plans to grow its crude output over the next five years to reach some 450,000 barrels per day, amid an oil price rally and widespread geopolitical uncertainty said YPF Chief Executive Officer Sergio Affronti.

YPF currently pumps some 220,000 barrels per day, and Affronti said he is targeting 450,000 bpd by 2026. The chief executive added the national oil company expects total investment this year to reach USD \$3.8 billion, with USD \$1.6 billion focused on shale projects. YPF is the primary operator of Vaca Muerta, the world's fourth-biggest shale oil reserve and No. 2 deposit for shale gas. The company's oil output has soared during the beginning of this year to average about 571,000 bpd in February, up slightly from the 570,000 bpd pumped in January. The two months mark the highest level of monthly output since December 2011. About 40% of the output comes from the country's shale reserves.

Brazil's Bolsonaro hints at potential replacement of Petrobras CEO – Reuters

There is a possibility of replacing Petrobras' chief executive, Brazil's President Jair Bolsonaro said, adding further pressure to the state-run oil company's pricing policy.

In an interview, Bolsonaro said the possibility of replacing Joaquim Silva e Luna as Petrobras CEO exists, although he added "everyone in the government can be replaced if they are not doing their job at a satisfactory level. "So it doesn't mean that they will be replaced or that they won't be replaced", said Bolsonaro. Luna, a retired army general, said he would not leave the company despite facing criticism from Bolsonaro and others over a fuel price hike announced. Bolsonaro appointed him to the job last year after his predecessor, Roberto Castello Branco, was fired due to a disagreement with the president over the company's pricing policy.

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