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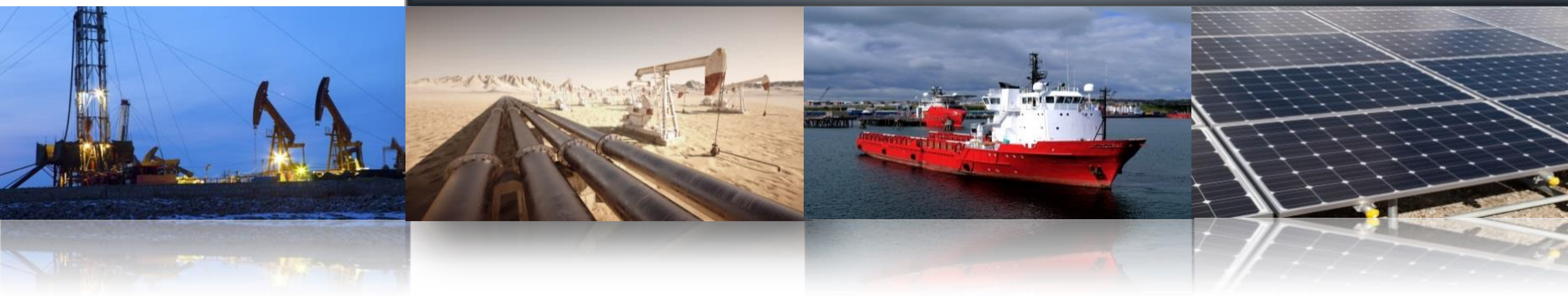
Energy Monthly News

July, 2019



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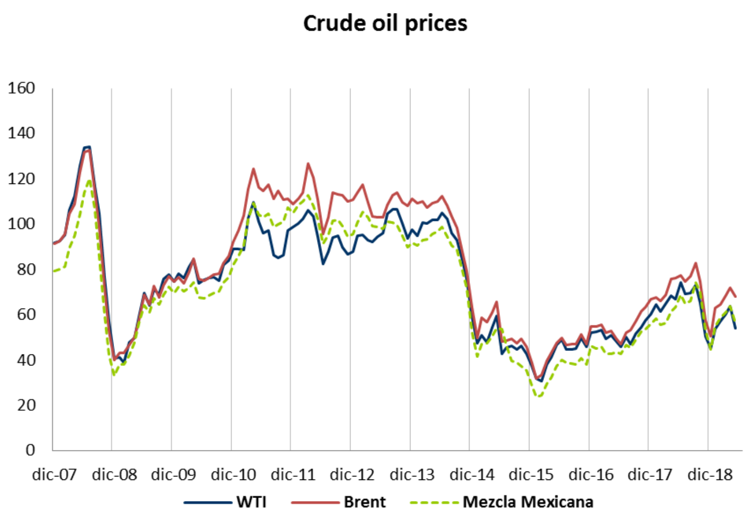

Crude oil Price* US/BD	WTI 55.39 BRENT 61.18 MME 56.99
NG price* US/MMBTU	Henry Hub 2.38
Mx crude production MMbd	1.657 *(May-19)*
Mx NG production MMpcd	4,821 *(May.-19)*
US crude production MMbd	12.16 *(April-19)*
FX Rate**	19.08

** 19/07/2019 **24/07/2019*
Source: EIA. Pemex BDI, Banxico, and CNH

Oil & Gas

Pemex 2Q-2019 results – *Pemex*

Pemex posted another quarter of major losses, weighed down by falling output and lower crude prices, as the heavily indebted firm faces the prospect of a fresh downgrade from credit agencies critical of its direction.
During 2Q19, total sales decreased -13.6%, as compared to 2Q18, mainly as a result of:

- A decrease in oil production. During the April to June period, the company's crude production dipped more than 10% to 1.661 million barrels per day compared to the same quarter last year. Pemex's natural gas production (without nitrogen) amounted to 3,634 million cubic feet per day, a 6.0% or 230 MMcfd decrease as compared to 2Q18.
- A decrease of 14.4% in domestic sales, mainly resulting from: (i) a decrease in gasoline and diesel prices; and (ii) market share loss due to entry of new competitors; and
- A decrease of 13.0% in export sales, which corresponds to a 10.3% reduction of exported volume, in addition to a USD $1.8 per barrel decline in the average price of the Mexican Oil Export Mix. Prices per barrel went from an average of USD $62.1 per barrel in 2Q18 to USD $60.3 per barrel in 2Q19.

During 2Q19, the average number of operating wells amounted to 7,302, a decrease of 395 wells, as compared to the same period of 2018. Most wells that halted activity were located at the Burgos area, and their production was not meaningful. During 2Q19, total crude oil processing at the National Refining System (NRS) averaged 595 Mbd, which represents a decrease of 15.6% or 110 Mbd, as compared to the same period of 2018.

During the same quarter, total taxes and duties totaled MXN 103.2 billion, a decrease of 11.3%, as compared to 2Q18, mainly due to lower oil prices and lower production of hydrocarbons.

Pemex's financial debt totaled 2 trillion pesos ($104.4 billion) at the end of June, compared to 2.06 trillion pesos in the previous three-month period.

For 2Q19, net loss was reduced by 67.6%, as compared to 2Q18. During 2Q19, a net loss of MXN $52.8 billion was recorded while for 2Q18, the recorded net loss was MXN $163.2 billion driven by a reduction in costs.

CNH approves Petronas deep-water exploration plan – *CNH*

Petronas exploration plan has been approved on its deep-water block won in Mexico's Round 2.4, with investments of USD $89 million. The Malaysian company aims to drill a single well at the Huracan prospect in the fourth quarter of 2020, as well as carrying out exploratory studies.

The prospect is targeting objectives with a prospective resource of 1.19 billion barrels and 613 million barrels respectively. Probabilities of success are 21% and 15% respectively, with oil as the target hydrocarbon. The well is planned to be drilled to a total depth of 3,500 meters.

Mexican government unveils winners for new oil refinery work – *Reuters*

Mexico's government unveiled the winners of contracts to build and develop an ambitious new oil refinery, which include Fluor Enterprises and ICA Fluor, Samsung Engineering and KBR. The USD $8 billion refinery planned in the southern port of Dos Bocas is one of the flagship infrastructure projects of President Andres Manuel Lopez Obrador, who wants to make Mexico more self-sufficient and wean it off gasoline imports. AMLO, this year threw out bids for it by engineering groups as too expensive, handing oversight of the project to cash-strapped state oil firm Pemex. Many financial analysts have questioned the wisdom of the refinery, arguing it makes more sense to import fuel. However, the government is adamant it must go ahead.

A block of work that includes the coking plant for what would be Mexico's biggest refinery was won by Fluor Enterprises and ICA Fluor, a tie-up between Mexico's ICA and Fluor Corp. Samsung Engineering and Asociados Constructores DBNR jointly won two blocks for work including the hydrodesulfurization plant. Meanwhile KBR and Mexican construction firm Grupo Hosto won two others for work such as the gas generator plant, among others. A contractual bundle for the site's product storage facilities will be tendered next year.

The refinery in the president's home state of Tabasco is scheduled to process 340,000 barrels per day of Mexico's flagship grade, Maya heavy crude, and to be completed by 2022.

CNH approves Pemex Ku development plan – *CNH*

The National Hydrocarbons Commission "CNH" approved Pemex to modify the development plan for its Ku field in shallow waters, which plans investments of USD $4.8 billion over the remaining life of the assignment to further boost recoveries at the already prolific area. The area is currently the fourth-most productive in the country, yielding output of 78,882 barrels per day of oil and 192 million cubic feet of natural gas in May of this year. The field has 262.9 million barrels 2P remaining oil reserve and a recovery factor of 48.1% for oil and 61.5% for natural gas.

Pemex's plan includes the drilling of 10 wells, 11 new completions, 22 major workovers and 40 minor workovers, as well as maintenance of infrastructure and ultimate abandonment of the installations and wells. The plan aims to recover a total of 251 million barrels of oil and 274.1

billion cubic feet of natural gas over the life of the contract. The field has 42 wells flowing at present. The plan includes pneumatic and electro-centrifugal pumping, as well as a treatment and water injection plant.

Pemex kicks off major tender for Maloob field – *Pemex*

Pemex has launched an international public tender for an engineering, procurement and construction contract of two drilling platforms in the bay of Campeche: Maloob-E and Maloob-I to improve recovery and stem declines at the Maloob field.

The amount of the contract will be around USD $350 million. Presentation and opening of proposals is scheduled for 10 September, with results published on 24 September. Once signed, the contract would run for 550 days. The area lies about 110 km off the coast of the state of Campeche in a water depth of about 85 meters.

Pemex will invest $568.7 million in Ixtoc field – *CNH, Milenio*

The National Hydrocarbons Commission "CNH" approved Pemex to modify the development plan for the Ixtoc field. The field is located off the coast of Campeche and was delivered to Pemex in August 2014 with an average production of 12,097 barrels per day of oil and 20.85 bcf of gas through 10 producing wells.

The modification of the plan aims to guarantee the operational continuity of the field and the maintenance of the base production. For this, Pemex will perform 52 minor repairs and 14 clogging and abandonment activities, which are intended to recover 12.1 million barrels of oil and 12.3 bcf of gas by 2025. The works will have an associated investment of USD $568.7 million, 73.2% designed for production and 26.8% for abandonment activities.

CNH approves deepwater Eni exploration plan - *CNH, Upstream*

The National Hydrocarbons Commission "CNH" approved Eni exploration plan for block 24 that the Italian company won in the country's Round 2.4 deep-water bid round in 2018. Eni could see a well drilled in mid-2021. The operator committed to drill a single well on Area 24 as well as to purchase 3D wide-azimuth seismic data and conduct extensive interpretation and studies. It is partnered on the block by Qatar Petroleum.

Eni's initial probe planned for 2021 could be followed by a second reaching into 2022 depending on the results of the first. The first prospect in a base scenario would be Tlahuillli-1 at between 2,850 and 3,650 meters.

Eni also proposes an incremental scenario to deepen the well to explore targets in the Middle Eocene at 4,100 meters, 6,100 meters and Cretaceous at 6,750 meters. Those targets represent resource potential of 102 million, 275 million and 84 million barrels respectively, with probabilities of success of 24%, 20% and 13%.

A second prospect envisaged on the block is named Etznab-1. The expected investment is about USD $89.6 million for the base scenario, potentially rising to USD $200.8 million in an incremental scenario. The area lies 187 km northeast of the port of Veracruz, in water depths between 1,700 and 3,000 meters.

Mexico's natural gas plans include unconventional, deepwater projects – *Pemex, NGI*

The 2019-2023 business plan presented by Pemex includes designs to develop deepwater and unconventional fields as a way to increase natural gas production.

Pemex has named the Lakach deep-water gas field as a target area to help bolster natural gas production in the country, earmarking the project as a candidate for development via a service contract. No timeframe was given for such action to be taken, which also listed the gas fields of Cuitlahac and Comitas as targeted for 2020 and Cuervito/Fronterizo for 2021. The development of the gas discovery made in 2007 had been poised to become Pemex's first major deep-water project, but work was suspended amid profitability concerns in 2016.

Lakach lies 60 miles south-east of the city of Veracruz in water depths of between 900 and 1,200 meters in the Gulf of Mexico. Lakach contains proved and probable resources, (2P) of close to 1 Tcf.

The business plan also includes development programs that would use horizontal and directional drilling at fields in Chicontepec, in the Tampico-Misantla Basin. Chicontepec has also seen previous development dating back to 2003, with underwhelming success. The pillar of Pemex's natural gas plans is the Ixachi field in Veracruz. Pemex would spend USD $6.4 billion developing the onshore, gas-rich field, with production expected to peak in 2022 at 638.5 MMcf/d.

The business plan sets a production goal of 4.916 Bcf/d for 2024, from an expected average of 3.561 Bcf/d this year. Pemex business plan does not mention farmouts or new oil and gas rounds, central components of the opening of the hydrocarbons sector under the previous administration, instead favoring oilfield service contracts. In addition, the business plan reduces the profit sharing tax on the company to 54% from 65% by 2021, but also includes construction of the $8 billion Dos Bocas refinery in Tabasco, which will divert resources away from exploration and production.

Pemex awards Yaxche-Onel EPC contract – *Pemex*

Pemex has awarded an engineering, procurement, construction and installation contract for the Yaxche-C and Onel-B platforms to a consortium made up of Hoc Offshore, Construcciones Mecánicas Monclova (Commsa), and Cotemar, according to procurement documents.

The EPC deal for the two marine infrastructure units to be installed in the Bay of Campeche was granted as part of a restricted invitation process that kicked off in early June. The work is valued at about USD $155.5 million, according to Pemex.

Both fields are located in shallow waters of the Gulf of Mexico, Yaxché is located off the coast of Tabasco and Onel is located off the coast of Campeche. According to the National Hydrocarbons Commission, Onel has proven reserves of 119,332 million barrels and Yaxché, 18,374 million barrels.

Pemex aims to reverse oil declines, balance budget – *Bloomberg*

Under presidency of AMLO, Pemex will invest USD$102 billion by 2024, as said on its business plan. Of that amount, $269 billion pesos between 2020 and 2022 will come from tax breaks and government allocations. Another $108 billion pesos through 2023 is expected to come from so-called integrated exploration and extraction contracts.

Pemex is the biggest borrower of any oil company, with USD $106.5 billion of debt. Many fear that a government decision to freeze oil auctions and Pemex joint-ventures that enabled it to develop oil fields with partners will stunt output growth. On the whole, the yield on Pemex's benchmark

2027 bond has fallen over the year, though it spiked in June after Fitch Ratings cut the company's credit rating to junk. Another junk rating for Pemex could lead to widespread forced selling as the credit drops off the major investment-grade indexes.

Pemex, which has failed to meet output goals every year for at least the past decade, aims to increase oil output to 2.7 million barrels a day by 2024, a 58% increase from current levels. Output is less than half of what it was in 2004 and Mexico's proven oil reserves have fallen 77% in two decades.

Mexico natural gas prices at record low while government disputes pipeline contracts – *NGI*

The timing of a disagreement between the Mexican government and several natural gas pipeline developers could hardly be less opportune for the country, with gas prices at record lows and the Yucatán peninsula facing an acute shortage of the fuel. Mexico's IPGN monthly natural gas price index averaged $2.783/MMBtu in June, the lowest average recorded since the Energy Regulatory Commission "CRE" began publishing the index in July 2017. The price was down from the May average of $3.001/MMBtu, reflecting a drop in U.S. gas prices,

Developers TC Energy Corp. and Infraestructura Energética Nova (IEnova) in June announced the long-awaited completion of the $2.5 billion pipeline, which is meant to connect the Agua Dulce hub in Texas with Mexico's Sistrangas national pipeline grid via the Montegrande interconnection in Veracruz state. However, the pipeline's anchor customer, Mexican state power utility Comisión Federal de Electricidad "CFE", has refused to allow commercial gas to begin flowing on the pipe as CFE seeks to renegotiate the gas transport services contract it holds with TC Energy and IEnova.

CFE said that it had held the third round of talks with executives from IEnova, TC Energy, Grupo Carso, and Fermaca, as part of CFE's effort to renegotiate the transport contracts it awarded the developers of seven pipelines, among them the Sur de Texas-Tuxpan line. Industrial groups have called for a speedy resolution to the marine pipeline dispute, citing the importance of natural gas for Mexico's economy.

Pemex business plan does not change negative outlook: Moody's analyst – *Reuters*

Pemex has failed to convince ratings agency Moody's Investor Services with its newly unveiled business plan, an analyst for the Mexican state oil company, adding that the risk for a downgrade persists. Pemex, the world's most heavily indebted oil company, is on the verge of losing its investment grade rating after Fitch downgraded its bonds to speculative grade, or junk status, in June.

Peter Speer, analyst covering Pemex, said that the business plan did not change Moody's expectations for the company's financial performance, though it did shed more light on the government's support of the company for next year. "We still have a negative outlook. We still have concerns about the rating, and there are risks to the rating," Speer said, adding that a negative outlook usually implies a possible downgrade within six months to a year; "If the government's rating were to be downgraded, that would likely lead to a downgrade for Pemex".

Pemex at risk of losing 57% of the zero round assignments – *El Economista*

Pemex runs the risk of losing 52 assignments granted by the Mexican state in 2014 during round zero, since it has not demonstrated the technical and financial capabilities to operate the areas.

In 2017, Pemex requested an extension of two more years to deliver the minimum work plans. However, the difficult financial situation that Pemex has gone through has made it difficult to deliver the programs of 52 of the 91 assignments that Pemex has. To maintain the allocations, Pemex must demonstrate that it carries out 80% of the activities of the minimum work commitments or that it made at least one geological discovery. This second extension concludes on August 27.

BHP spuds second appraisal well at Trion – ***Upstream***

BHP has spudded its second operated appraisal well at the Trion field off Mexico in the deep-water Perdido fold-belt area. The Australian operator began drilling operations at the Trion 3-DEL well on 9 July with the drillship Deepwater Invictus. "This appraisal well is expected to provide further information regarding rock and fluid properties near the crest of the field as well as information to support future development well planning," Company said. Completion work is planned from 26 July to 10 August. The well is planned to be drilled to a total depth of 4,624 meters.

The well will be about 58 km from the Shell-operated Great White discovery on the US side of the Gulf of Mexico frontier. The total well cost for drilling and abandonment is about USD $80 million, regulators said.

Hokchi Energy will drill two exploratory wells in shallow waters of Veracruz ***– CNH, Notimex***

The National Hydrocarbons Commission “CNH” approved to Hokchi Energy the modification to the exploration plan of block CS-15. With the modification of the plan, the operator seeks to confirm the discovery made by Pemex of the Xaxamani-1 well and the approval to drill the exploratory well in shallow waters Xaxamani-2EXP. Hokchi Energy expects to invest USD $36.3 million: USD $18.4 million are for drilling, while USD $17.9 million for the completion.

Drilling is expected to start on July, 2019, and conclude on August this year. The expected resources are around 43.6 Mboe, with a probability of geological success of 77%.

CNH approves Pemex Mulach development plan – ***CNH, Oil and gas Magazine***

The National Hydrocarbons Commission “CNH” approved the development plan for the Amoca-Yaxché Mulach field, located in Tabasco, 19 km of the Dos Bocas maritime terminal. The plan covers investments of USD $549.69 million over the life of the field, 72.9% of the investments will go to the development stage, 19.9% to the production period and the remaining 7.1% to abandonment. The plan calls for the drilling of six wells and 87 minor repairs, to recover 100% of the reserves. The plan is aiming to recover about 30.33 million barrels of oil and 11.88 mmmcfd of natural gas.

Eni claims offshore Mexico milestone – ***Financial Times, Rigzone***

Eni had begun production at the first offshore field since Mexico’s energy reform five years ago enabled private companies to enter the sector in a boost to the country’s flagging oil output. Eni had begun early production from the Miztón field in Area 1 off the coast of the state of Campeche, an area together with the Amoca and Tecoalli fields. Eni won the block in an auction in September 2015. Nevertheless President AMLO has halted the energy reform, saying private companies have not lived up to production expectations. He has given them three years to prove they will invest and boost Mexico’s oil output, which has been in steep decline since 2004.

Eni added the Mizton start-up marks the first step in developing Area 1, estimated to hold 2.1 billion barrels of oil equivalent in place (90% oil) in the Amoca, Miztón and Tecoalli fields. The company acquired Area 1 in a competitive bid round in September 2015.
"We have achieved production startup in less than two and a half years after Eni started its first well in Area 1 and in less than one year from the approval of the plan of development," Eni CEO Claudio Descalzi said. "This is in line with the expectations of the Mexican Government to increase the country's overall production.

Eni is the first international company to start offshore production in Mexico after the Energy Reform. Eni stated that production has started from the Mitzón 2 well, which has shown a very good productivity index and should produce up to 15,000 barrels per day of oil. Eni added that full field production should start in early 2021.

Pemex will invest USD $266 million to develop Uchbal field – *CNH*
Mexico's National Hydrocarbons Commission has approved to Pemex the development plan for the Uchbal field, one of the priority fields of Mexican president AMLO to boost production in the country. Pemex plans to invest USD $266.5 million over the life of the field to develop 15.8 million barrels of oil and 7.27 billion cubic feet of gas in probable reserves. Production will be achieved by the drilling of four horizontal wells from the Xikin-B platform, and be produced by infrastructure in the Xikin field. Of the total investment, 73.9% will be directed towards field development costs like drilling and construction of installations, 18.1% will be for production including well intervention and pipeline costs, and 8.0% for the eventual abandonment of the field.

Of the 20 projects for which Pemex is accelerating development to reverse declining oil production, Uchbal is seventh to obtain approval. The other six are Ixachi, Cahua, Cheek, Esah, Chocol, and Xikin. Total oil production from these seven fields is expected to peak at around 199,000 barrels per day by 2022.

Zama appraisal exceeds expectations for Talos – *Talos Press Release*
The Zama-3 appraisal well is the third and final appraisal penetration drilled by the Consortium to better define the resource potential of the Zama discovery. The Zama-2 and Zama-2 ST1 appraisal penetrations, both drilled in the first half of 2019, generated results that met or exceeded the Consortium's expectations. The Zama-3 well was drilled approximately 1.5 miles south of the original Zama-1 location with the goals of testing the southern extent of the reservoir and capturing additional reservoir description data.

Based on the preliminary information, Talos expects the updated value will fall in the upper half of the previously provided pre-appraisal guidance range of 400-800 MMBoe. Operations for the Zama-3 well were concluded approximately nine days ahead of schedule and within budget. The entire three-penetration appraisal program was finalized 39 days ahead of schedule and under budget.

Talos and its partners Sierra Oil & Gas, a Wintershall DEA company, and Premier Oil, are simultaneously advancing both, its front-end engineering and design (FEED) work streams as well as unitization discussions with Pemex, with the aim of making a Final Investment Decision (FID) on the project in 2020, pending required government approvals. Talos used the Ensco 8503 rig semi-submersible drilling rig for the appraisal program. This rig was also used when the original Zama discovery made by Talos in July 2017, in what was the first offshore exploration well drilled by a private company in Mexico. The Zama field one of the largest shallow water fields discovered in the past 20 years is expected to be brought online in 2022, with estimated peak production of approximately 150 Mboe/day.

Power/Renewable Energy

EDF Renewables announces its first solar power plant in Mexico – *EDF Press Release*

EDF Renewables announces the commissioning of Bluemex, its first solar power plant in Mexico. This 119.6 MWp photovoltaic facility is located in the northern Mexican state of Sonora. Occupying over 340 hectares, the Bluemex solar photovoltaic power plant is comprised of photovoltaic modules supplied by Canadian Solar Inc.

The solar project was awarded in 2016 through the second long-term auction of supply certificates and power purchase agreements for clean energy held by Mexico's Federal Electricity Commission. The construction of the solar power plant created 900 jobs. EDF Renewables, which first moved into Mexico in 2001, currently operates 1GW of wind and solar energy capacity. EDF Renewables is one of the largest renewable energy developers in North America with 16GW in gross wind, solar, and storage capacity being developed across the US, Canada and Mexico.