Pemex Watch: government support remain insufficient in light of the declining oil platform.

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Economic Research & Strategy

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Last figures released by Petroleos Mexicanos (Pemex) plotted the continuation of the declining path in oil production, a trend started in 2005 –if using annual averages– that the National Oil Company (NOC) has not been able to revert in almost 15 years.

According to Pemex, 1,728 thousand barrels per day (kbd) were produced on December 2018; an average production of 1,833 kbd during 2018. This figure indicates a 5.8% contraction relative to 2017 average, and a 7.7% decrease year-over-year.

Long-term analysis show that year after year oil platform has continuously decreased since 2005, when production fell from the 3,383 kdb average registered in 2004 to 3,333 kbd. Every year since then the weakening process has not stopped, accumulating a 45.8% reduction from 2004 to 2018.

Shortfall in production has increasingly caught the attention from the market over this period, in light of the rise in the NOC liabilities, and larger expectations on the government support that the company might need going forward. A plan to support Pemex is currently in the pipeline of the new administration, as previously shared by authorities both from the company, and the Mexican Ministry of Finance.

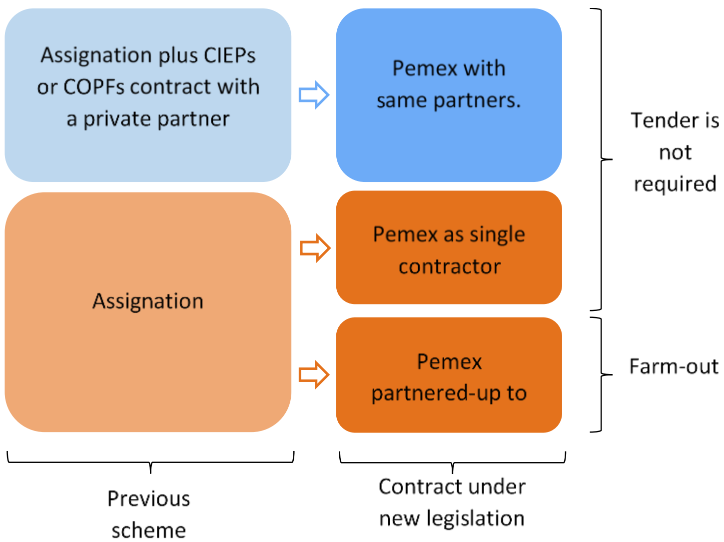
Aiming to meet the expectation created on a supportive strategy, the Ministry of Finance stated yesterday that one of the underlying reasons explaining the drop in production was the fiscal burden currently applicable to Pemex. Based on that assumption, two measures will be followed to provide Pemex with at least MXN 11 Bn each year, and ear-marked to be used only in capex for upstream activities.

The main measure will reduce government take by increasing the cost cap, a fiscal term that increases cost deductibility for the calculation of the shared-profit duty, the main contribution that Pemex pays to federal government under the assignations regime. Based on Comision Nacional de Hidrocarburos (National Hydrocarbons Commission, CNH) data, around 95% of Pemex's production is taxed under that regime, while the contracts regime, available to Pemex as a result of the 2013 energy reform, applies only to the remaining 5%.

Ministry of Finance's statement specifies they will seek to match the cost cap applied to Pemex with the cost recovery limit included in the contracts auctioned off in the oil rounds organized from 2015 to 2018. In fact, there was a specific mention to Ek-Balam field, a migration from the assignation's fiscal regime into a production sharing contract (PSC) carried out by Pemex in 2017.

Including Ek-Balam migration as an example of successful reduction in Pemex's fiscal take seems intriguing. Current laws allow Pemex to migrate fields under different schemes. See chart below.

Migration alternatives available to Pemex



Source: Finamex based on current legislation.

According to current legislation, the first option to migrate is from CIEPs and COPFs contracts with private sector that preceded the energy reform– into new contracts while keeping the partners Pemex already had (Santuario, Misión, Ébano and Miquetla fields belong to this set).

Second alternative is the migration of fields under the assignations’ regime into a contract where Pemex acts as single operator (Ek Balam is the only example). A third one is the migration of an assignation where Pemex aims to partner up, and that has to be auctioned off by CNH. This scheme is better known as a farm-out (Cárdenas-Mora and Ogarrio in shallow waters, as well as Trion in deep waters were auctioned off using this alternative).

All the preceding migrations used different alternatives of the contracts set include in the Hydrocarbons Revenues Law. Depending on the cost structure, the tender process itself –if applicable–, and market conditions, fiscal terms resulted to vary significantly across them. Also, depending on the type chosen, either license or PSC, contracts seek to maximize fiscal take by taxing gross revenues (mainly through royalties), or profits, and this has a direct impact on the resources available to contractors to efficiently operate the projects.

Particularly for Ek-Balam contract, cost recovery limit was set at 60% of gross revenues, and can be deduced from the base to calculate the main contribution charged to Pemex under this regime, the operating profit consideration. Hence, if government plans to match the cost recovery limit of the PSC with the cost cap applied to assignations’ regime, the migration process seems the most robust strategy to follow if they seek to avoid distortions in upstream market.

Among the reasons explaining the successful outcome in Ek-Balam is the size of the field. It produces around 40 kbd, around a half of the 90 kbd that will be charged the recently-announced fiscal regime. But as it will be detailed below, even when the fiscal regime is one reliable approach to analyse the decline in the oil platform, the kind of play and the density of crude extracted are both standpoints as necessary as the fiscal burden.

Some hints on this matter can be found in the strategy previously released by Pemex for this year. The NOC aims to increase production mainly supported by greater activity coming from services contracts. Larger drilling activity, secondary recovery, and non-detailed exploration plans support most of the new administration's plan in upstream. Still, disaggregated data expose some guidelines to judge ex ante for the potential effectiveness of this plan, and also to provide insights to check if the new measures are applicable to most profitable areas.

As a result of 2013 energy reform, Pemex is now subjected to different fiscal regimes. Using data from CNH, around 95% share of Pemex's production is subjected to assignations regime (required to pay duties), while the remaining 5% is ruled by different contracts, most of them in joint operation with private participants, while only one, Ek-Balam is single-operated by the NOC.

In our view, stopping –and eventually reverting– the severe reduction in production remains as the most important challenge for the NOC. We identify at least three axes to explain the declination. First, comparing across plays, although Cantarell field explained most of the decline in the beginning, both shallow waters –except for Ku Maloob Zaap block (KMZ)–, and onshore fields have also reduced their production in the last years. Second, by kind of oil, a decline that was highly concentrated on heavy oil is now spread into light and extra-light oil extraction. Third, fiscal classification of oil production show that production pumping out from fields ruled by contracts has increased since they started to operate.

Plays comparison

Using Pemex's data, more than 80% out of its total production is located in shallow waters, 2/3 out of this share specifically in Cantarell and KMZ. Yet, their respective trends are completely different. Using annual averages, from 2004 to 2018, Cantarell has reduced more than 90% its production, while KMZ has almost double it. Also in the same period, the remaining fields in shallow waters have increased their production by 22%.

Onshore production on the other side has deteriorated, with a more than 40% accumulated contraction also from 2004 to 2018. Particularly for 2018, when total platform reduced by 115 kbd on yearly basis, onshore fields reduced their production by 42 kbd, Cantarell fell by 15 kbd, KMZ increased by 17 kbd, while the remaining shallow waters' fields contracted by 74 kbd. See charts below.

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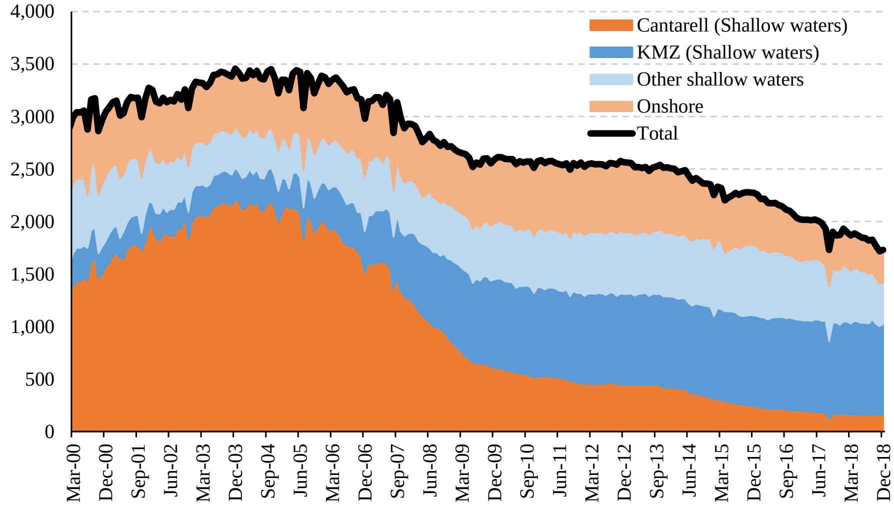
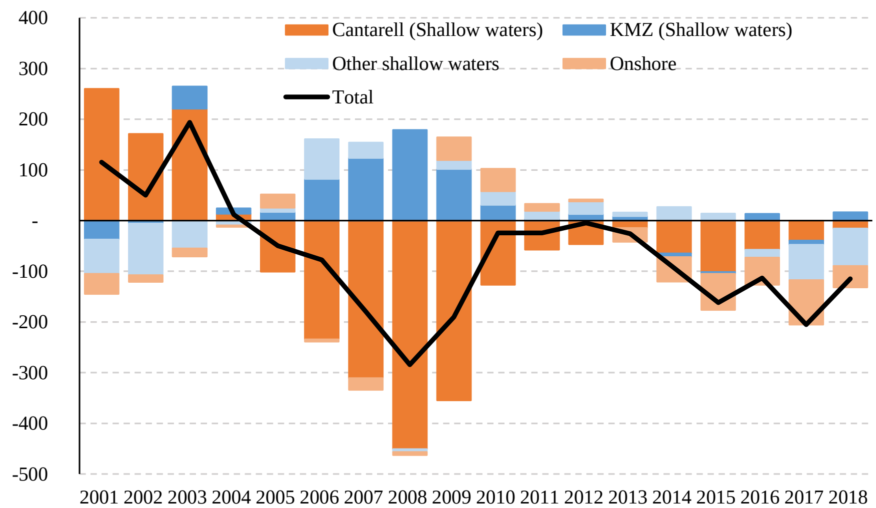
Pemex's oil production by kind of play
Kbd



Source: Finamex with Pemex data.

Change in Pemex's oil production by kind of play
Kbd



Source: Finamex with Pemex data.

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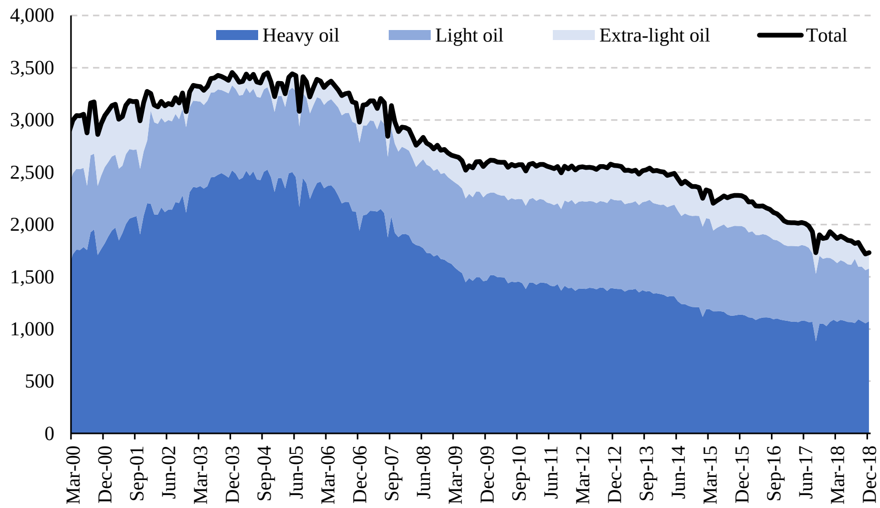
Oil kind comparison

Another relevant approach to review the contraction in oil production –particularly after Pemex announced they will focus on increasing fuels domestic production– is by the kind of oil the NOC is producing. Clearly, most of Pemex's production is from Maya crude, but also Olmeca, light, and Istmo, extra-light, are produced. For every 10 barrels produced by Pemex in 2018, a 6-3-1 ratio explain the contribution of heavy, light and extra-light oil.

Pemex's oil production by kind of oil
Kbd



Source: Finamex with Pemex data.

When looking into the declining trend, the cumulative decrease of 1,550 kbd from 2004 to 2014 in total production, can be decomposed in a reduction of 1,385 kbd in heavy oil, a reduction of 237 kbd in light oil, but an increase of 52 kbd in extra-light oil. Nonetheless, for the last year data tells differently, since the 115 kbd contraction from 2017 to 2018 is due to a contraction both in light (-136 kbd) and extra light oil production (-23 kbd), combined with a 24 kbd increase in the heavy oil platform.

If the current administration plans to increase refining capacity relying on domestic production, then the attention should also focus on the oil-kind production they anticipate to increase, otherwise they will need to allocate larger resources in the refineries' configuration –if technically feasible– to allow the use of heavy oil, and then reduce the dependence on importing extra-light oil for fuels' domestic sales.

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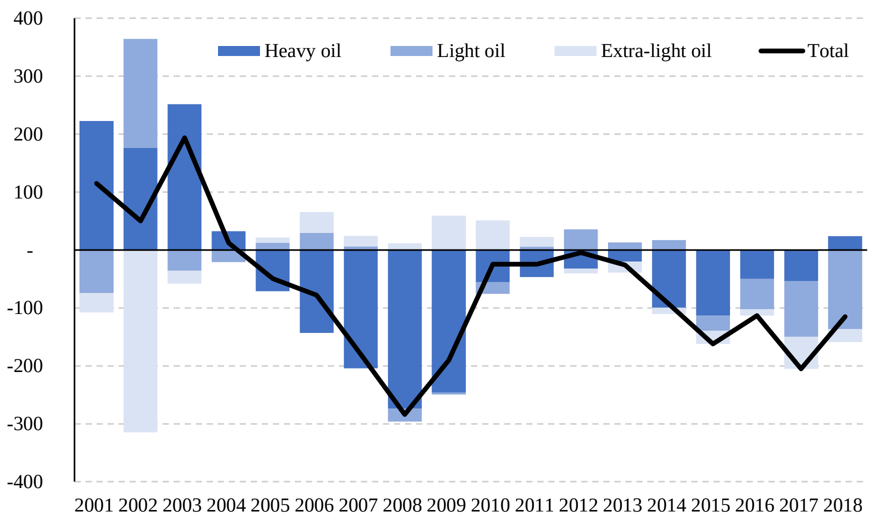
Change in Pemex's oil production by kind of play
Kbd



Source: Finamex with Pemex data.

Fiscal regimes comparison

Back in 2013 when the energy reform was approved, the recovery in oil platform was a top priority. The assessment at that moment showed that Pemex fiscal regime should move gradually into a scheme where competition with private firms was possible. That reason explained the deep changes in the duties regime applicable to assignations, but also the possibility to migrate into market-priced fiscal terms that will result after some fields were auctioned off in the oil tenders.

In addition, Pemex has had the chance to participate in the oil tenders organized by CNH, competing with private firms in offering the best fiscal take to government, both as single-operator or in partnerships. As a result, although the main fiscal regimes applicable to oil production divide into assignations and contracts, the allocation process has been wide-ranging. See chart below.

According to data from the Mexican Petroleum for Stabilization and Development, oil revenues manager, first barrels of oil under contracts' fiscal regime started pumping out in May 2016. Since then, contracts' production has been increasing its share in total production from 0.06% in May 2016 to more than 4% in November 2018.

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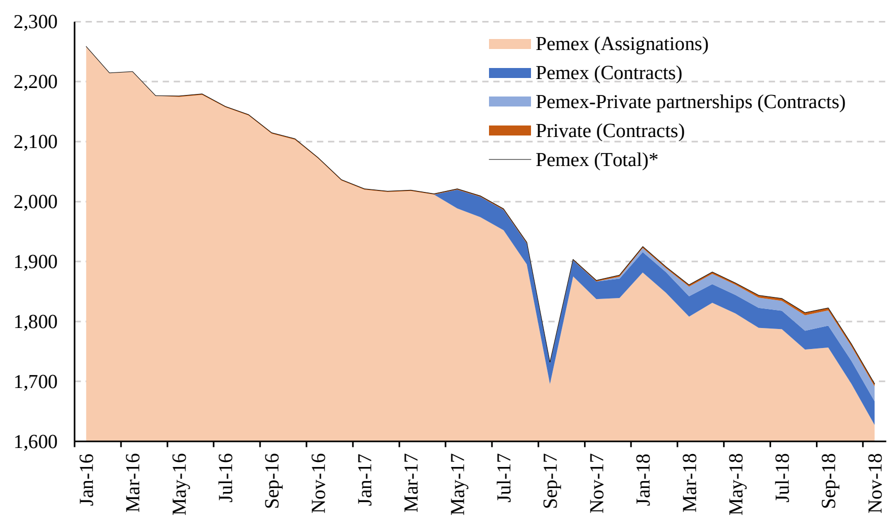
Fiscal regimes applicable to Mexican oil production

Producer		Allocation process	Fiscal regime	Payments to government
Pemex		Round Zero	Assignations	Duties & Taxes
Pemex		Single-contractor migrations	Contracts	Considerations & Taxes
Pemex		Rounds	Contracts	Considerations & Taxes
Pemex-partner	Private ships	Migrations from CIEPs and COPFs contracts	Contracts	Considerations & Taxes
Pemex-partner	Private ships	Migrations trough farm-outs	Contracts	Considerations & Taxes
Pemex-partner	Private ships	Rounds	Contracts	Considerations & Taxes
Private sector		Rounds	Contracts	Considerations & Taxes

Source: Finamex based on current legislation jointly with Mexican Ministry of Finance, Pemex and CNH data.

Within contracts' production, Pemex has been able to increase its platform –as opposed to most of their assignations–, both as single operator (22% higher between December 2017 and November 2018), and in partnerships with private sector firms (more than 6 times in the same period).

Pemex's oil production by fiscal regime
Kbd



Source: Finamex with CNH data. Total production matches exactly Pemex data up to 2017. From 2018 onwards, changes in Pemex's platform accounting resulted in a slight difference

Three lessons came out of the previous analysis: 1) declining in oil platform is widespread across plays and crude oil different gravities, but KMZ block has performed differently; 2) Pemex has relied in contracts' fiscal regime both to reduce its fiscal take, and also to start competing and partnering-up with private sector firms; and 3) recent reduction in extra-light oil has increased dependence on crude oil imports, placing another challenge to the successful implementation of the national refining plan.

Regarding public sector balance, changes announced will have a neutral effect in the public sector borrowing requirements (PSBRs), since it reduces oil revenues for the federal government in the same amount of the increase in Pemex's revenues. However, when analysing each entity separately, the operation itself worsens off federal government's deficit, increasing the pressure on its balance, the key indicator for the rating agencies to check on its credit risk.

Moreover, regarding Pemex, even when the operation could compensate some of the firm's financing needs, the Ministry of Finance has anticipated these resources will be allocated in capex and then the effect will be neutral for Pemex's deficit. There is also another measure announced that will focus on secondary and tertiary recovery, however more details are required to properly evaluate their effects.

In our view, both Pemex and the Ministry of Finance have stayed behind expectations. The obvious reason is the amount of the measure, that remains insufficient (around MXN 11 Bn) given the ambitious plan portrayed earlier by the firm, but more importantly, the most recent announcement made a timid use of the toolkit available for alternative fiscal regimes. Migrations, in all of its modalities, have been successful in attending main Pemex's demands: reduce financing needs, cut fiscal take, recover production in quick fashion, and allocate efficiently resources by keeping the money within the productive fields.

All of these factors are at the core of the risk assessment outlined by rating agencies regarding Pemex. Authorities should start looking in that direction betting big. As we have disclosed, big productive plays as KMZ block are not a pattern for Pemex but rather an exception to the drop in oil production. Clearly, the room is not wide for the call they can make –big and credible enough– with large prospective gains in the long-term.

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